

O3b Limited
Application for Experimental License to Operate an Earth Station Manufactured by
Orbit Communications Systems (“Orbit”) on Board a Maritime Vessel

Narrative Statement

(1) Name, address, phone number (also e-mail address and facsimile number, if available) of the applicant.

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(2) Description of why an experimental license is needed

O3b Limited (“O3b”) is a satellite startup with a unique non-geostationary satellite system¹ that orbits in a medium earth orbit 8,062 km above the earth. The system uses high-powered spot beams to transmit between earth station terminals and O3b’s satellites. Because O3b’s system architecture differs from that of other satellite operators, O3b and potential customers are in the process of determining which applications the system may be able to support.

The U.S. military is interested in using an O3b spot beam to provide connectivity to a U.S. military vessel operating in and around the U.S. waters near Guam. The purpose of the test is to determine whether the O3b system can meet the needs of the vessel while deployed at sea. O3b seeks temporary experimental authority to test whether its maritime service meets the vessel’s operational needs and to identify and troubleshoot any issues that may arise.

(3) Description of the operation to be conducted and its purpose

O3b will install one earth station (two active antennas and one spare) on board the customer’s ship. The ship will disembark and proceed along an itinerary that will not take it more than 100 km from Guam. O3b and its customer will evaluate and troubleshoot the O3b maritime service in preparation for future O3b supported operations.

(4) Time and dates of proposed operation

O3b requests temporary authority for four (4) months, from February 1, 2017 to June 1, 2017. O3b will notify EchoStar Satellite Operating Corporation, Hughes Network Systems, LLC, Inmarsat, Inc., SES Americom, Inc., ViaSat, Inc., and any other U.S.-authorized co-channel Ka-band satellite operators at least one week prior to any transmit testing and provide emergency contact information. In the event

¹ The Federal Communications Commission (“FCC”) has granted market access to the O3b 12-satellite constellation. See O3b Limited, IBFS File No. SAT-LOI-20141029-00118, Call Sign: S2935 (granted Jan. 22, 2015).

that there is harmful interference, O3b will immediately cease transmissions. In addition, when the earth stations will transmit in spectrum bands shared with terrestrial operators, O3b will complete frequency coordination prior to testing.

(5) Class(es) of station (fixed, mobile, fixed and mobile) and call sign of station (if applicable)

The transmitting stations will operate in fixed mode.

(6) Description of the location(s) and, if applicable, geographical coordinates of the proposed operation

Due to the constraints of the application form, O3b could not enter the correct coordinates for the testing location (the form only permits applicants to provide longitudinal coordinates from the western hemisphere). Below are the correct coordinates for the fixed/center of the area of operations:

13° 26' 24" N, 144° 39' 9" E

Please see below for a graphical representation of the area of operation.



(7) Transmit equipment to be used, including name of manufacturer, model and number of units

Exhibit 1: Directional Antenna Information

	Orbit 1.2m
Is a directional antenna (other than radar) used?	Yes
Width of the beam in degrees at the half power point	0.93° @ 18 GHz 0.60° @ 28 GHz
Orientation in horizontal plane (degrees)	TX = RHCP/LHCP RX = RHCP/LHCP
Orientation in vertical plane (degrees)	TX = RHCP/LHCP RX = RHCP/LHCP

Exhibit 2: Measured Antenna Patterns for Orbit 1.2m Terminal

**Measured 30 GHz band antenna performance data for the
1.2-meter antennas**

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-179.0	-36.6	-10.5	-26.1
-178.0	-28.7	-10.5	-18.2
-177.0	-35.2	-10.5	-24.7
-176.0	-32.4	-10.5	-21.9
-175.0	-41.4	-10.5	-30.9
-174.0	-38.3	-10.5	-27.8
-173.0	-42.1	-10.5	-31.6
-172.0	-44.0	-10.5	-33.5
-171.0	-41.6	-10.5	-31.1
-170.0	-43.4	-10.5	-32.9
-169.0	-46.8	-10.5	-36.3
-168.0	-40.6	-10.5	-30.1
-167.0	-42.9	-10.5	-32.4
-166.0	-43.8	-10.5	-33.3
-165.0	-40.6	-10.5	-30.1
-164.0	-54.5	-10.5	-44.0
-163.0	-46.1	-10.5	-35.6
-162.0	-41.4	-10.5	-30.9
-161.0	-40.1	-10.5	-29.6
-160.0	-56.3	-10.5	-45.8
-159.0	-38.4	-10.5	-27.9
-158.0	-43.7	-10.5	-33.2
-157.0	-41.6	-10.5	-31.1
-156.0	-33.7	-10.5	-23.2
-155.0	-37.8	-10.5	-27.3
-154.0	-38.4	-10.5	-27.9
-153.0	-42.3	-10.5	-31.8
-152.0	-46.8	-10.5	-36.3
-151.0	-36.2	-10.5	-25.7
-150.0	-45.7	-10.5	-35.2
-149.0	-45.8	-10.5	-35.3
-148.0	-37.7	-10.5	-27.2
-147.0	-43.5	-10.5	-33.0
-146.0	-37.1	-10.5	-26.6
-145.0	-41.0	-10.5	-30.5
-144.0	-49.5	-10.5	-39.0
-143.0	-41.1	-10.5	-30.6
-142.0	-53.1	-10.5	-42.6
-141.0	-35.2	-10.5	-24.7
-140.0	-35.8	-10.5	-25.3
-139.0	-34.8	-10.5	-24.3
-138.0	-36.8	-10.5	-26.3
-137.0	-39.3	-10.5	-28.8
-136.0	-38.1	-10.5	-27.6
-135.0	-40.4	-10.5	-29.9
-134.0	-44.0	-10.5	-33.5
-133.0	-31.7	-10.5	-21.2
-132.0	-34.6	-10.5	-24.1
-131.0	-38.5	-10.5	-28.0
-130.0	-30.2	-10.5	-19.7
-129.0	-31.0	-10.5	-20.5
-128.0	-36.7	-10.5	-26.2
-127.0	-43.6	-10.5	-33.1
-126.0	-43.6	-10.5	-33.1
-125.0	-35.5	-10.5	-25.0
-124.0	-35.0	-10.5	-24.5
-123.0	-40.9	-10.5	-30.4
-122.0	-38.4	-10.5	-27.9
-121.0	-33.6	-10.5	-23.1
-120.0	-38.0	-10.5	-27.5

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	37.9		
1.0	10.1		
2.0	-2.6	11.0	-13.6
3.0	1.2	6.6	-5.3
4.0	-1.2	3.4	-4.6
5.0	-8.6	1.0	-9.6
6.0	-13.7	-1.0	-12.8
7.0	-11.4	-2.6	-8.8
8.0	-10.6	-2.6	-8.0
9.0	-26.9	-2.6	-24.3
10.0	-23.2	-3.5	-19.7
11.0	-17.5	-4.5	-12.9
12.0	-19.3	-5.5	-13.9
13.0	-21.3	-6.3	-14.9
14.0	-18.6	-7.2	-11.4
15.0	-23.3	-7.9	-15.4
16.0	-28.7	-8.6	-20.1
17.0	-23.2	-9.3	-13.9
18.0	-22.4	-9.9	-12.6
19.0	-24.1	-10.5	-13.7
20.0	-25.5	-11.0	-14.4
21.0	-24.5	-11.6	-12.9
22.0	-32.6	-12.1	-20.5
23.0	-18.0	-12.5	-5.5
24.0	-22.5	-13.0	-9.5
25.0	-19.0	-13.4	-5.5
26.0	-21.9	-13.9	-8.0
27.0	-21.9	-14.3	-7.6
28.0	-20.0	-14.7	-5.3
29.0	-17.8	-15.1	-2.7
30.0	-21.0	-15.4	-5.6
31.0	-29.6	-15.8	-13.8
32.0	-25.7	-16.1	-9.6
33.0	-24.0	-16.5	-7.5
34.0	-25.1	-16.8	-8.3
35.0	-35.4	-17.1	-18.3
36.0	-32.8	-17.4	-15.4
37.0	-24.9	-17.7	-7.2
38.0	-30.9	-18.0	-12.9
39.0	-47.8	-18.3	-29.5
40.0	-33.0	-18.6	-14.4
41.0	-26.0	-18.8	-7.2
42.0	-21.3	-19.1	-2.2
43.0	-22.0	-19.3	-2.6
44.0	-25.7	-19.6	-6.1
45.0	-26.8	-19.8	-7.0
46.0	-23.1	-20.1	-3.0
47.0	-24.5	-20.3	-4.2
48.0	-23.4	-20.5	-2.8
49.0	-24.3	-10.5	-13.8
50.0	-28.4	-10.5	-17.9
51.0	-29.6	-10.5	-19.1
52.0	-34.4	-10.5	-23.9
53.0	-28.0	-10.5	-17.5
54.0	-28.5	-10.5	-18.0
55.0	-22.7	-10.5	-12.2
56.0	-25.1	-10.5	-14.6
57.0	-25.9	-10.5	-15.4
58.0	-28.5	-10.5	-18.0
59.0	-31.9	-10.5	-21.4

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-47.5	-10.5	-37.0
-118.0	-32.6	-10.5	-22.1
-117.0	-30.2	-10.5	-19.7
-116.0	-31.9	-10.5	-21.4
-115.0	-30.1	-10.5	-19.6
-114.0	-31.8	-10.5	-21.3
-113.0	-32.3	-10.5	-21.8
-112.0	-31.5	-10.5	-21.0
-111.0	-27.3	-10.5	-16.8
-110.0	-26.1	-10.5	-15.6
-109.0	-24.3	-10.5	-13.8
-108.0	-22.9	-10.5	-12.4
-107.0	-22.4	-10.5	-11.9
-106.0	-20.6	-10.5	-10.1
-105.0	-18.6	-10.5	-8.1
-104.0	-17.6	-10.5	-7.1
-103.0	-16.9	-10.5	-6.4
-102.0	-17.0	-10.5	-6.5
-101.0	-18.2	-10.5	-7.7
-100.0	-20.0	-10.5	-9.5
-99.0	-19.7	-10.5	-9.2
-98.0	-17.4	-10.5	-6.9
-97.0	-16.6	-10.5	-6.1
-96.0	-19.6	-10.5	-9.1
-95.0	-20.1	-10.5	-9.6
-94.0	-17.0	-10.5	-6.5
-93.0	-17.8	-10.5	-7.3
-92.0	-21.7	-10.5	-11.2
-91.0	-17.4	-10.5	-6.9
-90.0	-18.8	-10.5	-8.3
-89.0	-23.1	-10.5	-12.6
-88.0	-22.4	-10.5	-11.9
-87.0	-28.6	-10.5	-18.1
-86.0	-24.4	-10.5	-13.9
-85.0	-29.8	-10.5	-19.3
-84.0	-36.6	-10.5	-26.1
-83.0	-26.4	-10.5	-15.9
-82.0	-24.5	-10.5	-14.0
-81.0	-34.3	-10.5	-23.8
-80.0	-54.2	-10.5	-43.7
-79.0	-36.4	-10.5	-25.9
-78.0	-25.4	-10.5	-14.9
-77.0	-40.9	-10.5	-30.4
-76.0	-38.8	-10.5	-28.3
-75.0	-29.1	-10.5	-18.6
-74.0	-25.3	-10.5	-14.8
-73.0	-32.3	-10.5	-21.8
-72.0	-24.8	-10.5	-14.3
-71.0	-27.1	-10.5	-16.6
-70.0	-39.2	-10.5	-28.7
-69.0	-32.6	-10.5	-22.1
-68.0	-27.3	-10.5	-16.8
-67.0	-28.6	-10.5	-18.1
-66.0	-29.8	-10.5	-19.3
-65.0	-37.7	-10.5	-27.2
-64.0	-27.1	-10.5	-16.6
-63.0	-27.6	-10.5	-17.1
-62.0	-23.7	-10.5	-13.2
-61.0	-35.7	-10.5	-25.2
-60.0	-24.4	-10.5	-13.9
-59.0	-42.8	-10.5	-32.3
-58.0	-45.8	-10.5	-35.3
-57.0	-28.3	-10.5	-17.8

60.0	-26.6	-10.5	-16.1
61.0	-23.2	-10.5	-12.7
62.0	-25.0	-10.5	-14.5
63.0	-36.4	-10.5	-25.9
64.0	-41.5	-10.5	-31.0
65.0	-23.1	-10.5	-12.6
66.0	-22.8	-10.5	-12.3
67.0	-28.2	-10.5	-17.7
68.0	-37.2	-10.5	-26.7
69.0	-23.6	-10.5	-13.1
70.0	-26.6	-10.5	-16.1
71.0	-28.3	-10.5	-17.8
72.0	-28.0	-10.5	-17.5
73.0	-33.1	-10.5	-22.6
74.0	-26.5	-10.5	-16.0
75.0	-26.0	-10.5	-15.5
76.0	-28.8	-10.5	-18.3
77.0	-40.3	-10.5	-29.8
78.0	-28.2	-10.5	-17.7
79.0	-25.5	-10.5	-15.0
80.0	-32.5	-10.5	-22.0
81.0	-34.3	-10.5	-23.8
82.0	-34.2	-10.5	-23.7
83.0	-32.9	-10.5	-22.4
84.0	-32.5	-10.5	-22.0
85.0	-30.1	-10.5	-19.6
86.0	-31.3	-10.5	-20.8
87.0	-29.5	-10.5	-19.0
88.0	-34.4	-10.5	-23.9
89.0	-36.6	-10.5	-26.1
90.0	-32.4	-10.5	-21.9
91.0	-30.8	-10.5	-20.3
92.0	-35.9	-10.5	-25.4
93.0	-30.5	-10.5	-20.0
94.0	-32.9	-10.5	-22.4
95.0	-29.7	-10.5	-19.2
96.0	-34.6	-10.5	-24.1
97.0	-36.9	-10.5	-26.4
98.0	-25.5	-10.5	-15.0
99.0	-32.0	-10.5	-21.5
100.0	-30.6	-10.5	-20.1
101.0	-33.2	-10.5	-22.7
102.0	-30.4	-10.5	-19.9
103.0	-32.1	-10.5	-21.6
104.0	-32.1	-10.5	-21.6
105.0	-31.7	-10.5	-21.2
106.0	-34.0	-10.5	-23.5
107.0	-30.3	-10.5	-19.8
108.0	-41.7	-10.5	-31.2
109.0	-32.8	-10.5	-22.3
110.0	-37.6	-10.5	-27.1
111.0	-29.1	-10.5	-18.6
112.0	-32.7	-10.5	-22.2
113.0	-34.5	-10.5	-24.0
114.0	-34.4	-10.5	-23.9
115.0	-30.8	-10.5	-20.3
116.0	-32.8	-10.5	-22.3
117.0	-30.0	-10.5	-19.5
118.0	-33.9	-10.5	-23.4
119.0	-32.9	-10.5	-22.4
120.0	-29.6	-10.5	-19.1
121.0	-30.9	-10.5	-20.4
122.0	-28.1	-10.5	-17.6

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Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-27.1	-10.5	-16.6
-55.0	-27.2	-10.5	-16.7
-54.0	-31.7	-10.5	-21.2
-53.0	-30.1	-10.5	-19.6
-52.0	-28.4	-10.5	-17.9
-51.0	-26.9	-10.5	-16.4
-50.0	-30.7	-10.5	-20.2
-49.0	-23.0	-10.5	-12.5
-48.0	-21.6	-20.5	-1.1
-47.0	-22.8	-20.3	-2.5
-46.0	-20.9	-20.1	-0.8
-45.0	-21.5	-19.8	-1.7
-44.0	-22.2	-19.6	-2.6
-43.0	-23.1	-19.3	-3.8
-42.0	-23.0	-19.1	-3.9
-41.0	-20.5	-18.8	-1.7
-40.0	-20.3	-18.6	-1.7
-39.0	-25.5	-18.3	-7.2
-38.0	-23.8	-18.0	-5.8
-37.0	-24.6	-17.7	-6.9
-36.0	-21.3	-17.4	-3.8
-35.0	-22.1	-17.1	-5.0
-34.0	-20.6	-16.8	-3.8
-33.0	-28.9	-16.5	-12.4
-32.0	-24.0	-16.1	-7.9
-31.0	-22.3	-15.8	-6.5
-30.0	-25.5	-15.4	-10.0
-29.0	-32.8	-15.1	-17.7
-28.0	-23.2	-14.7	-8.5
-27.0	-19.2	-14.3	-4.9
-26.0	-25.5	-13.9	-11.7
-25.0	-22.3	-13.4	-8.8
-24.0	-22.3	-13.0	-9.3
-23.0	-24.4	-12.5	-11.8
-22.0	-20.7	-12.1	-8.6
-21.0	-15.6	-11.6	-4.0
-20.0	-41.7	-11.0	-30.6
-19.0	-17.0	-10.5	-6.5
-18.0	-18.6	-9.9	-8.8
-17.0	-15.7	-9.3	-6.5
-16.0	-13.0	-8.6	-4.4
-15.0	-11.8	-7.9	-3.9
-14.0	-15.6	-7.2	-8.5
-13.0	-13.3	-6.3	-7.0
-12.0	-22.0	-5.5	-16.6
-11.0	-18.9	-4.5	-14.4
-10.0	-15.6	-3.5	-12.1
-9.0	-18.1	-2.6	-15.5
-8.0	-18.7	-2.6	-16.1
-7.0	-9.1	-2.6	-6.5
-6.0	-16.8	-1.0	-15.8
-5.0	-6.2	1.0	-7.2
-4.0	-6.3	3.4	-9.7
-3.0	-2.3	6.6	-8.8
-2.0	6.9	11.0	-4.1
-1.0	8.5		
0.0	37.9		

123.0	-32.4	-10.5	-21.9
124.0	-29.6	-10.5	-19.1
125.0	-35.5	-10.5	-25.0
126.0	-43.8	-10.5	-33.3
127.0	-36.6	-10.5	-26.1
128.0	-45.1	-10.5	-34.6
129.0	-37.6	-10.5	-27.1
130.0	-32.3	-10.5	-21.8
131.0	-39.5	-10.5	-29.0
132.0	-30.8	-10.5	-20.3
133.0	-34.7	-10.5	-24.2
134.0	-34.0	-10.5	-23.5
135.0	-28.7	-10.5	-18.2
136.0	-28.9	-10.5	-18.4
137.0	-34.3	-10.5	-23.8
138.0	-32.2	-10.5	-21.7
139.0	-27.2	-10.5	-16.7
140.0	-30.9	-10.5	-20.4
141.0	-44.8	-10.5	-34.3
142.0	-37.4	-10.5	-26.9
143.0	-32.1	-10.5	-21.6
144.0	-36.8	-10.5	-26.3
145.0	-28.5	-10.5	-18.0
146.0	-31.4	-10.5	-20.9
147.0	-30.3	-10.5	-19.8
148.0	-39.7	-10.5	-29.2
149.0	-45.7	-10.5	-35.2
150.0	-36.8	-10.5	-26.3
151.0	-36.1	-10.5	-25.6
152.0	-44.0	-10.5	-33.5
153.0	-37.5	-10.5	-27.0
154.0	-37.3	-10.5	-26.8
155.0	-32.0	-10.5	-21.5
156.0	-34.0	-10.5	-23.5
157.0	-34.7	-10.5	-24.2
158.0	-42.3	-10.5	-31.8
159.0	-39.6	-10.5	-29.1
160.0	-48.0	-10.5	-37.5
161.0	-35.1	-10.5	-24.6
162.0	-49.0	-10.5	-38.5
163.0	-31.3	-10.5	-20.8
164.0	-30.7	-10.5	-20.2
165.0	-33.8	-10.5	-23.3
166.0	-31.2	-10.5	-20.7
167.0	-39.7	-10.5	-29.2
168.0	-32.4	-10.5	-21.9
169.0	-39.4	-10.5	-28.9
170.0	-49.5	-10.5	-39.0
171.0	-30.5	-10.5	-20.0
172.0	-31.2	-10.5	-20.7
173.0	-31.7	-10.5	-21.2
174.0	-31.7	-10.5	-21.2
175.0	-35.7	-10.5	-25.2
176.0	-32.9	-10.5	-22.4
177.0	-44.0	-10.5	-33.5
178.0	-34.8	-10.5	-24.3
179.0	-29.9	-10.5	-19.4

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP LHCP, -10° to +10° @ 0.1° increment

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-15.6	-3.5	-12.1
-9.9	-15.2	-3.4	-11.8
-9.8	-16.7	-3.3	-13.4
-9.7	-20.9	-3.2	-17.8
-9.6	-26.5	-3.1	-23.5
-9.5	-18.4	-2.9	-15.4
-9.4	-14.5	-2.8	-11.7
-9.3	-12.6	-2.7	-9.9
-9.2	-12.6	-2.6	-10.0
-9.1	-14.4	-2.6	-11.8
-9.0	-18.1	-2.6	-15.5
-8.9	-27.7	-2.6	-25.0
-8.8	-21.8	-2.6	-19.2
-8.7	-16.9	-2.6	-14.3
-8.6	-14.4	-2.6	-11.8
-8.5	-14.7	-2.6	-12.0
-8.4	-16.1	-2.6	-13.4
-8.3	-20.7	-2.6	-18.1
-8.2	-30.1	-2.6	-27.5
-8.1	-23.4	-2.6	-20.8
-8.0	-18.7	-2.6	-16.1
-7.9	-16.9	-2.6	-14.3
-7.8	-17.6	-2.6	-15.0
-7.7	-20.8	-2.6	-18.2
-7.6	-24.2	-2.6	-21.6
-7.5	-16.1	-2.6	-13.5
-7.4	-11.1	-2.6	-8.5
-7.3	-8.5	-2.6	-5.8
-7.2	-7.6	-2.6	-4.9
-7.1	-7.7	-2.6	-5.1
-7.0	-9.1	-2.6	-6.5
-6.9	-13.0	-2.5	-10.6
-6.8	-25.6	-2.3	-23.3
-6.7	-19.3	-2.2	-17.2
-6.6	-11.4	-2.0	-9.4
-6.5	-9.0	-1.8	-7.2
-6.4	-8.5	-1.7	-6.9
-6.3	-10.0	-1.5	-8.5
-6.2	-12.4	-1.3	-11.1
-6.1	-16.8	-1.1	-15.7
-6.0	-16.8	-1.0	-15.8
-5.9	-13.9	-0.8	-13.2
-5.8	-12.8	-0.6	-12.2
-5.7	-13.0	-0.4	-12.6
-5.6	-13.6	-0.2	-13.4
-5.5	-12.5	0.0	-12.4
-5.4	-10.8	0.2	-11.0
-5.3	-9.0	0.4	-9.4
-5.2	-7.6	0.6	-8.2
-5.1	-6.6	0.8	-7.4
-5.0	-6.2	1.0	-7.2
-4.9	-6.9	1.2	-8.1
-4.8	-8.9	1.5	-10.3
-4.7	-13.7	1.7	-15.4
-4.6	-21.3	1.9	-23.2
-4.5	-12.4	2.2	-14.5
-4.4	-7.9	2.4	-10.3
-4.3	-6.3	2.7	-8.9
-4.2	-6.2	2.9	-9.1
-4.1	-6.7	3.2	-9.9

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	37.9		
0.1	37.7		
0.2	37.0		
0.3	35.9		
0.4	34.3		
0.5	32.1		
0.6	29.4		
0.7	26.1		
0.8	22.0		
0.9	16.9		
1.0	10.1		
1.1	-0.5		
1.2	3.2		
1.3	7.8		
1.4	9.7		
1.5	10.0		
1.6	9.0		
1.7	7.0		
1.8	4.2		
1.9	0.9		
2.0	-2.6	11.0	-13.6
2.1	-5.4	10.4	-15.9
2.2	-4.8	9.9	-14.7
2.3	-1.2	9.5	-10.7
2.4	1.5	9.0	-7.5
2.5	2.4	8.6	-6.1
2.6	2.5	8.1	-5.6
2.7	1.7	7.7	-6.0
2.8	1.7	7.3	-5.6
2.9	1.3	6.9	-5.6
3.0	1.2	6.6	-5.3
3.1	1.0	6.2	-5.2
3.2	0.0	5.9	-5.9
3.3	-1.9	5.5	-7.5
3.4	-3.8	5.2	-9.0
3.5	-4.2	4.9	-9.1
3.6	-2.8	4.6	-7.4
3.7	-1.5	4.3	-5.8
3.8	-0.7	4.0	-4.7
3.9	-0.6	3.7	-4.3
4.0	-1.2	3.4	-4.6
4.1	-2.8	3.2	-6.0
4.2	-4.7	2.9	-7.6
4.3	-6.7	2.7	-9.4
4.4	-8.2	2.4	-10.6
4.5	-8.9	2.2	-11.0
4.6	-10.6	1.9	-12.5
4.7	-15.1	1.7	-16.8
4.8	-24.9	1.5	-26.4
4.9	-12.3	1.2	-13.5
5.0	-8.6	1.0	-9.6
5.1	-8.0	0.8	-8.8
5.2	-8.1	0.6	-8.7
5.3	-9.6	0.4	-10.0
5.4	-11.6	0.2	-11.8
5.5	-10.9	0.0	-10.9
5.6	-11.1	-0.2	-10.9
5.7	-12.4	-0.4	-12.0
5.8	-16.5	-0.6	-15.9
5.9	-22.9	-0.8	-22.2

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP LHCP, -10° to +10° @ 0.1° increment

-4.0	-6.3	3.4	-9.7
-3.9	-4.3	3.7	-8.0
-3.8	-1.9	4.0	-6.0
-3.7	-0.1	4.3	-4.4
-3.6	1.1	4.6	-3.5
-3.5	1.9	4.9	-3.0
-3.4	2.3	5.2	-2.9
-3.3	2.1	5.5	-3.5
-3.2	1.1	5.9	-4.7
-3.1	-0.7	6.2	-6.9
-3.0	-2.3	6.6	-8.8
-2.9	-1.0	6.9	-8.0
-2.8	1.6	7.3	-5.7
-2.7	3.4	7.7	-4.3
-2.6	4.5	8.1	-3.6
-2.5	5.3	8.6	-3.2
-2.4	6.3	9.0	-2.7
-2.3	7.5	9.5	-1.9
-2.2	8.4	9.9	-1.5
-2.1	8.3	10.4	-2.1
-2.0	6.9	11.0	-4.1
-1.9	3.0		
-1.8	-4.9		
-1.7	1.3		
-1.6	6.5		
-1.5	8.3		
-1.4	8.4		
-1.3	7.4		
-1.2	6.9		
-1.1	7.7		
-1.0	8.5		
-0.9	12.1		
-0.8	18.3		
-0.7	23.7		
-0.6	28.0		
-0.5	31.3		
-0.4	33.8		
-0.3	35.6		
-0.2	36.8		
-0.1	37.6		
0.0	37.9		

6.0	-13.7	-1.0	-12.8
6.1	-9.8	-1.1	-8.7
6.2	-7.7	-1.3	-6.4
6.3	-8.0	-1.5	-6.6
6.4	-10.2	-1.7	-8.5
6.5	-14.9	-1.8	-13.1
6.6	-24.4	-2.0	-22.4
6.7	-17.8	-2.2	-15.6
6.8	-13.3	-2.3	-11.0
6.9	-11.3	-2.5	-8.9
7.0	-11.4	-2.6	-8.8
7.1	-11.8	-2.6	-9.2
7.2	-13.1	-2.6	-10.5
7.3	-15.5	-2.6	-12.8
7.4	-19.8	-2.6	-17.2
7.5	-24.0	-2.6	-21.3
7.6	-19.0	-2.6	-16.4
7.7	-14.1	-2.6	-11.4
7.8	-11.5	-2.6	-8.9
7.9	-10.7	-2.6	-8.1
8.0	-10.6	-2.6	-8.0
8.1	-12.8	-2.6	-10.2
8.2	-16.5	-2.6	-13.9
8.3	-23.7	-2.6	-21.0
8.4	-18.1	-2.6	-15.5
8.5	-12.5	-2.6	-9.9
8.6	-10.4	-2.6	-7.8
8.7	-11.1	-2.6	-8.5
8.8	-12.7	-2.6	-10.0
8.9	-17.5	-2.6	-14.9
9.0	-26.9	-2.6	-24.3
9.1	-20.3	-2.6	-17.7
9.2	-16.4	-2.6	-13.7
9.3	-14.8	-2.7	-12.1
9.4	-16.3	-2.8	-13.5
9.5	-20.8	-2.9	-17.8
9.6	-22.8	-3.1	-19.8
9.7	-17.9	-3.2	-14.7
9.8	-16.9	-3.3	-13.6
9.9	-18.1	-3.4	-14.7
10.0	-23.2	-3.5	-19.7

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol EI LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-30.0	-23.0	-12.4	-10.6
-29.5	-23.3	-12.2	-11.1
-29.0	-19.5	-12.1	-7.4
-28.5	-21.9	-11.9	-10.0
-28.0	-26.0	-11.7	-14.3
-27.5	-23.8	-11.5	-12.4
-27.0	-25.4	-11.3	-14.1
-26.5	-23.5	-11.1	-12.4
-26.0	-20.3	-10.9	-9.4
-25.5	-18.4	-10.7	-7.7
-25.0	-18.4	-10.4	-8.0
-24.5	-20.0	-10.2	-9.7
-24.0	-18.6	-10.0	-8.6
-23.5	-22.4	-9.8	-12.7
-23.0	-19.2	-9.5	-9.7
-22.5	-17.7	-9.3	-8.4
-22.0	-21.1	-9.1	-12.0
-21.5	-21.2	-8.8	-12.4
-21.0	-18.0	-8.6	-9.4
-20.5	-18.4	-8.3	-10.1
-20.0	-20.9	-8.0	-12.9
-19.5	-21.1	-7.8	-13.4
-19.0	-21.6	-7.5	-14.1
-18.5	-17.5	-7.2	-10.4
-18.0	-16.7	-6.9	-9.8
-17.5	-18.4	-6.6	-11.8
-17.0	-23.7	-6.3	-17.4
-16.5	-32.5	-5.9	-26.6
-16.0	-22.0	-5.6	-16.4
-15.5	-20.7	-5.3	-15.4
-15.0	-23.1	-4.9	-18.2
-14.5	-21.5	-4.5	-16.9
-14.0	-16.0	-4.2	-11.9
-13.5	-16.0	-3.8	-12.2
-13.0	-20.4	-3.3	-17.1
-12.5	-32.9	-2.9	-30.0
-12.0	-22.0	-2.5	-19.5
-11.5	-38.0	-2.0	-36.0
-11.0	-15.3	-1.5	-13.8
-10.5	-16.8	-1.0	-15.8
-10.0	-20.6	-0.5	-20.1
-9.5	-19.0	0.1	-19.1
-9.0	-23.6	0.4	-24.0
-8.5	-15.3	0.4	-15.7
-8.0	-16.0	0.4	-16.3
-7.5	-17.8	0.4	-18.2
-7.0	-13.3	0.4	-13.7
-6.5	-24.4	1.2	-25.6
-6.0	-13.1	2.0	-15.1
-5.5	-17.0	3.0	-19.9
-5.0	-7.9	4.0	-11.9
-4.5	-7.5	5.2	-12.6
-4.0	-3.6	6.4	-10.0
-3.5	-10.2	7.9	-18.1
-3.0	1.4		
-2.5	2.9		
-2.0	1.2		
-1.5	11.0		
-1.0	12.2		
-0.5	31.8		
0.0	37.9		

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol EI LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	37.9		
0.5	30.4		
1.0	10.1		
1.5	7.4		
2.0	8.2		
2.5	6.1		
3.0	-2.8		
3.5	-1.8	7.9	-9.7
4.0	-3.8	6.4	-10.3
4.5	-12.5	5.2	-17.7
5.0	-10.4	4.0	-14.4
5.5	-15.9	3.0	-18.9
6.0	-17.0	2.0	-19.0
6.5	-9.3	1.2	-10.5
7.0	-8.5	0.4	-8.9
7.5	-15.9	0.4	-16.3
8.0	-15.8	0.4	-16.2
8.5	-15.5	0.4	-15.8
9.0	-13.8	0.4	-14.1
9.5	-19.4	0.1	-19.5
10.0	-19.8	-0.5	-19.3
10.5	-11.6	-1.0	-10.6
11.0	-29.4	-1.5	-27.9
11.5	-10.6	-2.0	-8.6
12.0	-10.7	-2.5	-8.2
12.5	-16.3	-2.9	-13.3
13.0	-13.8	-3.3	-10.5
13.5	-13.3	-3.8	-9.5
14.0	-29.8	-4.2	-25.7
14.5	-13.3	-4.5	-8.7
15.0	-12.7	-4.9	-7.8
15.5	-11.8	-5.3	-6.5
16.0	-14.8	-5.6	-9.2
16.5	-9.4	-5.9	-3.5
17.0	-17.5	-6.3	-11.3
17.5	-16.7	-6.6	-10.1
18.0	-16.4	-6.9	-9.5
18.5	-16.7	-7.2	-9.6
19.0	-26.6	-7.5	-19.1
19.5	-13.8	-7.8	-6.1
20.0	-21.9	-8.0	-13.9
20.5	-15.5	-8.3	-7.2
21.0	-13.1	-8.6	-4.5
21.5	-17.5	-8.8	-8.7
22.0	-20.5	-9.1	-11.4
22.5	-12.7	-9.3	-3.4
23.0	-17.8	-9.5	-8.2
23.5	-16.7	-9.8	-6.9
24.0	-18.0	-10.0	-8.0
24.5	-16.4	-10.2	-6.2
25.0	-17.2	-10.4	-6.8
25.5	-14.1	-10.7	-3.5
26.0	-15.2	-10.9	-4.4
26.5	-16.4	-11.1	-5.3
27.0	-15.3	-11.3	-4.0
27.5	-19.3	-11.5	-7.8
28.0	-24.5	-11.7	-12.8
28.5	-18.3	-11.9	-6.4
29.0	-24.4	-12.1	-12.3
29.5	-23.9	-12.2	-11.6
30.0	-16.1	-12.4	-3.7

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-20.6	-0.5	-20.1
-9.9	-18.5	-0.4	-18.2
-9.8	-19.7	-0.3	-19.4
-9.7	-23.6	-0.2	-23.4
-9.6	-26.0	-0.1	-26.0
-9.5	-19.0	0.1	-19.1
-9.4	-14.8	0.2	-15.0
-9.3	-15.0	0.3	-15.3
-9.2	-17.0	0.4	-17.4
-9.1	-21.4	0.4	-21.8
-9.0	-23.6	0.4	-24.0
-8.9	-16.8	0.4	-17.2
-8.8	-13.5	0.4	-13.9
-8.7	-12.8	0.4	-13.2
-8.6	-13.4	0.4	-13.7
-8.5	-15.3	0.4	-15.7
-8.4	-18.1	0.4	-18.5
-8.3	-27.1	0.4	-27.5
-8.2	-25.4	0.4	-25.8
-8.1	-19.4	0.4	-19.8
-8.0	-16.0	0.4	-16.3
-7.9	-14.2	0.4	-14.5
-7.8	-14.0	0.4	-14.4
-7.7	-15.6	0.4	-16.0
-7.6	-17.0	0.4	-17.4
-7.5	-17.8	0.4	-18.2
-7.4	-16.7	0.4	-17.1
-7.3	-16.3	0.4	-16.7
-7.2	-17.3	0.4	-17.6
-7.1	-16.6	0.4	-17.0
-7.0	-13.3	0.4	-13.7
-6.9	-10.6	0.5	-11.1
-6.8	-9.7	0.7	-10.4
-6.7	-10.5	0.8	-11.3
-6.6	-14.2	1.0	-15.2
-6.5	-24.4	1.2	-25.6
-6.4	-15.0	1.3	-16.3
-6.3	-10.0	1.5	-11.5
-6.2	-8.5	1.7	-10.2
-6.1	-9.1	1.9	-11.0
-6.0	-13.1	2.0	-15.1
-5.9	-26.9	2.2	-29.1
-5.8	-17.6	2.4	-20.0
-5.7	-12.5	2.6	-15.1
-5.6	-12.2	2.8	-15.0
-5.5	-17.0	3.0	-19.9
-5.4	-30.0	3.2	-33.2
-5.3	-12.8	3.4	-16.2
-5.2	-8.0	3.6	-11.6
-5.1	-6.7	3.8	-10.5
-5.0	-7.9	4.0	-11.9
-4.9	-12.8	4.2	-17.0
-4.8	-37.0	4.5	-41.5
-4.7	-13.5	4.7	-18.2
-4.6	-8.4	4.9	-13.3
-4.5	-7.5	5.2	-12.6
-4.4	-8.7	5.4	-14.1
-4.3	-9.8	5.7	-15.5
-4.2	-7.6	5.9	-13.5
-4.1	-4.9	6.2	-11.1

27.60 GHz @ -9,52 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	37.9		
0.1	37.5		
0.2	36.7		
0.3	35.3		
0.4	33.2		
0.5	30.4		
0.6	26.7		
0.7	21.7		
0.8	15.7		
0.9	10.9		
1.0	10.1		
1.1	8.9		
1.2	6.9		
1.3	6.8		
1.4	7.8		
1.5	7.4		
1.6	5.0		
1.7	1.0		
1.8	2.8		
1.9	6.5		
2.0	8.2		
2.1	8.5		
2.2	7.7		
2.3	6.7		
2.4	6.1		
2.5	6.1		
2.6	5.9		
2.7	4.8		
2.8	2.6		
2.9	-0.5		
3.0	-2.8		
3.1	-2.4		
3.2	-1.2		
3.3	-1.0		
3.4	-1.2		
3.5	-1.8	7.9	-9.7
3.6	-2.5	7.6	-10.1
3.7	-4.2	7.3	-11.5
3.8	-5.3	7.0	-12.3
3.9	-5.2	6.7	-11.9
4.0	-3.8	6.4	-10.3
4.1	-2.6	6.2	-8.7
4.2	-2.3	5.9	-8.2
4.3	-3.6	5.7	-9.3
4.4	-6.4	5.4	-11.8
4.5	-12.5	5.2	-17.7
4.6	-25.4	4.9	-30.3
4.7	-14.7	4.7	-19.4
4.8	-11.6	4.5	-16.1
4.9	-10.3	4.2	-14.6
5.0	-10.4	4.0	-14.4
5.1	-10.2	3.8	-14.0
5.2	-10.4	3.6	-14.0
5.3	-11.1	3.4	-14.5
5.4	-13.0	3.2	-16.2
5.5	-15.9	3.0	-18.9
5.6	-17.1	2.8	-19.9
5.7	-15.3	2.6	-17.9
5.8	-15.2	2.4	-17.6
5.9	-17.2	2.2	-19.4

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	-3.6	6.4	-10.0
-3.9	-3.5	6.7	-10.2
-3.8	-4.5	7.0	-11.5
-3.7	-6.2	7.3	-13.4
-3.6	-8.6	7.6	-16.2
-3.5	-10.2	7.9	-18.1
-3.4	-7.6		
-3.3	-3.6		
-3.2	-0.5		
-3.1	1.1		
-3.0	1.4		
-2.9	0.6		
-2.8	-0.8		
-2.7	-0.6		
-2.6	1.3		
-2.5	2.9		
-2.4	3.3		
-2.3	2.5		
-2.2	1.1		
-2.1	0.5		
-2.0	1.2		
-1.9	2.2		
-1.8	4.2		
-1.7	7.0		
-1.6	9.5		
-1.5	11.0		
-1.4	11.3		
-1.3	9.8		
-1.2	6.1		
-1.1	2.0		
-1.0	12.2		
-0.9	17.3		
-0.8	21.7		
-0.7	25.6		
-0.6	29.0		
-0.5	31.8		
-0.4	34.1		
-0.3	35.8		
-0.2	37.0		
-0.1	37.7		
0.0	37.9		

6.0	-17.0	2.0	-19.0
6.1	-13.0	1.9	-14.8
6.2	-9.2	1.7	-10.8
6.3	-7.4	1.5	-9.0
6.4	-7.5	1.3	-8.8
6.5	-9.3	1.2	-10.5
6.6	-13.9	1.0	-14.9
6.7	-25.3	0.8	-26.2
6.8	-15.1	0.7	-15.8
6.9	-10.9	0.5	-11.5
7.0	-8.5	0.4	-8.9
7.1	-8.1	0.4	-8.4
7.2	-8.6	0.4	-9.0
7.3	-10.1	0.4	-10.5
7.4	-12.2	0.4	-12.6
7.5	-15.9	0.4	-16.3
7.6	-24.1	0.4	-24.5
7.7	-31.2	0.4	-31.5
7.8	-19.2	0.4	-19.6
7.9	-16.2	0.4	-16.5
8.0	-15.8	0.4	-16.2
8.1	-17.2	0.4	-17.5
8.2	-21.3	0.4	-21.7
8.3	-21.5	0.4	-21.9
8.4	-18.1	0.4	-18.5
8.5	-15.5	0.4	-15.8
8.6	-15.9	0.4	-16.3
8.7	-19.6	0.4	-20.0
8.8	-34.6	0.4	-35.0
8.9	-19.8	0.4	-20.2
9.0	-13.8	0.4	-14.1
9.1	-11.4	0.4	-11.8
9.2	-10.8	0.4	-11.2
9.3	-11.5	0.3	-11.8
9.4	-14.6	0.2	-14.8
9.5	-19.4	0.1	-19.5
9.6	-21.8	-0.1	-21.7
9.7	-17.5	-0.2	-17.4
9.8	-16.6	-0.3	-16.3
9.9	-17.1	-0.4	-16.7
10.0	-19.8	-0.5	-19.3

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

27.60 GHz @ -9.52 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-18.9	-12.6	-6.3
-9.9	-24.6	-12.6	-12.0
-9.8	-29.3	-12.6	-16.6
-9.7	-22.6	-12.6	-10.0
-9.6	-20.5	-12.6	-7.9
-9.5	-19.4	-12.6	-6.7
-9.4	-19.9	-12.6	-7.2
-9.3	-21.3	-12.6	-8.7
-9.2	-21.0	-12.6	-8.3
-9.1	-18.2	-12.6	-5.5
-9.0	-16.2	-12.6	-3.6
-8.9	-15.4	-12.6	-2.8
-8.8	-16.1	-12.6	-3.5
-8.7	-17.6	-12.6	-5.0
-8.6	-21.4	-12.6	-8.8
-8.5	-27.0	-12.6	-14.3
-8.4	-30.8	-12.6	-18.2
-8.3	-25.0	-12.6	-12.4
-8.2	-22.8	-12.6	-10.2
-8.1	-19.0	-12.6	-6.4
-8.0	-18.3	-12.6	-5.6
-7.9	-18.2	-12.6	-5.6
-7.8	-18.0	-12.6	-5.4
-7.7	-18.8	-12.6	-6.2
-7.6	-19.5	-12.6	-6.9
-7.5	-20.1	-12.6	-7.5
-7.4	-22.1	-12.6	-9.5
-7.3	-24.6	-12.6	-11.9
-7.2	-22.4	-12.6	-9.7
-7.1	-18.2	-12.6	-5.6
-7.0	-15.0	-12.6	-2.4
-6.9	-13.7	-12.5	-1.2
-6.8	-12.8	-12.3	-0.5
-6.7	-13.5	-12.2	-1.4
-6.6	-16.6	-12.0	-4.7
-6.5	-23.0	-11.8	-11.2
-6.4	-28.1	-11.7	-16.5
-6.3	-20.0	-11.5	-8.5
-6.2	-17.1	-11.3	-5.8
-6.1	-17.0	-11.1	-5.9
-6.0	-18.9	-11.0	-8.0
-5.9	-20.4	-10.8	-9.6
-5.8	-17.1	-10.6	-6.5
-5.7	-14.2	-10.4	-3.8
-5.6	-12.5	-10.2	-2.3
-5.5	-12.4	-10.0	-2.4
-5.4	-13.8	-9.8	-4.0
-5.3	-16.6	-9.6	-7.0
-5.2	-20.4	-9.4	-11.0
-5.1	-27.4	-9.2	-18.2
-5.0	-25.2	-9.0	-16.2
-4.9	-16.8	-8.8	-8.0
-4.8	-12.2	-8.5	-3.7
-4.7	-9.7	-8.3	-1.4
-4.6	-8.4	-8.1	-0.3
-4.5	-9.0	-7.8	-1.1
-4.4	-11.3	-7.6	-3.7
-4.3	-16.8	-7.3	-9.5
-4.2	-29.5	-7.1	-22.4
-4.1	-17.3	-6.8	-10.5

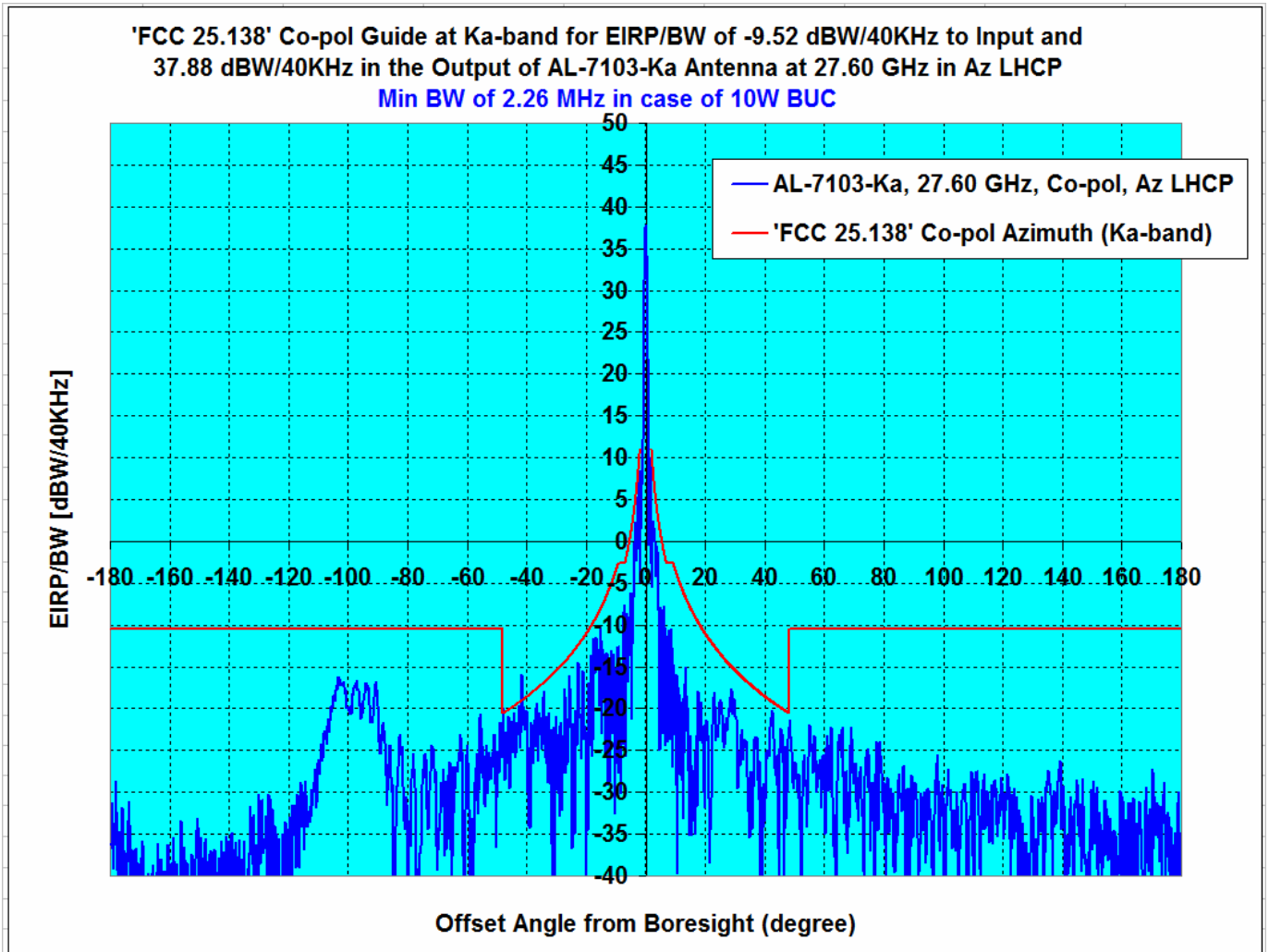
27.60 GHz @ -9.52 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	4.8		
0.1	13.0		
0.2	16.7		
0.3	18.4		
0.4	18.8		
0.5	18.3		
0.6	16.8		
0.7	14.4		
0.8	11.0		
0.9	6.8		
1.0	3.6		
1.1	2.0		
1.2	-0.6		
1.3	-6.0		
1.4	-21.3		
1.5	-6.6		
1.6	-3.2		
1.7	-3.1		
1.8	-5.7		
1.9	-11.5		
2.0	-12.6	1.0	-13.6
2.1	-9.1	0.4	-9.6
2.2	-8.4	-0.1	-8.4
2.3	-12.1	-0.5	-11.5
2.4	-21.7	-1.0	-20.7
2.5	-15.7	-1.4	-14.2
2.6	-8.6	-1.9	-6.7
2.7	-6.1	-2.3	-3.8
2.8	-6.1	-2.7	-3.4
2.9	-9.0	-3.1	-5.9
3.0	-14.6	-3.4	-11.2
3.1	-24.6	-3.8	-20.8
3.2	-17.0	-4.1	-12.9
3.3	-14.5	-4.5	-10.0
3.4	-14.1	-4.8	-9.3
3.5	-14.9	-5.1	-9.8
3.6	-16.5	-5.4	-11.1
3.7	-18.4	-5.7	-12.7
3.8	-21.4	-6.0	-15.4
3.9	-52.5	-6.3	-46.2
4.0	-18.8	-6.6	-12.3
4.1	-14.7	-6.8	-7.9
4.2	-12.1	-7.1	-5.0
4.3	-12.6	-7.3	-5.3
4.4	-16.2	-7.6	-8.7
4.5	-23.2	-7.8	-15.3
4.6	-23.0	-8.1	-14.9
4.7	-16.1	-8.3	-7.8
4.8	-14.9	-8.5	-6.4
4.9	-16.4	-8.8	-7.7
5.0	-21.9	-9.0	-12.9
5.1	-19.7	-9.2	-10.5
5.2	-14.7	-9.4	-5.3
5.3	-13.0	-9.6	-3.4
5.4	-13.7	-9.8	-3.9
5.5	-16.9	-10.0	-6.9
5.6	-27.4	-10.2	-17.2
5.7	-21.4	-10.4	-11.0
5.8	-14.6	-10.6	-4.0
5.9	-12.7	-10.8	-2.0

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

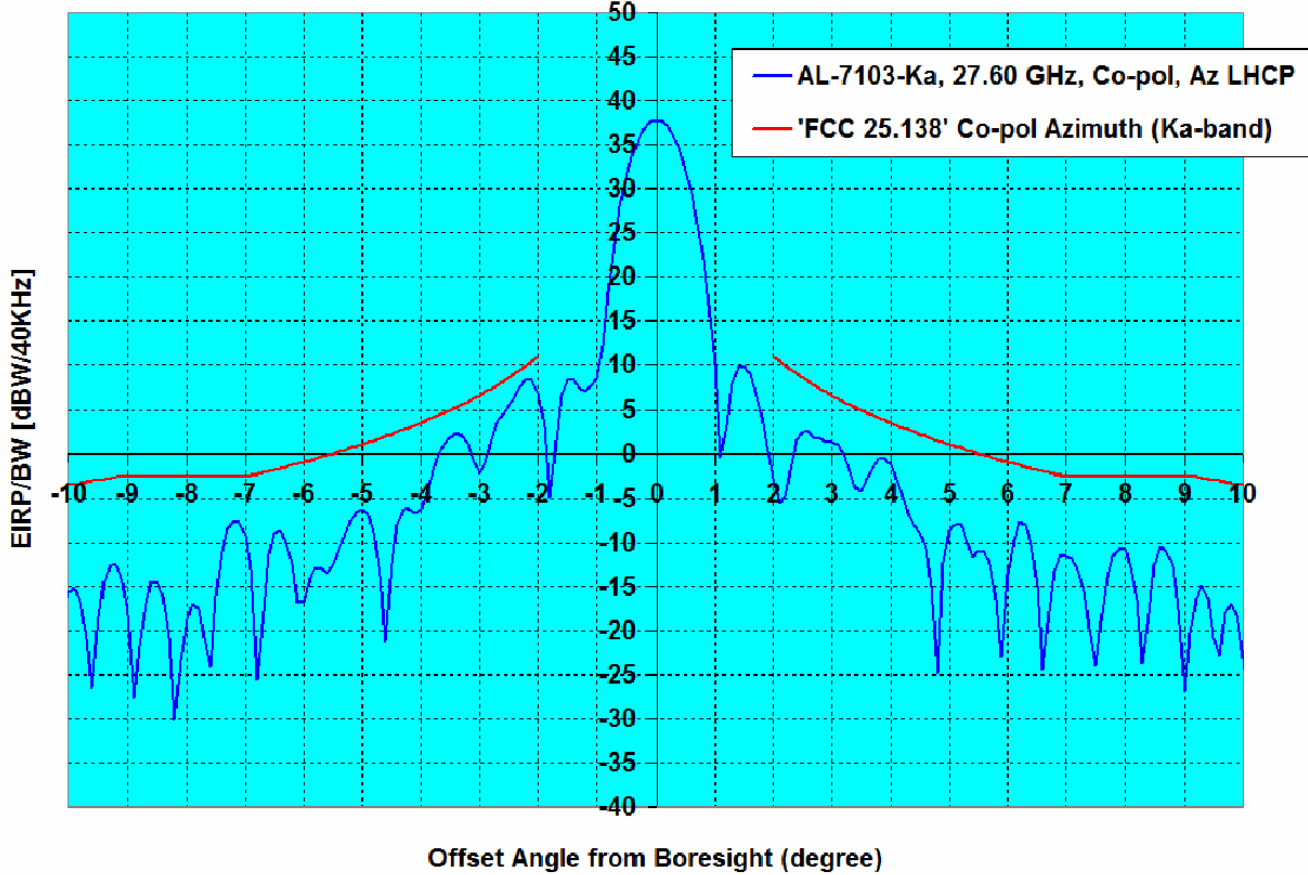
-4.0	-12.9	-6.6	-6.3
-3.9	-12.1	-6.3	-5.9
-3.8	-12.9	-6.0	-6.9
-3.7	-12.4	-5.7	-6.7
-3.6	-11.1	-5.4	-5.7
-3.5	-9.8	-5.1	-4.7
-3.4	-10.6	-4.8	-5.9
-3.3	-14.1	-4.5	-9.6
-3.2	-17.8	-4.1	-13.7
-3.1	-10.7	-3.8	-6.9
-3.0	-7.1	-3.4	-3.7
-2.9	-5.8	-3.1	-2.7
-2.8	-7.2	-2.7	-4.5
-2.7	-13.4	-2.3	-11.1
-2.6	-17.0	-1.9	-15.2
-2.5	-6.5	-1.4	-5.1
-2.4	-3.0	-1.0	-1.9
-2.3	-2.4	-0.5	-1.9
-2.2	-4.8	-0.1	-4.7
-2.1	-14.0	0.4	-14.5
-2.0	-8.1	1.0	-9.1
-1.9	-0.7		
-1.8	2.2		
-1.7	2.7		
-1.6	0.8		
-1.5	-5.9		
-1.4	-7.1		
-1.3	1.7		
-1.2	5.3		
-1.1	7.2		
-1.0	8.3		
-0.9	10.2		
-0.8	13.0		
-0.7	15.5		
-0.6	17.3		
-0.5	18.2		
-0.4	18.2		
-0.3	16.9		
-0.2	13.8		
-0.1	6.7		
0.0	4.8		

6.0	-13.3	-11.0	-2.3
6.1	-16.2	-11.1	-5.0
6.2	-21.3	-11.3	-10.0
6.3	-22.0	-11.5	-10.5
6.4	-17.5	-11.7	-5.8
6.5	-16.2	-11.8	-4.4
6.6	-16.7	-12.0	-4.7
6.7	-18.5	-12.2	-6.4
6.8	-21.8	-12.3	-9.5
6.9	-24.7	-12.5	-12.2
7.0	-29.4	-12.6	-16.8
7.1	-39.3	-12.6	-26.6
7.2	-32.6	-12.6	-20.0
7.3	-23.7	-12.6	-11.1
7.4	-20.1	-12.6	-7.4
7.5	-19.7	-12.6	-7.0
7.6	-19.3	-12.6	-6.7
7.7	-21.6	-12.6	-9.0
7.8	-25.5	-12.6	-12.9
7.9	-36.9	-12.6	-24.2
8.0	-32.1	-12.6	-19.5
8.1	-22.8	-12.6	-10.2
8.2	-20.7	-12.6	-8.0
8.3	-18.7	-12.6	-6.1
8.4	-18.5	-12.6	-5.9
8.5	-21.2	-12.6	-8.6
8.6	-24.3	-12.6	-11.6
8.7	-23.5	-12.6	-10.8
8.8	-21.2	-12.6	-8.6
8.9	-19.2	-12.6	-6.5
9.0	-18.7	-12.6	-6.0
9.1	-20.4	-12.6	-7.8
9.2	-24.2	-12.6	-11.5
9.3	-31.1	-12.6	-18.5
9.4	-26.2	-12.6	-13.6
9.5	-23.8	-12.6	-11.2
9.6	-22.4	-12.6	-9.8
9.7	-27.1	-12.6	-14.5
9.8	-34.2	-12.6	-21.6
9.9	-29.9	-12.6	-17.2
10.0	-26.3	-12.6	-13.7



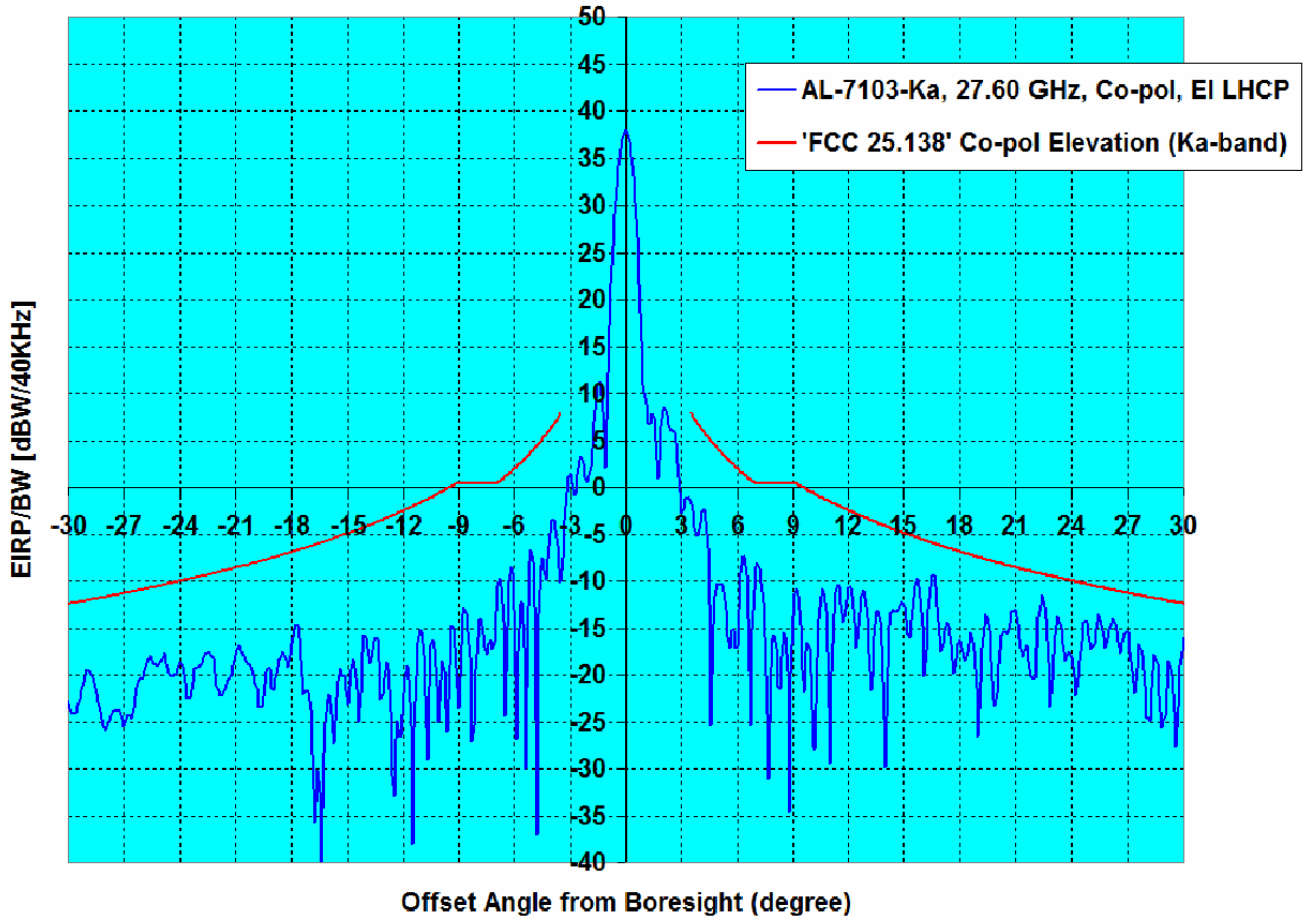
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 27.60 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	47.40	-9.52	-1.55	3.00	0.20

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -9.52 dBW/40KHz to Input and
 37.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in Az LHCP
 Min BW of 2.26 MHz in case of 10W BUC**



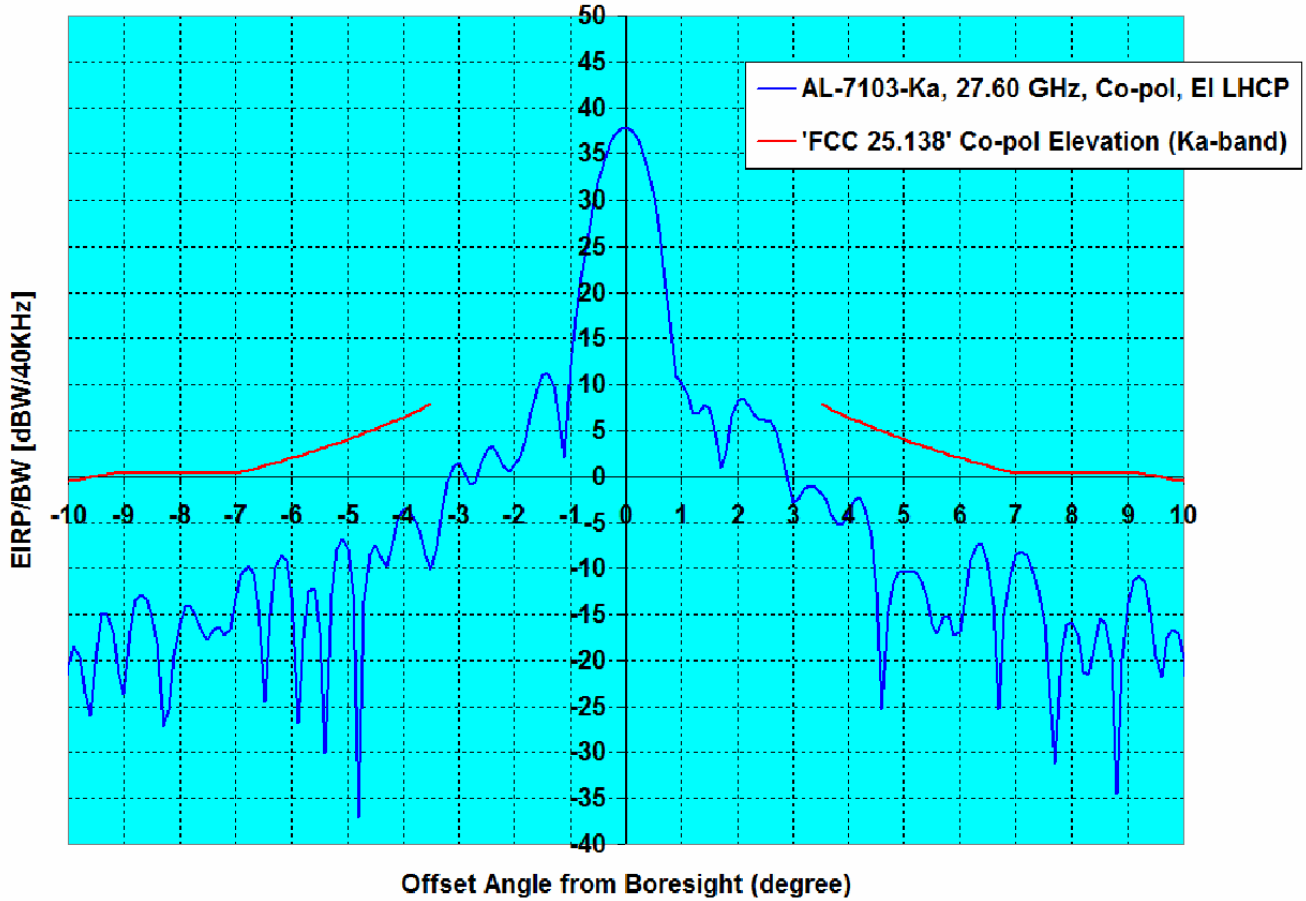
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Freq., Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (2° to 10°)	± (10° to 180°)	%
AL-7103-Ka, 27.60 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	47.40	-9.52	-1.55	3.00	0.20

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -9.52 dBW/40KHz to Input and
 37.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in EI LHCP
 Min BW of 2.26 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]			± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 27.60 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	47.40	-9.52	-8.18	-2.21	0.00

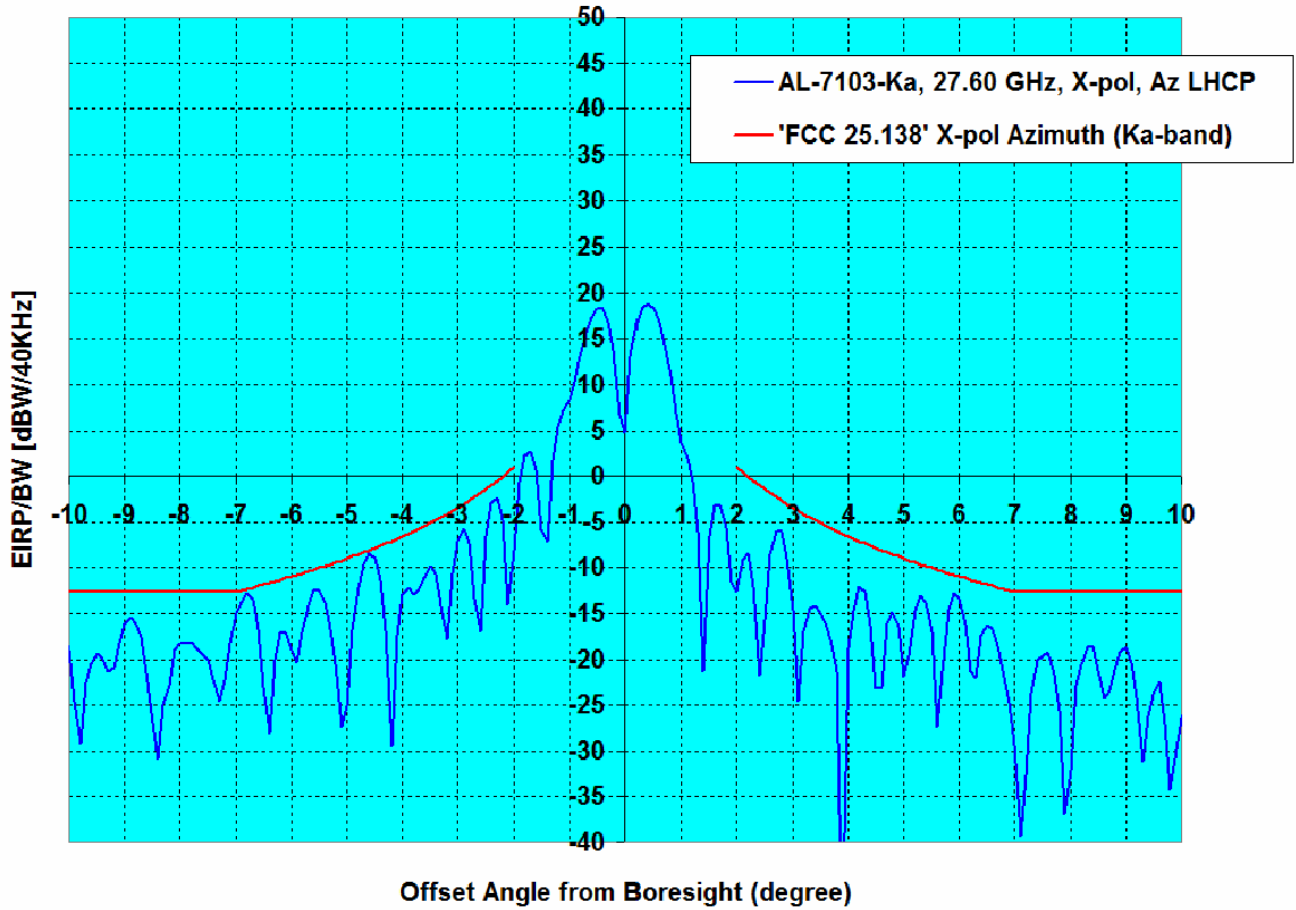
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -9.52 dBW/40KHz to Input and
 37.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in EI LHCP
 Min BW of 2.26 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 27.60 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	47.40	-9.52	-8.18	-2.21	0.00

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd, X-pol, Azimuth LHCP

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -9.52 dBW/40KHz to Input and
 37.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in Az LHCP
 Min BW of 2.26 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7103-Ka, 27.60 GHz, X-pol, Az LHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	47.40	-9.52	-0.30	-0.30	0.00

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-179.0	-40.0	-10.5	-29.5
-178.0	-40.3	-10.5	-29.8
-177.0	-34.9	-10.5	-24.4
-176.0	-42.4	-10.5	-31.9
-175.0	-41.9	-10.5	-31.4
-174.0	-38.9	-10.5	-28.4
-173.0	-46.7	-10.5	-36.2
-172.0	-38.7	-10.5	-28.2
-171.0	-48.8	-10.5	-38.3
-170.0	-40.6	-10.5	-30.1
-169.0	-38.2	-10.5	-27.7
-168.0	-42.6	-10.5	-32.1
-167.0	-53.8	-10.5	-43.3
-166.0	-43.3	-10.5	-32.8
-165.0	-36.9	-10.5	-26.4
-164.0	-50.5	-10.5	-40.0
-163.0	-49.0	-10.5	-38.5
-162.0	-42.0	-10.5	-31.5
-161.0	-42.4	-10.5	-31.9
-160.0	-38.9	-10.5	-28.4
-159.0	-44.1	-10.5	-33.6
-158.0	-43.3	-10.5	-32.8
-157.0	-35.9	-10.5	-25.4
-156.0	-42.3	-10.5	-31.8
-155.0	-50.0	-10.5	-39.5
-154.0	-34.2	-10.5	-23.7
-153.0	-45.2	-10.5	-34.7
-152.0	-43.8	-10.5	-33.3
-151.0	-46.2	-10.5	-35.7
-150.0	-39.8	-10.5	-29.3
-149.0	-44.7	-10.5	-34.2
-148.0	-49.8	-10.5	-39.3
-147.0	-39.4	-10.5	-28.9
-146.0	-44.3	-10.5	-33.8
-145.0	-41.3	-10.5	-30.8
-144.0	-38.5	-10.5	-28.0
-143.0	-39.8	-10.5	-29.3
-142.0	-44.6	-10.5	-34.1
-141.0	-40.4	-10.5	-29.9
-140.0	-45.1	-10.5	-34.6
-139.0	-45.9	-10.5	-35.4
-138.0	-45.1	-10.5	-34.6
-137.0	-39.7	-10.5	-29.2
-136.0	-41.2	-10.5	-30.7
-135.0	-46.4	-10.5	-35.9
-134.0	-48.6	-10.5	-38.1
-133.0	-40.6	-10.5	-30.1
-132.0	-39.1	-10.5	-28.6
-131.0	-50.4	-10.5	-39.9
-130.0	-38.3	-10.5	-27.8
-129.0	-44.1	-10.5	-33.6
-128.0	-38.7	-10.5	-28.2
-127.0	-39.0	-10.5	-28.5
-126.0	-48.7	-10.5	-38.2
-125.0	-41.0	-10.5	-30.5
-124.0	-49.9	-10.5	-39.4
-123.0	-48.9	-10.5	-38.4
-122.0	-42.7	-10.5	-32.2
-121.0	-40.6	-10.5	-30.1
-120.0	-58.8	-10.5	-48.3

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.3		
1.0	11.3		
2.0	-1.6	11.0	-12.5
3.0	-0.3	6.6	-6.9
4.0	-2.5	3.4	-5.9
5.0	-9.5	1.0	-10.5
6.0	-15.5	-1.0	-14.6
7.0	-17.5	-2.6	-14.9
8.0	-15.6	-2.6	-12.9
9.0	-18.6	-2.6	-15.9
10.0	-21.1	-3.5	-17.6
11.0	-18.8	-4.5	-14.2
12.0	-19.5	-5.5	-14.0
13.0	-18.9	-6.3	-12.5
14.0	-17.7	-7.2	-10.6
15.0	-51.3	-7.9	-43.4
16.0	-28.6	-8.6	-20.0
17.0	-21.3	-9.3	-12.0
18.0	-20.4	-9.9	-10.5
19.0	-21.4	-10.5	-10.9
20.0	-22.1	-11.0	-11.0
21.0	-18.7	-11.6	-7.2
22.0	-23.0	-12.1	-11.0
23.0	-20.7	-12.5	-8.2
24.0	-18.7	-13.0	-5.7
25.0	-19.1	-13.4	-5.6
26.0	-20.5	-13.9	-6.6
27.0	-19.3	-14.3	-5.0
28.0	-23.1	-14.7	-8.4
29.0	-20.9	-15.1	-5.8
30.0	-20.6	-15.4	-5.2
31.0	-29.2	-15.8	-13.4
32.0	-29.9	-16.1	-13.7
33.0	-31.0	-16.5	-14.6
34.0	-28.5	-16.8	-11.7
35.0	-25.8	-17.1	-8.7
36.0	-28.8	-17.4	-11.4
37.0	-33.4	-17.7	-15.7
38.0	-42.9	-18.0	-24.9
39.0	-34.5	-18.3	-16.2
40.0	-28.9	-18.6	-10.4
41.0	-27.4	-18.8	-8.6
42.0	-26.0	-19.1	-6.9
43.0	-34.4	-19.3	-15.1
44.0	-31.6	-19.6	-12.1
45.0	-30.6	-19.8	-10.8
46.0	-32.8	-20.1	-12.7
47.0	-24.5	-20.3	-4.2
48.0	-26.9	-20.5	-6.4
49.0	-46.8	-10.5	-36.3
50.0	-33.1	-10.5	-22.6
51.0	-40.3	-10.5	-29.8
52.0	-41.0	-10.5	-30.5
53.0	-30.6	-10.5	-20.1
54.0	-32.2	-10.5	-21.7
55.0	-36.1	-10.5	-25.6
56.0	-30.1	-10.5	-19.6
57.0	-36.0	-10.5	-25.5
58.0	-53.0	-10.5	-42.5
59.0	-37.0	-10.5	-26.5

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-41.1	-10.5	-30.6
-118.0	-33.3	-10.5	-22.8
-117.0	-40.3	-10.5	-29.8
-116.0	-39.4	-10.5	-28.9
-115.0	-42.9	-10.5	-32.4
-114.0	-43.5	-10.5	-33.0
-113.0	-42.1	-10.5	-31.6
-112.0	-45.5	-10.5	-35.0
-111.0	-38.9	-10.5	-28.4
-110.0	-45.2	-10.5	-34.7
-109.0	-40.4	-10.5	-29.9
-108.0	-34.9	-10.5	-24.4
-107.0	-33.7	-10.5	-23.2
-106.0	-30.5	-10.5	-20.0
-105.0	-27.5	-10.5	-17.0
-104.0	-27.1	-10.5	-16.6
-103.0	-25.7	-10.5	-15.2
-102.0	-25.6	-10.5	-15.1
-101.0	-26.3	-10.5	-15.8
-100.0	-28.0	-10.5	-17.5
-99.0	-25.3	-10.5	-14.8
-98.0	-24.9	-10.5	-14.4
-97.0	-26.3	-10.5	-15.8
-96.0	-28.1	-10.5	-17.6
-95.0	-30.9	-10.5	-20.4
-94.0	-37.9	-10.5	-27.4
-93.0	-29.7	-10.5	-19.2
-92.0	-34.2	-10.5	-23.7
-91.0	-31.3	-10.5	-20.8
-90.0	-29.2	-10.5	-18.7
-89.0	-32.7	-10.5	-22.2
-88.0	-32.9	-10.5	-22.4
-87.0	-35.4	-10.5	-24.9
-86.0	-32.9	-10.5	-22.4
-85.0	-29.8	-10.5	-19.3
-84.0	-30.1	-10.5	-19.6
-83.0	-33.5	-10.5	-23.0
-82.0	-31.9	-10.5	-21.4
-81.0	-27.2	-10.5	-16.7
-80.0	-27.6	-10.5	-17.1
-79.0	-28.0	-10.5	-17.5
-78.0	-26.0	-10.5	-15.5
-77.0	-28.8	-10.5	-18.3
-76.0	-34.5	-10.5	-24.0
-75.0	-31.9	-10.5	-21.4
-74.0	-25.0	-10.5	-14.5
-73.0	-38.9	-10.5	-28.4
-72.0	-27.9	-10.5	-17.4
-71.0	-45.7	-10.5	-35.2
-70.0	-37.1	-10.5	-26.6
-69.0	-31.7	-10.5	-21.2
-68.0	-27.8	-10.5	-17.3
-67.0	-29.4	-10.5	-18.9
-66.0	-31.2	-10.5	-20.7
-65.0	-42.2	-10.5	-31.7
-64.0	-34.1	-10.5	-23.6
-63.0	-26.7	-10.5	-16.2
-62.0	-24.6	-10.5	-14.1
-61.0	-28.7	-10.5	-18.2
-60.0	-31.6	-10.5	-21.1
-59.0	-37.7	-10.5	-27.2
-58.0	-29.7	-10.5	-19.2
-57.0	-29.2	-10.5	-18.7

60.0	-26.8	-10.5	-16.3
61.0	-29.1	-10.5	-18.6
62.0	-40.2	-10.5	-29.7
63.0	-37.1	-10.5	-26.6
64.0	-44.7	-10.5	-34.2
65.0	-26.5	-10.5	-16.0
66.0	-33.5	-10.5	-23.0
67.0	-30.9	-10.5	-20.4
68.0	-31.1	-10.5	-20.6
69.0	-34.8	-10.5	-24.3
70.0	-34.7	-10.5	-24.2
71.0	-31.4	-10.5	-20.9
72.0	-43.1	-10.5	-32.6
73.0	-29.2	-10.5	-18.7
74.0	-29.3	-10.5	-18.8
75.0	-29.0	-10.5	-18.5
76.0	-33.1	-10.5	-22.6
77.0	-26.9	-10.5	-16.4
78.0	-26.3	-10.5	-15.8
79.0	-33.9	-10.5	-23.4
80.0	-35.0	-10.5	-24.5
81.0	-39.8	-10.5	-29.3
82.0	-31.1	-10.5	-20.6
83.0	-34.2	-10.5	-23.7
84.0	-42.8	-10.5	-32.3
85.0	-41.9	-10.5	-31.4
86.0	-37.7	-10.5	-27.2
87.0	-29.9	-10.5	-19.4
88.0	-32.1	-10.5	-21.6
89.0	-38.0	-10.5	-27.5
90.0	-39.1	-10.5	-28.6
91.0	-31.6	-10.5	-21.1
92.0	-34.7	-10.5	-24.2
93.0	-37.5	-10.5	-27.0
94.0	-35.4	-10.5	-24.9
95.0	-41.7	-10.5	-31.2
96.0	-39.4	-10.5	-28.9
97.0	-36.6	-10.5	-26.1
98.0	-36.8	-10.5	-26.3
99.0	-33.8	-10.5	-23.3
100.0	-46.0	-10.5	-35.5
101.0	-33.9	-10.5	-23.4
102.0	-43.5	-10.5	-33.0
103.0	-35.4	-10.5	-24.9
104.0	-39.6	-10.5	-29.1
105.0	-45.4	-10.5	-34.9
106.0	-33.0	-10.5	-22.5
107.0	-42.8	-10.5	-32.3
108.0	-36.9	-10.5	-26.4
109.0	-36.1	-10.5	-25.6
110.0	-46.4	-10.5	-35.9
111.0	-37.1	-10.5	-26.6
112.0	-37.4	-10.5	-26.9
113.0	-37.0	-10.5	-26.5
114.0	-39.3	-10.5	-28.8
115.0	-35.4	-10.5	-24.9
116.0	-37.2	-10.5	-26.7
117.0	-41.7	-10.5	-31.2
118.0	-35.6	-10.5	-25.1
119.0	-32.3	-10.5	-21.8
120.0	-35.7	-10.5	-25.2
121.0	-31.7	-10.5	-21.2
122.0	-43.7	-10.5	-33.2

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-28.5	-10.5	-18.0
-55.0	-26.2	-10.5	-15.7
-54.0	-28.1	-10.5	-17.6
-53.0	-28.0	-10.5	-17.5
-52.0	-25.3	-10.5	-14.8
-51.0	-29.8	-10.5	-19.3
-50.0	-34.5	-10.5	-24.0
-49.0	-31.6	-10.5	-21.1
-48.0	-26.4	-20.5	-5.9
-47.0	-31.5	-20.3	-11.2
-46.0	-24.1	-20.1	-4.0
-45.0	-28.5	-19.8	-8.7
-44.0	-25.1	-19.6	-5.5
-43.0	-22.4	-19.3	-3.1
-42.0	-23.0	-19.1	-3.9
-41.0	-23.1	-18.8	-4.3
-40.0	-24.7	-18.6	-6.1
-39.0	-20.0	-18.3	-1.7
-38.0	-17.5	-18.0	0.5
-37.0	-23.4	-17.7	-5.7
-36.0	-25.3	-17.4	-7.9
-35.0	-24.0	-17.1	-6.9
-34.0	-17.4	-16.8	-0.6
-33.0	-24.4	-16.5	-7.9
-32.0	-21.3	-16.1	-5.2
-31.0	-19.3	-15.8	-3.5
-30.0	-25.0	-15.4	-9.5
-29.0	-28.5	-15.1	-13.4
-28.0	-19.3	-14.7	-4.6
-27.0	-18.6	-14.3	-4.3
-26.0	-20.5	-13.9	-6.7
-25.0	-19.9	-13.4	-6.4
-24.0	-24.2	-13.0	-11.2
-23.0	-24.0	-12.5	-11.4
-22.0	-18.1	-12.1	-6.0
-21.0	-15.9	-11.6	-4.4
-20.0	-37.5	-11.0	-26.5
-19.0	-17.5	-10.5	-7.0
-18.0	-22.2	-9.9	-12.3
-17.0	-19.2	-9.3	-10.0
-16.0	-13.3	-8.6	-4.7
-15.0	-16.4	-7.9	-8.5
-14.0	-31.4	-7.2	-24.3
-13.0	-13.2	-6.3	-6.9
-12.0	-17.4	-5.5	-11.9
-11.0	-30.1	-4.5	-25.5
-10.0	-15.3	-3.5	-11.8
-9.0	-19.2	-2.6	-16.6
-8.0	-18.2	-2.6	-15.5
-7.0	-11.3	-2.6	-8.7
-6.0	-23.0	-1.0	-22.0
-5.0	-7.5	1.0	-8.5
-4.0	-8.5	3.4	-12.0
-3.0	-2.7	6.6	-9.2
-2.0	6.2	11.0	-4.8
-1.0	7.2		
0.0	36.3		

123.0	-34.2	-10.5	-23.7
124.0	-48.6	-10.5	-38.1
125.0	-33.9	-10.5	-23.4
126.0	-33.7	-10.5	-23.2
127.0	-47.4	-10.5	-36.9
128.0	-35.6	-10.5	-25.1
129.0	-42.0	-10.5	-31.5
130.0	-36.8	-10.5	-26.3
131.0	-41.4	-10.5	-30.9
132.0	-36.5	-10.5	-26.0
133.0	-34.7	-10.5	-24.2
134.0	-33.9	-10.5	-23.4
135.0	-31.7	-10.5	-21.2
136.0	-49.6	-10.5	-39.1
137.0	-33.8	-10.5	-23.3
138.0	-32.0	-10.5	-21.5
139.0	-37.3	-10.5	-26.8
140.0	-34.9	-10.5	-24.4
141.0	-33.0	-10.5	-22.5
142.0	-37.3	-10.5	-26.8
143.0	-36.5	-10.5	-26.0
144.0	-42.7	-10.5	-32.2
145.0	-37.3	-10.5	-26.8
146.0	-32.1	-10.5	-21.6
147.0	-34.3	-10.5	-23.8
148.0	-47.1	-10.5	-36.6
149.0	-44.2	-10.5	-33.7
150.0	-41.6	-10.5	-31.1
151.0	-40.0	-10.5	-29.5
152.0	-35.3	-10.5	-24.8
153.0	-35.0	-10.5	-24.5
154.0	-38.6	-10.5	-28.1
155.0	-33.0	-10.5	-22.5
156.0	-39.1	-10.5	-28.6
157.0	-35.4	-10.5	-24.9
158.0	-32.8	-10.5	-22.3
159.0	-34.3	-10.5	-23.8
160.0	-36.6	-10.5	-26.1
161.0	-48.5	-10.5	-38.0
162.0	-34.3	-10.5	-23.8
163.0	-33.9	-10.5	-23.4
164.0	-36.4	-10.5	-25.9
165.0	-37.1	-10.5	-26.6
166.0	-34.0	-10.5	-23.5
167.0	-35.0	-10.5	-24.5
168.0	-32.5	-10.5	-22.0
169.0	-39.4	-10.5	-28.9
170.0	-45.8	-10.5	-35.3
171.0	-30.1	-10.5	-19.6
172.0	-34.3	-10.5	-23.8
173.0	-37.9	-10.5	-27.4
174.0	-31.8	-10.5	-21.3
175.0	-50.0	-10.5	-39.5
176.0	-38.0	-10.5	-27.5
177.0	-45.0	-10.5	-34.5
178.0	-37.9	-10.5	-27.4
179.0	-38.0	-10.5	-27.5

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-15.3	-3.5	-11.8
-9.9	-15.3	-3.4	-11.9
-9.8	-16.7	-3.3	-13.5
-9.7	-20.8	-3.2	-17.7
-9.6	-21.8	-3.1	-18.8
-9.5	-17.4	-2.9	-14.5
-9.4	-13.7	-2.8	-10.8
-9.3	-12.2	-2.7	-9.5
-9.2	-12.8	-2.6	-10.2
-9.1	-14.1	-2.6	-11.4
-9.0	-19.2	-2.6	-16.6
-8.9	-46.6	-2.6	-43.9
-8.8	-20.5	-2.6	-17.9
-8.7	-15.0	-2.6	-12.4
-8.6	-13.5	-2.6	-10.9
-8.5	-13.8	-2.6	-11.1
-8.4	-16.0	-2.6	-13.4
-8.3	-21.1	-2.6	-18.5
-8.2	-38.6	-2.6	-35.9
-8.1	-24.1	-2.6	-21.5
-8.0	-18.2	-2.6	-15.5
-7.9	-16.1	-2.6	-13.5
-7.8	-15.1	-2.6	-12.5
-7.7	-16.0	-2.6	-13.3
-7.6	-18.0	-2.6	-15.3
-7.5	-19.5	-2.6	-16.8
-7.4	-16.6	-2.6	-13.9
-7.3	-13.4	-2.6	-10.7
-7.2	-10.9	-2.6	-8.3
-7.1	-10.5	-2.6	-7.9
-7.0	-11.3	-2.6	-8.7
-6.9	-14.4	-2.5	-11.9
-6.8	-23.7	-2.3	-21.4
-6.7	-20.6	-2.2	-18.5
-6.6	-12.7	-2.0	-10.7
-6.5	-9.5	-1.8	-7.7
-6.4	-8.6	-1.7	-6.9
-6.3	-9.1	-1.5	-7.6
-6.2	-11.3	-1.3	-10.0
-6.1	-15.5	-1.1	-14.4
-6.0	-23.0	-1.0	-22.0
-5.9	-30.8	-0.8	-30.0
-5.8	-33.9	-0.6	-33.3
-5.7	-28.2	-0.4	-27.8
-5.6	-17.0	-0.2	-16.8
-5.5	-11.4	0.0	-11.4
-5.4	-9.2	0.2	-9.3
-5.3	-7.8	0.4	-8.2
-5.2	-7.4	0.6	-8.0
-5.1	-7.4	0.8	-8.2
-5.0	-7.5	1.0	-8.5
-4.9	-7.5	1.2	-8.7
-4.8	-8.2	1.5	-9.7
-4.7	-10.5	1.7	-12.2
-4.6	-15.6	1.9	-17.5
-4.5	-15.5	2.2	-17.6
-4.4	-10.2	2.4	-12.6
-4.3	-7.7	2.7	-10.3
-4.2	-6.9	2.9	-9.9
-4.1	-7.7	3.2	-10.9

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.3		
0.1	36.1		
0.2	35.4		
0.3	34.3		
0.4	32.6		
0.5	30.4		
0.6	27.6		
0.7	24.3		
0.8	20.5		
0.9	16.3		
1.0	11.3		
1.1	4.2		
1.2	-1.6		
1.3	5.1		
1.4	7.8		
1.5	8.3		
1.6	7.2		
1.7	5.0		
1.8	2.1		
1.9	0.0		
2.0	-1.6	11.0	-12.5
2.1	-2.4	10.4	-12.9
2.2	-1.9	9.9	-11.9
2.3	0.4	9.5	-9.1
2.4	2.1	9.0	-6.9
2.5	2.8	8.6	-5.7
2.6	2.2	8.1	-5.9
2.7	0.7	7.7	-7.0
2.8	-0.8	7.3	-8.1
2.9	-1.1	6.9	-8.0
3.0	-0.3	6.6	-6.9
3.1	-0.5	6.2	-6.7
3.2	-1.9	5.9	-7.8
3.3	-4.3	5.5	-9.9
3.4	-6.8	5.2	-12.1
3.5	-7.9	4.9	-12.8
3.6	-6.4	4.6	-11.0
3.7	-4.7	4.3	-9.0
3.8	-3.1	4.0	-7.1
3.9	-2.4	3.7	-6.1
4.0	-2.5	3.4	-5.9
4.1	-3.8	3.2	-7.0
4.2	-6.1	2.9	-9.0
4.3	-9.1	2.7	-11.8
4.4	-10.1	2.4	-12.5
4.5	-9.6	2.2	-11.7
4.6	-9.9	1.9	-11.8
4.7	-13.0	1.7	-14.7
4.8	-22.0	1.5	-23.5
4.9	-14.8	1.2	-16.0
5.0	-9.5	1.0	-10.5
5.1	-8.3	0.8	-9.1
5.2	-8.9	0.6	-9.5
5.3	-11.8	0.4	-12.2
5.4	-16.6	0.2	-16.8
5.5	-16.2	0.0	-16.2
5.6	-12.6	-0.2	-12.4
5.7	-12.7	-0.4	-12.3
5.8	-16.0	-0.6	-15.4
5.9	-29.5	-0.8	-28.7

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-8.5	3.4	-12.0
-3.9	-7.0	3.7	-10.7
-3.8	-4.3	4.0	-8.4
-3.7	-2.3	4.3	-6.6
-3.6	-1.2	4.6	-5.8
-3.5	-0.6	4.9	-5.5
-3.4	-0.2	5.2	-5.5
-3.3	-0.1	5.5	-5.7
-3.2	-0.3	5.9	-6.1
-3.1	-1.4	6.2	-7.6
-3.0	-2.7	6.6	-9.2
-2.9	-2.3	6.9	-9.2
-2.8	0.3	7.3	-7.0
-2.7	2.4	7.7	-5.4
-2.6	3.4	8.1	-4.8
-2.5	3.7	8.6	-4.8
-2.4	4.0	9.0	-5.0
-2.3	4.8	9.5	-4.6
-2.2	6.1	9.9	-3.9
-2.1	6.8	10.4	-3.7
-2.0	6.2	11.0	-4.8
-1.9	3.8		
-1.8	-1.7		
-1.7	-1.0		
-1.6	4.4		
-1.5	6.8		
-1.4	6.9		
-1.3	5.3		
-1.2	4.0		
-1.1	5.6		
-1.0	7.2		
-0.9	8.8		
-0.8	14.4		
-0.7	20.5		
-0.6	25.3		
-0.5	28.9		
-0.4	31.7		
-0.3	33.7		
-0.2	35.1		
-0.1	35.9		
0.0	36.3		

6.0	-15.5	-1.0	-14.6
6.1	-10.8	-1.1	-9.7
6.2	-9.0	-1.3	-7.7
6.3	-9.4	-1.5	-7.9
6.4	-12.1	-1.7	-10.4
6.5	-18.0	-1.8	-16.2
6.6	-32.3	-2.0	-30.3
6.7	-20.9	-2.2	-18.8
6.8	-19.1	-2.3	-16.8
6.9	-18.4	-2.5	-15.9
7.0	-17.5	-2.6	-14.9
7.1	-15.3	-2.6	-12.7
7.2	-14.6	-2.6	-12.0
7.3	-16.3	-2.6	-13.6
7.4	-22.6	-2.6	-20.0
7.5	-24.8	-2.6	-22.2
7.6	-17.9	-2.6	-15.3
7.7	-14.6	-2.6	-12.0
7.8	-13.8	-2.6	-11.1
7.9	-13.9	-2.6	-11.3
8.0	-15.6	-2.6	-12.9
8.1	-17.3	-2.6	-14.6
8.2	-19.9	-2.6	-17.2
8.3	-22.4	-2.6	-19.8
8.4	-36.5	-2.6	-33.9
8.5	-22.8	-2.6	-20.1
8.6	-16.1	-2.6	-13.5
8.7	-13.7	-2.6	-11.0
8.8	-12.8	-2.6	-10.2
8.9	-14.4	-2.6	-11.8
9.0	-18.6	-2.6	-15.9
9.1	-26.7	-2.6	-24.0
9.2	-21.4	-2.6	-18.8
9.3	-16.9	-2.7	-14.2
9.4	-16.4	-2.8	-13.6
9.5	-18.3	-2.9	-15.3
9.6	-24.1	-3.1	-21.0
9.7	-24.8	-3.2	-21.6
9.8	-19.9	-3.3	-16.6
9.9	-18.7	-3.4	-15.4
10.0	-21.1	-3.5	-17.6

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-23.6	-12.4	-11.2
-29.5	-21.9	-12.2	-9.7
-29.0	-21.4	-12.1	-9.3
-28.5	-20.9	-11.9	-9.0
-28.0	-21.8	-11.7	-10.1
-27.5	-23.9	-11.5	-12.4
-27.0	-25.3	-11.3	-14.0
-26.5	-24.2	-11.1	-13.1
-26.0	-22.3	-10.9	-11.4
-25.5	-21.2	-10.7	-10.5
-25.0	-21.0	-10.4	-10.6
-24.5	-24.6	-10.2	-14.3
-24.0	-23.9	-10.0	-13.9
-23.5	-23.7	-9.8	-13.9
-23.0	-23.5	-9.5	-13.9
-22.5	-27.7	-9.3	-18.4
-22.0	-38.5	-9.1	-29.4
-21.5	-28.5	-8.8	-19.7
-21.0	-23.4	-8.6	-14.8
-20.5	-23.7	-8.3	-15.4
-20.0	-28.3	-8.0	-20.3
-19.5	-25.3	-7.8	-17.5
-19.0	-24.2	-7.5	-16.8
-18.5	-19.3	-7.2	-12.1
-18.0	-21.4	-6.9	-14.5
-17.5	-22.7	-6.6	-16.1
-17.0	-25.4	-6.3	-19.1
-16.5	-30.8	-5.9	-24.8
-16.0	-34.1	-5.6	-28.5
-15.5	-26.0	-5.3	-20.7
-15.0	-27.1	-4.9	-22.2
-14.5	-28.3	-4.5	-23.7
-14.0	-21.0	-4.2	-16.8
-13.5	-18.3	-3.8	-14.5
-13.0	-21.7	-3.3	-18.4
-12.5	-34.4	-2.9	-31.5
-12.0	-21.6	-2.5	-19.1
-11.5	-28.4	-2.0	-26.4
-11.0	-18.9	-1.5	-17.4
-10.5	-19.5	-1.0	-18.5
-10.0	-22.2	-0.5	-21.7
-9.5	-20.4	0.1	-20.4
-9.0	-27.3	0.4	-27.7
-8.5	-13.7	0.4	-14.0
-8.0	-14.2	0.4	-14.6
-7.5	-21.4	0.4	-21.8
-7.0	-13.7	0.4	-14.0
-6.5	-18.7	1.2	-19.9
-6.0	-15.4	2.0	-17.4
-5.5	-15.8	3.0	-18.8
-5.0	-12.4	4.0	-16.4
-4.5	-10.1	5.2	-15.3
-4.0	-6.0	6.4	-12.5
-3.5	-8.5	7.9	-16.4
-3.0	-0.4		
-2.5	-0.1		
-2.0	-1.0		
-1.5	9.3		
-1.0	8.5		
-0.5	30.4		
0.0	36.3		

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.3		
0.5	29.4		
1.0	7.1		
1.5	5.4		
2.0	6.1		
2.5	4.5		
3.0	-5.0		
3.5	-2.6	7.9	-10.5
4.0	-4.8	6.4	-11.2
4.5	-12.3	5.2	-17.5
5.0	-12.6	4.0	-16.6
5.5	-10.4	3.0	-13.4
6.0	-17.2	2.0	-19.2
6.5	-11.5	1.2	-12.7
7.0	-9.8	0.4	-10.2
7.5	-17.9	0.4	-18.3
8.0	-27.0	0.4	-27.4
8.5	-13.8	0.4	-14.2
9.0	-17.7	0.4	-18.1
9.5	-28.0	0.1	-28.1
10.0	-14.2	-0.5	-13.7
10.5	-15.2	-1.0	-14.1
11.0	-25.9	-1.5	-24.4
11.5	-14.2	-2.0	-12.1
12.0	-16.6	-2.5	-14.1
12.5	-20.4	-2.9	-17.5
13.0	-14.5	-3.3	-11.1
13.5	-18.8	-3.8	-15.0
14.0	-15.9	-4.2	-11.7
14.5	-22.2	-4.5	-17.7
15.0	-11.4	-4.9	-6.5
15.5	-17.0	-5.3	-11.8
16.0	-18.0	-5.6	-12.4
16.5	-14.3	-5.9	-8.4
17.0	-13.5	-6.3	-7.2
17.5	-15.4	-6.6	-8.9
18.0	-14.7	-6.9	-7.8
18.5	-27.0	-7.2	-19.9
19.0	-21.0	-7.5	-13.6
19.5	-22.8	-7.8	-15.0
20.0	-23.7	-8.0	-15.7
20.5	-29.1	-8.3	-20.8
21.0	-19.9	-8.6	-11.4
21.5	-24.8	-8.8	-16.0
22.0	-24.5	-9.1	-15.5
22.5	-18.0	-9.3	-8.7
23.0	-20.4	-9.5	-10.9
23.5	-22.7	-9.8	-12.9
24.0	-21.2	-10.0	-11.2
24.5	-23.5	-10.2	-13.3
25.0	-24.5	-10.4	-14.1
25.5	-21.9	-10.7	-11.2
26.0	-19.9	-10.9	-9.0
26.5	-23.7	-11.1	-12.7
27.0	-19.7	-11.3	-8.4
27.5	-21.0	-11.5	-9.5
28.0	-30.4	-11.7	-18.7
28.5	-21.8	-11.9	-9.9
29.0	-27.4	-12.1	-15.4
29.5	-33.6	-12.2	-21.4
30.0	-21.6	-12.4	-9.2

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-22.2	-0.5	-21.7
-9.9	-20.6	-0.4	-20.2
-9.8	-21.9	-0.3	-21.6
-9.7	-25.0	-0.2	-24.9
-9.6	-27.4	-0.1	-27.4
-9.5	-20.4	0.1	-20.4
-9.4	-17.9	0.2	-18.0
-9.3	-16.9	0.3	-17.2
-9.2	-18.4	0.4	-18.7
-9.1	-23.5	0.4	-23.9
-9.0	-27.3	0.4	-27.7
-8.9	-18.8	0.4	-19.2
-8.8	-14.3	0.4	-14.7
-8.7	-12.5	0.4	-12.9
-8.6	-12.4	0.4	-12.7
-8.5	-13.7	0.4	-14.0
-8.4	-17.3	0.4	-17.7
-8.3	-25.9	0.4	-26.3
-8.2	-24.0	0.4	-24.3
-8.1	-17.0	0.4	-17.4
-8.0	-14.2	0.4	-14.6
-7.9	-13.6	0.4	-14.0
-7.8	-14.7	0.4	-15.1
-7.7	-18.6	0.4	-18.9
-7.6	-23.6	0.4	-23.9
-7.5	-21.4	0.4	-21.8
-7.4	-16.9	0.4	-17.3
-7.3	-15.2	0.4	-15.6
-7.2	-14.1	0.4	-14.5
-7.1	-14.2	0.4	-14.6
-7.0	-13.7	0.4	-14.0
-6.9	-13.5	0.5	-14.0
-6.8	-14.5	0.7	-15.2
-6.7	-18.3	0.8	-19.2
-6.6	-32.0	1.0	-33.1
-6.5	-18.7	1.2	-19.9
-6.4	-12.7	1.3	-14.0
-6.3	-10.4	1.5	-11.9
-6.2	-10.2	1.7	-11.9
-6.1	-11.7	1.9	-13.6
-6.0	-15.4	2.0	-17.4
-5.9	-19.5	2.2	-21.7
-5.8	-17.0	2.4	-19.4
-5.7	-14.4	2.6	-17.0
-5.6	-14.3	2.8	-17.1
-5.5	-15.8	3.0	-18.8
-5.4	-15.2	3.2	-18.4
-5.3	-13.0	3.4	-16.4
-5.2	-11.0	3.6	-14.6
-5.1	-10.9	3.8	-14.7
-5.0	-12.4	4.0	-16.4
-4.9	-18.3	4.2	-22.5
-4.8	-23.1	4.5	-27.5
-4.7	-14.8	4.7	-19.5
-4.6	-11.2	4.9	-16.1
-4.5	-10.1	5.2	-15.3
-4.4	-9.9	5.4	-15.3
-4.3	-9.7	5.7	-15.4
-4.2	-8.6	5.9	-14.5
-4.1	-7.1	6.2	-13.3

27.60 GHz @ -10.94 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.3		
0.1	35.9		
0.2	35.2		
0.3	33.8		
0.4	31.9		
0.5	29.4		
0.6	26.1		
0.7	21.8		
0.8	16.2		
0.9	10.2		
1.0	7.1		
1.1	6.6		
1.2	5.8		
1.3	5.6		
1.4	5.9		
1.5	5.4		
1.6	2.9		
1.7	-2.3		
1.8	-2.0		
1.9	3.3		
2.0	6.1		
2.1	7.0		
2.2	6.8		
2.3	5.9		
2.4	5.1		
2.5	4.5		
2.6	4.0		
2.7	2.8		
2.8	0.8		
2.9	-2.2		
3.0	-5.0		
3.1	-4.3		
3.2	-2.4		
3.3	-1.6		
3.4	-1.8		
3.5	-2.6	7.9	-10.5
3.6	-3.7	7.6	-11.3
3.7	-5.0	7.3	-12.3
3.8	-5.8	7.0	-12.8
3.9	-5.6	6.7	-12.3
4.0	-4.8	6.4	-11.2
4.1	-4.1	6.2	-10.3
4.2	-4.2	5.9	-10.1
4.3	-5.6	5.7	-11.2
4.4	-7.8	5.4	-13.2
4.5	-12.3	5.2	-17.5
4.6	-23.7	4.9	-28.6
4.7	-20.4	4.7	-25.1
4.8	-14.5	4.5	-18.9
4.9	-12.9	4.2	-17.1
5.0	-12.6	4.0	-16.6
5.1	-13.5	3.8	-17.3
5.2	-13.7	3.6	-17.3
5.3	-12.3	3.4	-15.7
5.4	-11.3	3.2	-14.5
5.5	-10.4	3.0	-13.4
5.6	-9.9	2.8	-12.7
5.7	-10.3	2.6	-12.9
5.8	-12.1	2.4	-14.5
5.9	-14.9	2.2	-17.1

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	-6.0	6.4	-12.5
-3.9	-5.6	6.7	-12.3
-3.8	-5.8	7.0	-12.9
-3.7	-6.7	7.3	-14.0
-3.6	-8.2	7.6	-15.8
-3.5	-8.5	7.9	-16.4
-3.4	-6.0		
-3.3	-3.3		
-3.2	-1.2		
-3.1	-0.3		
-3.0	-0.4		
-2.9	-1.0		
-2.8	-1.5		
-2.7	-1.0		
-2.6	-0.3		
-2.5	-0.1		
-2.4	-0.8		
-2.3	-2.5		
-2.2	-4.0		
-2.1	-3.4		
-2.0	-1.0		
-1.9	1.8		
-1.8	4.5		
-1.7	6.8		
-1.6	8.5		
-1.5	9.3		
-1.4	8.9		
-1.3	6.9		
-1.2	1.8		
-1.1	-3.2		
-1.0	8.5		
-0.9	15.4		
-0.8	20.3		
-0.7	24.4		
-0.6	27.7		
-0.5	30.4		
-0.4	32.6		
-0.3	34.2		
-0.2	35.4		
-0.1	36.1		
0.0	36.3		

6.0	-17.2	2.0	-19.2
6.1	-14.9	1.9	-16.7
6.2	-11.6	1.7	-13.3
6.3	-10.1	1.5	-11.6
6.4	-10.0	1.3	-11.4
6.5	-11.5	1.2	-12.7
6.6	-16.0	1.0	-17.0
6.7	-21.6	0.8	-22.4
6.8	-16.2	0.7	-16.9
6.9	-11.6	0.5	-12.1
7.0	-9.8	0.4	-10.2
7.1	-9.3	0.4	-9.6
7.2	-9.5	0.4	-9.9
7.3	-11.1	0.4	-11.5
7.4	-13.7	0.4	-14.1
7.5	-17.9	0.4	-18.3
7.6	-23.5	0.4	-23.9
7.7	-30.7	0.4	-31.1
7.8	-30.7	0.4	-31.0
7.9	-26.7	0.4	-27.0
8.0	-27.0	0.4	-27.4
8.1	-22.8	0.4	-23.2
8.2	-18.6	0.4	-19.0
8.3	-15.1	0.4	-15.5
8.4	-13.8	0.4	-14.2
8.5	-13.8	0.4	-14.2
8.6	-15.2	0.4	-15.6
8.7	-18.2	0.4	-18.6
8.8	-25.7	0.4	-26.1
8.9	-23.7	0.4	-24.0
9.0	-17.7	0.4	-18.1
9.1	-15.5	0.4	-15.8
9.2	-15.3	0.4	-15.6
9.3	-17.1	0.3	-17.4
9.4	-22.2	0.2	-22.4
9.5	-28.0	0.1	-28.1
9.6	-19.1	-0.1	-19.0
9.7	-15.1	-0.2	-14.9
9.8	-13.3	-0.3	-13.0
9.9	-13.2	-0.4	-12.8
10.0	-14.2	-0.5	-13.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.60 GHz @ -10.94 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-23.9	-12.6	-11.3
-9.9	-24.5	-12.6	-11.9
-9.8	-24.8	-12.6	-12.1
-9.7	-24.3	-12.6	-11.7
-9.6	-23.3	-12.6	-10.7
-9.5	-22.5	-12.6	-9.9
-9.4	-20.5	-12.6	-7.8
-9.3	-20.3	-12.6	-7.6
-9.2	-20.0	-12.6	-7.4
-9.1	-21.3	-12.6	-8.7
-9.0	-25.4	-12.6	-12.7
-8.9	-31.4	-12.6	-18.8
-8.8	-34.8	-12.6	-22.2
-8.7	-25.5	-12.6	-12.8
-8.6	-21.7	-12.6	-9.0
-8.5	-20.6	-12.6	-8.0
-8.4	-20.3	-12.6	-7.7
-8.3	-22.5	-12.6	-9.8
-8.2	-24.1	-12.6	-11.5
-8.1	-24.5	-12.6	-11.8
-8.0	-25.9	-12.6	-13.2
-7.9	-24.3	-12.6	-11.7
-7.8	-22.0	-12.6	-9.3
-7.7	-21.8	-12.6	-9.1
-7.6	-22.1	-12.6	-9.5
-7.5	-21.9	-12.6	-9.2
-7.4	-22.7	-12.6	-10.1
-7.3	-25.5	-12.6	-12.8
-7.2	-25.9	-12.6	-13.3
-7.1	-27.1	-12.6	-14.4
-7.0	-25.1	-12.6	-12.5
-6.9	-23.0	-12.5	-10.5
-6.8	-21.3	-12.3	-9.0
-6.7	-19.7	-12.2	-7.5
-6.6	-18.3	-12.0	-6.3
-6.5	-17.7	-11.8	-5.8
-6.4	-17.2	-11.7	-5.6
-6.3	-16.7	-11.5	-5.2
-6.2	-15.8	-11.3	-4.5
-6.1	-14.7	-11.1	-3.5
-6.0	-13.7	-11.0	-2.8
-5.9	-13.0	-10.8	-2.3
-5.8	-13.3	-10.6	-2.7
-5.7	-13.2	-10.4	-2.8
-5.6	-13.5	-10.2	-3.3
-5.5	-14.0	-10.0	-4.0
-5.4	-13.9	-9.8	-4.1
-5.3	-13.8	-9.6	-4.2
-5.2	-13.5	-9.4	-4.1
-5.1	-13.2	-9.2	-4.1
-5.0	-12.8	-9.0	-3.8
-4.9	-11.9	-8.8	-3.1
-4.8	-10.8	-8.5	-2.3
-4.7	-10.0	-8.3	-1.7
-4.6	-8.8	-8.1	-0.7
-4.5	-8.0	-7.8	-0.2
-4.4	-7.7	-7.6	-0.1
-4.3	-7.3	-7.3	0.0
-4.2	-7.6	-7.1	-0.6
-4.1	-8.1	-6.8	-1.3

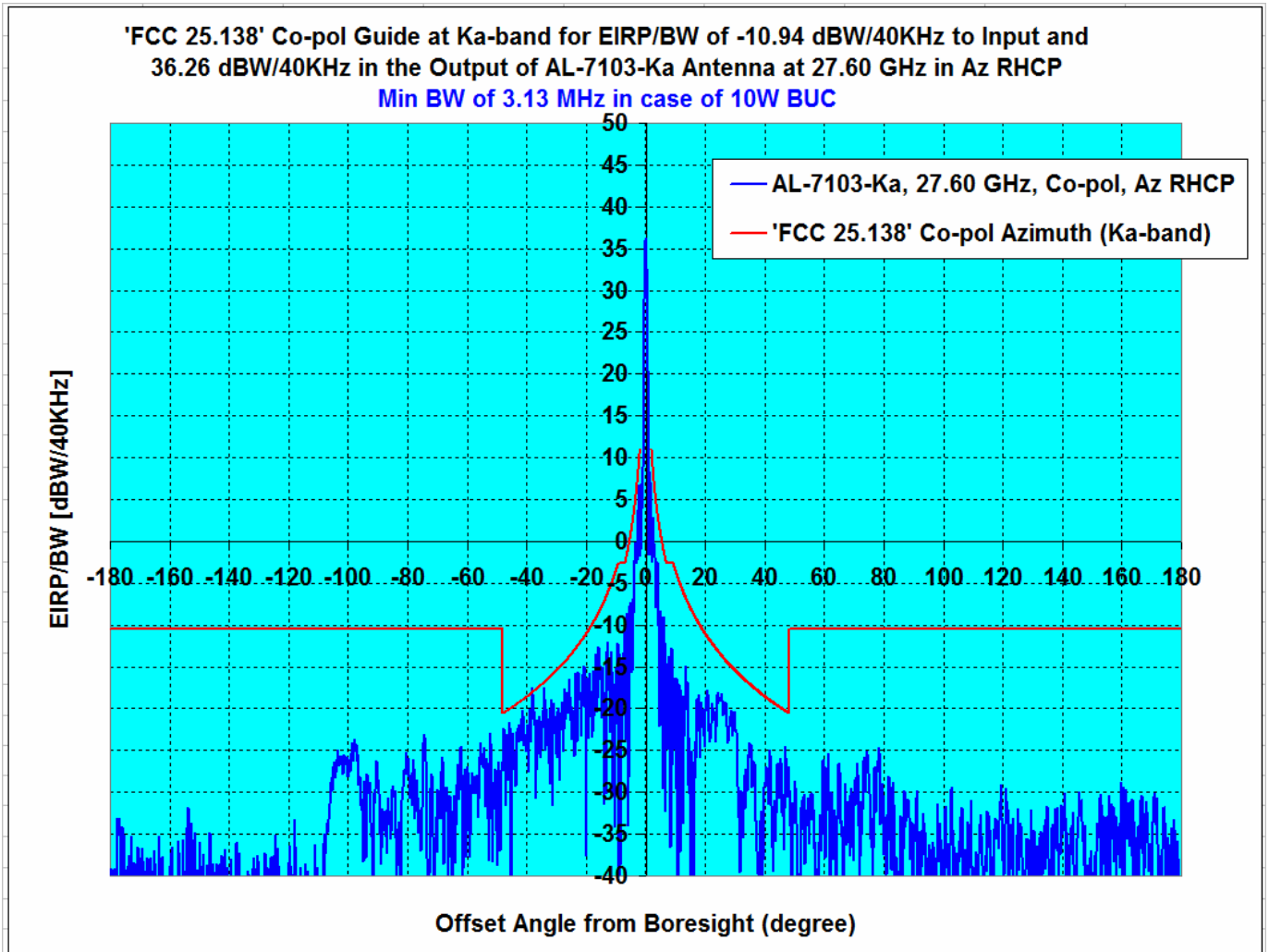
27.60 GHz @ -10.94 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	3.3		
0.1	0.4		
0.2	-1.6		
0.3	-2.7		
0.4	-2.9		
0.5	-2.8		
0.6	-3.1		
0.7	-3.5		
0.8	-4.4		
0.9	-5.5		
1.0	-6.6		
1.1	-8.1		
1.2	-9.6		
1.3	-11.2		
1.4	-11.6		
1.5	-12.4		
1.6	-12.6		
1.7	-14.1		
1.8	-15.0		
1.9	-16.1		
2.0	-18.3	1.0	-19.3
2.1	-18.8	0.4	-19.2
2.2	-18.0	-0.1	-18.0
2.3	-16.2	-0.5	-15.6
2.4	-13.9	-1.0	-12.9
2.5	-14.2	-1.4	-12.7
2.6	-12.6	-1.9	-10.7
2.7	-12.5	-2.3	-10.2
2.8	-13.4	-2.7	-10.7
2.9	-13.1	-3.1	-10.0
3.0	-16.5	-3.4	-13.0
3.1	-20.8	-3.8	-17.0
3.2	-25.4	-4.1	-21.3
3.3	-23.0	-4.5	-18.5
3.4	-21.7	-4.8	-16.9
3.5	-26.2	-5.1	-21.1
3.6	-27.5	-5.4	-22.1
3.7	-23.9	-5.7	-18.2
3.8	-23.5	-6.0	-17.5
3.9	-24.7	-6.3	-18.4
4.0	-26.0	-6.6	-19.4
4.1	-37.3	-6.8	-30.5
4.2	-27.2	-7.1	-20.1
4.3	-30.3	-7.3	-23.0
4.4	-24.6	-7.6	-17.1
4.5	-27.5	-7.8	-19.7
4.6	-28.7	-8.1	-20.6
4.7	-28.4	-8.3	-20.1
4.8	-34.0	-8.5	-25.5
4.9	-26.3	-8.8	-17.5
5.0	-26.0	-9.0	-17.0
5.1	-29.3	-9.2	-20.1
5.2	-33.4	-9.4	-24.0
5.3	-33.7	-9.6	-24.1
5.4	-35.1	-9.8	-25.3
5.5	-33.1	-10.0	-23.1
5.6	-30.8	-10.2	-20.6
5.7	-35.4	-10.4	-25.0
5.8	-30.9	-10.6	-20.3
5.9	-29.6	-10.8	-18.9

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

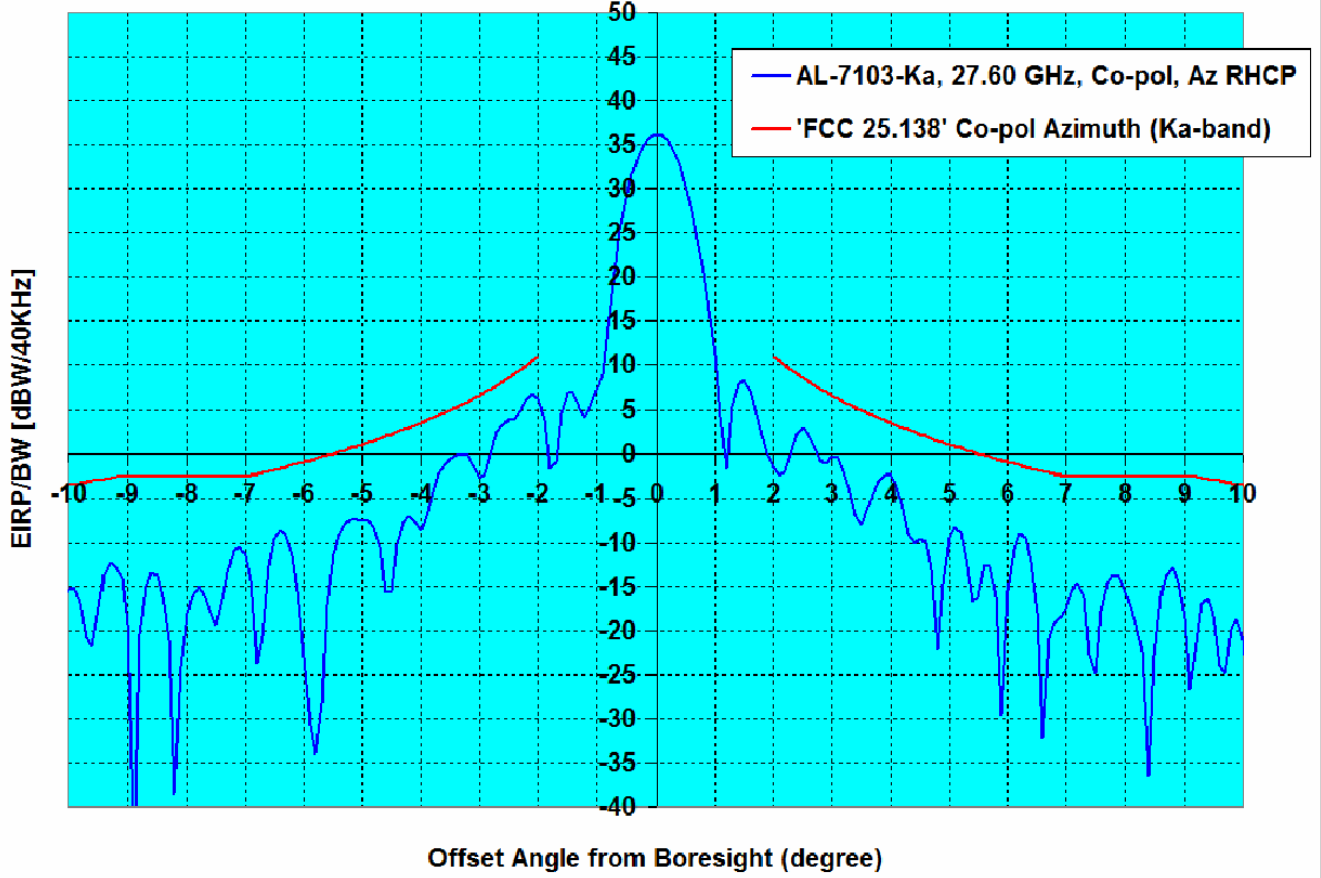
-4.0	-8.8	-6.6	-2.2
-3.9	-9.4	-6.3	-3.2
-3.8	-9.9	-6.0	-3.9
-3.7	-10.1	-5.7	-4.4
-3.6	-10.3	-5.4	-4.9
-3.5	-10.0	-5.1	-4.9
-3.4	-9.8	-4.8	-5.0
-3.3	-9.8	-4.5	-5.4
-3.2	-10.0	-4.1	-5.9
-3.1	-11.1	-3.8	-7.3
-3.0	-12.3	-3.4	-8.9
-2.9	-12.8	-3.1	-9.8
-2.8	-12.3	-2.7	-9.6
-2.7	-10.4	-2.3	-8.2
-2.6	-9.4	-1.9	-7.6
-2.5	-9.5	-1.4	-8.1
-2.4	-10.2	-1.0	-9.2
-2.3	-12.7	-0.5	-12.2
-2.2	-15.4	-0.1	-15.3
-2.1	-15.7	0.4	-16.1
-2.0	-14.4	1.0	-15.4
-1.9	-13.9		
-1.8	-13.6		
-1.7	-10.9		
-1.6	-7.9		
-1.5	-5.7		
-1.4	-4.9		
-1.3	-5.6		
-1.2	-10.0		
-1.1	-18.2		
-1.0	-4.3		
-0.9	1.7		
-0.8	5.2		
-0.7	7.1		
-0.6	8.1		
-0.5	8.6		
-0.4	8.8		
-0.3	8.4		
-0.2	7.4		
-0.1	5.6		
0.0	3.3		

6.0	-26.1	-11.0	-15.2
6.1	-26.1	-11.1	-15.0
6.2	-24.1	-11.3	-12.8
6.3	-23.5	-11.5	-12.0
6.4	-24.1	-11.7	-12.4
6.5	-23.8	-11.8	-11.9
6.6	-24.6	-12.0	-12.6
6.7	-25.3	-12.2	-13.2
6.8	-26.3	-12.3	-14.0
6.9	-29.4	-12.5	-17.0
7.0	-33.5	-12.6	-20.8
7.1	-35.2	-12.6	-22.5
7.2	-28.0	-12.6	-15.4
7.3	-23.3	-12.6	-10.7
7.4	-20.2	-12.6	-7.6
7.5	-19.4	-12.6	-6.8
7.6	-19.0	-12.6	-6.4
7.7	-19.5	-12.6	-6.9
7.8	-20.6	-12.6	-8.0
7.9	-20.3	-12.6	-7.6
8.0	-21.1	-12.6	-8.5
8.1	-22.6	-12.6	-10.0
8.2	-22.7	-12.6	-10.1
8.3	-24.4	-12.6	-11.8
8.4	-27.1	-12.6	-14.5
8.5	-31.2	-12.6	-18.6
8.6	-35.1	-12.6	-22.5
8.7	-33.4	-12.6	-20.8
8.8	-33.2	-12.6	-20.6
8.9	-35.7	-12.6	-23.1
9.0	-34.0	-12.6	-21.3
9.1	-31.8	-12.6	-19.2
9.2	-37.5	-12.6	-24.9
9.3	-38.7	-12.6	-26.1
9.4	-43.2	-12.6	-30.5
9.5	-35.8	-12.6	-23.1
9.6	-32.6	-12.6	-20.0
9.7	-33.4	-12.6	-20.8
9.8	-38.1	-12.6	-25.5
9.9	-44.1	-12.6	-31.5
10.0	-39.6	-12.6	-27.0



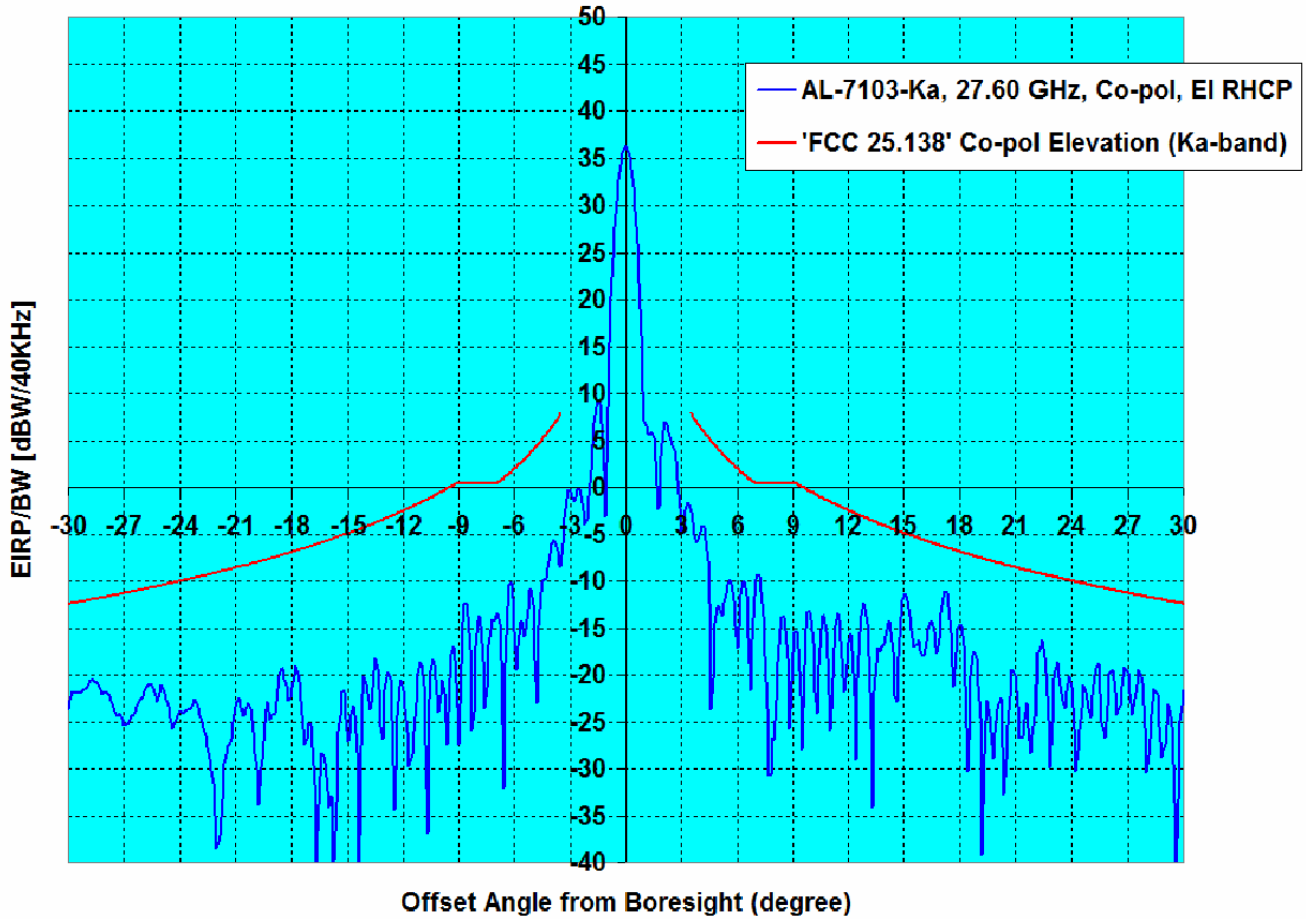
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 27.60 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	47.20	-10.94	-3.69	0.46	0.03

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -10.94 dBW/40KHz to Input and
 36.26 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in Az RHCP
 Min BW of 3.13 MHz in case of 10W BUC**



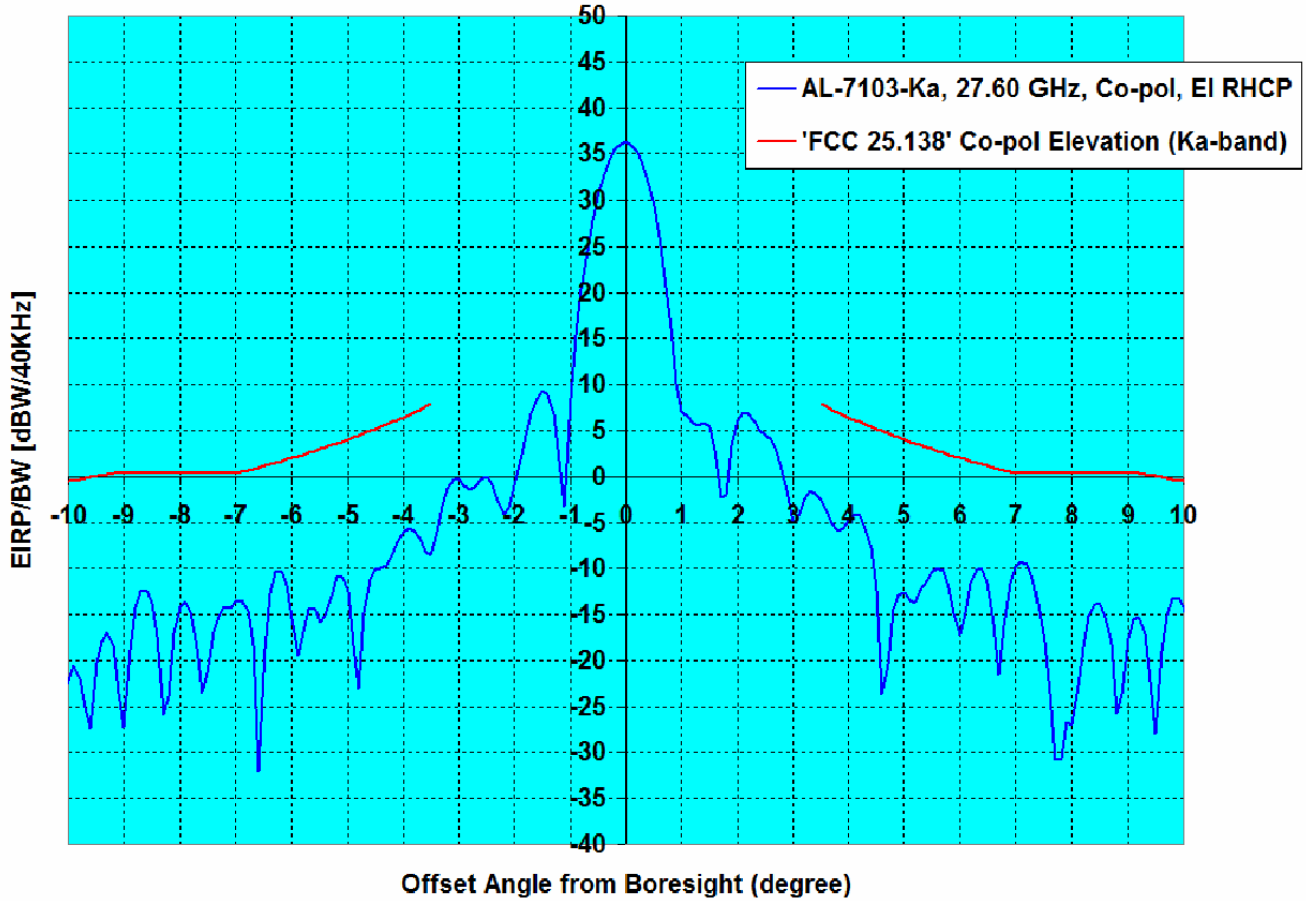
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Freq., Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (2° to 10°)	± (10° to 180°)	%
AL-7103-Ka, 27.60 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	47.20	-10.94	-3.69	0.46	0.03

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -10.94 dBW/40KHz to Input and
 36.26 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in EI RHCP
 Min BW of 3.13 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 27.60 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	47.20	-10.94	-9.65	-4.68	0.00

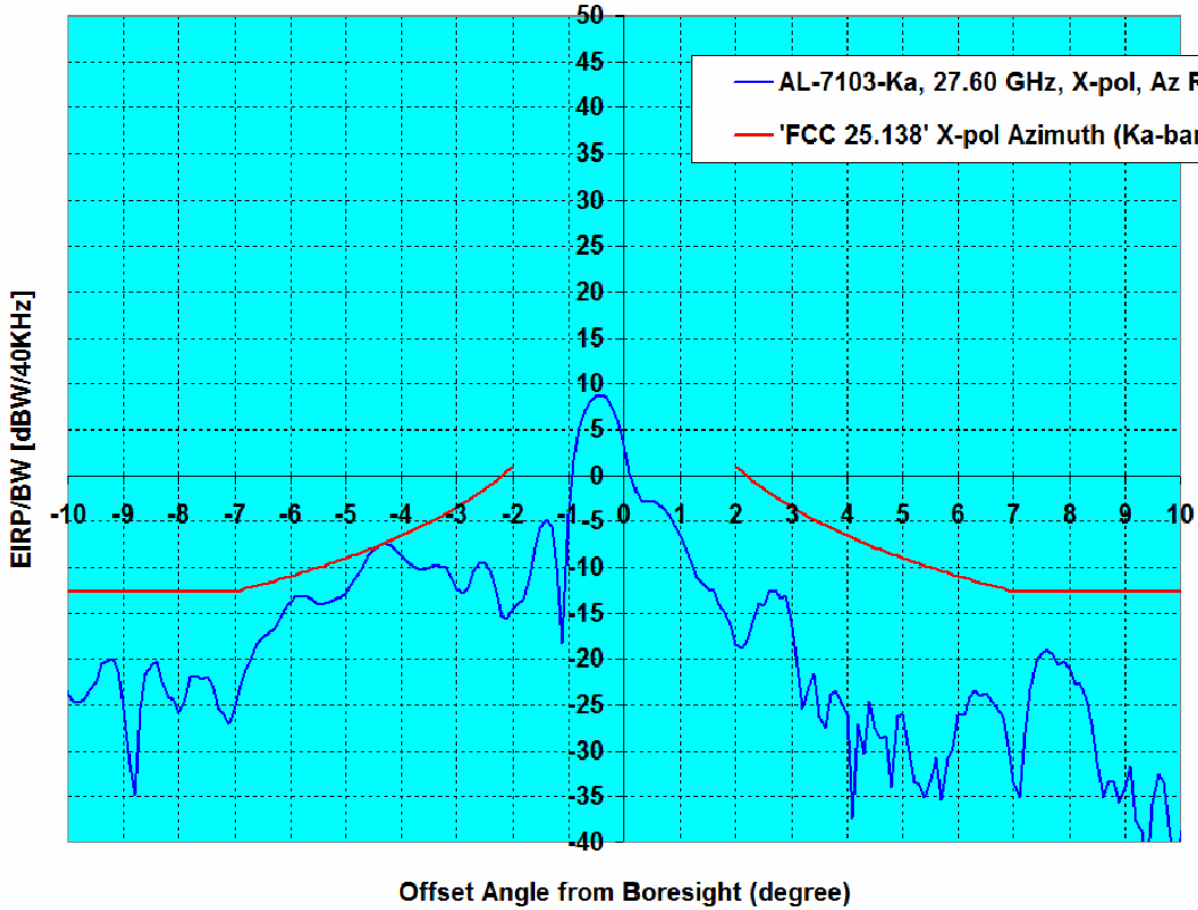
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -10.94 dBW/40KHz to Input and
 36.26 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in EI RHCP
 Min BW of 3.13 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 27.60 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	47.20	-10.94	-9.65	-4.68	0.00

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd, X-pol, Azimuth RHCP

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -10.94 dBW/40KHz to Input and
 36.26 dBW/40KHz in the Output of AL-7103-Ka Antenna at 27.60 GHz in Az RHCP
 Min BW of 3.13 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7103-Ka, 27.60 GHz, X-pol, Az RHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	47.20	-10.94	0.00	0.00	0.68

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-179.0	-39.9	-10.5	-29.4
-178.0	-40.5	-10.5	-30.0
-177.0	-33.7	-10.5	-23.2
-176.0	-36.6	-10.5	-26.1
-175.0	-35.6	-10.5	-25.1
-174.0	-42.4	-10.5	-31.9
-173.0	-32.6	-10.5	-22.1
-172.0	-54.8	-10.5	-44.3
-171.0	-36.1	-10.5	-25.6
-170.0	-38.0	-10.5	-27.5
-169.0	-38.6	-10.5	-28.1
-168.0	-48.3	-10.5	-37.8
-167.0	-41.1	-10.5	-30.6
-166.0	-42.4	-10.5	-31.9
-165.0	-44.0	-10.5	-33.5
-164.0	-39.1	-10.5	-28.6
-163.0	-46.9	-10.5	-36.4
-162.0	-44.5	-10.5	-34.0
-161.0	-49.0	-10.5	-38.5
-160.0	-37.3	-10.5	-26.8
-159.0	-47.7	-10.5	-37.2
-158.0	-45.5	-10.5	-35.0
-157.0	-48.5	-10.5	-38.0
-156.0	-48.5	-10.5	-38.0
-155.0	-36.8	-10.5	-26.3
-154.0	-40.2	-10.5	-29.7
-153.0	-40.4	-10.5	-29.9
-152.0	-43.0	-10.5	-32.5
-151.0	-41.2	-10.5	-30.7
-150.0	-41.3	-10.5	-30.8
-149.0	-42.7	-10.5	-32.2
-148.0	-47.7	-10.5	-37.2
-147.0	-37.9	-10.5	-27.4
-146.0	-46.4	-10.5	-35.9
-145.0	-48.0	-10.5	-37.5
-144.0	-42.4	-10.5	-31.9
-143.0	-44.2	-10.5	-33.7
-142.0	-57.3	-10.5	-46.8
-141.0	-44.0	-10.5	-33.5
-140.0	-38.0	-10.5	-27.5
-139.0	-43.9	-10.5	-33.4
-138.0	-37.6	-10.5	-27.1
-137.0	-41.6	-10.5	-31.1
-136.0	-38.4	-10.5	-27.9
-135.0	-37.2	-10.5	-26.7
-134.0	-34.7	-10.5	-24.2
-133.0	-39.8	-10.5	-29.3
-132.0	-40.2	-10.5	-29.7
-131.0	-37.3	-10.5	-26.8
-130.0	-35.9	-10.5	-25.4
-129.0	-33.5	-10.5	-23.0
-128.0	-35.6	-10.5	-25.1
-127.0	-37.1	-10.5	-26.6
-126.0	-46.8	-10.5	-36.3
-125.0	-45.9	-10.5	-35.4
-124.0	-40.9	-10.5	-30.4
-123.0	-41.3	-10.5	-30.8
-122.0	-36.1	-10.5	-25.6
-121.0	-36.5	-10.5	-26.0
-120.0	-36.9	-10.5	-26.4

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	38.6		
1.0	10.3		
2.0	-0.2	11.0	-11.2
3.0	0.4	6.6	-6.2
4.0	-2.8	3.4	-6.3
5.0	-8.2	1.0	-9.2
6.0	-5.4	-1.0	-4.4
7.0	-7.9	-2.6	-5.3
8.0	-16.1	-2.6	-13.5
9.0	-15.6	-2.6	-13.0
10.0	-14.3	-3.5	-10.8
11.0	-20.4	-4.5	-15.9
12.0	-19.4	-5.5	-13.9
13.0	-15.6	-6.3	-9.2
14.0	-18.7	-7.2	-11.5
15.0	-18.1	-7.9	-10.2
16.0	-23.0	-8.6	-14.4
17.0	-23.6	-9.3	-14.4
18.0	-27.2	-9.9	-17.3
19.0	-31.7	-10.5	-21.3
20.0	-25.2	-11.0	-14.1
21.0	-18.2	-11.6	-6.7
22.0	-23.8	-12.1	-11.8
23.0	-24.0	-12.5	-11.4
24.0	-27.3	-13.0	-14.3
25.0	-22.8	-13.4	-9.4
26.0	-19.4	-13.9	-5.5
27.0	-23.5	-14.3	-9.2
28.0	-28.7	-14.7	-14.0
29.0	-17.3	-15.1	-2.2
30.0	-19.4	-15.4	-4.0
31.0	-20.0	-15.8	-4.2
32.0	-18.1	-16.1	-2.0
33.0	-16.5	-16.5	0.0
34.0	-18.5	-16.8	-1.7
35.0	-24.3	-17.1	-7.2
36.0	-33.2	-17.4	-15.8
37.0	-34.6	-17.7	-16.9
38.0	-29.6	-18.0	-11.7
39.0	-29.5	-18.3	-11.2
40.0	-26.7	-18.6	-8.1
41.0	-46.0	-18.8	-27.2
42.0	-32.4	-19.1	-13.3
43.0	-31.4	-19.3	-12.0
44.0	-29.9	-19.6	-10.3
45.0	-21.8	-19.8	-1.9
46.0	-21.8	-20.1	-1.7
47.0	-20.0	-20.3	0.3
48.0	-20.3	-20.5	0.2
49.0	-26.3	-10.5	-15.8
50.0	-28.5	-10.5	-18.0
51.0	-26.5	-10.5	-16.0
52.0	-24.4	-10.5	-13.9
53.0	-27.6	-10.5	-17.1
54.0	-31.6	-10.5	-21.1
55.0	-31.8	-10.5	-21.3
56.0	-28.3	-10.5	-17.8
57.0	-25.6	-10.5	-15.1
58.0	-34.3	-10.5	-23.8
59.0	-28.8	-10.5	-18.3

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-43.4	-10.5	-32.9
-118.0	-36.7	-10.5	-26.2
-117.0	-35.3	-10.5	-24.8
-116.0	-34.9	-10.5	-24.4
-115.0	-34.5	-10.5	-24.0
-114.0	-32.9	-10.5	-22.4
-113.0	-39.6	-10.5	-29.1
-112.0	-34.5	-10.5	-24.0
-111.0	-35.0	-10.5	-24.5
-110.0	-35.2	-10.5	-24.7
-109.0	-31.3	-10.5	-20.8
-108.0	-32.2	-10.5	-21.7
-107.0	-31.1	-10.5	-20.6
-106.0	-26.3	-10.5	-15.8
-105.0	-24.4	-10.5	-13.9
-104.0	-24.2	-10.5	-13.7
-103.0	-22.0	-10.5	-11.5
-102.0	-22.0	-10.5	-11.5
-101.0	-21.6	-10.5	-11.1
-100.0	-23.7	-10.5	-13.2
-99.0	-26.5	-10.5	-16.0
-98.0	-28.3	-10.5	-17.8
-97.0	-23.2	-10.5	-12.7
-96.0	-23.7	-10.5	-13.2
-95.0	-24.2	-10.5	-13.7
-94.0	-22.7	-10.5	-12.2
-93.0	-21.8	-10.5	-11.3
-92.0	-22.5	-10.5	-12.0
-91.0	-22.3	-10.5	-11.8
-90.0	-29.3	-10.5	-18.8
-89.0	-23.0	-10.5	-12.5
-88.0	-24.7	-10.5	-14.2
-87.0	-25.2	-10.5	-14.7
-86.0	-22.4	-10.5	-11.9
-85.0	-37.6	-10.5	-27.1
-84.0	-23.5	-10.5	-13.0
-83.0	-27.7	-10.5	-17.2
-82.0	-29.5	-10.5	-19.0
-81.0	-26.4	-10.5	-15.9
-80.0	-44.5	-10.5	-34.0
-79.0	-25.2	-10.5	-14.7
-78.0	-25.1	-10.5	-14.6
-77.0	-41.2	-10.5	-30.7
-76.0	-25.2	-10.5	-14.7
-75.0	-26.1	-10.5	-15.6
-74.0	-27.7	-10.5	-17.2
-73.0	-27.9	-10.5	-17.4
-72.0	-30.1	-10.5	-19.6
-71.0	-27.4	-10.5	-16.9
-70.0	-27.6	-10.5	-17.1
-69.0	-35.0	-10.5	-24.5
-68.0	-29.4	-10.5	-18.9
-67.0	-26.5	-10.5	-16.0
-66.0	-33.9	-10.5	-23.4
-65.0	-31.7	-10.5	-21.2
-64.0	-24.6	-10.5	-14.1
-63.0	-23.1	-10.5	-12.6
-62.0	-32.2	-10.5	-21.7
-61.0	-28.6	-10.5	-18.1
-60.0	-30.4	-10.5	-19.9
-59.0	-25.8	-10.5	-15.3
-58.0	-24.6	-10.5	-14.1
-57.0	-24.7	-10.5	-14.2

60.0	-37.1	-10.5	-26.6
61.0	-24.2	-10.5	-13.7
62.0	-26.2	-10.5	-15.7
63.0	-24.9	-10.5	-14.4
64.0	-29.7	-10.5	-19.2
65.0	-30.6	-10.5	-20.1
66.0	-30.3	-10.5	-19.8
67.0	-27.6	-10.5	-17.1
68.0	-28.7	-10.5	-18.2
69.0	-31.2	-10.5	-20.7
70.0	-26.9	-10.5	-16.4
71.0	-30.2	-10.5	-19.7
72.0	-29.5	-10.5	-19.0
73.0	-31.6	-10.5	-21.1
74.0	-24.0	-10.5	-13.5
75.0	-27.3	-10.5	-16.8
76.0	-24.4	-10.5	-13.9
77.0	-30.6	-10.5	-20.1
78.0	-26.9	-10.5	-16.4
79.0	-36.0	-10.5	-25.5
80.0	-36.7	-10.5	-26.2
81.0	-43.4	-10.5	-32.9
82.0	-36.6	-10.5	-26.1
83.0	-33.0	-10.5	-22.5
84.0	-37.9	-10.5	-27.4
85.0	-26.9	-10.5	-16.4
86.0	-36.4	-10.5	-25.9
87.0	-30.1	-10.5	-19.6
88.0	-39.8	-10.5	-29.3
89.0	-30.0	-10.5	-19.5
90.0	-31.0	-10.5	-20.5
91.0	-37.5	-10.5	-27.0
92.0	-40.6	-10.5	-30.1
93.0	-34.9	-10.5	-24.4
94.0	-33.0	-10.5	-22.5
95.0	-30.5	-10.5	-20.0
96.0	-38.0	-10.5	-27.5
97.0	-28.8	-10.5	-18.3
98.0	-31.9	-10.5	-21.4
99.0	-27.8	-10.5	-17.3
100.0	-31.5	-10.5	-21.0
101.0	-34.8	-10.5	-24.3
102.0	-34.3	-10.5	-23.8
103.0	-29.4	-10.5	-18.9
104.0	-30.5	-10.5	-20.0
105.0	-35.8	-10.5	-25.3
106.0	-29.7	-10.5	-19.2
107.0	-41.0	-10.5	-30.5
108.0	-32.5	-10.5	-22.0
109.0	-28.7	-10.5	-18.2
110.0	-34.6	-10.5	-24.1
111.0	-30.0	-10.5	-19.5
112.0	-36.5	-10.5	-26.0
113.0	-44.6	-10.5	-34.1
114.0	-44.8	-10.5	-34.3
115.0	-30.7	-10.5	-20.2
116.0	-33.9	-10.5	-23.4
117.0	-39.9	-10.5	-29.4
118.0	-29.0	-10.5	-18.5
119.0	-28.6	-10.5	-18.1
120.0	-55.2	-10.5	-44.7
121.0	-37.3	-10.5	-26.8
122.0	-30.4	-10.5	-19.9

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-44.1	-10.5	-33.6
-55.0	-29.4	-10.5	-18.9
-54.0	-26.7	-10.5	-16.2
-53.0	-24.9	-10.5	-14.4
-52.0	-36.1	-10.5	-25.6
-51.0	-31.5	-10.5	-21.0
-50.0	-27.8	-10.5	-17.3
-49.0	-23.2	-10.5	-12.7
-48.0	-18.7	-20.5	1.8
-47.0	-20.8	-20.3	-0.5
-46.0	-20.9	-20.1	-0.8
-45.0	-22.0	-19.8	-2.2
-44.0	-22.2	-19.6	-2.6
-43.0	-24.1	-19.3	-4.8
-42.0	-20.9	-19.1	-1.8
-41.0	-28.2	-18.8	-9.4
-40.0	-22.4	-18.6	-3.9
-39.0	-20.8	-18.3	-2.5
-38.0	-20.0	-18.0	-2.0
-37.0	-18.9	-17.7	-1.2
-36.0	-21.1	-17.4	-3.7
-35.0	-22.5	-17.1	-5.4
-34.0	-26.0	-16.8	-9.3
-33.0	-24.9	-16.5	-8.5
-32.0	-22.4	-16.1	-6.3
-31.0	-17.8	-15.8	-2.0
-30.0	-19.8	-15.4	-4.4
-29.0	-20.8	-15.1	-5.8
-28.0	-17.0	-14.7	-2.3
-27.0	-15.5	-14.3	-1.2
-26.0	-29.3	-13.9	-15.4
-25.0	-14.2	-13.4	-0.8
-24.0	-14.3	-13.0	-1.3
-23.0	-20.5	-12.5	-8.0
-22.0	-16.3	-12.1	-4.2
-21.0	-17.5	-11.6	-5.9
-20.0	-13.0	-11.0	-1.9
-19.0	-13.0	-10.5	-2.6
-18.0	-12.1	-9.9	-2.2
-17.0	-14.3	-9.3	-5.1
-16.0	-16.1	-8.6	-7.5
-15.0	-10.7	-7.9	-2.8
-14.0	-9.3	-7.2	-2.2
-13.0	-17.8	-6.3	-11.4
-12.0	-10.3	-5.5	-4.8
-11.0	-14.7	-4.5	-10.1
-10.0	-21.5	-3.5	-18.0
-9.0	-11.5	-2.6	-8.8
-8.0	-17.8	-2.6	-15.2
-7.0	-7.6	-2.6	-5.0
-6.0	-25.6	-1.0	-24.6
-5.0	-6.1	1.0	-7.2
-4.0	-4.3	3.4	-7.7
-3.0	1.6	6.6	-4.9
-2.0	8.1	11.0	-2.9
-1.0	4.4		
0.0	38.6		

123.0	-35.8	-10.5	-25.3
124.0	-39.5	-10.5	-29.0
125.0	-42.7	-10.5	-32.2
126.0	-43.0	-10.5	-32.5
127.0	-36.9	-10.5	-26.4
128.0	-36.2	-10.5	-25.7
129.0	-32.1	-10.5	-21.6
130.0	-28.7	-10.5	-18.2
131.0	-29.3	-10.5	-18.8
132.0	-38.1	-10.5	-27.6
133.0	-29.7	-10.5	-19.2
134.0	-33.5	-10.5	-23.0
135.0	-33.7	-10.5	-23.2
136.0	-35.6	-10.5	-25.1
137.0	-31.2	-10.5	-20.7
138.0	-34.8	-10.5	-24.3
139.0	-39.2	-10.5	-28.7
140.0	-36.4	-10.5	-25.9
141.0	-33.5	-10.5	-23.0
142.0	-32.3	-10.5	-21.8
143.0	-33.4	-10.5	-22.9
144.0	-39.7	-10.5	-29.2
145.0	-33.7	-10.5	-23.2
146.0	-36.5	-10.5	-26.0
147.0	-34.0	-10.5	-23.5
148.0	-35.2	-10.5	-24.7
149.0	-36.8	-10.5	-26.3
150.0	-47.0	-10.5	-36.5
151.0	-28.3	-10.5	-17.8
152.0	-30.0	-10.5	-19.5
153.0	-41.2	-10.5	-30.7
154.0	-40.4	-10.5	-29.9
155.0	-32.7	-10.5	-22.2
156.0	-39.2	-10.5	-28.7
157.0	-37.8	-10.5	-27.3
158.0	-33.1	-10.5	-22.6
159.0	-33.2	-10.5	-22.7
160.0	-33.2	-10.5	-22.7
161.0	-38.4	-10.5	-27.9
162.0	-39.8	-10.5	-29.3
163.0	-37.5	-10.5	-27.0
164.0	-46.6	-10.5	-36.1
165.0	-35.3	-10.5	-24.8
166.0	-35.8	-10.5	-25.3
167.0	-35.5	-10.5	-25.0
168.0	-36.6	-10.5	-26.1
169.0	-32.1	-10.5	-21.6
170.0	-46.9	-10.5	-36.4
171.0	-32.0	-10.5	-21.5
172.0	-35.6	-10.5	-25.1
173.0	-41.6	-10.5	-31.1
174.0	-35.4	-10.5	-24.9
175.0	-35.1	-10.5	-24.6
176.0	-40.0	-10.5	-29.5
177.0	-35.9	-10.5	-25.4
178.0	-44.4	-10.5	-33.9
179.0	-35.8	-10.5	-25.3

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-21.5	-3.5	-18.0
-9.9	-33.0	-3.4	-29.6
-9.8	-19.2	-3.3	-15.9
-9.7	-16.2	-3.2	-13.1
-9.6	-16.4	-3.1	-13.3
-9.5	-19.8	-2.9	-16.9
-9.4	-33.0	-2.8	-30.2
-9.3	-20.9	-2.7	-18.2
-9.2	-14.7	-2.6	-12.1
-9.1	-12.0	-2.6	-9.4
-9.0	-11.5	-2.6	-8.8
-8.9	-12.5	-2.6	-9.9
-8.8	-15.3	-2.6	-12.7
-8.7	-21.3	-2.6	-18.6
-8.6	-23.2	-2.6	-20.6
-8.5	-19.2	-2.6	-16.5
-8.4	-18.2	-2.6	-15.5
-8.3	-20.4	-2.6	-17.8
-8.2	-25.2	-2.6	-22.6
-8.1	-21.8	-2.6	-19.1
-8.0	-17.8	-2.6	-15.2
-7.9	-15.7	-2.6	-13.1
-7.8	-16.3	-2.6	-13.7
-7.7	-19.2	-2.6	-16.6
-7.6	-28.4	-2.6	-25.8
-7.5	-27.7	-2.6	-25.0
-7.4	-17.3	-2.6	-14.7
-7.3	-13.0	-2.6	-10.4
-7.2	-10.0	-2.6	-7.3
-7.1	-8.2	-2.6	-5.5
-7.0	-7.6	-2.6	-5.0
-6.9	-8.5	-2.5	-6.0
-6.8	-11.0	-2.3	-8.7
-6.7	-16.4	-2.2	-14.3
-6.6	-19.2	-2.0	-17.2
-6.5	-12.7	-1.8	-10.8
-6.4	-9.5	-1.7	-7.8
-6.3	-8.8	-1.5	-7.4
-6.2	-10.0	-1.3	-8.7
-6.1	-14.2	-1.1	-13.1
-6.0	-25.6	-1.0	-24.6
-5.9	-17.9	-0.8	-17.1
-5.8	-12.0	-0.6	-11.5
-5.7	-10.3	-0.4	-9.9
-5.6	-10.2	-0.2	-9.9
-5.5	-10.7	0.0	-10.7
-5.4	-10.7	0.2	-10.9
-5.3	-9.5	0.4	-9.9
-5.2	-8.1	0.6	-8.7
-5.1	-7.1	0.8	-7.9
-5.0	-6.1	1.0	-7.2
-4.9	-5.4	1.2	-6.7
-4.8	-5.4	1.5	-6.8
-4.7	-6.4	1.7	-8.1
-4.6	-9.2	1.9	-11.1
-4.5	-9.8	2.2	-12.0
-4.4	-6.4	2.4	-8.8
-4.3	-3.5	2.7	-6.1
-4.2	-2.2	2.9	-5.1
-4.1	-2.6	3.2	-5.8

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	38.6		
0.1	38.2		
0.2	37.4		
0.3	36.1		
0.4	34.3		
0.5	31.8		
0.6	28.9		
0.7	25.4		
0.8	21.2		
0.9	16.2		
1.0	10.3		
1.1	6.6		
1.2	9.2		
1.3	11.2		
1.4	11.6		
1.5	10.5		
1.6	8.4		
1.7	5.7		
1.8	3.1		
1.9	1.2		
2.0	-0.2	11.0	-11.2
2.1	0.4	10.4	-10.1
2.2	2.9	9.9	-7.1
2.3	4.7	9.5	-4.8
2.4	5.2	9.0	-3.8
2.5	4.8	8.6	-3.8
2.6	3.4	8.1	-4.8
2.7	1.0	7.7	-6.7
2.8	-0.6	7.3	-7.9
2.9	-0.3	6.9	-7.2
3.0	0.4	6.6	-6.2
3.1	0.1	6.2	-6.1
3.2	-0.9	5.9	-6.8
3.3	-1.6	5.5	-7.2
3.4	-1.5	5.2	-6.7
3.5	-0.5	4.9	-5.4
3.6	0.6	4.6	-4.0
3.7	1.1	4.3	-3.2
3.8	0.9	4.0	-3.1
3.9	-0.4	3.7	-4.1
4.0	-2.8	3.4	-6.3
4.1	-6.6	3.2	-9.7
4.2	-9.8	2.9	-12.7
4.3	-9.3	2.7	-12.0
4.4	-8.8	2.4	-11.2
4.5	-11.6	2.2	-13.7
4.6	-17.7	1.9	-19.6
4.7	-13.5	1.7	-15.2
4.8	-8.8	1.5	-10.3
4.9	-7.3	1.2	-8.6
5.0	-8.2	1.0	-9.2
5.1	-11.9	0.8	-12.7
5.2	-18.5	0.6	-19.1
5.3	-12.2	0.4	-12.5
5.4	-8.5	0.2	-8.7
5.5	-8.5	0.0	-8.5
5.6	-12.4	-0.2	-12.2
5.7	-23.2	-0.4	-22.8
5.8	-12.5	-0.6	-11.9
5.9	-7.2	-0.8	-6.4

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-4.3	3.4	-7.7
-3.9	-6.4	3.7	-10.1
-3.8	-5.3	4.0	-9.3
-3.7	-2.5	4.3	-6.8
-3.6	-0.3	4.6	-4.9
-3.5	1.0	4.9	-3.9
-3.4	2.0	5.2	-3.2
-3.3	2.6	5.5	-2.9
-3.2	2.8	5.9	-3.1
-3.1	2.4	6.2	-3.8
-3.0	1.6	6.6	-4.9
-2.9	2.0	6.9	-5.0
-2.8	3.9	7.3	-3.4
-2.7	5.9	7.7	-1.8
-2.6	7.0	8.1	-1.1
-2.5	7.2	8.6	-1.3
-2.4	6.8	9.0	-2.2
-2.3	6.7	9.5	-2.7
-2.2	7.4	9.9	-2.5
-2.1	8.2	10.4	-2.2
-2.0	8.1	11.0	-2.9
-1.9	6.4		
-1.8	2.8		
-1.7	2.7		
-1.6	7.3		
-1.5	10.2		
-1.4	11.3		
-1.3	11.3		
-1.2	10.4		
-1.1	8.1		
-1.0	4.4		
-0.9	11.7		
-0.8	19.6		
-0.7	25.1		
-0.6	29.3		
-0.5	32.4		
-0.4	34.8		
-0.3	36.6		
-0.2	37.8		
-0.1	38.4		
0.0	38.6		

6.0	-5.4	-1.0	-4.4
6.1	-5.7	-1.1	-4.6
6.2	-7.7	-1.3	-6.4
6.3	-12.0	-1.5	-10.6
6.4	-21.3	-1.7	-19.6
6.5	-24.0	-1.8	-22.2
6.6	-17.6	-2.0	-15.6
6.7	-14.2	-2.2	-12.0
6.8	-10.8	-2.3	-8.5
6.9	-8.8	-2.5	-6.3
7.0	-7.9	-2.6	-5.3
7.1	-8.7	-2.6	-6.0
7.2	-11.9	-2.6	-9.3
7.3	-18.7	-2.6	-16.1
7.4	-16.5	-2.6	-13.9
7.5	-10.5	-2.6	-7.9
7.6	-8.1	-2.6	-5.5
7.7	-7.6	-2.6	-5.0
7.8	-8.7	-2.6	-6.1
7.9	-11.3	-2.6	-8.7
8.0	-16.1	-2.6	-13.5
8.1	-17.2	-2.6	-14.6
8.2	-12.8	-2.6	-10.2
8.3	-10.2	-2.6	-7.6
8.4	-9.6	-2.6	-7.0
8.5	-10.5	-2.6	-7.9
8.6	-13.6	-2.6	-11.0
8.7	-20.4	-2.6	-17.8
8.8	-25.3	-2.6	-22.6
8.9	-17.9	-2.6	-15.3
9.0	-15.6	-2.6	-13.0
9.1	-15.7	-2.6	-13.1
9.2	-18.8	-2.6	-16.2
9.3	-22.0	-2.7	-19.3
9.4	-19.3	-2.8	-16.5
9.5	-16.7	-2.9	-13.7
9.6	-17.8	-3.1	-14.7
9.7	-23.6	-3.2	-20.5
9.8	-31.5	-3.3	-28.3
9.9	-18.3	-3.4	-14.9
10.0	-14.3	-3.5	-10.8

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.7	-12.4	-8.2
-29.5	-20.0	-12.2	-7.8
-29.0	-20.9	-12.1	-8.9
-28.5	-27.5	-11.9	-15.6
-28.0	-26.0	-11.7	-14.3
-27.5	-40.2	-11.5	-28.7
-27.0	-30.2	-11.3	-19.0
-26.5	-26.6	-11.1	-15.5
-26.0	-21.0	-10.9	-10.1
-25.5	-24.4	-10.7	-13.7
-25.0	-43.2	-10.4	-32.7
-24.5	-36.8	-10.2	-26.5
-24.0	-43.4	-10.0	-33.4
-23.5	-38.9	-9.8	-29.2
-23.0	-24.5	-9.5	-14.9
-22.5	-23.0	-9.3	-13.7
-22.0	-28.5	-9.1	-19.4
-21.5	-28.8	-8.8	-20.0
-21.0	-29.7	-8.6	-21.1
-20.5	-36.8	-8.3	-28.5
-20.0	-27.0	-8.0	-18.9
-19.5	-22.6	-7.8	-14.9
-19.0	-23.7	-7.5	-16.2
-18.5	-23.9	-7.2	-16.7
-18.0	-17.9	-6.9	-11.0
-17.5	-16.3	-6.6	-9.7
-17.0	-23.6	-6.3	-17.4
-16.5	-29.1	-5.9	-23.2
-16.0	-28.0	-5.6	-22.4
-15.5	-20.8	-5.3	-15.5
-15.0	-17.3	-4.9	-12.4
-14.5	-18.5	-4.5	-13.9
-14.0	-30.0	-4.2	-25.8
-13.5	-18.1	-3.8	-14.4
-13.0	-17.2	-3.3	-13.8
-12.5	-17.5	-2.9	-14.6
-12.0	-22.9	-2.5	-20.4
-11.5	-21.1	-2.0	-19.0
-11.0	-19.0	-1.5	-17.4
-10.5	-23.7	-1.0	-22.7
-10.0	-21.4	-0.5	-20.9
-9.5	-29.1	0.1	-29.2
-9.0	-13.6	0.4	-14.0
-8.5	-10.8	0.4	-11.1
-8.0	-20.0	0.4	-20.4
-7.5	-19.3	0.4	-19.7
-7.0	-10.7	0.4	-11.0
-6.5	-12.1	1.2	-13.3
-6.0	-8.2	2.0	-10.2
-5.5	-8.8	3.0	-11.8
-5.0	-8.8	4.0	-12.9
-4.5	-10.6	5.2	-15.8
-4.0	-4.2	6.4	-10.7
-3.5	-3.8	7.9	-11.7
-3.0	0.4		
-2.5	3.8		
-2.0	1.1		
-1.5	11.6		
-1.0	13.5		
-0.5	32.9		
0.0	38.6		

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	38.6		
0.5	30.4		
1.0	4.1		
1.5	8.9		
2.0	7.6		
2.5	7.8		
3.0	0.4		
3.5	-5.9	7.9	-13.8
4.0	-0.5	6.4	-6.9
4.5	-14.3	5.2	-19.5
5.0	-13.7	4.0	-17.7
5.5	-8.5	3.0	-11.5
6.0	-12.4	2.0	-14.5
6.5	-11.5	1.2	-12.7
7.0	-7.4	0.4	-7.7
7.5	-21.2	0.4	-21.6
8.0	-28.0	0.4	-28.3
8.5	-15.5	0.4	-15.8
9.0	-11.6	0.4	-12.0
9.5	-20.2	0.1	-20.3
10.0	-18.3	-0.5	-17.8
10.5	-13.4	-1.0	-12.3
11.0	-13.1	-1.5	-11.6
11.5	-8.7	-2.0	-6.7
12.0	-15.6	-2.5	-13.1
12.5	-11.0	-2.9	-8.1
13.0	-13.2	-3.3	-9.9
13.5	-14.9	-3.8	-11.2
14.0	-13.3	-4.2	-9.1
14.5	-7.8	-4.5	-3.3
15.0	-14.2	-4.9	-9.3
15.5	-11.4	-5.3	-6.2
16.0	-14.1	-5.6	-8.5
16.5	-12.4	-5.9	-6.5
17.0	-15.5	-6.3	-9.2
17.5	-11.1	-6.6	-4.5
18.0	-12.6	-6.9	-5.7
18.5	-13.1	-7.2	-5.9
19.0	-12.7	-7.5	-5.2
19.5	-14.0	-7.8	-6.3
20.0	-14.8	-8.0	-6.8
20.5	-11.8	-8.3	-3.5
21.0	-14.8	-8.6	-6.3
21.5	-20.6	-8.8	-11.8
22.0	-13.7	-9.1	-4.7
22.5	-14.8	-9.3	-5.5
23.0	-12.2	-9.5	-2.6
23.5	-17.1	-9.8	-7.3
24.0	-12.2	-10.0	-2.2
24.5	-14.6	-10.2	-4.4
25.0	-14.8	-10.4	-4.3
25.5	-13.9	-10.7	-3.2
26.0	-13.9	-10.9	-3.0
26.5	-15.6	-11.1	-4.5
27.0	-16.2	-11.3	-4.9
27.5	-15.1	-11.5	-3.6
28.0	-16.8	-11.7	-5.1
28.5	-17.8	-11.9	-5.9
29.0	-19.2	-12.1	-7.1
29.5	-19.2	-12.2	-6.9
30.0	-17.4	-12.4	-4.9

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-21.4	-0.5	-20.9
-9.9	-21.7	-0.4	-21.3
-9.8	-19.4	-0.3	-19.1
-9.7	-19.6	-0.2	-19.5
-9.6	-22.4	-0.1	-22.3
-9.5	-29.1	0.1	-29.2
-9.4	-19.7	0.2	-19.9
-9.3	-14.7	0.3	-15.0
-9.2	-12.7	0.4	-13.1
-9.1	-12.5	0.4	-12.8
-9.0	-13.6	0.4	-14.0
-8.9	-15.6	0.4	-16.0
-8.8	-15.6	0.4	-16.0
-8.7	-13.0	0.4	-13.4
-8.6	-11.2	0.4	-11.6
-8.5	-10.8	0.4	-11.1
-8.4	-11.2	0.4	-11.6
-8.3	-13.1	0.4	-13.4
-8.2	-17.1	0.4	-17.5
-8.1	-21.2	0.4	-21.6
-8.0	-20.0	0.4	-20.4
-7.9	-15.1	0.4	-15.4
-7.8	-13.0	0.4	-13.4
-7.7	-12.7	0.4	-13.1
-7.6	-14.6	0.4	-14.9
-7.5	-19.3	0.4	-19.7
-7.4	-39.1	0.4	-39.5
-7.3	-18.5	0.4	-18.9
-7.2	-13.5	0.4	-13.8
-7.1	-11.6	0.4	-11.9
-7.0	-10.7	0.4	-11.0
-6.9	-9.8	0.5	-10.3
-6.8	-9.3	0.7	-10.0
-6.7	-9.3	0.8	-10.2
-6.6	-10.6	1.0	-11.6
-6.5	-12.1	1.2	-13.3
-6.4	-10.9	1.3	-12.3
-6.3	-7.9	1.5	-9.4
-6.2	-6.3	1.7	-8.0
-6.1	-6.1	1.9	-8.0
-6.0	-8.2	2.0	-10.2
-5.9	-12.7	2.2	-14.9
-5.8	-16.2	2.4	-18.6
-5.7	-11.2	2.6	-13.8
-5.6	-8.6	2.8	-11.4
-5.5	-8.8	3.0	-11.8
-5.4	-12.1	3.2	-15.3
-5.3	-24.7	3.4	-28.1
-5.2	-15.8	3.6	-19.4
-5.1	-10.4	3.8	-14.2
-5.0	-8.8	4.0	-12.9
-4.9	-10.7	4.2	-14.9
-4.8	-16.9	4.5	-21.3
-4.7	-22.0	4.7	-26.7
-4.6	-13.2	4.9	-18.1
-4.5	-10.6	5.2	-15.8
-4.4	-11.7	5.4	-17.1
-4.3	-15.0	5.7	-20.7
-4.2	-11.1	5.9	-17.0
-4.1	-6.6	6.2	-12.8

28.30 GHz @ -9,62 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	38.6		
0.1	38.1		
0.2	37.2		
0.3	35.6		
0.4	33.4		
0.5	30.4		
0.6	26.6		
0.7	21.5		
0.8	14.5		
0.9	5.3		
1.0	4.1		
1.1	7.3		
1.2	9.4		
1.3	10.5		
1.4	10.4		
1.5	8.9		
1.6	6.8		
1.7	5.8		
1.8	6.8		
1.9	7.8		
2.0	7.6		
2.1	6.3		
2.2	5.4		
2.3	6.1		
2.4	7.4		
2.5	7.8		
2.6	7.3		
2.7	6.0		
2.8	3.7		
2.9	1.5		
3.0	0.4		
3.1	0.1		
3.2	-0.8		
3.3	-2.1		
3.4	-3.9		
3.5	-5.9	7.9	-13.8
3.6	-7.1	7.6	-14.7
3.7	-6.1	7.3	-13.4
3.8	-3.5	7.0	-10.5
3.9	-1.3	6.7	-8.0
4.0	-0.5	6.4	-6.9
4.1	-0.6	6.2	-6.8
4.2	-1.9	5.9	-7.9
4.3	-4.9	5.7	-10.6
4.4	-10.0	5.4	-15.4
4.5	-14.3	5.2	-19.5
4.6	-12.9	4.9	-17.8
4.7	-11.5	4.7	-16.2
4.8	-11.7	4.5	-16.2
4.9	-13.6	4.2	-17.9
5.0	-13.7	4.0	-17.7
5.1	-13.9	3.8	-17.7
5.2	-14.4	3.6	-18.0
5.3	-13.6	3.4	-17.0
5.4	-10.1	3.2	-13.3
5.5	-8.5	3.0	-11.5
5.6	-7.6	2.8	-10.4
5.7	-9.2	2.6	-11.8
5.8	-12.5	2.4	-14.9
5.9	-15.4	2.2	-17.6

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	-4.2	6.4	-10.7
-3.9	-3.4	6.7	-10.1
-3.8	-3.3	7.0	-10.3
-3.7	-3.5	7.3	-10.8
-3.6	-3.8	7.6	-11.4
-3.5	-3.8	7.9	-11.7
-3.4	-3.1		
-3.3	-1.6		
-3.2	0.0		
-3.1	0.9		
-3.0	0.4		
-2.9	-1.5		
-2.8	-3.8		
-2.7	-1.4		
-2.6	1.9		
-2.5	3.8		
-2.4	4.3		
-2.3	3.8		
-2.2	2.6		
-2.1	1.6		
-2.0	1.1		
-1.9	1.8		
-1.8	4.5		
-1.7	7.8		
-1.6	10.3		
-1.5	11.6		
-1.4	11.6		
-1.3	10.4		
-1.2	8.6		
-1.1	9.4		
-1.0	13.5		
-0.9	18.1		
-0.8	22.5		
-0.7	26.5		
-0.6	30.0		
-0.5	32.9		
-0.4	35.1		
-0.3	36.8		
-0.2	37.9		
-0.1	38.5		
0.0	38.6		

6.0	-12.4	2.0	-14.5
6.1	-8.9	1.9	-10.8
6.2	-7.6	1.7	-9.3
6.3	-8.2	1.5	-9.7
6.4	-10.2	1.3	-11.5
6.5	-11.5	1.2	-12.7
6.6	-10.3	1.0	-11.3
6.7	-8.6	0.8	-9.5
6.8	-7.2	0.7	-7.9
6.9	-6.9	0.5	-7.4
7.0	-7.4	0.4	-7.7
7.1	-8.9	0.4	-9.3
7.2	-11.4	0.4	-11.7
7.3	-14.9	0.4	-15.2
7.4	-20.5	0.4	-20.9
7.5	-21.2	0.4	-21.6
7.6	-18.1	0.4	-18.5
7.7	-16.9	0.4	-17.2
7.8	-17.7	0.4	-18.0
7.9	-23.8	0.4	-24.2
8.0	-28.0	0.4	-28.3
8.1	-17.5	0.4	-17.9
8.2	-13.6	0.4	-13.9
8.3	-12.3	0.4	-12.7
8.4	-13.0	0.4	-13.4
8.5	-15.5	0.4	-15.8
8.6	-18.2	0.4	-18.5
8.7	-15.5	0.4	-15.8
8.8	-12.3	0.4	-12.7
8.9	-10.8	0.4	-11.2
9.0	-11.6	0.4	-12.0
9.1	-13.3	0.4	-13.7
9.2	-17.2	0.4	-17.6
9.3	-22.4	0.3	-22.7
9.4	-22.6	0.2	-22.7
9.5	-20.2	0.1	-20.3
9.6	-19.3	-0.1	-19.2
9.7	-21.4	-0.2	-21.3
9.8	-24.8	-0.3	-24.5
9.9	-23.0	-0.4	-22.6
10.0	-18.3	-0.5	-17.8

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -9.62 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-25.9	-12.6	-13.3
-9.9	-25.0	-12.6	-12.3
-9.8	-25.7	-12.6	-13.0
-9.7	-31.2	-12.6	-18.5
-9.6	-39.2	-12.6	-26.6
-9.5	-26.9	-12.6	-14.2
-9.4	-20.4	-12.6	-7.7
-9.3	-18.1	-12.6	-5.5
-9.2	-16.6	-12.6	-4.0
-9.1	-16.8	-12.6	-4.2
-9.0	-16.9	-12.6	-4.2
-8.9	-16.2	-12.6	-3.6
-8.8	-16.0	-12.6	-3.4
-8.7	-15.4	-12.6	-2.8
-8.6	-16.0	-12.6	-3.4
-8.5	-17.9	-12.6	-5.3
-8.4	-22.0	-12.6	-9.3
-8.3	-24.6	-12.6	-11.9
-8.2	-24.2	-12.6	-11.5
-8.1	-20.7	-12.6	-8.1
-8.0	-18.4	-12.6	-5.7
-7.9	-17.7	-12.6	-5.0
-7.8	-17.1	-12.6	-4.5
-7.7	-18.1	-12.6	-5.4
-7.6	-18.9	-12.6	-6.3
-7.5	-20.6	-12.6	-8.0
-7.4	-23.5	-12.6	-10.9
-7.3	-29.0	-12.6	-16.4
-7.2	-32.1	-12.6	-19.5
-7.1	-37.9	-12.6	-25.2
-7.0	-32.2	-12.6	-19.6
-6.9	-22.4	-12.5	-9.9
-6.8	-17.8	-12.3	-5.5
-6.7	-14.5	-12.2	-2.3
-6.6	-13.3	-12.0	-1.3
-6.5	-12.8	-11.8	-1.0
-6.4	-14.0	-11.7	-2.4
-6.3	-16.8	-11.5	-5.3
-6.2	-21.7	-11.3	-10.4
-6.1	-25.2	-11.1	-14.0
-6.0	-22.3	-11.0	-11.3
-5.9	-19.3	-10.8	-8.5
-5.8	-18.2	-10.6	-7.6
-5.7	-16.3	-10.4	-5.9
-5.6	-14.7	-10.2	-4.5
-5.5	-13.5	-10.0	-3.5
-5.4	-13.1	-9.8	-3.3
-5.3	-14.2	-9.6	-4.6
-5.2	-16.9	-9.4	-7.5
-5.1	-21.9	-9.2	-12.7
-5.0	-26.6	-9.0	-17.6
-4.9	-27.4	-8.8	-18.6
-4.8	-20.4	-8.5	-11.9
-4.7	-14.4	-8.3	-6.1
-4.6	-10.8	-8.1	-2.7
-4.5	-8.5	-7.8	-0.7
-4.4	-7.6	-7.6	0.0
-4.3	-8.0	-7.3	-0.7
-4.2	-10.3	-7.1	-3.2
-4.1	-15.3	-6.8	-8.5

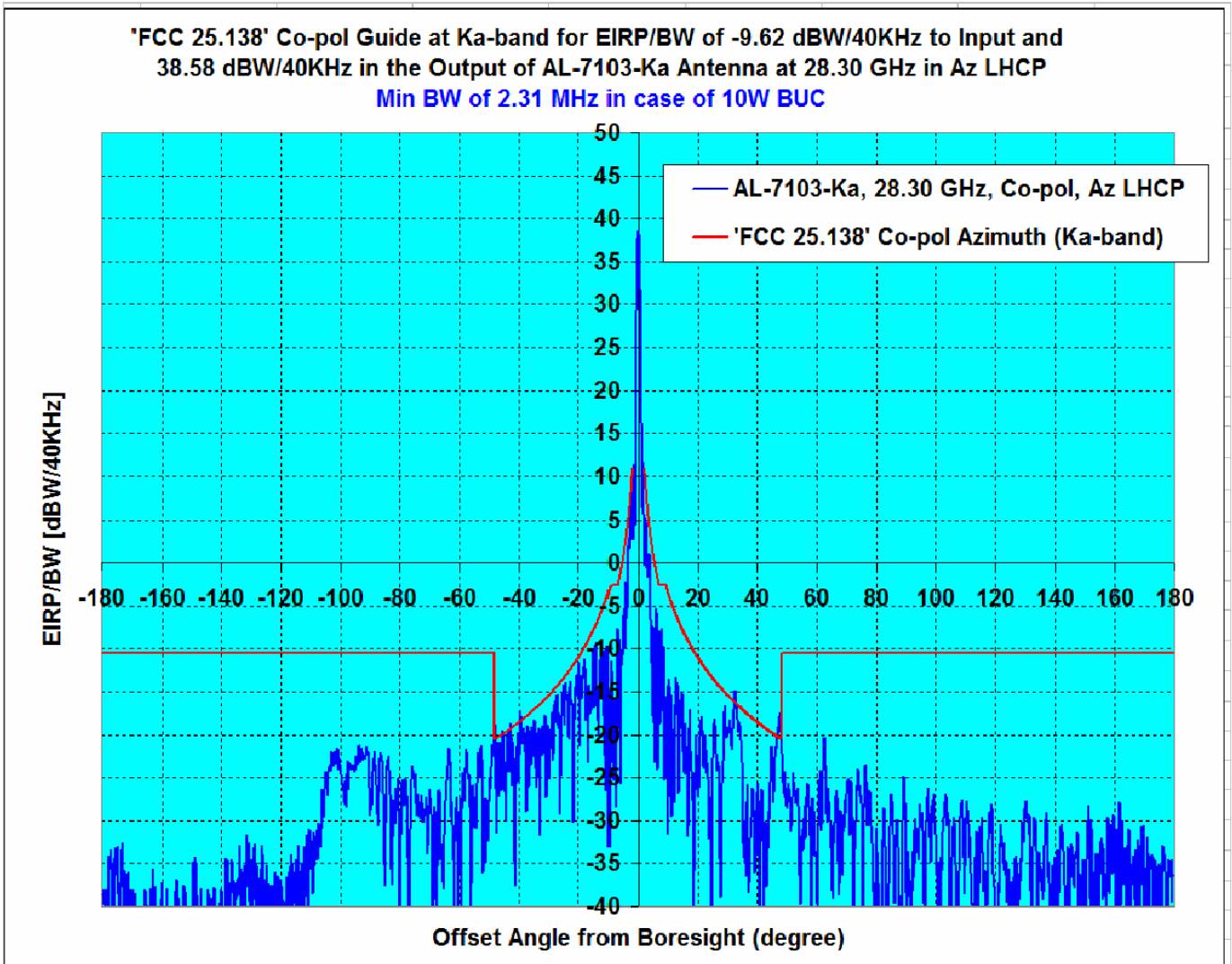
28.30 GHz @ -9.62 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	9.6		
0.1	10.5		
0.2	13.5		
0.3	15.6		
0.4	16.5		
0.5	16.3		
0.6	15.2		
0.7	13.2		
0.8	10.2		
0.9	6.5		
1.0	2.8		
1.1	0.1		
1.2	-2.8		
1.3	-7.8		
1.4	-21.1		
1.5	-9.8		
1.6	-6.5		
1.7	-6.8		
1.8	-9.9		
1.9	-17.9		
2.0	-13.8	1.0	-14.7
2.1	-10.5	0.4	-10.9
2.2	-10.9	-0.1	-10.8
2.3	-17.6	-0.5	-17.0
2.4	-19.3	-1.0	-18.3
2.5	-10.1	-1.4	-8.6
2.6	-7.0	-1.9	-5.1
2.7	-5.9	-2.3	-3.6
2.8	-7.5	-2.7	-4.8
2.9	-11.1	-3.1	-8.0
3.0	-19.7	-3.4	-16.2
3.1	-16.9	-3.8	-13.1
3.2	-11.7	-4.1	-7.5
3.3	-10.6	-4.5	-6.2
3.4	-11.6	-4.8	-6.8
3.5	-13.6	-5.1	-8.5
3.6	-17.6	-5.4	-12.2
3.7	-22.8	-5.7	-17.1
3.8	-25.6	-6.0	-19.6
3.9	-19.3	-6.3	-13.0
4.0	-16.6	-6.6	-10.0
4.1	-15.4	-6.8	-8.6
4.2	-15.9	-7.1	-8.8
4.3	-19.0	-7.3	-11.6
4.4	-24.2	-7.6	-16.6
4.5	-23.2	-7.8	-15.3
4.6	-20.2	-8.1	-12.1
4.7	-21.1	-8.3	-12.8
4.8	-32.2	-8.5	-23.7
4.9	-25.6	-8.8	-16.9
5.0	-16.9	-9.0	-7.9
5.1	-14.7	-9.2	-5.5
5.2	-13.8	-9.4	-4.4
5.3	-15.5	-9.6	-5.9
5.4	-21.4	-9.8	-11.6
5.5	-24.3	-10.0	-14.3
5.6	-17.4	-10.2	-7.2
5.7	-13.5	-10.4	-3.1
5.8	-13.0	-10.6	-2.4
5.9	-14.2	-10.8	-3.4

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

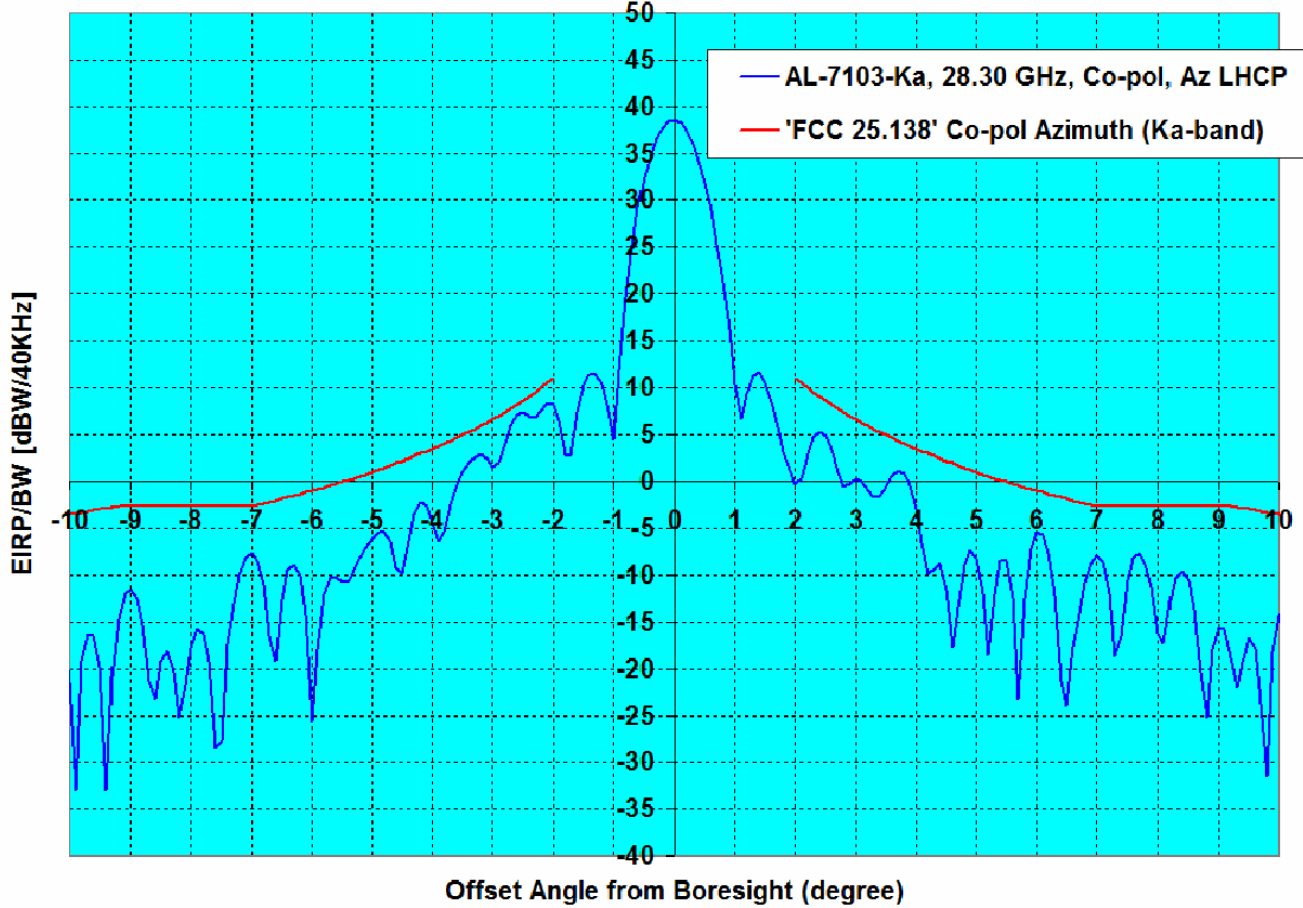
-4.0	-23.9	-6.6	-17.3
-3.9	-17.5	-6.3	-11.2
-3.8	-13.4	-6.0	-7.4
-3.7	-12.0	-5.7	-6.3
-3.6	-11.8	-5.4	-6.4
-3.5	-11.2	-5.1	-6.1
-3.4	-10.3	-4.8	-5.5
-3.3	-10.7	-4.5	-6.2
-3.2	-14.1	-4.1	-10.0
-3.1	-32.8	-3.8	-29.0
-3.0	-15.0	-3.4	-11.6
-2.9	-8.6	-3.1	-5.6
-2.8	-6.2	-2.7	-3.5
-2.7	-6.7	-2.3	-4.4
-2.6	-10.7	-1.9	-8.9
-2.5	-32.9	-1.4	-31.4
-2.4	-9.0	-1.0	-8.0
-2.3	-4.0	-0.5	-3.5
-2.2	-2.3	-0.1	-2.2
-2.1	-3.3	0.4	-3.7
-2.0	-8.4	1.0	-9.3
-1.9	-14.0		
-1.8	-3.3		
-1.7	0.9		
-1.6	2.4		
-1.5	1.8		
-1.4	-1.6		
-1.3	-11.7		
-1.2	-4.3		
-1.1	2.7		
-1.0	6.1		
-0.9	8.5		
-0.8	10.9		
-0.7	13.3		
-0.6	15.3		
-0.5	16.6		
-0.4	17.1		
-0.3	16.6		
-0.2	15.1		
-0.1	12.4		
0.0	9.6		

6.0	-17.5	-11.0	-6.5
6.1	-22.3	-11.1	-11.1
6.2	-25.1	-11.3	-13.8
6.3	-22.4	-11.5	-10.9
6.4	-20.3	-11.7	-8.7
6.5	-18.7	-11.8	-6.9
6.6	-16.6	-12.0	-4.6
6.7	-15.2	-12.2	-3.0
6.8	-14.6	-12.3	-2.3
6.9	-16.3	-12.5	-3.8
7.0	-19.7	-12.6	-7.0
7.1	-19.9	-12.6	-7.2
7.2	-17.4	-12.6	-4.8
7.3	-15.4	-12.6	-2.7
7.4	-15.3	-12.6	-2.7
7.5	-16.2	-12.6	-3.6
7.6	-18.6	-12.6	-6.0
7.7	-20.1	-12.6	-7.4
7.8	-19.3	-12.6	-6.7
7.9	-17.5	-12.6	-4.8
8.0	-16.8	-12.6	-4.2
8.1	-17.9	-12.6	-5.3
8.2	-19.3	-12.6	-6.7
8.3	-21.0	-12.6	-8.4
8.4	-24.3	-12.6	-11.7
8.5	-26.1	-12.6	-13.5
8.6	-24.3	-12.6	-11.7
8.7	-21.3	-12.6	-8.7
8.8	-18.8	-12.6	-6.2
8.9	-18.1	-12.6	-5.5
9.0	-18.9	-12.6	-6.2
9.1	-21.7	-12.6	-9.0
9.2	-27.4	-12.6	-14.8
9.3	-28.9	-12.6	-16.2
9.4	-26.9	-12.6	-14.3
9.5	-23.9	-12.6	-11.3
9.6	-23.0	-12.6	-10.3
9.7	-23.7	-12.6	-11.0
9.8	-23.8	-12.6	-11.2
9.9	-24.4	-12.6	-11.8
10.0	-28.1	-12.6	-15.5



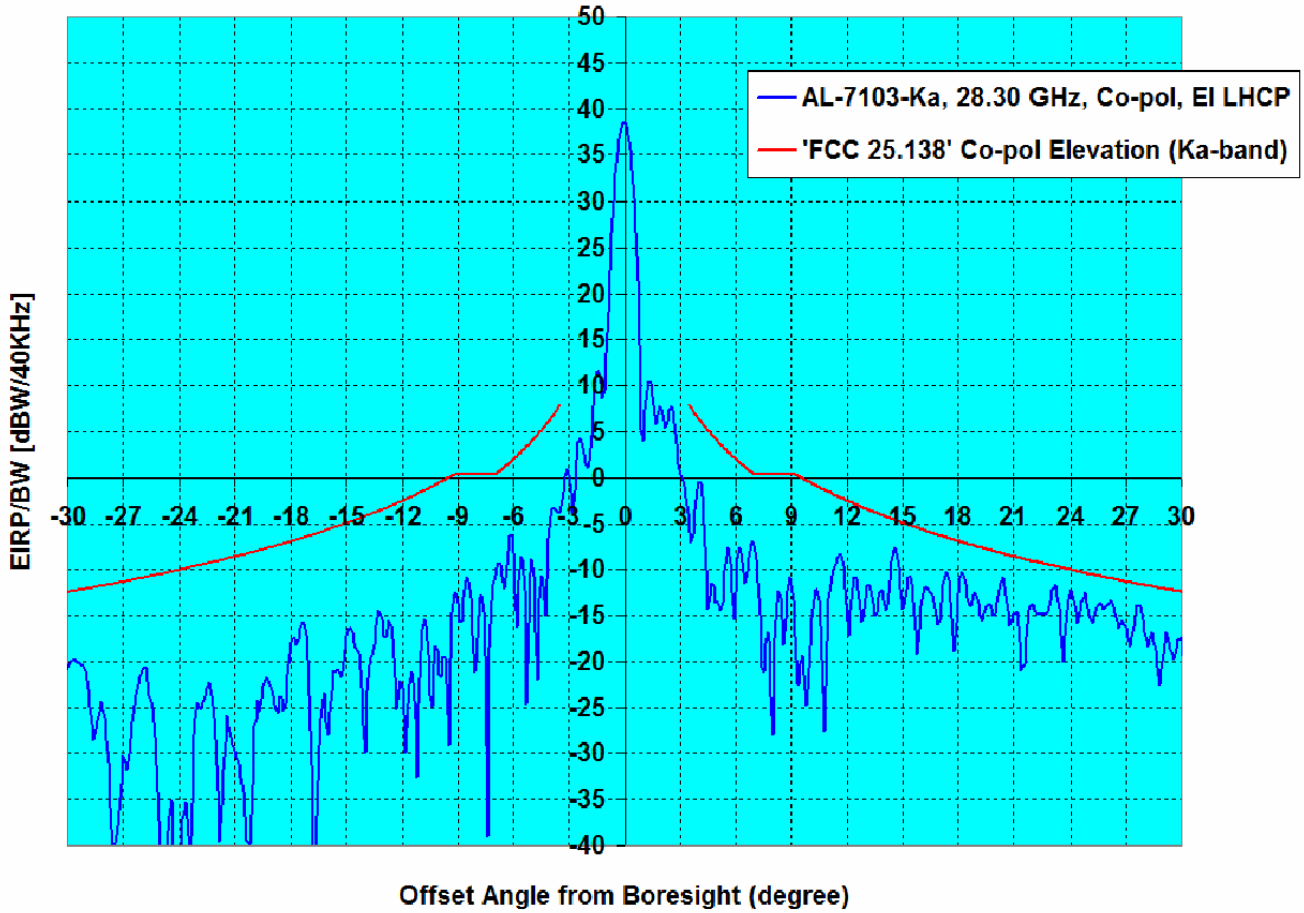
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 28.30 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.20	-9.62	-1.09	2.99	0.87

'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -9.62 dBW/40KHz to Input and 38.58 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in Az LHCP
 Min BW of 2.31 MHz in case of 10W BUC



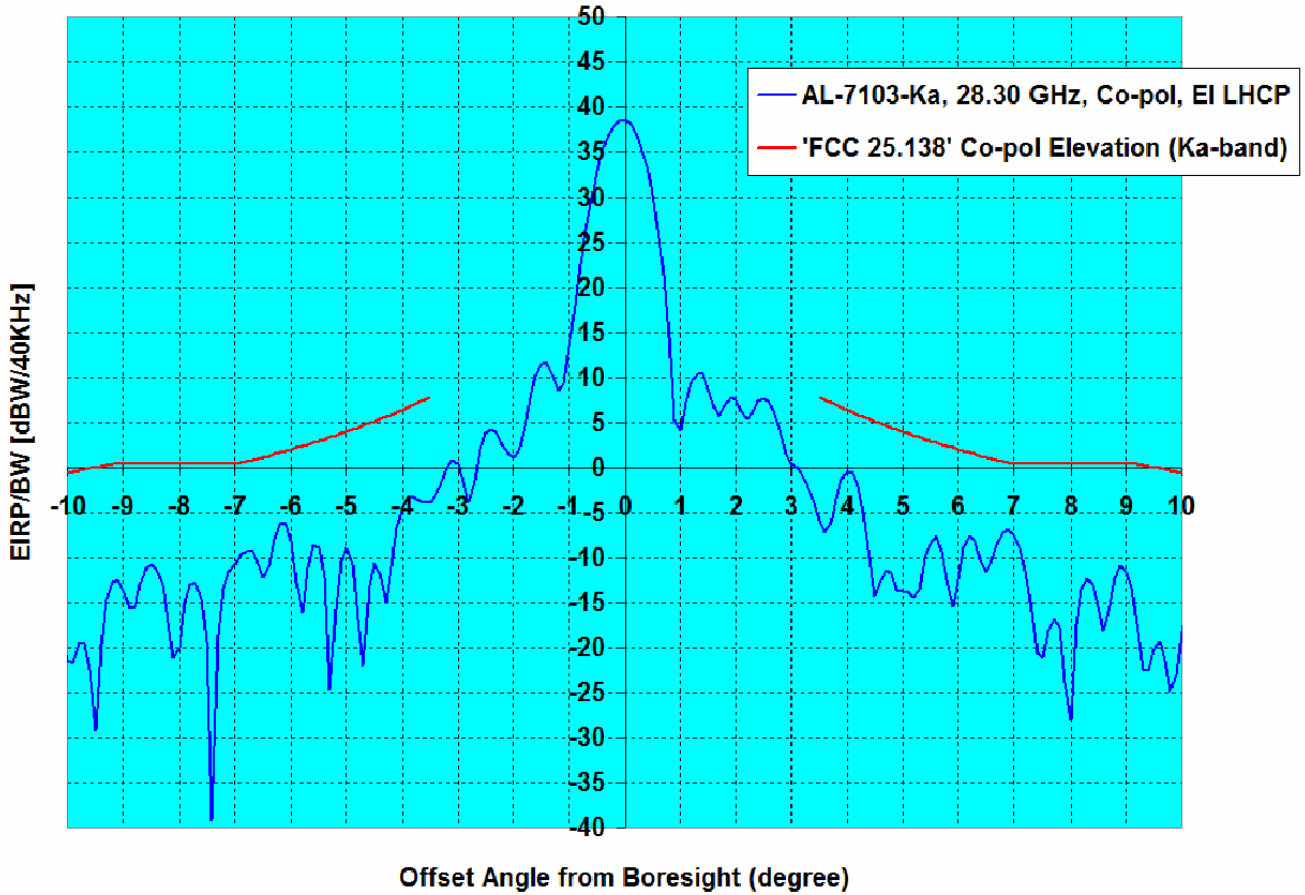
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 28.30 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.20	-9.62	-1.09	2.99	0.87

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -9.62 dBW/40KHz to Input and
 38.58 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in EI LHCP
 Min BW of 2.31 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]			± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 28.30 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.20	-9.62	-6.75	-2.04	0.00

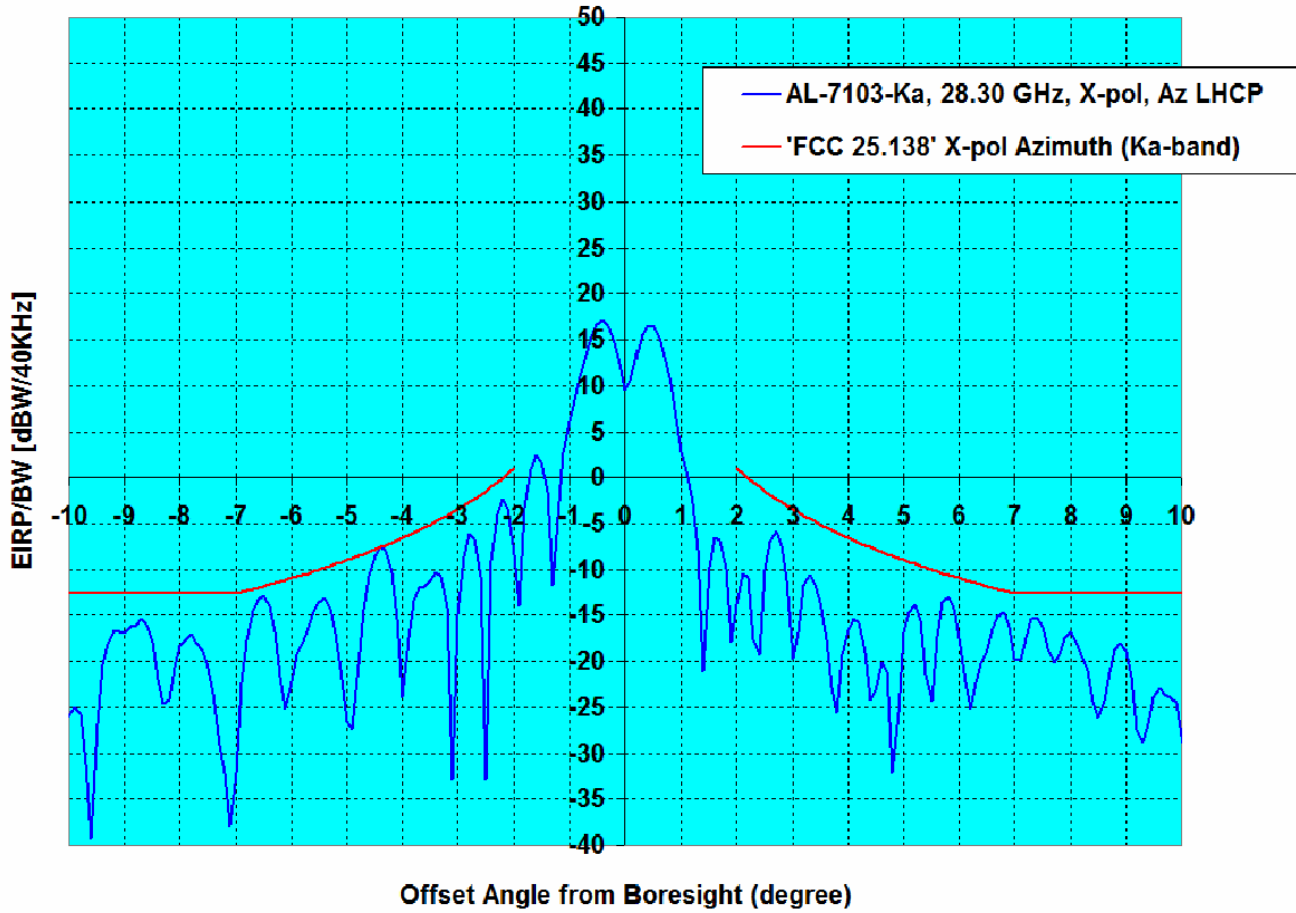
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -9.62 dBW/40KHz to Input and
 38.58 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in EI LHCP
 Min BW of 2.31 MHz in case of 10W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7103-Ka, 28.30 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.20	-9.62	-6.75	-2.04	0.00

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd, X-pol, Azimuth LHCP

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -9.62 dBW/40KHz to Input and
 38.58 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in Az LHCP
 Min BW of 2.31 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]			± (2° to 7°)	± (2° to 9.2°)	
AL-7103-Ka, 28.30 GHz, X-pol, Az LHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	48.20	-9.62	0.00	0.00	0.00

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-179.0	-34.1	-10.5	-23.6
-178.0	-48.1	-10.5	-37.6
-177.0	-38.6	-10.5	-28.1
-176.0	-34.8	-10.5	-24.3
-175.0	-36.4	-10.5	-25.9
-174.0	-37.7	-10.5	-27.2
-173.0	-46.6	-10.5	-36.1
-172.0	-42.7	-10.5	-32.2
-171.0	-42.1	-10.5	-31.6
-170.0	-37.2	-10.5	-26.7
-169.0	-43.6	-10.5	-33.1
-168.0	-43.8	-10.5	-33.3
-167.0	-43.3	-10.5	-32.8
-166.0	-44.3	-10.5	-33.8
-165.0	-44.7	-10.5	-34.2
-164.0	-43.6	-10.5	-33.1
-163.0	-40.7	-10.5	-30.2
-162.0	-41.4	-10.5	-30.9
-161.0	-53.8	-10.5	-43.3
-160.0	-42.1	-10.5	-31.6
-159.0	-44.1	-10.5	-33.6
-158.0	-44.0	-10.5	-33.5
-157.0	-45.3	-10.5	-34.8
-156.0	-39.0	-10.5	-28.5
-155.0	-41.8	-10.5	-31.3
-154.0	-47.8	-10.5	-37.3
-153.0	-40.2	-10.5	-29.7
-152.0	-49.7	-10.5	-39.2
-151.0	-43.4	-10.5	-32.9
-150.0	-45.9	-10.5	-35.4
-149.0	-38.7	-10.5	-28.2
-148.0	-43.0	-10.5	-32.5
-147.0	-40.6	-10.5	-30.1
-146.0	-45.9	-10.5	-35.4
-145.0	-39.8	-10.5	-29.3
-144.0	-44.4	-10.5	-33.9
-143.0	-41.7	-10.5	-31.2
-142.0	-44.3	-10.5	-33.8
-141.0	-38.8	-10.5	-28.3
-140.0	-52.2	-10.5	-41.7
-139.0	-42.2	-10.5	-31.7
-138.0	-42.6	-10.5	-32.1
-137.0	-42.0	-10.5	-31.5
-136.0	-39.3	-10.5	-28.8
-135.0	-41.1	-10.5	-30.6
-134.0	-44.4	-10.5	-33.9
-133.0	-39.9	-10.5	-29.4
-132.0	-48.9	-10.5	-38.4
-131.0	-39.9	-10.5	-29.4
-130.0	-45.1	-10.5	-34.6
-129.0	-49.1	-10.5	-38.6
-128.0	-47.9	-10.5	-37.4
-127.0	-44.3	-10.5	-33.8
-126.0	-49.7	-10.5	-39.2
-125.0	-45.6	-10.5	-35.1
-124.0	-39.6	-10.5	-29.1
-123.0	-33.9	-10.5	-23.4
-122.0	-44.2	-10.5	-33.7
-121.0	-41.8	-10.5	-31.3
-120.0	-37.2	-10.5	-26.7

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	36.9		
1.0	9.0		
2.0	-1.7	11.0	-12.7
3.0	-1.3	6.6	-7.8
4.0	-4.2	3.4	-7.6
5.0	-8.9	1.0	-10.0
6.0	-7.7	-1.0	-6.8
7.0	-9.5	-2.6	-6.9
8.0	-24.1	-2.6	-21.5
9.0	-16.5	-2.6	-13.9
10.0	-16.8	-3.5	-13.3
11.0	-21.0	-4.5	-16.5
12.0	-23.5	-5.5	-18.0
13.0	-18.3	-6.3	-12.0
14.0	-23.5	-7.2	-16.4
15.0	-21.8	-7.9	-13.9
16.0	-22.1	-8.6	-13.5
17.0	-23.6	-9.3	-14.4
18.0	-20.9	-9.9	-11.1
19.0	-27.7	-10.5	-17.3
20.0	-35.6	-11.0	-24.5
21.0	-20.8	-11.6	-9.3
22.0	-29.7	-12.1	-17.6
23.0	-24.9	-12.5	-12.3
24.0	-29.5	-13.0	-16.5
25.0	-37.7	-13.4	-24.2
26.0	-22.0	-13.9	-8.2
27.0	-28.0	-14.3	-13.7
28.0	-26.1	-14.7	-11.4
29.0	-18.7	-15.1	-3.7
30.0	-19.8	-15.4	-4.4
31.0	-22.4	-15.8	-6.6
32.0	-22.2	-16.1	-6.1
33.0	-19.6	-16.5	-3.2
34.0	-26.2	-16.8	-9.4
35.0	-28.5	-17.1	-11.4
36.0	-42.3	-17.4	-24.9
37.0	-25.7	-17.7	-8.0
38.0	-34.9	-18.0	-16.9
39.0	-28.1	-18.3	-9.9
40.0	-33.6	-18.6	-15.0
41.0	-35.7	-18.8	-16.9
42.0	-35.6	-19.1	-16.5
43.0	-24.4	-19.3	-5.1
44.0	-26.5	-19.6	-6.9
45.0	-26.7	-19.8	-6.9
46.0	-29.8	-20.1	-9.8
47.0	-25.8	-20.3	-5.5
48.0	-28.2	-20.5	-7.7
49.0	-32.5	-10.5	-22.0
50.0	-30.9	-10.5	-20.4
51.0	-25.2	-10.5	-14.7
52.0	-37.1	-10.5	-26.6
53.0	-41.4	-10.5	-30.9
54.0	-37.9	-10.5	-27.4
55.0	-39.5	-10.5	-29.0
56.0	-38.4	-10.5	-27.9
57.0	-38.7	-10.5	-28.2
58.0	-42.6	-10.5	-32.1
59.0	-31.1	-10.5	-20.6

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-37.9	-10.5	-27.4
-118.0	-41.1	-10.5	-30.6
-117.0	-37.8	-10.5	-27.3
-116.0	-45.1	-10.5	-34.6
-115.0	-39.6	-10.5	-29.1
-114.0	-41.6	-10.5	-31.1
-113.0	-38.4	-10.5	-27.9
-112.0	-42.7	-10.5	-32.2
-111.0	-38.1	-10.5	-27.6
-110.0	-38.2	-10.5	-27.7
-109.0	-45.8	-10.5	-35.3
-108.0	-35.5	-10.5	-25.0
-107.0	-36.8	-10.5	-26.3
-106.0	-38.0	-10.5	-27.5
-105.0	-41.3	-10.5	-30.8
-104.0	-38.2	-10.5	-27.7
-103.0	-32.4	-10.5	-21.9
-102.0	-28.5	-10.5	-18.0
-101.0	-26.7	-10.5	-16.2
-100.0	-28.3	-10.5	-17.8
-99.0	-27.2	-10.5	-16.7
-98.0	-26.6	-10.5	-16.1
-97.0	-28.3	-10.5	-17.8
-96.0	-28.2	-10.5	-17.7
-95.0	-24.6	-10.5	-14.1
-94.0	-24.1	-10.5	-13.6
-93.0	-28.0	-10.5	-17.5
-92.0	-25.9	-10.5	-15.4
-91.0	-26.6	-10.5	-16.1
-90.0	-40.2	-10.5	-29.7
-89.0	-26.4	-10.5	-15.9
-88.0	-28.9	-10.5	-18.4
-87.0	-31.1	-10.5	-20.6
-86.0	-27.5	-10.5	-17.0
-85.0	-47.8	-10.5	-37.3
-84.0	-32.4	-10.5	-21.9
-83.0	-54.6	-10.5	-44.1
-82.0	-25.5	-10.5	-15.0
-81.0	-25.8	-10.5	-15.3
-80.0	-33.8	-10.5	-23.3
-79.0	-43.7	-10.5	-33.2
-78.0	-34.9	-10.5	-24.4
-77.0	-34.1	-10.5	-23.6
-76.0	-24.5	-10.5	-14.0
-75.0	-25.7	-10.5	-15.2
-74.0	-29.8	-10.5	-19.3
-73.0	-35.6	-10.5	-25.1
-72.0	-31.4	-10.5	-20.9
-71.0	-32.9	-10.5	-22.4
-70.0	-25.6	-10.5	-15.1
-69.0	-32.5	-10.5	-22.0
-68.0	-28.0	-10.5	-17.5
-67.0	-27.1	-10.5	-16.6
-66.0	-29.6	-10.5	-19.1
-65.0	-31.0	-10.5	-20.5
-64.0	-28.1	-10.5	-17.6
-63.0	-26.3	-10.5	-15.8
-62.0	-33.3	-10.5	-22.8
-61.0	-26.6	-10.5	-16.1
-60.0	-25.7	-10.5	-15.2
-59.0	-26.9	-10.5	-16.4
-58.0	-34.0	-10.5	-23.5
-57.0	-23.7	-10.5	-13.2

60.0	-37.1	-10.5	-26.6
61.0	-28.8	-10.5	-18.3
62.0	-27.1	-10.5	-16.6
63.0	-25.1	-10.5	-14.6
64.0	-30.0	-10.5	-19.5
65.0	-32.1	-10.5	-21.6
66.0	-38.9	-10.5	-28.4
67.0	-25.5	-10.5	-15.0
68.0	-33.3	-10.5	-22.8
69.0	-33.8	-10.5	-23.3
70.0	-30.5	-10.5	-20.0
71.0	-24.5	-10.5	-14.0
72.0	-27.1	-10.5	-16.6
73.0	-29.5	-10.5	-19.0
74.0	-31.8	-10.5	-21.3
75.0	-24.9	-10.5	-14.4
76.0	-35.8	-10.5	-25.3
77.0	-33.4	-10.5	-22.9
78.0	-25.3	-10.5	-14.8
79.0	-28.3	-10.5	-17.8
80.0	-33.0	-10.5	-22.5
81.0	-34.1	-10.5	-23.6
82.0	-35.1	-10.5	-24.6
83.0	-31.5	-10.5	-21.0
84.0	-34.4	-10.5	-23.9
85.0	-37.4	-10.5	-26.9
86.0	-31.3	-10.5	-20.8
87.0	-37.0	-10.5	-26.5
88.0	-39.3	-10.5	-28.8
89.0	-34.2	-10.5	-23.7
90.0	-33.2	-10.5	-22.7
91.0	-36.5	-10.5	-26.0
92.0	-43.6	-10.5	-33.1
93.0	-47.4	-10.5	-36.9
94.0	-37.1	-10.5	-26.6
95.0	-41.7	-10.5	-31.2
96.0	-37.9	-10.5	-27.4
97.0	-33.1	-10.5	-22.6
98.0	-38.7	-10.5	-28.2
99.0	-44.4	-10.5	-33.9
100.0	-36.3	-10.5	-25.8
101.0	-43.0	-10.5	-32.5
102.0	-37.5	-10.5	-27.0
103.0	-32.9	-10.5	-22.4
104.0	-39.9	-10.5	-29.4
105.0	-37.4	-10.5	-26.9
106.0	-34.7	-10.5	-24.2
107.0	-33.6	-10.5	-23.1
108.0	-67.8	-10.5	-57.3
109.0	-35.8	-10.5	-25.3
110.0	-38.1	-10.5	-27.6
111.0	-36.5	-10.5	-26.0
112.0	-39.2	-10.5	-28.7
113.0	-54.8	-10.5	-44.3
114.0	-34.5	-10.5	-24.0
115.0	-41.7	-10.5	-31.2
116.0	-44.1	-10.5	-33.6
117.0	-43.7	-10.5	-33.2
118.0	-42.5	-10.5	-32.0
119.0	-37.1	-10.5	-26.6
120.0	-34.1	-10.5	-23.6
121.0	-38.4	-10.5	-27.9
122.0	-36.1	-10.5	-25.6

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-22.5	-10.5	-12.0
-55.0	-28.1	-10.5	-17.6
-54.0	-34.6	-10.5	-24.1
-53.0	-23.6	-10.5	-13.1
-52.0	-26.7	-10.5	-16.2
-51.0	-31.6	-10.5	-21.1
-50.0	-25.8	-10.5	-15.3
-49.0	-25.0	-10.5	-14.5
-48.0	-20.7	-20.5	-0.1
-47.0	-21.3	-20.3	-1.0
-46.0	-25.5	-20.1	-5.4
-45.0	-27.3	-19.8	-7.4
-44.0	-22.4	-19.6	-2.8
-43.0	-29.6	-19.3	-10.3
-42.0	-25.0	-19.1	-5.9
-41.0	-24.6	-18.8	-5.8
-40.0	-22.7	-18.6	-4.2
-39.0	-20.8	-18.3	-2.5
-38.0	-21.6	-18.0	-3.6
-37.0	-21.6	-17.7	-3.9
-36.0	-21.3	-17.4	-3.9
-35.0	-22.8	-17.1	-5.7
-34.0	-24.0	-16.8	-7.2
-33.0	-25.4	-16.5	-9.0
-32.0	-22.5	-16.1	-6.4
-31.0	-19.7	-15.8	-4.0
-30.0	-19.0	-15.4	-3.6
-29.0	-21.0	-15.1	-6.0
-28.0	-16.7	-14.7	-2.0
-27.0	-16.8	-14.3	-2.5
-26.0	-20.3	-13.9	-6.4
-25.0	-15.7	-13.4	-2.3
-24.0	-15.9	-13.0	-2.9
-23.0	-14.8	-12.5	-2.2
-22.0	-16.5	-12.1	-4.4
-21.0	-20.9	-11.6	-9.3
-20.0	-20.1	-11.0	-9.0
-19.0	-15.3	-10.5	-4.9
-18.0	-19.0	-9.9	-9.1
-17.0	-15.3	-9.3	-6.0
-16.0	-22.7	-8.6	-14.1
-15.0	-16.4	-7.9	-8.5
-14.0	-17.5	-7.2	-10.3
-13.0	-20.9	-6.3	-14.6
-12.0	-12.3	-5.5	-6.8
-11.0	-18.8	-4.5	-14.3
-10.0	-27.2	-3.5	-23.7
-9.0	-11.8	-2.6	-9.2
-8.0	-27.5	-2.6	-24.9
-7.0	-9.7	-2.6	-7.1
-6.0	-15.9	-1.0	-14.9
-5.0	-8.9	1.0	-9.9
-4.0	-7.8	3.4	-11.2
-3.0	0.3	6.6	-6.3
-2.0	6.3	11.0	-4.7
-1.0	1.9		
0.0	36.9		

123.0	-46.7	-10.5	-36.2
124.0	-39.7	-10.5	-29.2
125.0	-36.8	-10.5	-26.3
126.0	-37.4	-10.5	-26.9
127.0	-48.4	-10.5	-37.9
128.0	-47.3	-10.5	-36.8
129.0	-40.2	-10.5	-29.7
130.0	-51.8	-10.5	-41.3
131.0	-37.0	-10.5	-26.5
132.0	-45.0	-10.5	-34.5
133.0	-33.8	-10.5	-23.3
134.0	-30.5	-10.5	-20.0
135.0	-40.9	-10.5	-30.4
136.0	-38.7	-10.5	-28.2
137.0	-42.8	-10.5	-32.3
138.0	-37.8	-10.5	-27.3
139.0	-32.1	-10.5	-21.6
140.0	-31.9	-10.5	-21.4
141.0	-30.2	-10.5	-19.7
142.0	-39.4	-10.5	-28.9
143.0	-35.7	-10.5	-25.2
144.0	-36.7	-10.5	-26.2
145.0	-36.8	-10.5	-26.3
146.0	-29.7	-10.5	-19.2
147.0	-31.8	-10.5	-21.3
148.0	-42.9	-10.5	-32.4
149.0	-34.4	-10.5	-23.9
150.0	-40.3	-10.5	-29.8
151.0	-35.1	-10.5	-24.6
152.0	-33.9	-10.5	-23.4
153.0	-30.8	-10.5	-20.3
154.0	-33.5	-10.5	-23.0
155.0	-42.7	-10.5	-32.2
156.0	-31.0	-10.5	-20.5
157.0	-30.8	-10.5	-20.3
158.0	-43.1	-10.5	-32.6
159.0	-29.6	-10.5	-19.1
160.0	-30.3	-10.5	-19.8
161.0	-29.9	-10.5	-19.4
162.0	-34.1	-10.5	-23.6
163.0	-44.6	-10.5	-34.1
164.0	-39.7	-10.5	-29.2
165.0	-37.8	-10.5	-27.3
166.0	-31.3	-10.5	-20.8
167.0	-34.2	-10.5	-23.7
168.0	-30.2	-10.5	-19.7
169.0	-43.6	-10.5	-33.1
170.0	-28.3	-10.5	-17.8
171.0	-32.8	-10.5	-22.3
172.0	-34.0	-10.5	-23.5
173.0	-41.0	-10.5	-30.5
174.0	-34.2	-10.5	-23.7
175.0	-38.6	-10.5	-28.1
176.0	-36.1	-10.5	-25.6
177.0	-39.0	-10.5	-28.5
178.0	-36.6	-10.5	-26.1
179.0	-47.0	-10.5	-36.5

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-27.2	-3.5	-23.7
-9.9	-22.7	-3.4	-19.3
-9.8	-19.1	-3.3	-15.8
-9.7	-17.4	-3.2	-14.2
-9.6	-18.3	-3.1	-15.2
-9.5	-20.1	-2.9	-17.2
-9.4	-18.0	-2.8	-15.1
-9.3	-14.8	-2.7	-12.1
-9.2	-12.8	-2.6	-10.2
-9.1	-11.6	-2.6	-9.0
-9.0	-11.8	-2.6	-9.2
-8.9	-13.5	-2.6	-10.9
-8.8	-17.7	-2.6	-15.1
-8.7	-22.6	-2.6	-20.0
-8.6	-18.6	-2.6	-16.0
-8.5	-14.5	-2.6	-11.9
-8.4	-13.4	-2.6	-10.8
-8.3	-13.9	-2.6	-11.3
-8.2	-16.5	-2.6	-13.9
-8.1	-22.5	-2.6	-19.9
-8.0	-27.5	-2.6	-24.9
-7.9	-22.0	-2.6	-19.4
-7.8	-19.5	-2.6	-16.9
-7.7	-18.5	-2.6	-15.9
-7.6	-19.7	-2.6	-17.1
-7.5	-20.6	-2.6	-17.9
-7.4	-22.4	-2.6	-19.8
-7.3	-18.7	-2.6	-16.1
-7.2	-14.2	-2.6	-11.5
-7.1	-11.2	-2.6	-8.6
-7.0	-9.7	-2.6	-7.1
-6.9	-9.8	-2.5	-7.3
-6.8	-11.8	-2.3	-9.5
-6.7	-15.9	-2.2	-13.7
-6.6	-16.9	-2.0	-14.9
-6.5	-12.4	-1.8	-10.6
-6.4	-9.5	-1.7	-7.9
-6.3	-8.5	-1.5	-7.0
-6.2	-9.1	-1.3	-7.8
-6.1	-11.3	-1.1	-10.2
-6.0	-15.9	-1.0	-14.9
-5.9	-20.4	-0.8	-19.6
-5.8	-16.8	-0.6	-16.3
-5.7	-15.2	-0.4	-14.8
-5.6	-16.5	-0.2	-16.3
-5.5	-21.3	0.0	-21.3
-5.4	-18.5	0.2	-18.7
-5.3	-13.5	0.4	-13.9
-5.2	-10.9	0.6	-11.5
-5.1	-9.8	0.8	-10.6
-5.0	-8.9	1.0	-9.9
-4.9	-8.1	1.2	-9.4
-4.8	-7.6	1.5	-9.1
-4.7	-8.2	1.7	-9.9
-4.6	-10.4	1.9	-12.3
-4.5	-12.6	2.2	-14.7
-4.4	-9.5	2.4	-12.0
-4.3	-6.6	2.7	-9.2
-4.2	-5.2	2.9	-8.1
-4.1	-5.7	3.2	-8.9

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	36.9		
0.1	36.6		
0.2	35.7		
0.3	34.4		
0.4	32.4		
0.5	29.9		
0.6	26.7		
0.7	23.0		
0.8	18.6		
0.9	13.9		
1.0	9.0		
1.1	5.4		
1.2	6.5		
1.3	8.3		
1.4	8.7		
1.5	7.7		
1.6	5.4		
1.7	2.0		
1.8	-0.8		
1.9	-2.1		
2.0	-1.7	11.0	-12.7
2.1	-0.2	10.4	-10.7
2.2	1.6	9.9	-8.3
2.3	3.3	9.5	-6.2
2.4	3.7	9.0	-5.3
2.5	2.5	8.6	-6.0
2.6	0.4	8.1	-7.8
2.7	-2.3	7.7	-10.0
2.8	-3.0	7.3	-10.3
2.9	-1.9	6.9	-8.8
3.0	-1.3	6.6	-7.8
3.1	-1.3	6.2	-7.6
3.2	-2.4	5.9	-8.3
3.3	-3.3	5.5	-8.8
3.4	-3.4	5.2	-8.6
3.5	-2.7	4.9	-7.6
3.6	-2.0	4.6	-6.6
3.7	-1.5	4.3	-5.8
3.8	-1.6	4.0	-5.6
3.9	-2.3	3.7	-6.0
4.0	-4.2	3.4	-7.6
4.1	-7.4	3.2	-10.6
4.2	-10.9	2.9	-13.8
4.3	-12.7	2.7	-15.4
4.4	-12.4	2.4	-14.8
4.5	-14.0	2.2	-16.1
4.6	-17.5	1.9	-19.4
4.7	-14.5	1.7	-16.2
4.8	-10.2	1.5	-11.7
4.9	-8.3	1.2	-9.6
5.0	-8.9	1.0	-10.0
5.1	-12.9	0.8	-13.7
5.2	-20.1	0.6	-20.7
5.3	-14.4	0.4	-14.8
5.4	-10.6	0.2	-10.8
5.5	-9.6	0.0	-9.6
5.6	-11.5	-0.2	-11.3
5.7	-16.8	-0.4	-16.4
5.8	-15.1	-0.6	-14.5
5.9	-10.1	-0.8	-9.4

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-7.8	3.4	-11.2
-3.9	-10.2	3.7	-14.0
-3.8	-7.5	4.0	-11.5
-3.7	-4.2	4.3	-8.5
-3.6	-2.0	4.6	-6.6
-3.5	-1.0	4.9	-5.9
-3.4	-0.4	5.2	-5.6
-3.3	0.0	5.5	-5.5
-3.2	0.5	5.9	-5.4
-3.1	0.5	6.2	-5.7
-3.0	0.3	6.6	-6.3
-2.9	0.7	6.9	-6.2
-2.8	2.4	7.3	-5.0
-2.7	4.0	7.7	-3.7
-2.6	5.1	8.1	-3.0
-2.5	5.1	8.6	-3.4
-2.4	4.3	9.0	-4.7
-2.3	3.8	9.5	-5.7
-2.2	4.6	9.9	-5.3
-2.1	5.9	10.4	-4.5
-2.0	6.3	11.0	-4.7
-1.9	5.1		
-1.8	2.3		
-1.7	1.6		
-1.6	5.1		
-1.5	7.6		
-1.4	8.1		
-1.3	6.8		
-1.2	4.1		
-1.1	1.5		
-1.0	1.9		
-0.9	9.4		
-0.8	17.0		
-0.7	22.6		
-0.6	27.0		
-0.5	30.4		
-0.4	32.9		
-0.3	34.7		
-0.2	36.0		
-0.1	36.7		
0.0	36.9		

6.0	-7.7	-1.0	-6.8
6.1	-7.9	-1.1	-6.8
6.2	-9.7	-1.3	-8.4
6.3	-13.1	-1.5	-11.6
6.4	-17.8	-1.7	-16.2
6.5	-18.1	-1.8	-16.3
6.6	-15.3	-2.0	-13.3
6.7	-13.1	-2.2	-11.0
6.8	-11.2	-2.3	-8.8
6.9	-9.8	-2.5	-7.4
7.0	-9.5	-2.6	-6.9
7.1	-11.3	-2.6	-8.7
7.2	-15.8	-2.6	-13.2
7.3	-21.0	-2.6	-18.4
7.4	-15.9	-2.6	-13.2
7.5	-12.3	-2.6	-9.7
7.6	-11.3	-2.6	-8.7
7.7	-11.8	-2.6	-9.2
7.8	-14.3	-2.6	-11.6
7.9	-17.9	-2.6	-15.2
8.0	-24.1	-2.6	-21.5
8.1	-27.4	-2.6	-24.8
8.2	-20.1	-2.6	-17.5
8.3	-15.8	-2.6	-13.2
8.4	-13.0	-2.6	-10.4
8.5	-12.2	-2.6	-9.5
8.6	-12.8	-2.6	-10.1
8.7	-15.6	-2.6	-12.9
8.8	-19.8	-2.6	-17.2
8.9	-20.1	-2.6	-17.5
9.0	-16.5	-2.6	-13.9
9.1	-14.8	-2.6	-12.2
9.2	-15.3	-2.6	-12.7
9.3	-18.9	-2.7	-16.2
9.4	-23.9	-2.8	-21.0
9.5	-22.5	-2.9	-19.5
9.6	-21.2	-3.1	-18.2
9.7	-24.7	-3.2	-21.5
9.8	-44.2	-3.3	-40.9
9.9	-21.5	-3.4	-18.1
10.0	-16.8	-3.5	-13.3

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-27.5	-12.4	-15.0
-29.5	-22.7	-12.2	-10.5
-29.0	-26.5	-12.1	-14.5
-28.5	-24.8	-11.9	-12.9
-28.0	-20.7	-11.7	-9.0
-27.5	-27.3	-11.5	-15.8
-27.0	-29.1	-11.3	-17.9
-26.5	-25.8	-11.1	-14.7
-26.0	-23.5	-10.9	-12.6
-25.5	-26.1	-10.7	-15.5
-25.0	-32.8	-10.4	-22.4
-24.5	-29.2	-10.2	-19.0
-24.0	-33.7	-10.0	-23.7
-23.5	-33.8	-9.8	-24.0
-23.0	-25.0	-9.5	-15.4
-22.5	-25.2	-9.3	-15.9
-22.0	-31.0	-9.1	-21.9
-21.5	-22.2	-8.8	-13.4
-21.0	-22.8	-8.6	-14.2
-20.5	-27.0	-8.3	-18.7
-20.0	-23.8	-8.0	-15.7
-19.5	-24.1	-7.8	-16.4
-19.0	-29.0	-7.5	-21.5
-18.5	-33.6	-7.2	-26.5
-18.0	-30.2	-6.9	-23.3
-17.5	-23.9	-6.6	-17.3
-17.0	-20.8	-6.3	-14.6
-16.5	-26.7	-5.9	-20.8
-16.0	-30.9	-5.6	-25.3
-15.5	-23.3	-5.3	-18.1
-15.0	-19.2	-4.9	-14.3
-14.5	-18.9	-4.5	-14.4
-14.0	-22.9	-4.2	-18.8
-13.5	-24.5	-3.8	-20.8
-13.0	-19.4	-3.3	-16.1
-12.5	-16.8	-2.9	-13.9
-12.0	-19.4	-2.5	-16.9
-11.5	-28.9	-2.0	-26.9
-11.0	-26.9	-1.5	-25.4
-10.5	-20.3	-1.0	-19.3
-10.0	-18.0	-0.5	-17.5
-9.5	-23.7	0.1	-23.8
-9.0	-16.2	0.4	-16.5
-8.5	-11.5	0.4	-11.9
-8.0	-22.6	0.4	-22.9
-7.5	-15.5	0.4	-15.8
-7.0	-11.1	0.4	-11.5
-6.5	-20.0	1.2	-21.1
-6.0	-8.0	2.0	-10.1
-5.5	-11.3	3.0	-14.3
-5.0	-9.5	4.0	-13.6
-4.5	-11.2	5.2	-16.4
-4.0	-6.5	6.4	-12.9
-3.5	-5.6	7.9	-13.5
-3.0	-0.3		
-2.5	1.4		
-2.0	0.6		
-1.5	10.3		
-1.0	9.1		
-0.5	30.5		
0.0	36.9		

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.9		
0.5	30.5		
1.0	4.5		
1.5	7.6		
2.0	6.8		
2.5	6.1		
3.0	-1.4		
3.5	-4.6	7.9	-12.5
4.0	-1.7	6.4	-8.1
4.5	-14.5	5.2	-19.6
5.0	-11.9	4.0	-16.0
5.5	-8.8	3.0	-11.8
6.0	-19.9	2.0	-22.0
6.5	-14.4	1.2	-15.6
7.0	-9.2	0.4	-9.5
7.5	-24.1	0.4	-24.5
8.0	-19.9	0.4	-20.3
8.5	-19.8	0.4	-20.2
9.0	-14.3	0.4	-14.7
9.5	-15.1	0.1	-15.1
10.0	-31.1	-0.5	-30.6
10.5	-14.9	-1.0	-13.9
11.0	-13.8	-1.5	-12.2
11.5	-14.7	-2.0	-12.7
12.0	-17.9	-2.5	-15.4
12.5	-13.2	-2.9	-10.3
13.0	-23.6	-3.3	-20.2
13.5	-18.3	-3.8	-14.5
14.0	-10.6	-4.2	-6.4
14.5	-16.6	-4.5	-12.1
15.0	-16.1	-4.9	-11.2
15.5	-17.8	-5.3	-12.5
16.0	-17.1	-5.6	-11.5
16.5	-20.0	-5.9	-14.1
17.0	-15.1	-6.3	-8.8
17.5	-14.5	-6.6	-7.9
18.0	-19.7	-6.9	-12.8
18.5	-15.0	-7.2	-7.8
19.0	-13.6	-7.5	-6.1
19.5	-13.2	-7.8	-5.5
20.0	-15.4	-8.0	-7.4
20.5	-15.8	-8.3	-7.5
21.0	-16.0	-8.6	-7.5
21.5	-25.4	-8.8	-16.6
22.0	-20.3	-9.1	-11.3
22.5	-17.1	-9.3	-7.8
23.0	-19.2	-9.5	-9.7
23.5	-18.7	-9.8	-8.9
24.0	-15.2	-10.0	-5.2
24.5	-16.7	-10.2	-6.5
25.0	-18.7	-10.4	-8.3
25.5	-19.5	-10.7	-8.9
26.0	-20.0	-10.9	-9.2
26.5	-22.2	-11.1	-11.1
27.0	-18.8	-11.3	-7.5
27.5	-17.7	-11.5	-6.2
28.0	-21.3	-11.7	-9.6
28.5	-18.5	-11.9	-6.7
29.0	-18.8	-12.1	-6.8
29.5	-20.3	-12.2	-8.0
30.0	-19.7	-12.4	-7.3

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol EI RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-18.0	-0.5	-17.5
-9.9	-23.3	-0.4	-22.9
-9.8	-27.5	-0.3	-27.2
-9.7	-22.7	-0.2	-22.5
-9.6	-20.1	-0.1	-20.0
-9.5	-23.7	0.1	-23.8
-9.4	-30.1	0.2	-30.2
-9.3	-24.1	0.3	-24.4
-9.2	-18.0	0.4	-18.3
-9.1	-15.9	0.4	-16.3
-9.0	-16.2	0.4	-16.5
-8.9	-19.0	0.4	-19.3
-8.8	-23.1	0.4	-23.5
-8.7	-17.6	0.4	-18.0
-8.6	-13.4	0.4	-13.7
-8.5	-11.5	0.4	-11.9
-8.4	-11.1	0.4	-11.5
-8.3	-12.2	0.4	-12.6
-8.2	-15.4	0.4	-15.7
-8.1	-21.2	0.4	-21.6
-8.0	-22.6	0.4	-22.9
-7.9	-16.7	0.4	-17.0
-7.8	-13.1	0.4	-13.5
-7.7	-11.9	0.4	-12.3
-7.6	-12.8	0.4	-13.2
-7.5	-15.5	0.4	-15.8
-7.4	-23.4	0.4	-23.8
-7.3	-25.1	0.4	-25.5
-7.2	-16.2	0.4	-16.6
-7.1	-12.9	0.4	-13.2
-7.0	-11.1	0.4	-11.5
-6.9	-10.4	0.5	-10.9
-6.8	-10.7	0.7	-11.3
-6.7	-11.4	0.8	-12.2
-6.6	-14.0	1.0	-15.0
-6.5	-20.0	1.2	-21.1
-6.4	-20.6	1.3	-21.9
-6.3	-12.4	1.5	-13.9
-6.2	-8.7	1.7	-10.4
-6.1	-7.3	1.9	-9.2
-6.0	-8.0	2.0	-10.1
-5.9	-10.8	2.2	-13.1
-5.8	-19.0	2.4	-21.4
-5.7	-22.6	2.6	-25.2
-5.6	-13.2	2.8	-16.0
-5.5	-11.3	3.0	-14.3
-5.4	-13.0	3.2	-16.2
-5.3	-18.8	3.4	-22.2
-5.2	-19.8	3.6	-23.4
-5.1	-12.4	3.8	-16.2
-5.0	-9.5	4.0	-13.6
-4.9	-10.0	4.2	-14.3
-4.8	-13.5	4.5	-18.0
-4.7	-24.9	4.7	-29.6
-4.6	-16.7	4.9	-21.6
-4.5	-11.2	5.2	-16.4
-4.4	-9.6	5.4	-15.0
-4.3	-10.9	5.7	-16.5
-4.2	-12.6	5.9	-18.5
-4.1	-10.1	6.2	-16.2

28.30 GHz @ -11.42 dBW / 40 kHz in Co-pol EI RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	36.9		
0.1	36.7		
0.2	36.0		
0.3	34.8		
0.4	33.0		
0.5	30.5		
0.6	27.3		
0.7	23.0		
0.8	17.4		
0.9	10.1		
1.0	4.5		
1.1	6.6		
1.2	8.5		
1.3	9.2		
1.4	9.0		
1.5	7.6		
1.6	4.7		
1.7	1.9		
1.8	3.5		
1.9	5.9		
2.0	6.8		
2.1	6.5		
2.2	5.6		
2.3	5.1		
2.4	5.7		
2.5	6.1		
2.6	5.9		
2.7	4.5		
2.8	2.2		
2.9	-0.3		
3.0	-1.4		
3.1	-0.9		
3.2	-0.5		
3.3	-1.1		
3.4	-2.5		
3.5	-4.6	7.9	-12.5
3.6	-6.9	7.6	-14.5
3.7	-7.4	7.3	-14.7
3.8	-5.4	7.0	-12.4
3.9	-3.1	6.7	-9.8
4.0	-1.7	6.4	-8.1
4.1	-1.4	6.2	-7.6
4.2	-2.3	5.9	-8.2
4.3	-4.6	5.7	-10.3
4.4	-8.8	5.4	-14.2
4.5	-14.5	5.2	-19.6
4.6	-13.6	4.9	-18.5
4.7	-11.2	4.7	-15.9
4.8	-10.2	4.5	-14.7
4.9	-10.9	4.2	-15.1
5.0	-11.9	4.0	-16.0
5.1	-11.5	3.8	-15.3
5.2	-10.9	3.6	-14.5
5.3	-10.3	3.4	-13.7
5.4	-9.4	3.2	-12.6
5.5	-8.8	3.0	-11.8
5.6	-8.9	2.8	-11.7
5.7	-10.2	2.6	-12.8
5.8	-13.6	2.4	-16.0
5.9	-20.6	2.2	-22.8

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	-6.5	6.4	-12.9
-3.9	-4.4	6.7	-11.1
-3.8	-3.6	7.0	-10.6
-3.7	-3.8	7.3	-11.1
-3.6	-4.5	7.6	-12.1
-3.5	-5.6	7.9	-13.5
-3.4	-5.7		
-3.3	-4.3		
-3.2	-2.3		
-3.1	-0.9		
-3.0	-0.3		
-2.9	-0.9		
-2.8	-2.1		
-2.7	-2.3		
-2.6	-0.4		
-2.5	1.4		
-2.4	2.2		
-2.3	1.8		
-2.2	0.6		
-2.1	0.0		
-2.0	0.6		
-1.9	2.0		
-1.8	3.8		
-1.7	6.3		
-1.6	8.7		
-1.5	10.3		
-1.4	11.1		
-1.3	10.5		
-1.2	8.3		
-1.1	5.7		
-1.0	9.1		
-0.9	15.1		
-0.8	19.9		
-0.7	24.1		
-0.6	27.6		
-0.5	30.5		
-0.4	32.7		
-0.3	34.5		
-0.2	35.8		
-0.1	36.6		
0.0	36.9		

6.0	-19.9	2.0	-22.0
6.1	-12.8	1.9	-14.7
6.2	-10.5	1.7	-12.2
6.3	-10.0	1.5	-11.6
6.4	-11.6	1.3	-13.0
6.5	-14.4	1.2	-15.6
6.6	-15.5	1.0	-16.5
6.7	-12.7	0.8	-13.6
6.8	-10.1	0.7	-10.8
6.9	-9.2	0.5	-9.7
7.0	-9.2	0.4	-9.5
7.1	-9.8	0.4	-10.2
7.2	-11.7	0.4	-12.1
7.3	-14.7	0.4	-15.0
7.4	-19.3	0.4	-19.7
7.5	-24.1	0.4	-24.5
7.6	-20.4	0.4	-20.8
7.7	-18.0	0.4	-18.4
7.8	-16.7	0.4	-17.1
7.9	-17.9	0.4	-18.3
8.0	-19.9	0.4	-20.3
8.1	-20.0	0.4	-20.3
8.2	-17.6	0.4	-18.0
8.3	-15.9	0.4	-16.3
8.4	-16.2	0.4	-16.6
8.5	-19.8	0.4	-20.2
8.6	-30.2	0.4	-30.6
8.7	-23.5	0.4	-23.8
8.8	-17.1	0.4	-17.5
8.9	-14.6	0.4	-15.0
9.0	-14.3	0.4	-14.7
9.1	-16.7	0.4	-17.1
9.2	-23.4	0.4	-23.7
9.3	-28.4	0.3	-28.7
9.4	-18.4	0.2	-18.5
9.5	-15.1	0.1	-15.1
9.6	-13.5	-0.1	-13.5
9.7	-14.3	-0.2	-14.2
9.8	-16.9	-0.3	-16.6
9.9	-22.8	-0.4	-22.4
10.0	-31.1	-0.5	-30.6

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -11.42 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-24.2	-12.6	-11.5
-9.9	-29.2	-12.6	-16.5
-9.8	-29.9	-12.6	-17.2
-9.7	-28.3	-12.6	-15.7
-9.6	-25.1	-12.6	-12.5
-9.5	-21.4	-12.6	-8.8
-9.4	-19.3	-12.6	-6.6
-9.3	-17.7	-12.6	-5.1
-9.2	-18.2	-12.6	-5.5
-9.1	-18.6	-12.6	-6.0
-9.0	-21.1	-12.6	-8.5
-8.9	-24.2	-12.6	-11.6
-8.8	-31.0	-12.6	-18.3
-8.7	-24.3	-12.6	-11.6
-8.6	-19.3	-12.6	-6.7
-8.5	-17.4	-12.6	-4.8
-8.4	-16.9	-12.6	-4.2
-8.3	-18.0	-12.6	-5.4
-8.2	-20.9	-12.6	-8.3
-8.1	-26.8	-12.6	-14.1
-8.0	-30.8	-12.6	-18.2
-7.9	-26.8	-12.6	-14.2
-7.8	-25.0	-12.6	-12.3
-7.7	-25.2	-12.6	-12.6
-7.6	-27.3	-12.6	-14.7
-7.5	-27.2	-12.6	-14.5
-7.4	-26.5	-12.6	-13.9
-7.3	-24.9	-12.6	-12.2
-7.2	-24.8	-12.6	-12.1
-7.1	-24.4	-12.6	-11.8
-7.0	-23.2	-12.6	-10.5
-6.9	-24.5	-12.5	-12.0
-6.8	-28.8	-12.3	-16.5
-6.7	-32.7	-12.2	-20.6
-6.6	-24.1	-12.0	-12.1
-6.5	-18.5	-11.8	-6.7
-6.4	-16.9	-11.7	-5.3
-6.3	-14.5	-11.5	-3.1
-6.2	-14.1	-11.3	-2.8
-6.1	-13.6	-11.1	-2.5
-6.0	-15.4	-11.0	-4.4
-5.9	-15.2	-10.8	-4.4
-5.8	-16.5	-10.6	-5.9
-5.7	-17.8	-10.4	-7.4
-5.6	-17.9	-10.2	-7.7
-5.5	-17.1	-10.0	-7.1
-5.4	-16.2	-9.8	-6.4
-5.3	-15.2	-9.6	-5.6
-5.2	-14.6	-9.4	-5.2
-5.1	-14.3	-9.2	-5.1
-5.0	-14.1	-9.0	-5.1
-4.9	-14.2	-8.8	-5.5
-4.8	-14.5	-8.5	-5.9
-4.7	-14.7	-8.3	-6.4
-4.6	-14.0	-8.1	-5.9
-4.5	-12.4	-7.8	-4.5
-4.4	-10.6	-7.6	-3.0
-4.3	-8.9	-7.3	-1.5
-4.2	-7.7	-7.1	-0.6
-4.1	-7.0	-6.8	-0.2

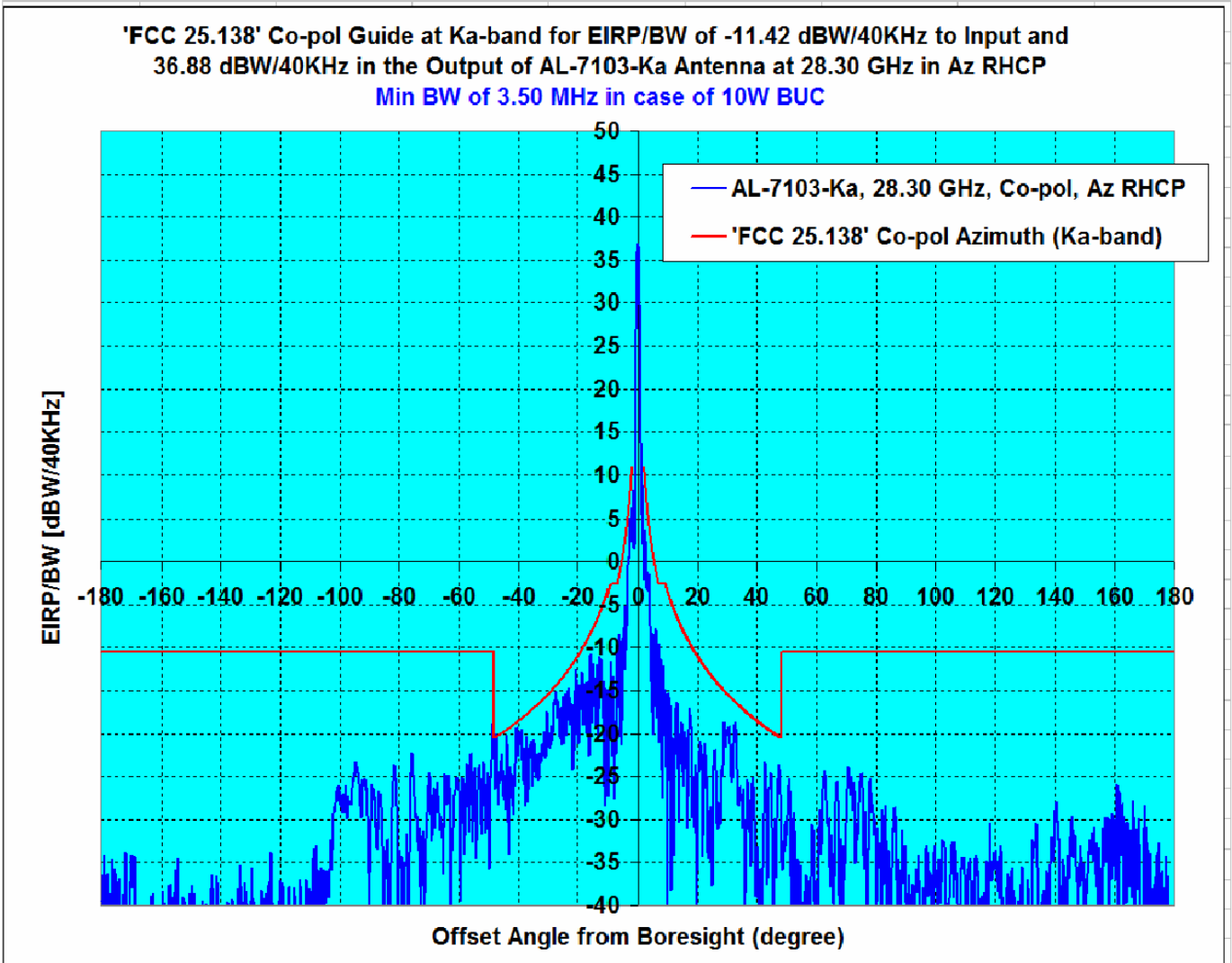
28.30 GHz @ -11.42 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	1.4		
0.1	2.9		
0.2	3.6		
0.3	3.5		
0.4	2.6		
0.5	0.9		
0.6	-1.7		
0.7	-5.3		
0.8	-9.1		
0.9	-10.0		
1.0	-9.3		
1.1	-8.4		
1.2	-8.8		
1.3	-9.8		
1.4	-11.8		
1.5	-13.3		
1.6	-13.5		
1.7	-12.0		
1.8	-12.5		
1.9	-13.8		
2.0	-17.1	1.0	-18.0
2.1	-31.2	0.4	-31.6
2.2	-18.4	-0.1	-18.4
2.3	-13.1	-0.5	-12.6
2.4	-10.7	-1.0	-9.7
2.5	-9.2	-1.4	-7.7
2.6	-8.9	-1.9	-7.0
2.7	-10.2	-2.3	-7.9
2.8	-12.4	-2.7	-9.7
2.9	-15.7	-3.1	-12.6
3.0	-20.9	-3.4	-17.5
3.1	-25.1	-3.8	-21.3
3.2	-23.7	-4.1	-19.5
3.3	-24.7	-4.5	-20.3
3.4	-32.1	-4.8	-27.3
3.5	-40.9	-5.1	-35.8
3.6	-34.2	-5.4	-28.8
3.7	-53.4	-5.7	-47.7
3.8	-30.0	-6.0	-24.0
3.9	-28.7	-6.3	-22.4
4.0	-22.6	-6.6	-16.1
4.1	-23.7	-6.8	-16.9
4.2	-23.8	-7.1	-16.7
4.3	-28.0	-7.3	-20.6
4.4	-40.0	-7.6	-32.4
4.5	-35.4	-7.8	-27.5
4.6	-27.7	-8.1	-19.6
4.7	-28.2	-8.3	-19.9
4.8	-39.2	-8.5	-30.7
4.9	-33.6	-8.8	-24.9
5.0	-26.5	-9.0	-17.5
5.1	-22.2	-9.2	-13.0
5.2	-21.8	-9.4	-12.4
5.3	-21.8	-9.6	-12.2
5.4	-23.9	-9.8	-14.1
5.5	-32.8	-10.0	-22.8
5.6	-33.4	-10.2	-23.2
5.7	-23.2	-10.4	-12.8
5.8	-22.3	-10.6	-11.7
5.9	-20.9	-10.8	-10.2

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

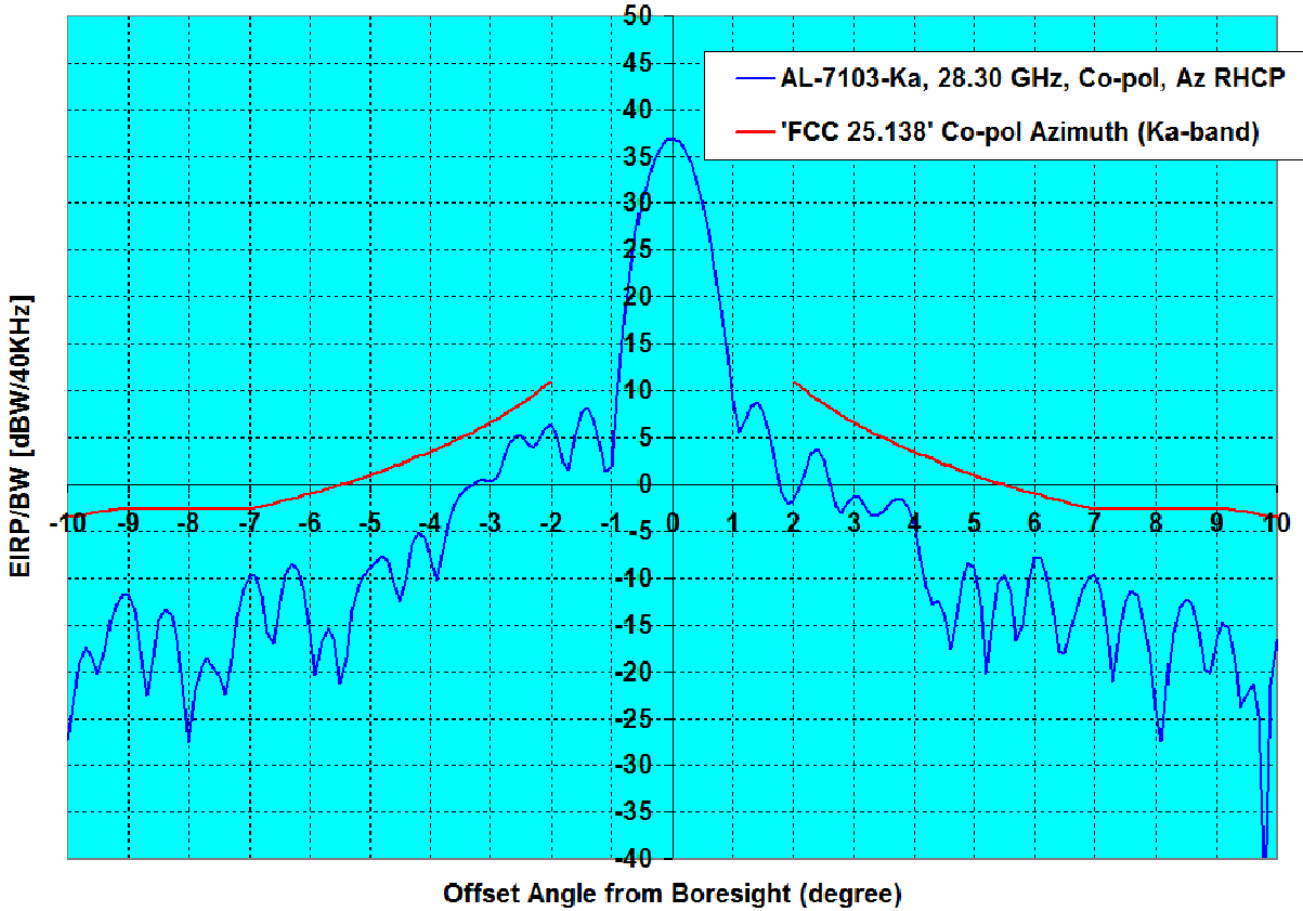
-4.0	-6.6	-6.6	0.0
-3.9	-6.8	-6.3	-0.5
-3.8	-7.3	-6.0	-1.4
-3.7	-8.1	-5.7	-2.4
-3.6	-9.0	-5.4	-3.6
-3.5	-9.3	-5.1	-4.2
-3.4	-9.5	-4.8	-4.8
-3.3	-9.3	-4.5	-4.9
-3.2	-8.8	-4.1	-4.7
-3.1	-8.3	-3.8	-4.6
-3.0	-8.1	-3.4	-4.7
-2.9	-8.4	-3.1	-5.3
-2.8	-8.8	-2.7	-6.1
-2.7	-8.7	-2.3	-6.4
-2.6	-7.8	-1.9	-5.9
-2.5	-6.7	-1.4	-5.2
-2.4	-6.0	-1.0	-5.0
-2.3	-6.0	-0.5	-5.4
-2.2	-6.5	-0.1	-6.5
-2.1	-8.2	0.4	-8.6
-2.0	-10.5	1.0	-11.5
-1.9	-12.9		
-1.8	-13.4		
-1.7	-12.2		
-1.6	-10.1		
-1.5	-8.3		
-1.4	-6.7		
-1.3	-6.3		
-1.2	-6.4		
-1.1	-7.8		
-1.0	-11.0		
-0.9	-10.3		
-0.8	-6.2		
-0.7	-3.5		
-0.6	-1.3		
-0.5	-0.8		
-0.4	-1.8		
-0.3	-5.1		
-0.2	-5.2		
-0.1	-1.2		
0.0	1.4		

6.0	-22.1	-11.0	-11.2
6.1	-25.7	-11.1	-14.5
6.2	-29.7	-11.3	-18.4
6.3	-38.6	-11.5	-27.1
6.4	-40.3	-11.7	-28.7
6.5	-34.8	-11.8	-22.9
6.6	-27.9	-12.0	-15.9
6.7	-26.1	-12.2	-14.0
6.8	-22.4	-12.3	-10.1
6.9	-20.4	-12.5	-8.0
7.0	-18.9	-12.6	-6.3
7.1	-19.1	-12.6	-6.4
7.2	-18.4	-12.6	-5.8
7.3	-18.2	-12.6	-5.6
7.4	-18.7	-12.6	-6.1
7.5	-19.0	-12.6	-6.4
7.6	-18.8	-12.6	-6.2
7.7	-20.1	-12.6	-7.5
7.8	-20.6	-12.6	-8.0
7.9	-21.6	-12.6	-9.0
8.0	-22.6	-12.6	-10.0
8.1	-26.7	-12.6	-14.0
8.2	-30.1	-12.6	-17.5
8.3	-33.9	-12.6	-21.3
8.4	-43.7	-12.6	-31.1
8.5	-32.5	-12.6	-19.9
8.6	-32.6	-12.6	-20.0
8.7	-28.1	-12.6	-15.5
8.8	-26.8	-12.6	-14.2
8.9	-25.7	-12.6	-13.0
9.0	-25.3	-12.6	-12.7
9.1	-25.8	-12.6	-13.1
9.2	-26.6	-12.6	-14.0
9.3	-25.7	-12.6	-13.0
9.4	-25.6	-12.6	-13.0
9.5	-26.7	-12.6	-14.0
9.6	-26.3	-12.6	-13.7
9.7	-25.9	-12.6	-13.3
9.8	-27.5	-12.6	-14.9
9.9	-25.5	-12.6	-12.9
10.0	-25.6	-12.6	-13.0



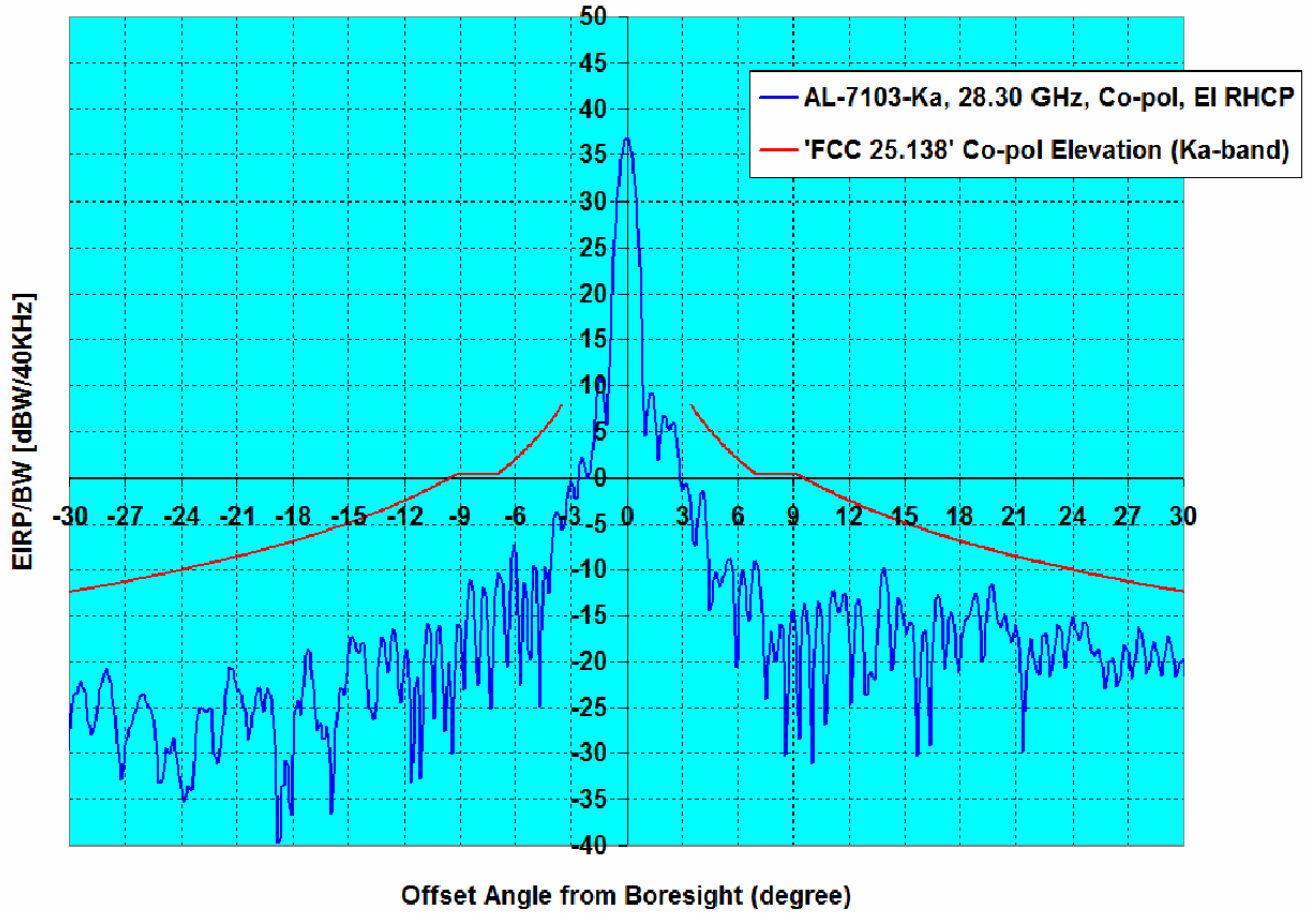
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 28.30 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.30	-11.42	-3.01	0.25	0.03

'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.42 dBW/40KHz to Input and 36.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in Az RHCP
 Min BW of 3.50 MHz in case of 10W BUC



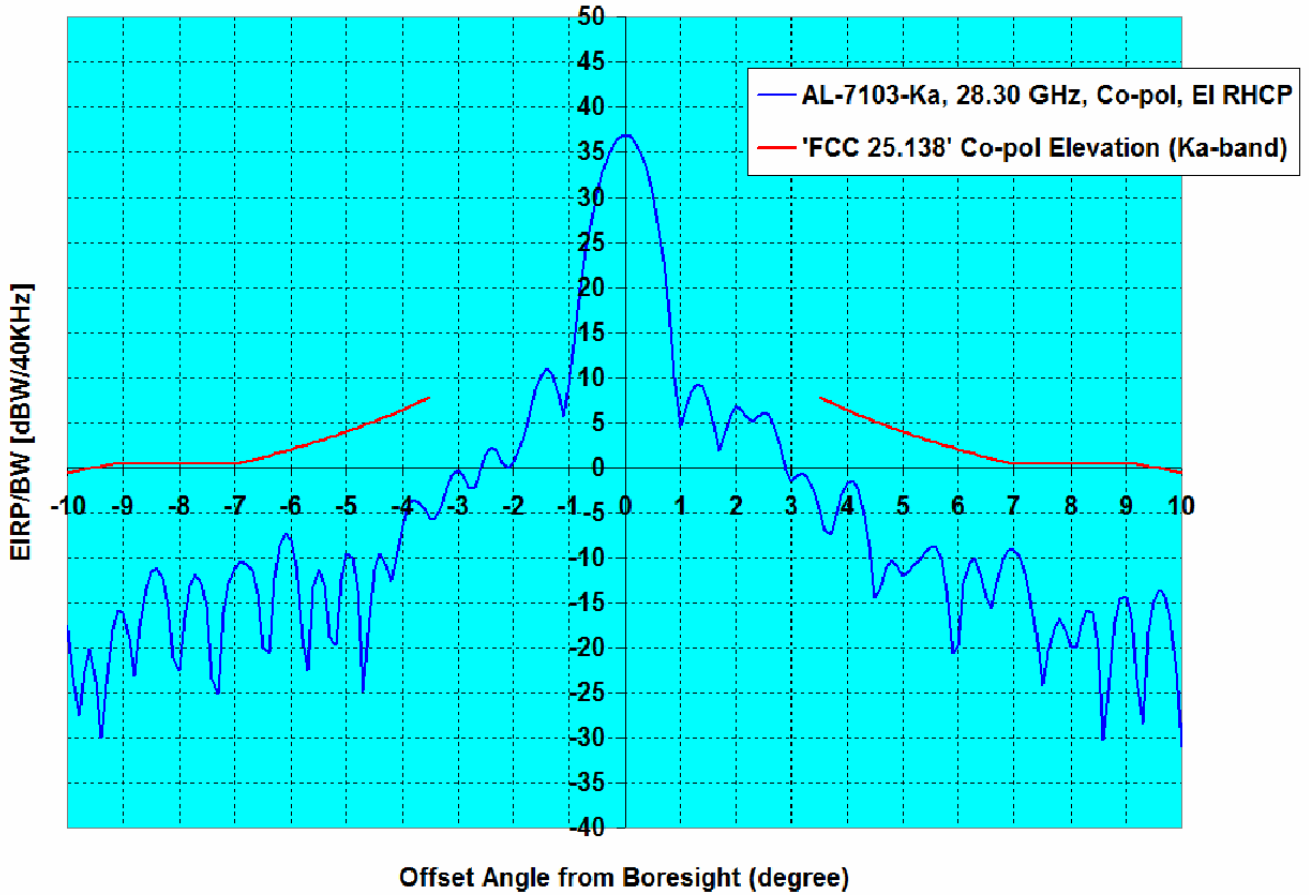
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 28.30 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.30	-11.42	-3.01	0.25	0.03

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.42 dBW/40KHz to Input and
 36.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in EI RHCP
 Min BW of 3.50 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]			± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 28.30 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.30	-11.42	-7.55	-3.70	0.00

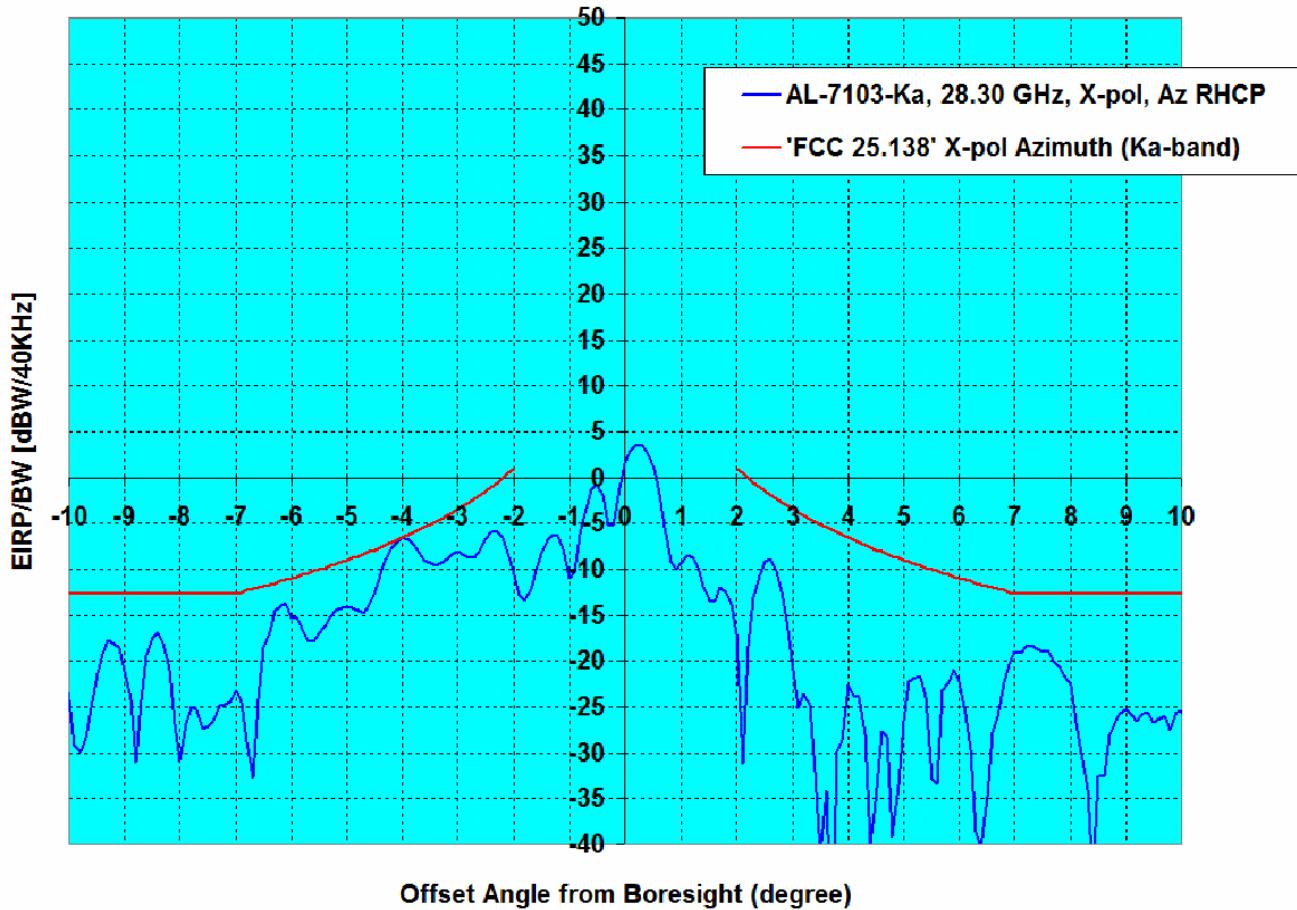
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.42 dBW/40KHz to Input and
 36.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in EI RHCP
 Min BW of 3.50 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 28.30 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.30	-11.42	-7.55	-3.70	0.00

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd, X-pol, Azimuth RHCP

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -11.42 dBW/40KHz to Input and
 36.88 dBW/40KHz in the Output of AL-7103-Ka Antenna at 28.30 GHz in Az RHCP
 Min BW of 3.50 MHz in case of 10W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7103-Ka, 28.30 GHz, X-pol, Az RHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	48.30	-11.42	0.00	0.00	0.00

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-179.0	-38.0	-10.5	-27.5
-178.0	-46.2	-10.5	-35.7
-177.0	-44.7	-10.5	-34.2
-176.0	-51.9	-10.5	-41.4
-175.0	-47.2	-10.5	-36.7
-174.0	-48.7	-10.5	-38.2
-173.0	-47.4	-10.5	-36.9
-172.0	-58.0	-10.5	-47.5
-171.0	-39.8	-10.5	-29.3
-170.0	-46.6	-10.5	-36.1
-169.0	-39.2	-10.5	-28.7
-168.0	-51.2	-10.5	-40.7
-167.0	-42.8	-10.5	-32.3
-166.0	-44.5	-10.5	-34.0
-165.0	-46.0	-10.5	-35.5
-164.0	-44.8	-10.5	-34.3
-163.0	-40.0	-10.5	-29.5
-162.0	-39.3	-10.5	-28.8
-161.0	-62.7	-10.5	-52.2
-160.0	-42.1	-10.5	-31.6
-159.0	-37.5	-10.5	-27.0
-158.0	-44.5	-10.5	-34.0
-157.0	-46.0	-10.5	-35.5
-156.0	-40.5	-10.5	-30.0
-155.0	-56.8	-10.5	-46.3
-154.0	-47.1	-10.5	-36.6
-153.0	-48.1	-10.5	-37.6
-152.0	-47.9	-10.5	-37.4
-151.0	-42.6	-10.5	-32.1
-150.0	-47.8	-10.5	-37.3
-149.0	-40.6	-10.5	-30.1
-148.0	-58.8	-10.5	-48.3
-147.0	-47.1	-10.5	-36.6
-146.0	-46.4	-10.5	-35.9
-145.0	-45.6	-10.5	-35.1
-144.0	-45.5	-10.5	-35.0
-143.0	-42.6	-10.5	-32.1
-142.0	-45.8	-10.5	-35.3
-141.0	-44.4	-10.5	-33.9
-140.0	-39.7	-10.5	-29.2
-139.0	-37.6	-10.5	-27.1
-138.0	-42.9	-10.5	-32.4
-137.0	-39.5	-10.5	-29.0
-136.0	-39.1	-10.5	-28.6
-135.0	-45.4	-10.5	-34.9
-134.0	-43.2	-10.5	-32.7
-133.0	-43.6	-10.5	-33.1
-132.0	-38.8	-10.5	-28.3
-131.0	-41.8	-10.5	-31.3
-130.0	-40.0	-10.5	-29.5
-129.0	-40.3	-10.5	-29.8
-128.0	-40.3	-10.5	-29.8
-127.0	-38.0	-10.5	-27.5
-126.0	-44.8	-10.5	-34.3
-125.0	-43.7	-10.5	-33.2
-124.0	-47.2	-10.5	-36.7
-123.0	-37.9	-10.5	-27.4
-122.0	-35.5	-10.5	-25.0
-121.0	-49.7	-10.5	-39.2
-120.0	-41.5	-10.5	-31.0

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.9		
1.0	10.5		
2.0	-1.8	11.0	-12.8
3.0	-0.2	6.6	-6.8
4.0	-8.8	3.4	-12.2
5.0	-9.2	1.0	-10.2
6.0	-12.8	-1.0	-11.8
7.0	-29.6	-2.6	-26.9
8.0	-24.2	-2.6	-21.6
9.0	-25.8	-2.6	-23.2
10.0	-19.6	-3.5	-16.1
11.0	-19.7	-4.5	-15.1
12.0	-35.4	-5.5	-29.9
13.0	-22.3	-6.3	-15.9
14.0	-21.8	-7.2	-14.7
15.0	-19.2	-7.9	-11.3
16.0	-27.3	-8.6	-18.7
17.0	-20.3	-9.3	-11.1
18.0	-40.8	-9.9	-31.0
19.0	-17.8	-10.5	-7.3
20.0	-30.5	-11.0	-19.5
21.0	-29.1	-11.6	-17.5
22.0	-21.1	-12.1	-9.1
23.0	-23.3	-12.5	-10.7
24.0	-18.8	-13.0	-5.8
25.0	-19.0	-13.4	-5.6
26.0	-18.6	-13.9	-4.8
27.0	-19.1	-14.3	-4.9
28.0	-19.8	-14.7	-5.1
29.0	-21.0	-15.1	-5.9
30.0	-22.1	-15.4	-6.7
31.0	-27.3	-15.8	-11.6
32.0	-30.1	-16.1	-14.0
33.0	-25.1	-16.5	-8.7
34.0	-25.6	-16.8	-8.8
35.0	-25.3	-17.1	-8.2
36.0	-24.8	-17.4	-7.4
37.0	-23.9	-17.7	-6.2
38.0	-20.8	-18.0	-2.8
39.0	-26.8	-18.3	-8.6
40.0	-28.5	-18.6	-9.9
41.0	-39.5	-18.8	-20.7
42.0	-29.3	-19.1	-10.2
43.0	-27.0	-19.3	-7.7
44.0	-26.0	-19.6	-6.4
45.0	-27.4	-19.8	-7.5
46.0	-27.1	-20.1	-7.1
47.0	-22.2	-20.3	-1.9
48.0	-44.7	-20.5	-24.2
49.0	-41.6	-10.5	-31.1
50.0	-29.6	-10.5	-19.1
51.0	-34.0	-10.5	-23.5
52.0	-32.4	-10.5	-21.9
53.0	-41.4	-10.5	-30.9
54.0	-26.2	-10.5	-15.7
55.0	-25.0	-10.5	-14.5
56.0	-29.4	-10.5	-18.9
57.0	-31.8	-10.5	-21.3
58.0	-29.5	-10.5	-19.0
59.0	-27.7	-10.5	-17.2

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-33.5	-10.5	-23.0
-118.0	-40.7	-10.5	-30.2
-117.0	-41.1	-10.5	-30.6
-116.0	-45.0	-10.5	-34.5
-115.0	-44.8	-10.5	-34.3
-114.0	-37.9	-10.5	-27.4
-113.0	-36.3	-10.5	-25.8
-112.0	-35.3	-10.5	-24.8
-111.0	-32.3	-10.5	-21.8
-110.0	-28.6	-10.5	-18.1
-109.0	-29.6	-10.5	-19.1
-108.0	-27.9	-10.5	-17.4
-107.0	-26.8	-10.5	-16.3
-106.0	-26.2	-10.5	-15.7
-105.0	-24.2	-10.5	-13.7
-104.0	-23.3	-10.5	-12.8
-103.0	-22.9	-10.5	-12.4
-102.0	-23.3	-10.5	-12.8
-101.0	-27.0	-10.5	-16.5
-100.0	-31.8	-10.5	-21.3
-99.0	-26.8	-10.5	-16.3
-98.0	-23.6	-10.5	-13.1
-97.0	-23.6	-10.5	-13.1
-96.0	-24.7	-10.5	-14.2
-95.0	-26.5	-10.5	-16.0
-94.0	-24.1	-10.5	-13.6
-93.0	-26.0	-10.5	-15.5
-92.0	-32.8	-10.5	-22.3
-91.0	-27.6	-10.5	-17.1
-90.0	-27.5	-10.5	-17.0
-89.0	-30.2	-10.5	-19.7
-88.0	-26.2	-10.5	-15.7
-87.0	-33.0	-10.5	-22.5
-86.0	-28.0	-10.5	-17.5
-85.0	-29.8	-10.5	-19.3
-84.0	-45.2	-10.5	-34.7
-83.0	-34.3	-10.5	-23.8
-82.0	-29.3	-10.5	-18.8
-81.0	-39.7	-10.5	-29.2
-80.0	-32.1	-10.5	-21.6
-79.0	-34.7	-10.5	-24.2
-78.0	-29.2	-10.5	-18.7
-77.0	-29.9	-10.5	-19.4
-76.0	-28.8	-10.5	-18.3
-75.0	-42.1	-10.5	-31.6
-74.0	-29.7	-10.5	-19.2
-73.0	-31.8	-10.5	-21.3
-72.0	-36.9	-10.5	-26.4
-71.0	-29.0	-10.5	-18.5
-70.0	-37.8	-10.5	-27.3
-69.0	-40.8	-10.5	-30.3
-68.0	-31.9	-10.5	-21.4
-67.0	-40.9	-10.5	-30.4
-66.0	-33.2	-10.5	-22.7
-65.0	-28.4	-10.5	-17.9
-64.0	-30.3	-10.5	-19.8
-63.0	-35.1	-10.5	-24.6
-62.0	-35.6	-10.5	-25.1
-61.0	-30.0	-10.5	-19.5
-60.0	-28.4	-10.5	-17.9
-59.0	-26.9	-10.5	-16.4
-58.0	-34.0	-10.5	-23.5
-57.0	-28.2	-10.5	-17.7

60.0	-25.6	-10.5	-15.1
61.0	-39.5	-10.5	-29.0
62.0	-34.6	-10.5	-24.1
63.0	-30.0	-10.5	-19.5
64.0	-27.0	-10.5	-16.5
65.0	-23.0	-10.5	-12.5
66.0	-33.8	-10.5	-23.3
67.0	-34.3	-10.5	-23.8
68.0	-32.8	-10.5	-22.3
69.0	-32.6	-10.5	-22.1
70.0	-24.4	-10.5	-13.9
71.0	-28.9	-10.5	-18.4
72.0	-26.0	-10.5	-15.5
73.0	-26.6	-10.5	-16.1
74.0	-24.4	-10.5	-13.9
75.0	-30.3	-10.5	-19.8
76.0	-30.9	-10.5	-20.4
77.0	-30.1	-10.5	-19.6
78.0	-26.7	-10.5	-16.2
79.0	-37.0	-10.5	-26.5
80.0	-30.1	-10.5	-19.6
81.0	-27.8	-10.5	-17.3
82.0	-34.8	-10.5	-24.3
83.0	-33.5	-10.5	-23.0
84.0	-34.4	-10.5	-23.9
85.0	-43.8	-10.5	-33.3
86.0	-29.0	-10.5	-18.5
87.0	-31.4	-10.5	-20.9
88.0	-27.6	-10.5	-17.1
89.0	-35.6	-10.5	-25.1
90.0	-33.8	-10.5	-23.3
91.0	-35.1	-10.5	-24.6
92.0	-30.6	-10.5	-20.1
93.0	-40.1	-10.5	-29.6
94.0	-32.4	-10.5	-21.9
95.0	-28.6	-10.5	-18.1
96.0	-33.0	-10.5	-22.5
97.0	-39.6	-10.5	-29.1
98.0	-45.5	-10.5	-35.0
99.0	-29.6	-10.5	-19.1
100.0	-30.5	-10.5	-20.0
101.0	-33.0	-10.5	-22.5
102.0	-36.7	-10.5	-26.2
103.0	-32.1	-10.5	-21.6
104.0	-46.3	-10.5	-35.8
105.0	-28.1	-10.5	-17.6
106.0	-33.1	-10.5	-22.6
107.0	-38.5	-10.5	-28.0
108.0	-33.4	-10.5	-22.9
109.0	-46.8	-10.5	-36.3
110.0	-33.1	-10.5	-22.6
111.0	-36.3	-10.5	-25.8
112.0	-30.4	-10.5	-19.9
113.0	-38.3	-10.5	-27.8
114.0	-35.4	-10.5	-24.9
115.0	-36.6	-10.5	-26.1
116.0	-31.9	-10.5	-21.4
117.0	-30.1	-10.5	-19.6
118.0	-39.7	-10.5	-29.2
119.0	-33.4	-10.5	-22.9
120.0	-29.2	-10.5	-18.7
121.0	-39.0	-10.5	-28.5
122.0	-33.4	-10.5	-22.9

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-30.6	-10.5	-20.1
-55.0	-25.4	-10.5	-14.9
-54.0	-27.4	-10.5	-16.9
-53.0	-29.0	-10.5	-18.5
-52.0	-28.4	-10.5	-17.9
-51.0	-23.3	-10.5	-12.8
-50.0	-28.3	-10.5	-17.8
-49.0	-26.9	-10.5	-16.4
-48.0	-26.4	-20.5	-5.9
-47.0	-26.8	-20.3	-6.5
-46.0	-24.0	-20.1	-3.9
-45.0	-24.1	-19.8	-4.2
-44.0	-25.4	-19.6	-5.8
-43.0	-25.8	-19.3	-6.4
-42.0	-20.2	-19.1	-1.1
-41.0	-22.6	-18.8	-3.8
-40.0	-23.1	-18.6	-4.5
-39.0	-19.9	-18.3	-1.7
-38.0	-21.9	-18.0	-3.9
-37.0	-20.3	-17.7	-2.5
-36.0	-24.1	-17.4	-6.7
-35.0	-23.8	-17.1	-6.7
-34.0	-22.1	-16.8	-5.3
-33.0	-32.4	-16.5	-15.9
-32.0	-21.3	-16.1	-5.1
-31.0	-24.1	-15.8	-8.3
-30.0	-30.1	-15.4	-14.7
-29.0	-22.5	-15.1	-7.4
-28.0	-24.3	-14.7	-9.6
-27.0	-31.6	-14.3	-17.3
-26.0	-25.5	-13.9	-11.7
-25.0	-22.7	-13.4	-9.2
-24.0	-26.4	-13.0	-13.4
-23.0	-17.6	-12.5	-5.0
-22.0	-39.1	-12.1	-27.0
-21.0	-15.2	-11.6	-3.6
-20.0	-22.1	-11.0	-11.1
-19.0	-18.3	-10.5	-7.8
-18.0	-15.6	-9.9	-5.7
-17.0	-21.5	-9.3	-12.2
-16.0	-11.5	-8.6	-2.9
-15.0	-17.9	-7.9	-10.0
-14.0	-21.4	-7.2	-14.3
-13.0	-16.9	-6.3	-10.6
-12.0	-21.2	-5.5	-15.8
-11.0	-19.8	-4.5	-15.3
-10.0	-11.2	-3.5	-7.7
-9.0	-16.2	-2.6	-13.5
-8.0	-21.3	-2.6	-18.6
-7.0	-9.1	-2.6	-6.5
-6.0	-23.0	-1.0	-22.0
-5.0	-7.6	1.0	-8.6
-4.0	-7.2	3.4	-10.6
-3.0	-1.8	6.6	-8.4
-2.0	7.0	11.0	-4.0
-1.0	2.9		
0.0	36.9		

123.0	-38.4	-10.5	-27.9
124.0	-34.2	-10.5	-23.7
125.0	-42.4	-10.5	-31.9
126.0	-54.3	-10.5	-43.8
127.0	-34.0	-10.5	-23.5
128.0	-40.2	-10.5	-29.7
129.0	-31.2	-10.5	-20.7
130.0	-39.0	-10.5	-28.5
131.0	-31.0	-10.5	-20.5
132.0	-30.5	-10.5	-20.0
133.0	-32.7	-10.5	-22.2
134.0	-34.7	-10.5	-24.2
135.0	-32.6	-10.5	-22.1
136.0	-34.7	-10.5	-24.2
137.0	-31.6	-10.5	-21.1
138.0	-32.4	-10.5	-21.9
139.0	-32.4	-10.5	-21.9
140.0	-29.4	-10.5	-18.9
141.0	-31.4	-10.5	-20.9
142.0	-38.5	-10.5	-28.0
143.0	-44.3	-10.5	-33.8
144.0	-40.8	-10.5	-30.3
145.0	-34.9	-10.5	-24.4
146.0	-31.5	-10.5	-21.0
147.0	-32.2	-10.5	-21.7
148.0	-46.9	-10.5	-36.4
149.0	-36.1	-10.5	-25.6
150.0	-36.1	-10.5	-25.6
151.0	-36.0	-10.5	-25.5
152.0	-41.4	-10.5	-30.9
153.0	-40.0	-10.5	-29.5
154.0	-33.3	-10.5	-22.8
155.0	-34.3	-10.5	-23.8
156.0	-36.5	-10.5	-26.0
157.0	-37.3	-10.5	-26.8
158.0	-30.8	-10.5	-20.3
159.0	-31.7	-10.5	-21.2
160.0	-31.8	-10.5	-21.3
161.0	-40.3	-10.5	-29.8
162.0	-36.7	-10.5	-26.2
163.0	-33.0	-10.5	-22.5
164.0	-29.3	-10.5	-18.8
165.0	-31.3	-10.5	-20.8
166.0	-29.4	-10.5	-18.9
167.0	-37.2	-10.5	-26.7
168.0	-41.1	-10.5	-30.6
169.0	-29.3	-10.5	-18.8
170.0	-32.5	-10.5	-22.0
171.0	-35.8	-10.5	-25.3
172.0	-33.1	-10.5	-22.6
173.0	-39.5	-10.5	-29.0
174.0	-41.1	-10.5	-30.6
175.0	-39.5	-10.5	-29.0
176.0	-45.9	-10.5	-35.4
177.0	-46.8	-10.5	-36.3
178.0	-36.2	-10.5	-25.7
179.0	-41.6	-10.5	-31.1

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol Az LHCP				29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol Az LHCP			
Angle	EIRPsd	Mask	Over Mask	Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB	Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-11.2	-3.5	-7.7	0.0	36.9		
-9.9	-9.7	-3.4	-6.3	0.1	36.7		
-9.8	-9.2	-3.3	-5.9	0.2	36.0		
-9.7	-9.8	-3.2	-6.7	0.3	34.8		
-9.6	-11.7	-3.1	-8.6	0.4	33.1		
-9.5	-14.8	-2.9	-11.9	0.5	30.8		
-9.4	-18.5	-2.8	-15.7	0.6	28.0		
-9.3	-19.7	-2.7	-17.0	0.7	24.7		
-9.2	-17.5	-2.6	-14.8	0.8	20.6		
-9.1	-16.1	-2.6	-13.4	0.9	15.8		
-9.0	-16.2	-2.6	-13.5	1.0	10.5		
-8.9	-18.0	-2.6	-15.4	1.1	6.0		
-8.8	-21.3	-2.6	-18.7	1.2	6.6		
-8.7	-24.1	-2.6	-21.5	1.3	8.3		
-8.6	-19.7	-2.6	-17.1	1.4	8.8		
-8.5	-15.8	-2.6	-13.2	1.5	8.1		
-8.4	-13.6	-2.6	-10.9	1.6	6.3		
-8.3	-13.2	-2.6	-10.6	1.7	3.7		
-8.2	-14.1	-2.6	-11.5	1.8	0.7		
-8.1	-17.5	-2.6	-14.9	1.9	-1.2		
-8.0	-21.3	-2.6	-18.6	2.0	-1.8	11.0	-12.8
-7.9	-17.1	-2.6	-14.4	2.1	-0.5	10.4	-10.9
-7.8	-13.1	-2.6	-10.5	2.2	1.2	9.9	-8.7
-7.7	-11.4	-2.6	-8.8	2.3	2.2	9.5	-7.2
-7.6	-11.5	-2.6	-8.9	2.4	2.7	9.0	-6.3
-7.5	-13.4	-2.6	-10.8	2.5	2.4	8.6	-6.2
-7.4	-17.2	-2.6	-14.6	2.6	1.8	8.1	-6.3
-7.3	-19.2	-2.6	-16.6	2.7	1.2	7.7	-6.6
-7.2	-13.9	-2.6	-11.3	2.8	0.8	7.3	-6.6
-7.1	-10.6	-2.6	-8.0	2.9	0.6	6.9	-6.4
-7.0	-9.1	-2.6	-6.5	3.0	-0.2	6.6	-6.8
-6.9	-8.5	-2.5	-6.0	3.1	-1.4	6.2	-7.6
-6.8	-9.2	-2.3	-6.9	3.2	-2.4	5.9	-8.2
-6.7	-11.2	-2.2	-9.1	3.3	-2.8	5.5	-8.4
-6.6	-14.9	-2.0	-12.9	3.4	-2.3	5.2	-7.5
-6.5	-22.9	-1.8	-21.0	3.5	-1.9	4.9	-6.8
-6.4	-21.2	-1.7	-19.6	3.6	-1.9	4.6	-6.5
-6.3	-16.0	-1.5	-14.5	3.7	-2.6	4.3	-6.9
-6.2	-14.3	-1.3	-13.0	3.8	-4.0	4.0	-8.0
-6.1	-16.1	-1.1	-14.9	3.9	-6.6	3.7	-10.3
-6.0	-23.0	-1.0	-22.0	4.0	-8.8	3.4	-12.2
-5.9	-24.3	-0.8	-23.6	4.1	-9.0	3.2	-12.2
-5.8	-14.8	-0.6	-14.3	4.2	-8.5	2.9	-11.4
-5.7	-11.2	-0.4	-10.8	4.3	-9.0	2.7	-11.7
-5.6	-10.3	-0.2	-10.1	4.4	-11.2	2.4	-13.6
-5.5	-11.7	0.0	-11.7	4.5	-12.8	2.2	-14.9
-5.4	-15.9	0.2	-16.1	4.6	-10.3	1.9	-12.2
-5.3	-25.1	0.4	-25.5	4.7	-7.5	1.7	-9.1
-5.2	-15.0	0.6	-15.6	4.8	-6.6	1.5	-8.0
-5.1	-9.7	0.8	-10.5	4.9	-7.1	1.2	-8.3
-5.0	-7.6	1.0	-8.6	5.0	-9.2	1.0	-10.2
-4.9	-6.7	1.2	-7.9	5.1	-12.8	0.8	-13.6
-4.8	-6.7	1.5	-8.1	5.2	-17.8	0.6	-18.4
-4.7	-7.1	1.7	-8.8	5.3	-17.1	0.4	-17.5
-4.6	-8.8	1.9	-10.7	5.4	-17.0	0.2	-17.2
-4.5	-11.6	2.2	-13.8	5.5	-21.1	0.0	-21.1
-4.4	-14.7	2.4	-17.1	5.6	-19.6	-0.2	-19.4
-4.3	-12.8	2.7	-15.5	5.7	-14.8	-0.4	-14.4
-4.2	-8.9	2.9	-11.8	5.8	-12.2	-0.6	-11.6
-4.1	-7.2	3.2	-10.3	5.9	-11.7	-0.8	-10.9
-4.0	-7.2	3.4	-10.6	6.0	-12.8	-1.0	-11.8
-3.9	-8.0	3.7	-11.8	6.1	-15.7	-1.1	-14.5

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-3.8	-7.7	4.0	-11.7		6.2	-21.8	-1.3	-20.5
-3.7	-5.0	4.3	-9.3		6.3	-24.7	-1.5	-23.2
-3.6	-2.2	4.6	-6.8		6.4	-19.1	-1.7	-17.4
-3.5	-0.3	4.9	-5.2		6.5	-16.1	-1.8	-14.2
-3.4	0.5	5.2	-4.7		6.6	-14.8	-2.0	-12.8
-3.3	0.6	5.5	-4.9		6.7	-14.3	-2.2	-12.1
-3.2	0.2	5.9	-5.7		6.8	-15.3	-2.3	-12.9
-3.1	-0.6	6.2	-6.8		6.9	-19.2	-2.5	-16.7
-3.0	-1.8	6.6	-8.4		7.0	-29.6	-2.6	-26.9
-2.9	-2.8	6.9	-9.8		7.1	-21.5	-2.6	-18.9
-2.8	-2.2	7.3	-9.5		7.2	-16.5	-2.6	-13.8
-2.7	0.0	7.7	-7.7		7.3	-15.0	-2.6	-12.4
-2.6	2.5	8.1	-5.7		7.4	-15.8	-2.6	-13.2
-2.5	4.4	8.6	-4.2		7.5	-20.2	-2.6	-17.5
-2.4	5.7	9.0	-3.3		7.6	-33.1	-2.6	-30.5
-2.3	6.6	9.5	-2.9		7.7	-23.9	-2.6	-21.3
-2.2	7.3	9.9	-2.7		7.8	-20.1	-2.6	-17.5
-2.1	7.5	10.4	-3.0		7.9	-20.2	-2.6	-17.5
-2.0	7.0	11.0	-4.0		8.0	-24.2	-2.6	-21.6
-1.9	5.5				8.1	-28.0	-2.6	-25.3
-1.8	2.4				8.2	-22.2	-2.6	-19.6
-1.7	-1.3				8.3	-19.5	-2.6	-16.9
-1.6	0.5				8.4	-21.2	-2.6	-18.5
-1.5	3.8				8.5	-28.4	-2.6	-25.8
-1.4	5.4				8.6	-27.0	-2.6	-24.3
-1.3	5.6				8.7	-20.1	-2.6	-17.4
-1.2	5.4				8.8	-18.5	-2.6	-15.8
-1.1	4.8				8.9	-21.0	-2.6	-18.4
-1.0	2.9				9.0	-25.8	-2.6	-23.2
-0.9	7.6				9.1	-23.7	-2.6	-21.1
-0.8	16.0				9.2	-17.1	-2.6	-14.4
-0.7	22.0				9.3	-14.6	-2.7	-11.8
-0.6	26.6				9.4	-14.7	-2.8	-11.9
-0.5	30.0				9.5	-17.1	-2.9	-14.1
-0.4	32.6				9.6	-22.3	-3.1	-19.2
-0.3	34.5				9.7	-25.5	-3.2	-22.3
-0.2	35.8				9.8	-20.6	-3.3	-17.4
-0.1	36.6				9.9	-18.6	-3.4	-15.2
0.0	36.9				10.0	-19.6	-3.5	-16.1

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-25.8	-12.4	-13.4
-29.5	-23.3	-12.2	-11.1
-29.0	-25.1	-12.1	-13.1
-28.5	-23.8	-11.9	-12.0
-28.0	-22.9	-11.7	-11.2
-27.5	-23.1	-11.5	-11.6
-27.0	-21.8	-11.3	-10.5
-26.5	-21.6	-11.1	-10.6
-26.0	-24.3	-10.9	-13.4
-25.5	-24.3	-10.7	-13.7
-25.0	-20.3	-10.4	-9.8
-24.5	-20.7	-10.2	-10.4
-24.0	-23.3	-10.0	-13.3
-23.5	-21.7	-9.8	-12.0
-23.0	-23.2	-9.5	-13.7
-22.5	-24.3	-9.3	-15.0
-22.0	-22.5	-9.1	-13.4
-21.5	-26.5	-8.8	-17.7
-21.0	-37.3	-8.6	-28.8
-20.5	-32.4	-8.3	-24.1
-20.0	-22.6	-8.0	-14.6
-19.5	-21.8	-7.8	-14.1
-19.0	-22.6	-7.5	-15.1
-18.5	-27.5	-7.2	-20.3
-18.0	-23.1	-6.9	-16.2
-17.5	-18.9	-6.6	-12.3
-17.0	-20.1	-6.3	-13.9
-16.5	-30.3	-5.9	-24.3
-16.0	-22.7	-5.6	-17.1
-15.5	-24.6	-5.3	-19.4
-15.0	-25.0	-4.9	-20.1
-14.5	-22.8	-4.5	-18.3
-14.0	-18.8	-4.2	-14.6
-13.5	-19.9	-3.8	-16.1
-13.0	-22.3	-3.3	-19.0
-12.5	-26.4	-2.9	-23.5
-12.0	-20.5	-2.5	-18.0
-11.5	-23.1	-2.0	-21.1
-11.0	-22.7	-1.5	-21.2
-10.5	-23.0	-1.0	-22.0
-10.0	-28.6	-0.5	-28.1
-9.5	-21.1	0.1	-21.2
-9.0	-21.7	0.4	-22.1
-8.5	-21.6	0.4	-22.0
-8.0	-33.2	0.4	-33.6
-7.5	-31.6	0.4	-31.9
-7.0	-23.8	0.4	-24.2
-6.5	-10.5	1.2	-11.7
-6.0	-11.0	2.0	-13.0
-5.5	-20.8	3.0	-23.7
-5.0	-9.1	4.0	-13.1
-4.5	-11.0	5.2	-16.1
-4.0	-11.4	6.4	-17.9
-3.5	-8.3	7.9	-16.2
-3.0	0.0		
-2.5	0.8		
-2.0	1.1		
-1.5	10.0		
-1.0	11.5		
-0.5	30.9		
0.0	36.9		

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.9		
0.5	29.4		
1.0	5.0		
1.5	3.4		
2.0	5.8		
2.5	4.6		
3.0	-5.3		
3.5	-4.5	7.9	-12.4
4.0	-4.9	6.4	-11.4
4.5	-12.0	5.2	-17.2
5.0	-9.8	4.0	-13.9
5.5	-9.0	3.0	-12.0
6.0	-26.5	2.0	-28.6
6.5	-17.3	1.2	-18.5
7.0	-9.5	0.4	-9.9
7.5	-10.9	0.4	-11.3
8.0	-14.3	0.4	-14.6
8.5	-13.4	0.4	-13.7
9.0	-24.0	0.4	-24.3
9.5	-11.0	0.1	-11.0
10.0	-10.7	-0.5	-10.2
10.5	-22.8	-1.0	-21.8
11.0	-17.7	-1.5	-16.1
11.5	-17.7	-2.0	-15.7
12.0	-24.0	-2.5	-21.6
12.5	-14.9	-2.9	-11.9
13.0	-22.9	-3.3	-19.5
13.5	-16.0	-3.8	-12.2
14.0	-13.4	-4.2	-9.3
14.5	-17.4	-4.5	-12.9
15.0	-15.2	-4.9	-10.2
15.5	-19.3	-5.3	-14.1
16.0	-19.8	-5.6	-14.2
16.5	-14.4	-5.9	-8.4
17.0	-40.0	-6.3	-33.7
17.5	-16.0	-6.6	-9.5
18.0	-18.5	-6.9	-11.6
18.5	-14.3	-7.2	-7.2
19.0	-17.6	-7.5	-10.2
19.5	-15.0	-7.8	-7.3
20.0	-18.8	-8.0	-10.8
20.5	-18.9	-8.3	-10.6
21.0	-16.5	-8.6	-8.0
21.5	-16.8	-8.8	-8.0
22.0	-18.9	-9.1	-9.8
22.5	-17.5	-9.3	-8.2
23.0	-19.7	-9.5	-10.2
23.5	-21.5	-9.8	-11.7
24.0	-24.3	-10.0	-14.3
24.5	-28.4	-10.2	-18.1
25.0	-17.1	-10.4	-6.6
25.5	-23.4	-10.7	-12.8
26.0	-26.0	-10.9	-15.1
26.5	-19.1	-11.1	-8.0
27.0	-27.1	-11.3	-15.8
27.5	-24.1	-11.5	-12.7
28.0	-24.7	-11.7	-13.1
28.5	-24.9	-11.9	-13.0
29.0	-32.6	-12.1	-20.5
29.5	-25.5	-12.2	-13.2
30.0	-24.2	-12.4	-11.8

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-28.6	-0.5	-28.1
-9.9	-26.4	-0.4	-26.0
-9.8	-29.4	-0.3	-29.1
-9.7	-28.5	-0.2	-28.4
-9.6	-23.8	-0.1	-23.8
-9.5	-21.1	0.1	-21.2
-9.4	-20.9	0.2	-21.1
-9.3	-24.0	0.3	-24.3
-9.2	-32.8	0.4	-33.1
-9.1	-28.2	0.4	-28.6
-9.0	-21.7	0.4	-22.1
-8.9	-19.7	0.4	-20.1
-8.8	-21.0	0.4	-21.4
-8.7	-24.1	0.4	-24.5
-8.6	-26.5	0.4	-26.9
-8.5	-21.6	0.4	-22.0
-8.4	-18.8	0.4	-19.1
-8.3	-18.8	0.4	-19.1
-8.2	-20.7	0.4	-21.1
-8.1	-27.1	0.4	-27.5
-8.0	-33.2	0.4	-33.6
-7.9	-25.2	0.4	-25.6
-7.8	-23.8	0.4	-24.2
-7.7	-24.5	0.4	-24.9
-7.6	-27.3	0.4	-27.7
-7.5	-31.6	0.4	-31.9
-7.4	-28.1	0.4	-28.5
-7.3	-22.9	0.4	-23.3
-7.2	-20.4	0.4	-20.8
-7.1	-20.4	0.4	-20.8
-7.0	-23.8	0.4	-24.2
-6.9	-27.3	0.5	-27.9
-6.8	-18.9	0.7	-19.6
-6.7	-13.6	0.8	-14.5
-6.6	-11.1	1.0	-12.1
-6.5	-10.5	1.2	-11.7
-6.4	-11.2	1.3	-12.5
-6.3	-13.6	1.5	-15.2
-6.2	-15.0	1.7	-16.7
-6.1	-12.9	1.9	-14.8
-6.0	-11.0	2.0	-13.0
-5.9	-10.7	2.2	-12.9
-5.8	-12.6	2.4	-15.0
-5.7	-17.6	2.6	-20.2
-5.6	-26.6	2.8	-29.4
-5.5	-20.8	3.0	-23.7
-5.4	-17.2	3.2	-20.4
-5.3	-18.7	3.4	-22.1
-5.2	-18.1	3.6	-21.7
-5.1	-12.6	3.8	-16.4
-5.0	-9.1	4.0	-13.1
-4.9	-7.3	4.2	-11.6
-4.8	-7.5	4.5	-12.0
-4.7	-9.0	4.7	-13.7
-4.6	-10.7	4.9	-15.6
-4.5	-11.0	5.2	-16.1
-4.4	-9.9	5.4	-15.3
-4.3	-9.3	5.7	-15.0
-4.2	-9.6	5.9	-15.5
-4.1	-10.4	6.2	-16.6

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.9		
0.1	36.6		
0.2	35.7		
0.3	34.3		
0.4	32.2		
0.5	29.4		
0.6	25.7		
0.7	20.6		
0.8	13.4		
0.9	2.3		
1.0	5.0		
1.1	7.3		
1.2	7.1		
1.3	6.0		
1.4	4.7		
1.5	3.4		
1.6	2.0		
1.7	2.3		
1.8	3.7		
1.9	5.0		
2.0	5.8		
2.1	6.2		
2.2	6.3		
2.3	6.1		
2.4	5.6		
2.5	4.6		
2.6	3.0		
2.7	0.6		
2.8	-2.3		
2.9	-4.4		
3.0	-5.3		
3.1	-5.0		
3.2	-4.1		
3.3	-3.2		
3.4	-3.3		
3.5	-4.5	7.9	-12.4
3.6	-6.2	7.6	-13.7
3.7	-7.5	7.3	-14.8
3.8	-6.9	7.0	-13.9
3.9	-5.4	6.7	-12.1
4.0	-4.9	6.4	-11.4
4.1	-5.8	6.2	-11.9
4.2	-6.9	5.9	-12.8
4.3	-9.3	5.7	-15.0
4.4	-11.5	5.4	-16.9
4.5	-12.0	5.2	-17.2
4.6	-11.0	4.9	-15.9
4.7	-9.6	4.7	-14.3
4.8	-8.3	4.5	-12.8
4.9	-7.9	4.2	-12.1
5.0	-9.8	4.0	-13.9
5.1	-14.2	3.8	-18.0
5.2	-26.0	3.6	-29.6
5.3	-17.2	3.4	-20.6
5.4	-10.7	3.2	-13.9
5.5	-9.0	3.0	-12.0
5.6	-8.6	2.8	-11.4
5.7	-10.0	2.6	-12.6
5.8	-14.4	2.4	-16.8
5.9	-24.4	2.2	-26.7

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	-11.4	6.4	-17.9
-3.9	-11.8	6.7	-18.5
-3.8	-11.7	7.0	-18.7
-3.7	-10.7	7.3	-18.0
-3.6	-9.5	7.6	-17.1
-3.5	-8.3	7.9	-16.2
-3.4	-6.9		
-3.3	-5.0		
-3.2	-2.9		
-3.1	-1.0		
-3.0	0.0		
-2.9	0.0		
-2.8	-0.7		
-2.7	-1.3		
-2.6	-0.7		
-2.5	0.8		
-2.4	2.0		
-2.3	2.3		
-2.2	2.0		
-2.1	1.4		
-2.0	1.1		
-1.9	1.7		
-1.8	3.6		
-1.7	6.3		
-1.6	8.6		
-1.5	10.0		
-1.4	10.3		
-1.3	9.5		
-1.2	8.0		
-1.1	7.8		
-1.0	11.5		
-0.9	16.2		
-0.8	20.7		
-0.7	24.7		
-0.6	28.1		
-0.5	30.9		
-0.4	33.2		
-0.3	34.9		
-0.2	36.1		
-0.1	36.8		
0.0	36.9		

6.0	-26.5	2.0	-28.6
6.1	-18.5	1.9	-20.4
6.2	-17.1	1.7	-18.8
6.3	-17.4	1.5	-18.9
6.4	-18.2	1.3	-19.6
6.5	-17.3	1.2	-18.5
6.6	-14.4	1.0	-15.4
6.7	-11.8	0.8	-12.7
6.8	-9.8	0.7	-10.5
6.9	-9.3	0.5	-9.8
7.0	-9.5	0.4	-9.9
7.1	-10.6	0.4	-11.0
7.2	-12.3	0.4	-12.7
7.3	-12.6	0.4	-12.9
7.4	-11.6	0.4	-12.0
7.5	-10.9	0.4	-11.3
7.6	-10.6	0.4	-10.9
7.7	-11.3	0.4	-11.7
7.8	-12.9	0.4	-13.3
7.9	-14.5	0.4	-14.9
8.0	-14.3	0.4	-14.6
8.1	-12.8	0.4	-13.1
8.2	-11.7	0.4	-12.1
8.3	-11.5	0.4	-11.9
8.4	-11.6	0.4	-12.0
8.5	-13.4	0.4	-13.7
8.6	-15.5	0.4	-15.8
8.7	-19.1	0.4	-19.5
8.8	-23.0	0.4	-23.3
8.9	-24.5	0.4	-24.9
9.0	-24.0	0.4	-24.3
9.1	-24.8	0.4	-25.2
9.2	-24.6	0.4	-24.9
9.3	-18.8	0.3	-19.1
9.4	-13.8	0.2	-14.0
9.5	-11.0	0.1	-11.0
9.6	-9.1	-0.1	-9.1
9.7	-8.2	-0.2	-8.1
9.8	-8.2	-0.3	-7.9
9.9	-9.3	-0.4	-8.9
10.0	-10.7	-0.5	-10.2

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.10 GHz @ -11.58 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-15.4	-12.6	-2.7
-9.9	-15.0	-12.6	-2.3
-9.8	-14.8	-12.6	-2.2
-9.7	-15.0	-12.6	-2.4
-9.6	-16.0	-12.6	-3.4
-9.5	-17.0	-12.6	-4.4
-9.4	-18.5	-12.6	-5.8
-9.3	-20.3	-12.6	-7.7
-9.2	-22.1	-12.6	-9.5
-9.1	-23.4	-12.6	-10.8
-9.0	-25.3	-12.6	-12.7
-8.9	-24.9	-12.6	-12.3
-8.8	-26.2	-12.6	-13.6
-8.7	-29.5	-12.6	-16.9
-8.6	-37.0	-12.6	-24.4
-8.5	-29.6	-12.6	-16.9
-8.4	-24.2	-12.6	-11.6
-8.3	-22.1	-12.6	-9.5
-8.2	-20.8	-12.6	-8.1
-8.1	-22.0	-12.6	-9.4
-8.0	-24.5	-12.6	-11.8
-7.9	-25.7	-12.6	-13.1
-7.8	-25.9	-12.6	-13.2
-7.7	-22.4	-12.6	-9.8
-7.6	-22.4	-12.6	-9.8
-7.5	-23.7	-12.6	-11.1
-7.4	-28.4	-12.6	-15.8
-7.3	-32.9	-12.6	-20.3
-7.2	-23.2	-12.6	-10.6
-7.1	-19.7	-12.6	-7.1
-7.0	-18.1	-12.6	-5.4
-6.9	-17.7	-12.5	-5.3
-6.8	-18.5	-12.3	-6.2
-6.7	-21.0	-12.2	-8.9
-6.6	-20.6	-12.0	-8.6
-6.5	-18.7	-11.8	-6.8
-6.4	-15.3	-11.7	-3.6
-6.3	-12.9	-11.5	-1.4
-6.2	-11.3	-11.3	0.0
-6.1	-11.2	-11.1	-0.1
-6.0	-12.2	-11.0	-1.2
-5.9	-14.7	-10.8	-3.9
-5.8	-19.8	-10.6	-9.2
-5.7	-24.2	-10.4	-13.9
-5.6	-19.7	-10.2	-9.5
-5.5	-16.2	-10.0	-6.2
-5.4	-14.9	-9.8	-5.1
-5.3	-16.1	-9.6	-6.5
-5.2	-17.3	-9.4	-7.9
-5.1	-17.3	-9.2	-8.1
-5.0	-16.4	-9.0	-7.5
-4.9	-15.2	-8.8	-6.5
-4.8	-14.7	-8.5	-6.2
-4.7	-14.6	-8.3	-6.3
-4.6	-15.0	-8.1	-6.9
-4.5	-13.7	-7.8	-5.9
-4.4	-12.3	-7.6	-4.7
-4.3	-10.7	-7.3	-3.4
-4.2	-9.1	-7.1	-2.1
-4.1	-7.7	-6.8	-0.9

29.10 GHz @ -11.58 dBW / 40 kHz in X-pol Az LHCP

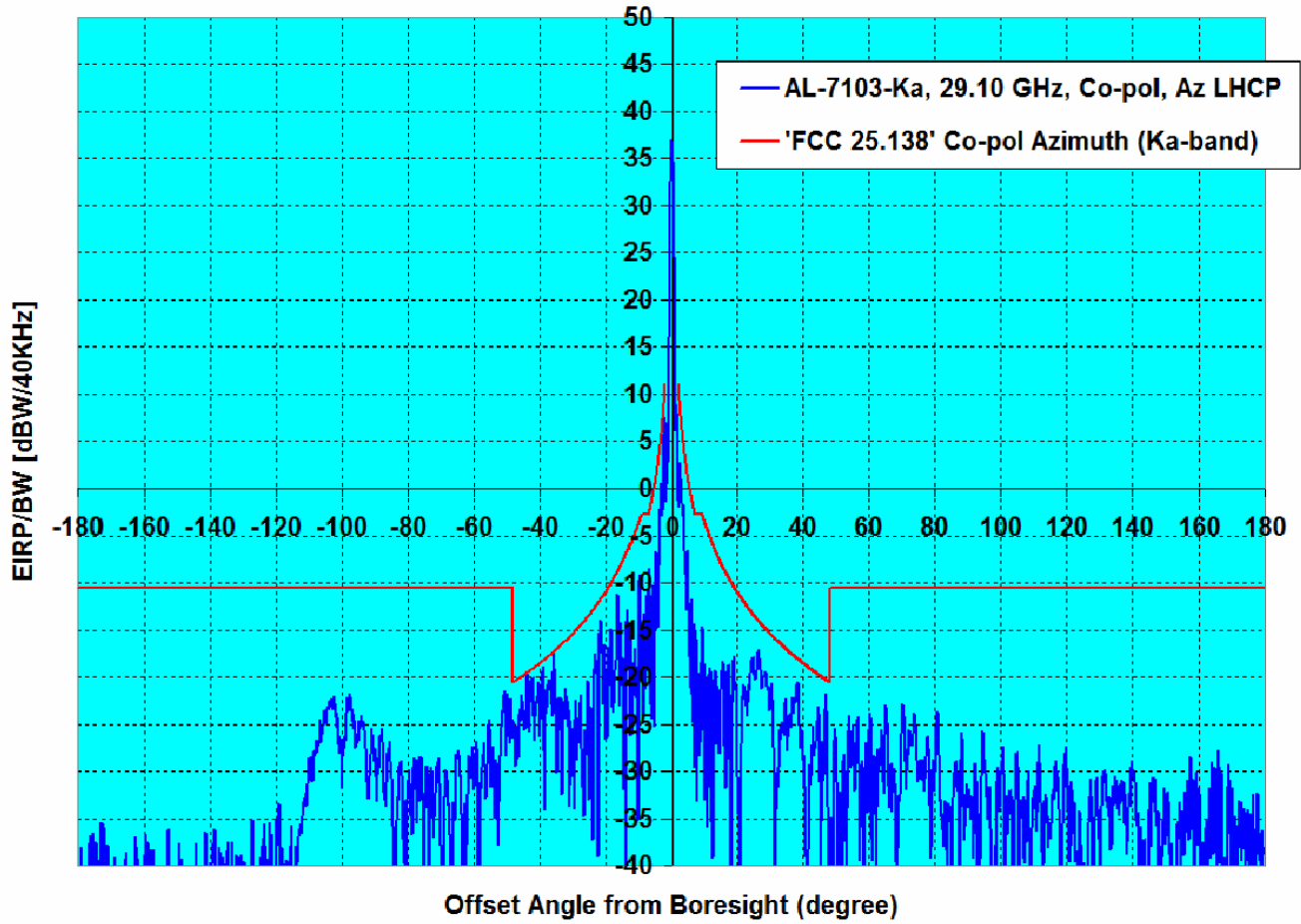
Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	6.9		
0.1	5.3		
0.2	4.9		
0.3	5.6		
0.4	6.8		
0.5	7.7		
0.6	8.1		
0.7	7.7		
0.8	6.6		
0.9	4.4		
1.0	0.7		
1.1	-5.2		
1.2	-15.4		
1.3	-13.1		
1.4	-10.9		
1.5	-12.9		
1.6	-14.4		
1.7	-12.2		
1.8	-10.2		
1.9	-10.7		
2.0	-14.5	1.0	-15.4
2.1	-23.9	0.4	-24.4
2.2	-20.7	-0.1	-20.6
2.3	-14.1	-0.5	-13.6
2.4	-13.4	-1.0	-12.4
2.5	-14.5	-1.4	-13.1
2.6	-16.3	-1.9	-14.5
2.7	-16.5	-2.3	-14.2
2.8	-14.6	-2.7	-11.9
2.9	-14.9	-3.1	-11.8
3.0	-16.9	-3.4	-13.5
3.1	-27.7	-3.8	-23.9
3.2	-26.4	-4.1	-22.2
3.3	-17.6	-4.5	-13.1
3.4	-16.4	-4.8	-11.6
3.5	-17.1	-5.1	-12.0
3.6	-18.5	-5.4	-13.1
3.7	-20.4	-5.7	-14.7
3.8	-19.5	-6.0	-13.5
3.9	-20.9	-6.3	-14.6
4.0	-24.0	-6.6	-17.4
4.1	-24.0	-6.8	-17.2
4.2	-19.8	-7.1	-12.8
4.3	-16.3	-7.3	-8.9
4.4	-15.9	-7.6	-8.3
4.5	-17.7	-7.8	-9.9
4.6	-24.4	-8.1	-16.3
4.7	-29.7	-8.3	-21.4
4.8	-21.3	-8.5	-12.7
4.9	-21.0	-8.8	-12.2
5.0	-22.2	-9.0	-13.2
5.1	-28.2	-9.2	-19.0
5.2	-32.0	-9.4	-22.6
5.3	-25.7	-9.6	-16.1
5.4	-20.8	-9.8	-10.9
5.5	-22.2	-10.0	-12.2
5.6	-28.8	-10.2	-18.6
5.7	-32.9	-10.4	-22.5
5.8	-24.4	-10.6	-13.8
5.9	-21.9	-10.8	-11.1

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-7.1	-6.6	-0.5
-3.9	-6.9	-6.3	-0.7
-3.8	-7.6	-6.0	-1.6
-3.7	-9.0	-5.7	-3.3
-3.6	-10.7	-5.4	-5.3
-3.5	-12.3	-5.1	-7.2
-3.4	-12.0	-4.8	-7.2
-3.3	-10.8	-4.5	-6.3
-3.2	-9.5	-4.1	-5.3
-3.1	-8.6	-3.8	-4.8
-3.0	-8.5	-3.4	-5.0
-2.9	-9.3	-3.1	-6.3
-2.8	-11.8	-2.7	-9.1
-2.7	-16.6	-2.3	-14.3
-2.6	-22.3	-1.9	-20.4
-2.5	-16.4	-1.4	-15.0
-2.4	-13.9	-1.0	-12.9
-2.3	-13.4	-0.5	-12.9
-2.2	-11.5	-0.1	-11.5
-2.1	-8.4	0.4	-8.9
-2.0	-6.1	1.0	-7.1
-1.9	-5.6		
-1.8	-7.8		
-1.7	-11.9		
-1.6	-4.8		
-1.5	1.1		
-1.4	4.4		
-1.3	6.0		
-1.2	5.8		
-1.1	3.8		
-1.0	-1.3		
-0.9	-1.8		
-0.8	5.3		
-0.7	9.4		
-0.6	11.8		
-0.5	12.8		
-0.4	12.9		
-0.3	12.2		
-0.2	11.0		
-0.1	9.1		
0.0	6.9		

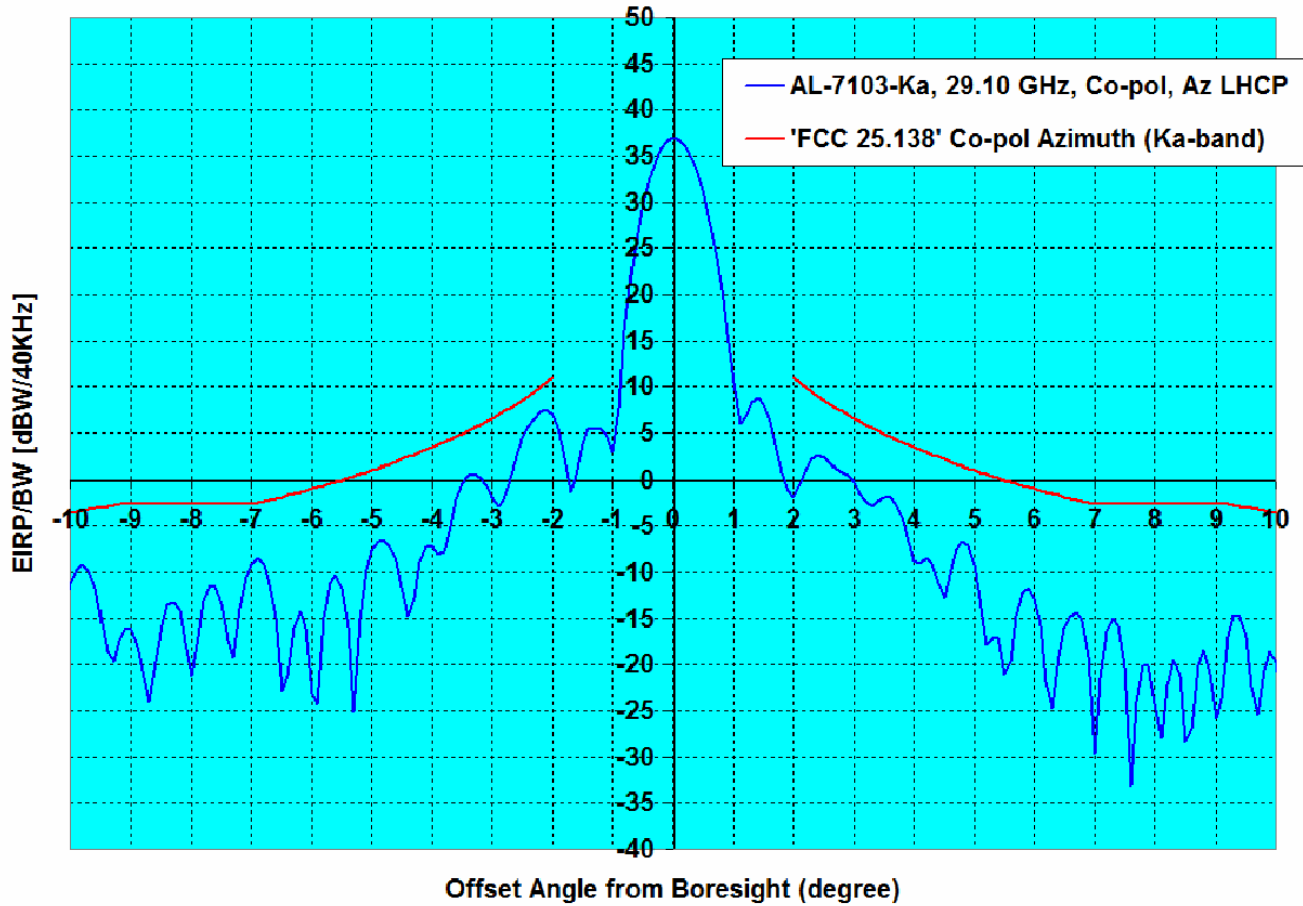
6.0	-22.6	-11.0	-11.7
6.1	-24.4	-11.1	-13.3
6.2	-28.2	-11.3	-16.9
6.3	-26.4	-11.5	-14.9
6.4	-25.3	-11.7	-13.6
6.5	-24.4	-11.8	-12.5
6.6	-28.2	-12.0	-16.2
6.7	-29.9	-12.2	-17.8
6.8	-27.0	-12.3	-14.7
6.9	-25.4	-12.5	-12.9
7.0	-27.1	-12.6	-14.5
7.1	-32.2	-12.6	-19.6
7.2	-36.3	-12.6	-23.7
7.3	-26.9	-12.6	-14.3
7.4	-24.7	-12.6	-12.1
7.5	-24.6	-12.6	-12.0
7.6	-26.9	-12.6	-14.3
7.7	-28.7	-12.6	-16.0
7.8	-26.8	-12.6	-14.1
7.9	-23.4	-12.6	-10.8
8.0	-24.5	-12.6	-11.9
8.1	-26.7	-12.6	-14.1
8.2	-36.4	-12.6	-23.8
8.3	-42.8	-12.6	-30.2
8.4	-36.0	-12.6	-23.3
8.5	-34.7	-12.6	-22.0
8.6	-40.0	-12.6	-27.4
8.7	-32.6	-12.6	-20.0
8.8	-33.4	-12.6	-20.8
8.9	-27.8	-12.6	-15.1
9.0	-29.1	-12.6	-16.4
9.1	-30.0	-12.6	-17.4
9.2	-31.7	-12.6	-19.1
9.3	-32.5	-12.6	-19.9
9.4	-30.6	-12.6	-18.0
9.5	-30.0	-12.6	-17.3
9.6	-31.4	-12.6	-18.8
9.7	-31.5	-12.6	-18.8
9.8	-38.5	-12.6	-25.8
9.9	-38.1	-12.6	-25.5
10.0	-35.4	-12.6	-22.7

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in Az LHCP
 Min BW of 3.63 MHz in case of 20W BUC**



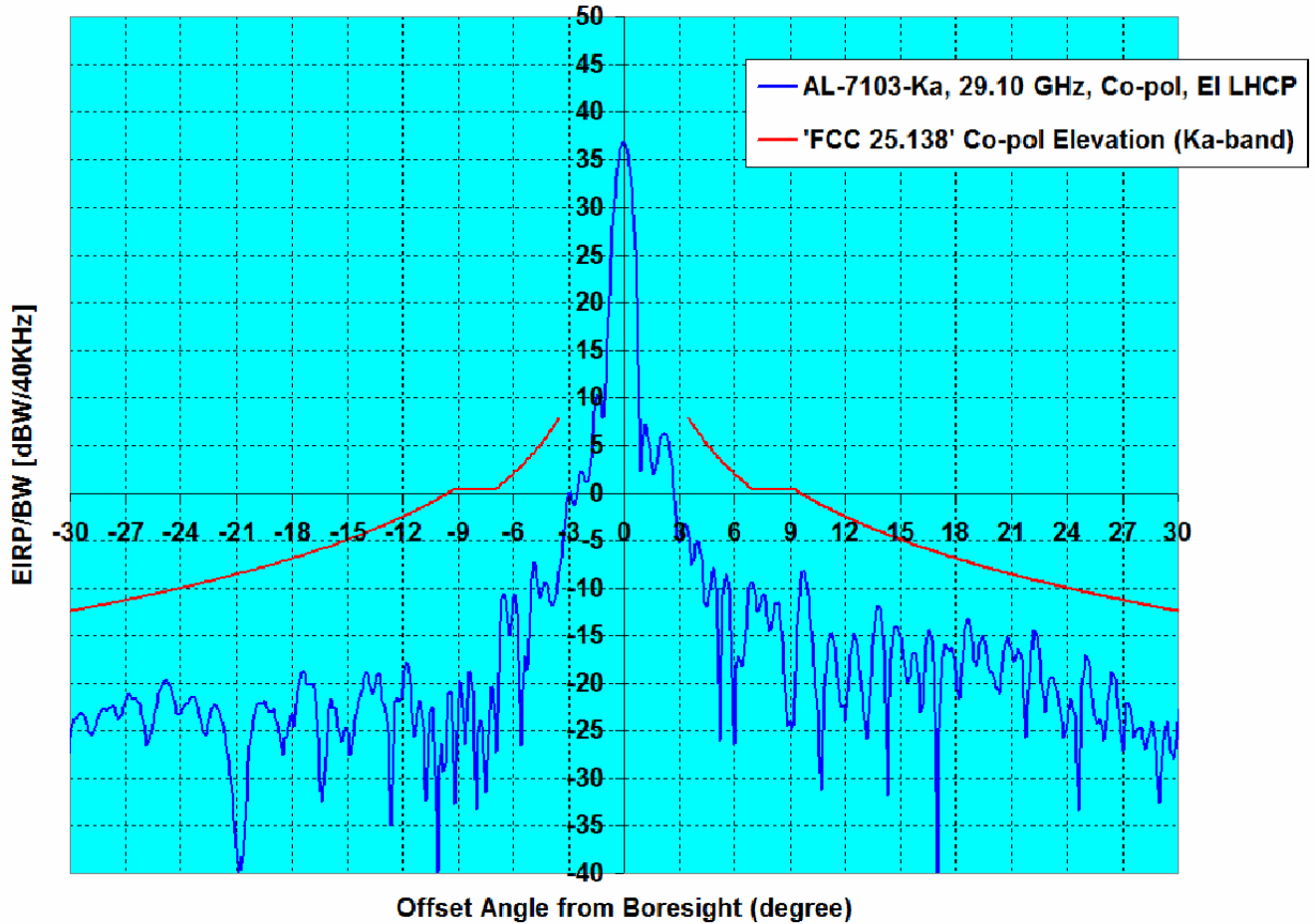
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 29.10 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.50	-11.58	-2.68	-0.14	0.00

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in Az LHCP
 Min BW of 3.63 MHz in case of 20W BUC**



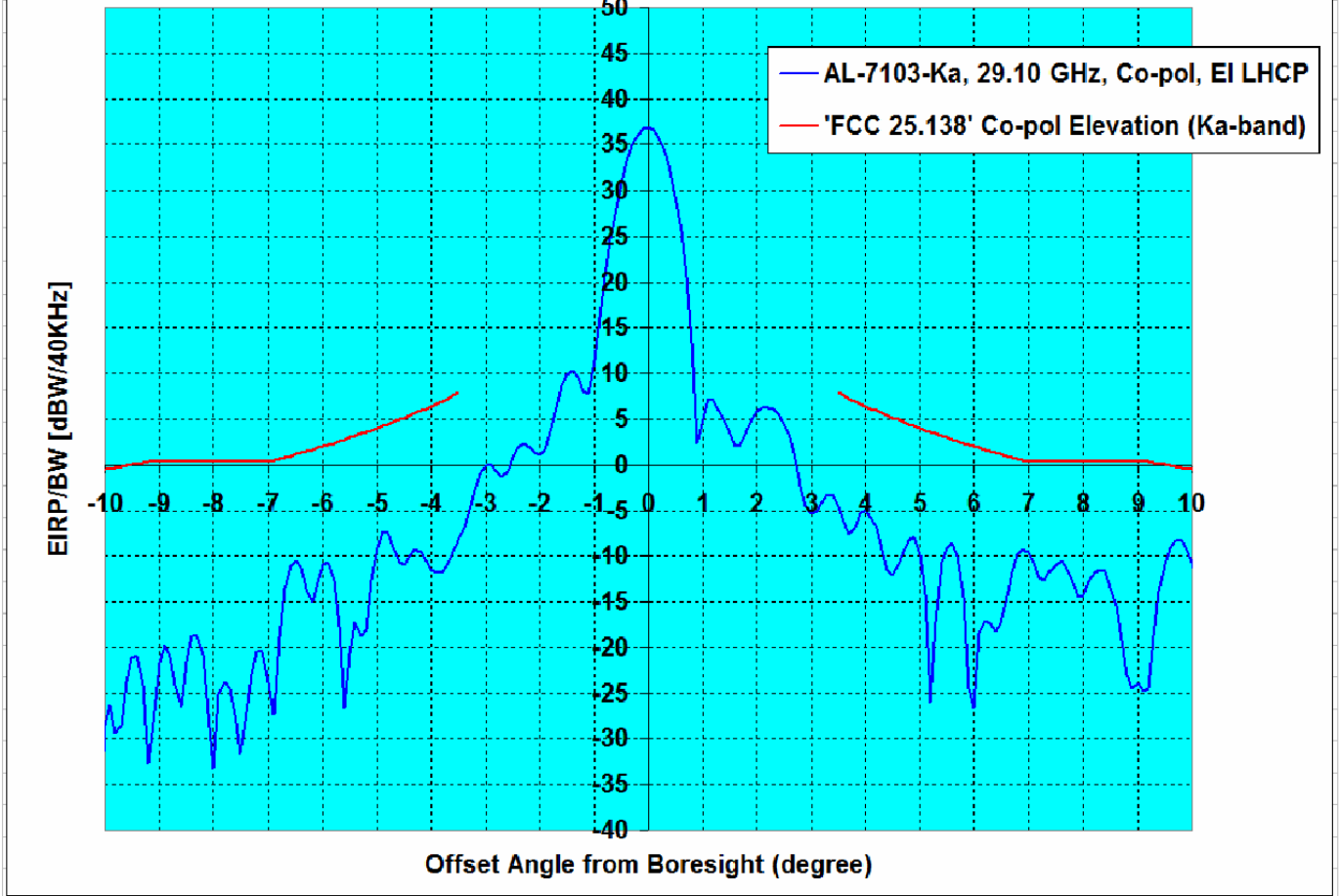
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 29.10 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.50	-11.58	-2.68	-0.14	0.00

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in EI LHCP
 Min BW of 3.63 MHz in case of 20W BUC**



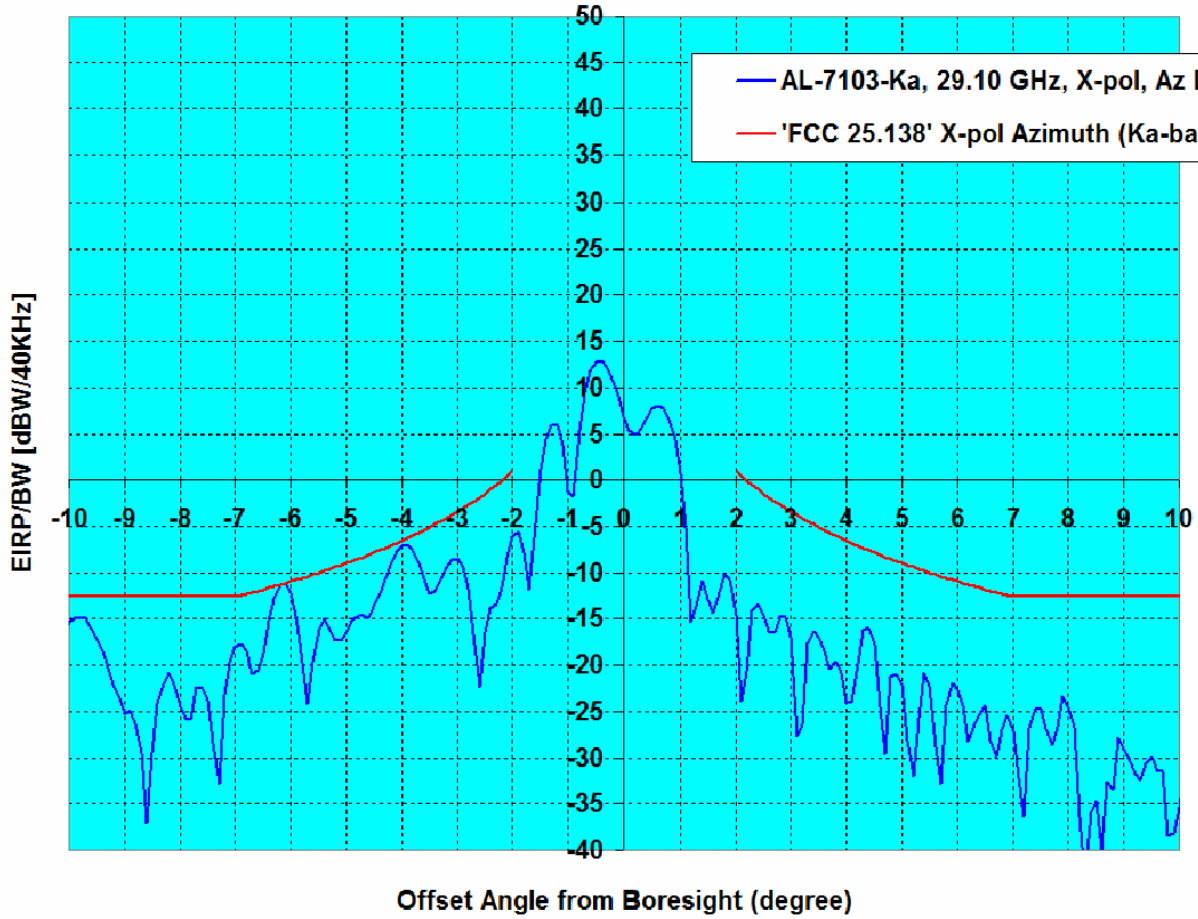
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.6° to 10°)	± (10° to 30°)	%
AL-7103-Ka, 29.10 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.50	-11.58	-7.93	-5.25	0.00

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in EI LHCP
 Min BW of 3.63 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]			± (3.5° to 10°)	± (10° to 30°)	
AL-7103-Ka, 29.10 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.50	-11.58	-7.93	-5.25	0.00

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in Az LHCP
 Min BW of 3.63 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]			± (2° to 7°)	± (2° to 9.2°)	
AL-7103-Ka, 29.10 GHz, X-pol, Az LHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	48.50	-11.58	0.00	0.00	0.00

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-179.0	-42.8	-10.5	-32.3
-178.0	-41.4	-10.5	-30.9
-177.0	-39.1	-10.5	-28.6
-176.0	-35.0	-10.5	-24.5
-175.0	-42.8	-10.5	-32.3
-174.0	-47.3	-10.5	-36.8
-173.0	-43.1	-10.5	-32.6
-172.0	-45.4	-10.5	-34.9
-171.0	-47.3	-10.5	-36.8
-170.0	-44.5	-10.5	-34.0
-169.0	-37.0	-10.5	-26.5
-168.0	-55.6	-10.5	-45.1
-167.0	-36.8	-10.5	-26.3
-166.0	-41.6	-10.5	-31.1
-165.0	-51.4	-10.5	-40.9
-164.0	-47.6	-10.5	-37.1
-163.0	-48.5	-10.5	-38.0
-162.0	-44.7	-10.5	-34.2
-161.0	-45.5	-10.5	-35.0
-160.0	-41.5	-10.5	-31.0
-159.0	-44.6	-10.5	-34.1
-158.0	-43.2	-10.5	-32.7
-157.0	-44.4	-10.5	-33.9
-156.0	-42.5	-10.5	-32.0
-155.0	-46.8	-10.5	-36.3
-154.0	-45.8	-10.5	-35.3
-153.0	-43.9	-10.5	-33.4
-152.0	-48.3	-10.5	-37.8
-151.0	-42.7	-10.5	-32.2
-150.0	-44.0	-10.5	-33.5
-149.0	-39.6	-10.5	-29.1
-148.0	-37.8	-10.5	-27.3
-147.0	-40.0	-10.5	-29.5
-146.0	-46.0	-10.5	-35.5
-145.0	-38.6	-10.5	-28.1
-144.0	-42.4	-10.5	-31.9
-143.0	-45.2	-10.5	-34.7
-142.0	-45.8	-10.5	-35.3
-141.0	-44.1	-10.5	-33.6
-140.0	-45.1	-10.5	-34.6
-139.0	-39.2	-10.5	-28.7
-138.0	-53.1	-10.5	-42.6
-137.0	-45.7	-10.5	-35.2
-136.0	-48.6	-10.5	-38.1
-135.0	-40.9	-10.5	-30.4
-134.0	-39.0	-10.5	-28.5
-133.0	-39.7	-10.5	-29.2
-132.0	-51.3	-10.5	-40.8
-131.0	-42.2	-10.5	-31.7
-130.0	-53.9	-10.5	-43.4
-129.0	-39.4	-10.5	-28.9
-128.0	-43.4	-10.5	-32.9
-127.0	-37.3	-10.5	-26.8
-126.0	-49.7	-10.5	-39.2
-125.0	-39.1	-10.5	-28.6
-124.0	-40.3	-10.5	-29.8
-123.0	-46.1	-10.5	-35.6
-122.0	-46.8	-10.5	-36.3
-121.0	-41.5	-10.5	-31.0
-120.0	-39.4	-10.5	-28.9

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	36.9		
1.0	11.1		
2.0	-0.6	11.0	-11.6
3.0	0.2	6.6	-6.4
4.0	-11.0	3.4	-14.4
5.0	-9.3	1.0	-10.3
6.0	-10.3	-1.0	-9.4
7.0	-38.5	-2.6	-35.9
8.0	-25.3	-2.6	-22.6
9.0	-27.7	-2.6	-25.1
10.0	-21.9	-3.5	-18.4
11.0	-24.6	-4.5	-20.1
12.0	-20.2	-5.5	-14.7
13.0	-18.6	-6.3	-12.3
14.0	-18.1	-7.2	-10.9
15.0	-20.9	-7.9	-13.0
16.0	-26.4	-8.6	-17.8
17.0	-17.8	-9.3	-8.6
18.0	-28.4	-9.9	-18.5
19.0	-21.6	-10.5	-11.1
20.0	-22.4	-11.0	-11.4
21.0	-32.4	-11.6	-20.9
22.0	-23.8	-12.1	-11.7
23.0	-21.6	-12.5	-9.0
24.0	-19.7	-13.0	-6.7
25.0	-20.8	-13.4	-7.4
26.0	-21.3	-13.9	-7.5
27.0	-24.7	-14.3	-10.4
28.0	-21.5	-14.7	-6.8
29.0	-26.5	-15.1	-11.5
30.0	-25.9	-15.4	-10.5
31.0	-24.8	-15.8	-9.0
32.0	-41.6	-16.1	-25.4
33.0	-28.7	-16.5	-12.3
34.0	-33.5	-16.8	-16.8
35.0	-31.6	-17.1	-14.5
36.0	-33.7	-17.4	-16.2
37.0	-26.2	-17.7	-8.5
38.0	-29.7	-18.0	-11.7
39.0	-29.1	-18.3	-10.9
40.0	-37.0	-18.6	-18.5
41.0	-30.2	-18.8	-11.4
42.0	-30.5	-19.1	-11.4
43.0	-36.4	-19.3	-17.1
44.0	-28.6	-19.6	-9.0
45.0	-47.7	-19.8	-27.8
46.0	-29.0	-20.1	-8.9
47.0	-20.1	-20.3	0.2
48.0	-31.1	-20.5	-10.6
49.0	-27.0	-10.5	-16.5
50.0	-27.3	-10.5	-16.8
51.0	-29.6	-10.5	-19.1
52.0	-32.9	-10.5	-22.4
53.0	-42.7	-10.5	-32.2
54.0	-31.5	-10.5	-21.0
55.0	-28.6	-10.5	-18.1
56.0	-25.0	-10.5	-14.5
57.0	-29.6	-10.5	-19.1
58.0	-34.7	-10.5	-24.2
59.0	-25.8	-10.5	-15.3

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-49.3	-10.5	-38.8
-118.0	-51.0	-10.5	-40.5
-117.0	-43.8	-10.5	-33.3
-116.0	-35.0	-10.5	-24.5
-115.0	-36.9	-10.5	-26.4
-114.0	-39.2	-10.5	-28.7
-113.0	-39.1	-10.5	-28.6
-112.0	-35.0	-10.5	-24.5
-111.0	-37.4	-10.5	-26.9
-110.0	-33.8	-10.5	-23.3
-109.0	-31.9	-10.5	-21.4
-108.0	-29.8	-10.5	-19.3
-107.0	-26.6	-10.5	-16.1
-106.0	-26.0	-10.5	-15.5
-105.0	-24.7	-10.5	-14.2
-104.0	-24.6	-10.5	-14.1
-103.0	-24.7	-10.5	-14.2
-102.0	-26.2	-10.5	-15.7
-101.0	-28.8	-10.5	-18.3
-100.0	-37.1	-10.5	-26.6
-99.0	-58.8	-10.5	-48.3
-98.0	-34.4	-10.5	-23.9
-97.0	-28.5	-10.5	-18.0
-96.0	-26.1	-10.5	-15.6
-95.0	-26.2	-10.5	-15.7
-94.0	-32.2	-10.5	-21.7
-93.0	-29.8	-10.5	-19.3
-92.0	-25.8	-10.5	-15.3
-91.0	-29.8	-10.5	-19.3
-90.0	-31.3	-10.5	-20.8
-89.0	-28.3	-10.5	-17.8
-88.0	-26.5	-10.5	-16.0
-87.0	-24.7	-10.5	-14.2
-86.0	-29.9	-10.5	-19.4
-85.0	-24.1	-10.5	-13.6
-84.0	-24.2	-10.5	-13.7
-83.0	-39.5	-10.5	-29.0
-82.0	-26.4	-10.5	-15.9
-81.0	-26.9	-10.5	-16.4
-80.0	-28.1	-10.5	-17.6
-79.0	-28.4	-10.5	-17.9
-78.0	-29.5	-10.5	-19.0
-77.0	-29.1	-10.5	-18.6
-76.0	-34.9	-10.5	-24.4
-75.0	-26.9	-10.5	-16.4
-74.0	-26.0	-10.5	-15.5
-73.0	-27.6	-10.5	-17.1
-72.0	-29.0	-10.5	-18.5
-71.0	-28.0	-10.5	-17.5
-70.0	-32.4	-10.5	-21.9
-69.0	-28.8	-10.5	-18.3
-68.0	-39.8	-10.5	-29.3
-67.0	-32.3	-10.5	-21.8
-66.0	-35.9	-10.5	-25.4
-65.0	-24.7	-10.5	-14.2
-64.0	-26.0	-10.5	-15.5
-63.0	-30.1	-10.5	-19.6
-62.0	-30.8	-10.5	-20.3
-61.0	-34.5	-10.5	-24.0
-60.0	-29.6	-10.5	-19.1
-59.0	-32.0	-10.5	-21.5
-58.0	-28.1	-10.5	-17.6
-57.0	-24.9	-10.5	-14.4

60.0	-27.1	-10.5	-16.6
61.0	-33.5	-10.5	-23.0
62.0	-32.7	-10.5	-22.2
63.0	-39.8	-10.5	-29.3
64.0	-30.4	-10.5	-19.9
65.0	-22.2	-10.5	-11.7
66.0	-25.9	-10.5	-15.4
67.0	-27.3	-10.5	-16.8
68.0	-24.4	-10.5	-13.9
69.0	-25.8	-10.5	-15.3
70.0	-27.0	-10.5	-16.5
71.0	-36.6	-10.5	-26.1
72.0	-26.8	-10.5	-16.3
73.0	-29.8	-10.5	-19.3
74.0	-41.7	-10.5	-31.2
75.0	-29.8	-10.5	-19.3
76.0	-39.2	-10.5	-28.7
77.0	-32.1	-10.5	-21.6
78.0	-34.9	-10.5	-24.4
79.0	-36.6	-10.5	-26.1
80.0	-40.6	-10.5	-30.1
81.0	-25.5	-10.5	-15.0
82.0	-29.2	-10.5	-18.7
83.0	-37.9	-10.5	-27.4
84.0	-36.3	-10.5	-25.8
85.0	-29.8	-10.5	-19.3
86.0	-34.8	-10.5	-24.3
87.0	-42.9	-10.5	-32.4
88.0	-34.0	-10.5	-23.5
89.0	-27.9	-10.5	-17.4
90.0	-38.8	-10.5	-28.3
91.0	-32.3	-10.5	-21.8
92.0	-37.4	-10.5	-26.9
93.0	-32.6	-10.5	-22.1
94.0	-37.1	-10.5	-26.6
95.0	-33.8	-10.5	-23.3
96.0	-34.7	-10.5	-24.2
97.0	-36.6	-10.5	-26.1
98.0	-32.1	-10.5	-21.6
99.0	-36.0	-10.5	-25.5
100.0	-42.3	-10.5	-31.8
101.0	-33.2	-10.5	-22.7
102.0	-31.7	-10.5	-21.2
103.0	-39.2	-10.5	-28.7
104.0	-36.8	-10.5	-26.3
105.0	-37.7	-10.5	-27.2
106.0	-32.2	-10.5	-21.7
107.0	-31.7	-10.5	-21.2
108.0	-35.7	-10.5	-25.2
109.0	-52.8	-10.5	-42.3
110.0	-42.6	-10.5	-32.1
111.0	-30.7	-10.5	-20.2
112.0	-38.6	-10.5	-28.1
113.0	-33.7	-10.5	-23.2
114.0	-33.9	-10.5	-23.4
115.0	-39.1	-10.5	-28.6
116.0	-33.7	-10.5	-23.2
117.0	-44.1	-10.5	-33.6
118.0	-44.4	-10.5	-33.9
119.0	-34.4	-10.5	-23.9
120.0	-38.6	-10.5	-28.1
121.0	-33.5	-10.5	-23.0
122.0	-35.9	-10.5	-25.4

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-28.2	-10.5	-17.7
-55.0	-22.5	-10.5	-12.0
-54.0	-24.4	-10.5	-13.9
-53.0	-28.4	-10.5	-17.9
-52.0	-30.4	-10.5	-19.9
-51.0	-22.1	-10.5	-11.6
-50.0	-21.9	-10.5	-11.4
-49.0	-31.1	-10.5	-20.6
-48.0	-24.0	-20.5	-3.5
-47.0	-25.3	-20.3	-5.0
-46.0	-28.1	-20.1	-8.0
-45.0	-23.3	-19.8	-3.5
-44.0	-23.9	-19.6	-4.3
-43.0	-24.0	-19.3	-4.7
-42.0	-17.2	-19.1	1.8
-41.0	-20.2	-18.8	-1.4
-40.0	-25.2	-18.6	-6.6
-39.0	-20.6	-18.3	-2.4
-38.0	-21.2	-18.0	-3.2
-37.0	-20.6	-17.7	-2.9
-36.0	-22.3	-17.4	-4.9
-35.0	-23.7	-17.1	-6.6
-34.0	-21.0	-16.8	-4.2
-33.0	-25.7	-16.5	-9.3
-32.0	-21.5	-16.1	-5.4
-31.0	-19.5	-15.8	-3.7
-30.0	-25.7	-15.4	-10.3
-29.0	-20.7	-15.1	-5.6
-28.0	-25.6	-14.7	-10.9
-27.0	-25.2	-14.3	-11.0
-26.0	-23.4	-13.9	-9.5
-25.0	-16.2	-13.4	-2.7
-24.0	-20.6	-13.0	-7.6
-23.0	-20.4	-12.5	-7.9
-22.0	-23.7	-12.1	-11.7
-21.0	-12.8	-11.6	-1.2
-20.0	-20.9	-11.0	-9.9
-19.0	-17.8	-10.5	-7.3
-18.0	-17.1	-9.9	-7.2
-17.0	-22.8	-9.3	-13.5
-16.0	-14.0	-8.6	-5.3
-15.0	-22.3	-7.9	-14.4
-14.0	-12.7	-7.2	-5.5
-13.0	-18.3	-6.3	-11.9
-12.0	-28.9	-5.5	-23.4
-11.0	-31.7	-4.5	-27.1
-10.0	-10.7	-3.5	-7.2
-9.0	-24.4	-2.6	-21.8
-8.0	-19.8	-2.6	-17.2
-7.0	-11.8	-2.6	-9.2
-6.0	-33.9	-1.0	-33.0
-5.0	-7.4	1.0	-8.5
-4.0	-10.2	3.4	-13.7
-3.0	-2.7	6.6	-9.3
-2.0	5.3	11.0	-5.7
-1.0	2.3		
0.0	36.9		

123.0	-39.2	-10.5	-28.7
124.0	-32.2	-10.5	-21.7
125.0	-45.7	-10.5	-35.2
126.0	-36.3	-10.5	-25.8
127.0	-39.1	-10.5	-28.6
128.0	-33.1	-10.5	-22.6
129.0	-39.5	-10.5	-29.0
130.0	-31.4	-10.5	-20.9
131.0	-36.8	-10.5	-26.3
132.0	-37.7	-10.5	-27.2
133.0	-35.9	-10.5	-25.4
134.0	-31.0	-10.5	-20.5
135.0	-36.5	-10.5	-26.0
136.0	-39.7	-10.5	-29.2
137.0	-37.6	-10.5	-27.1
138.0	-30.5	-10.5	-20.0
139.0	-34.1	-10.5	-23.6
140.0	-39.7	-10.5	-29.2
141.0	-34.2	-10.5	-23.7
142.0	-31.4	-10.5	-20.9
143.0	-36.4	-10.5	-25.9
144.0	-46.8	-10.5	-36.3
145.0	-37.2	-10.5	-26.7
146.0	-44.2	-10.5	-33.7
147.0	-31.8	-10.5	-21.3
148.0	-30.7	-10.5	-20.2
149.0	-36.1	-10.5	-25.6
150.0	-36.6	-10.5	-26.1
151.0	-35.9	-10.5	-25.4
152.0	-35.2	-10.5	-24.7
153.0	-44.6	-10.5	-34.1
154.0	-35.0	-10.5	-24.5
155.0	-34.7	-10.5	-24.2
156.0	-37.0	-10.5	-26.5
157.0	-31.7	-10.5	-21.2
158.0	-41.4	-10.5	-30.9
159.0	-31.1	-10.5	-20.6
160.0	-29.1	-10.5	-18.6
161.0	-30.0	-10.5	-19.5
162.0	-37.0	-10.5	-26.5
163.0	-49.4	-10.5	-38.9
164.0	-38.1	-10.5	-27.6
165.0	-41.9	-10.5	-31.4
166.0	-39.8	-10.5	-29.3
167.0	-32.5	-10.5	-22.0
168.0	-36.2	-10.5	-25.7
169.0	-37.0	-10.5	-26.5
170.0	-53.5	-10.5	-43.0
171.0	-47.3	-10.5	-36.8
172.0	-29.8	-10.5	-19.3
173.0	-37.3	-10.5	-26.8
174.0	-35.1	-10.5	-24.6
175.0	-40.5	-10.5	-30.0
176.0	-39.3	-10.5	-28.8
177.0	-48.7	-10.5	-38.2
178.0	-44.7	-10.5	-34.2
179.0	-42.6	-10.5	-32.1

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol Az RHCP				29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol Az RHCP			
Angle	EIRPsd	Mask	Over Mask	Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB	Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-10.7	-3.5	-7.2	0.0	36.9		
-9.9	-9.2	-3.4	-5.8	0.1	36.8		
-9.8	-8.9	-3.3	-5.6	0.2	36.1		
-9.7	-9.8	-3.2	-6.6	0.3	34.9		
-9.6	-11.5	-3.1	-8.5	0.4	33.2		
-9.5	-14.3	-2.9	-11.4	0.5	30.8		
-9.4	-18.2	-2.8	-15.4	0.6	28.0		
-9.3	-21.1	-2.7	-18.4	0.7	24.5		
-9.2	-21.2	-2.6	-18.5	0.8	20.4		
-9.1	-21.9	-2.6	-19.3	0.9	15.7		
-9.0	-24.4	-2.6	-21.8	1.0	11.1		
-8.9	-31.1	-2.6	-28.5	1.1	7.0		
-8.8	-26.5	-2.6	-23.9	1.2	6.5		
-8.7	-19.9	-2.6	-17.3	1.3	7.8		
-8.6	-16.6	-2.6	-14.0	1.4	8.4		
-8.5	-14.5	-2.6	-11.9	1.5	7.8		
-8.4	-13.6	-2.6	-11.0	1.6	6.1		
-8.3	-13.7	-2.6	-11.0	1.7	3.4		
-8.2	-15.2	-2.6	-12.6	1.8	0.6		
-8.1	-18.1	-2.6	-15.5	1.9	-0.8		
-8.0	-19.8	-2.6	-17.2	2.0	-0.6	11.0	-11.6
-7.9	-17.3	-2.6	-14.7	2.1	0.7	10.4	-9.7
-7.8	-14.5	-2.6	-11.9	2.2	2.1	9.9	-7.9
-7.7	-13.6	-2.6	-11.0	2.3	2.7	9.5	-6.7
-7.6	-14.4	-2.6	-11.8	2.4	2.9	9.0	-6.1
-7.5	-17.2	-2.6	-14.6	2.5	2.3	8.6	-6.2
-7.4	-20.4	-2.6	-17.8	2.6	1.0	8.1	-7.1
-7.3	-18.5	-2.6	-15.9	2.7	0.3	7.7	-7.5
-7.2	-14.4	-2.6	-11.8	2.8	-0.1	7.3	-7.4
-7.1	-12.6	-2.6	-9.9	2.9	0.3	6.9	-6.7
-7.0	-11.8	-2.6	-9.2	3.0	0.2	6.6	-6.4
-6.9	-12.2	-2.5	-9.7	3.1	-0.2	6.2	-6.4
-6.8	-13.4	-2.3	-11.1	3.2	-1.2	5.9	-7.1
-6.7	-16.0	-2.2	-13.9	3.3	-2.0	5.5	-7.6
-6.6	-20.0	-2.0	-18.0	3.4	-2.6	5.2	-7.9
-6.5	-26.4	-1.8	-24.6	3.5	-3.3	4.9	-8.2
-6.4	-21.0	-1.7	-19.4	3.6	-3.9	4.6	-8.5
-6.3	-17.4	-1.5	-16.0	3.7	-4.7	4.3	-9.0
-6.2	-17.3	-1.3	-16.0	3.8	-6.6	4.0	-10.6
-6.1	-19.8	-1.1	-18.7	3.9	-8.8	3.7	-12.5
-6.0	-33.9	-1.0	-33.0	4.0	-11.0	3.4	-14.4
-5.9	-18.2	-0.8	-17.4	4.1	-11.0	3.2	-14.2
-5.8	-12.1	-0.6	-11.5	4.2	-9.3	2.9	-12.2
-5.7	-9.7	-0.4	-9.3	4.3	-8.9	2.7	-11.5
-5.6	-8.6	-0.2	-8.4	4.4	-8.3	2.4	-10.7
-5.5	-9.8	0.0	-9.8	4.5	-8.1	2.2	-10.2
-5.4	-13.1	0.2	-13.3	4.6	-7.5	1.9	-9.4
-5.3	-18.8	0.4	-19.2	4.7	-6.3	1.7	-8.0
-5.2	-14.4	0.6	-15.0	4.8	-6.0	1.5	-7.5
-5.1	-9.5	0.8	-10.3	4.9	-7.1	1.2	-8.3
-5.0	-7.4	1.0	-8.5	5.0	-9.3	1.0	-10.3
-4.9	-7.0	1.2	-8.2	5.1	-15.0	0.8	-15.8
-4.8	-7.6	1.5	-9.1	5.2	-34.1	0.6	-34.7
-4.7	-9.3	1.7	-11.0	5.3	-20.0	0.4	-20.4
-4.6	-11.3	1.9	-13.3	5.4	-17.5	0.2	-17.7
-4.5	-13.5	2.2	-15.7	5.5	-23.2	0.0	-23.1
-4.4	-14.5	2.4	-16.9	5.6	-22.4	-0.2	-22.2
-4.3	-13.0	2.7	-15.7	5.7	-15.0	-0.4	-14.6
-4.2	-10.9	2.9	-13.8	5.8	-11.3	-0.6	-10.8
-4.1	-9.7	3.2	-12.8	5.9	-9.9	-0.8	-9.1
-4.0	-10.2	3.4	-13.7	6.0	-10.3	-1.0	-9.4
-3.9	-10.9	3.7	-14.6	6.1	-12.3	-1.1	-11.2

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table

Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-3.8	-8.9	4.0	-12.9		6.2	-14.2	-1.3	-12.9
-3.7	-5.2	4.3	-9.5		6.3	-14.6	-1.5	-13.1
-3.6	-2.5	4.6	-7.1		6.4	-13.3	-1.7	-11.7
-3.5	-1.0	4.9	-5.9		6.5	-13.2	-1.8	-11.4
-3.4	-0.6	5.2	-5.8		6.6	-14.0	-2.0	-12.1
-3.3	-1.0	5.5	-6.6		6.7	-16.0	-2.2	-13.8
-3.2	-1.8	5.9	-7.7		6.8	-20.7	-2.3	-18.4
-3.1	-2.5	6.2	-8.8		6.9	-27.7	-2.5	-25.2
-3.0	-2.7	6.6	-9.3		7.0	-38.5	-2.6	-35.9
-2.9	-2.2	6.9	-9.1		7.1	-23.7	-2.6	-21.1
-2.8	-0.8	7.3	-8.1		7.2	-19.1	-2.6	-16.5
-2.7	1.2	7.7	-6.5		7.3	-17.5	-2.6	-14.8
-2.6	3.0	8.1	-5.1		7.4	-18.2	-2.6	-15.5
-2.5	4.3	8.6	-4.3		7.5	-21.3	-2.6	-18.6
-2.4	5.0	9.0	-4.0		7.6	-25.5	-2.6	-22.9
-2.3	5.3	9.5	-4.2		7.7	-23.9	-2.6	-21.2
-2.2	5.4	9.9	-4.5		7.8	-21.6	-2.6	-18.9
-2.1	5.5	10.4	-5.0		7.9	-22.4	-2.6	-19.8
-2.0	5.3	11.0	-5.7		8.0	-25.3	-2.6	-22.6
-1.9	4.3				8.1	-22.5	-2.6	-19.9
-1.8	2.4				8.2	-18.1	-2.6	-15.5
-1.7	0.4				8.3	-16.3	-2.6	-13.6
-1.6	1.2				8.4	-16.0	-2.6	-13.4
-1.5	3.0				8.5	-19.0	-2.6	-16.4
-1.4	3.9				8.6	-24.5	-2.6	-21.8
-1.3	3.8				8.7	-28.3	-2.6	-25.7
-1.2	3.9				8.8	-23.7	-2.6	-21.0
-1.1	4.3				8.9	-23.2	-2.6	-20.6
-1.0	2.3				9.0	-27.7	-2.6	-25.1
-0.9	4.6				9.1	-33.6	-2.6	-31.0
-0.8	14.3				9.2	-23.8	-2.6	-21.2
-0.7	20.9				9.3	-19.7	-2.7	-16.9
-0.6	26.0				9.4	-18.3	-2.8	-15.5
-0.5	29.6				9.5	-20.1	-2.9	-17.2
-0.4	32.3				9.6	-25.5	-3.1	-22.4
-0.3	34.3				9.7	-28.3	-3.2	-25.1
-0.2	35.7				9.8	-23.0	-3.3	-19.7
-0.1	36.6				9.9	-20.4	-3.4	-17.0
0.0	36.9				10.0	-21.9	-3.5	-18.4

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.1	-12.4	-7.7
-29.5	-18.1	-12.2	-5.8
-29.0	-20.3	-12.1	-8.3
-28.5	-19.8	-11.9	-8.0
-28.0	-18.5	-11.7	-6.9
-27.5	-20.0	-11.5	-8.5
-27.0	-20.1	-11.3	-8.8
-26.5	-19.1	-11.1	-8.0
-26.0	-20.3	-10.9	-9.4
-25.5	-18.5	-10.7	-7.8
-25.0	-16.6	-10.4	-6.1
-24.5	-18.6	-10.2	-8.4
-24.0	-24.1	-10.0	-14.1
-23.5	-23.5	-9.8	-13.7
-23.0	-19.0	-9.5	-9.4
-22.5	-20.7	-9.3	-11.4
-22.0	-25.4	-9.1	-16.4
-21.5	-26.6	-8.8	-17.8
-21.0	-28.2	-8.6	-19.7
-20.5	-31.3	-8.3	-23.0
-20.0	-28.5	-8.0	-20.5
-19.5	-26.5	-7.8	-18.8
-19.0	-20.7	-7.5	-13.3
-18.5	-25.1	-7.2	-17.9
-18.0	-48.0	-6.9	-41.1
-17.5	-26.8	-6.6	-20.2
-17.0	-22.8	-6.3	-16.5
-16.5	-23.4	-5.9	-17.4
-16.0	-29.5	-5.6	-23.9
-15.5	-21.4	-5.3	-16.2
-15.0	-23.9	-4.9	-19.0
-14.5	-21.6	-4.5	-17.1
-14.0	-18.0	-4.2	-13.8
-13.5	-22.1	-3.8	-18.4
-13.0	-23.9	-3.3	-20.5
-12.5	-32.8	-2.9	-29.9
-12.0	-32.2	-2.5	-29.7
-11.5	-21.2	-2.0	-19.2
-11.0	-20.2	-1.5	-18.6
-10.5	-19.9	-1.0	-18.8
-10.0	-22.9	-0.5	-22.4
-9.5	-22.1	0.1	-22.1
-9.0	-72.2	0.4	-72.5
-8.5	-27.0	0.4	-27.3
-8.0	-20.2	0.4	-20.6
-7.5	-24.3	0.4	-24.7
-7.0	-15.4	0.4	-15.8
-6.5	-12.6	1.2	-13.8
-6.0	-11.9	2.0	-14.0
-5.5	-21.2	3.0	-24.2
-5.0	-10.2	4.0	-14.2
-4.5	-15.1	5.2	-20.2
-4.0	-10.4	6.4	-16.9
-3.5	-5.6	7.9	-13.5
-3.0	-0.2		
-2.5	1.6		
-2.0	0.3		
-1.5	9.8		
-1.0	10.6		
-0.5	31.0		
0.0	36.9		

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.9		
0.5	29.9		
1.0	5.3		
1.5	2.5		
2.0	7.5		
2.5	5.2		
3.0	-4.5		
3.5	-2.9	7.9	-10.8
4.0	-3.5	6.4	-10.0
4.5	-18.3	5.2	-23.5
5.0	-11.0	4.0	-15.0
5.5	-8.0	3.0	-11.0
6.0	-22.9	2.0	-25.0
6.5	-19.3	1.2	-20.5
7.0	-8.3	0.4	-8.7
7.5	-9.6	0.4	-10.0
8.0	-20.9	0.4	-21.2
8.5	-16.8	0.4	-17.2
9.0	-16.0	0.4	-16.3
9.5	-13.8	0.1	-13.8
10.0	-15.2	-0.5	-14.7
10.5	-16.1	-1.0	-15.0
11.0	-16.2	-1.5	-14.6
11.5	-31.5	-2.0	-29.5
12.0	-17.4	-2.5	-15.0
12.5	-19.4	-2.9	-16.5
13.0	-14.7	-3.3	-11.4
13.5	-20.4	-3.8	-16.7
14.0	-24.4	-4.2	-20.3
14.5	-17.9	-4.5	-13.4
15.0	-16.1	-4.9	-11.2
15.5	-20.6	-5.3	-15.3
16.0	-13.0	-5.6	-7.4
16.5	-18.9	-5.9	-13.0
17.0	-19.7	-6.3	-13.5
17.5	-17.7	-6.6	-11.1
18.0	-15.2	-6.9	-8.3
18.5	-18.5	-7.2	-11.3
19.0	-16.5	-7.5	-9.0
19.5	-19.0	-7.8	-11.2
20.0	-17.6	-8.0	-9.5
20.5	-20.7	-8.3	-12.4
21.0	-18.7	-8.6	-10.2
21.5	-18.1	-8.8	-9.3
22.0	-20.0	-9.1	-10.9
22.5	-20.4	-9.3	-11.1
23.0	-17.0	-9.5	-7.5
23.5	-21.5	-9.8	-11.8
24.0	-29.4	-10.0	-19.4
24.5	-20.9	-10.2	-10.7
25.0	-23.2	-10.4	-12.7
25.5	-32.4	-10.7	-21.7
26.0	-30.1	-10.9	-19.2
26.5	-25.5	-11.1	-14.4
27.0	-29.1	-11.3	-17.8
27.5	-28.8	-11.5	-17.3
28.0	-21.3	-11.7	-9.7
28.5	-28.4	-11.9	-16.5
29.0	-27.3	-12.1	-15.2
29.5	-25.6	-12.2	-13.4
30.0	-25.8	-12.4	-13.4

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-22.9	-0.5	-22.4
-9.9	-20.7	-0.4	-20.3
-9.8	-21.1	-0.3	-20.8
-9.7	-26.9	-0.2	-26.7
-9.6	-31.5	-0.1	-31.5
-9.5	-22.1	0.1	-22.1
-9.4	-18.6	0.2	-18.8
-9.3	-17.8	0.3	-18.0
-9.2	-19.6	0.4	-20.0
-9.1	-25.5	0.4	-25.8
-9.0	-72.2	0.4	-72.5
-8.9	-25.3	0.4	-25.7
-8.8	-23.1	0.4	-23.5
-8.7	-22.8	0.4	-23.2
-8.6	-24.9	0.4	-25.2
-8.5	-27.0	0.4	-27.3
-8.4	-23.0	0.4	-23.4
-8.3	-20.6	0.4	-21.0
-8.2	-19.4	0.4	-19.7
-8.1	-19.5	0.4	-19.9
-8.0	-20.2	0.4	-20.6
-7.9	-21.5	0.4	-21.9
-7.8	-22.0	0.4	-22.4
-7.7	-24.0	0.4	-24.4
-7.6	-25.2	0.4	-25.6
-7.5	-24.3	0.4	-24.7
-7.4	-21.8	0.4	-22.2
-7.3	-18.9	0.4	-19.3
-7.2	-17.2	0.4	-17.5
-7.1	-16.2	0.4	-16.5
-7.0	-15.4	0.4	-15.8
-6.9	-16.8	0.5	-17.3
-6.8	-18.5	0.7	-19.2
-6.7	-16.5	0.8	-17.3
-6.6	-13.9	1.0	-14.9
-6.5	-12.6	1.2	-13.8
-6.4	-13.5	1.3	-14.9
-6.3	-17.4	1.5	-18.9
-6.2	-21.5	1.7	-23.2
-6.1	-16.0	1.9	-17.8
-6.0	-11.9	2.0	-14.0
-5.9	-10.6	2.2	-12.9
-5.8	-11.1	2.4	-13.6
-5.7	-14.0	2.6	-16.6
-5.6	-20.1	2.8	-22.9
-5.5	-21.2	3.0	-24.2
-5.4	-18.1	3.2	-21.3
-5.3	-19.8	3.4	-23.2
-5.2	-26.0	3.6	-29.6
-5.1	-15.2	3.8	-19.0
-5.0	-10.2	4.0	-14.2
-4.9	-7.8	4.2	-12.0
-4.8	-7.8	4.5	-12.2
-4.7	-9.7	4.7	-14.4
-4.6	-14.5	4.9	-19.4
-4.5	-15.1	5.2	-20.2
-4.4	-10.4	5.4	-15.8
-4.3	-7.8	5.7	-13.5
-4.2	-7.7	5.9	-13.6
-4.1	-8.7	6.2	-14.8

29.10 GHz @ -11.58 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	36.9		
0.1	36.6		
0.2	35.8		
0.3	34.5		
0.4	32.5		
0.5	29.9		
0.6	26.4		
0.7	21.8		
0.8	15.6		
0.9	7.8		
1.0	5.3		
1.1	6.8		
1.2	6.7		
1.3	5.8		
1.4	4.6		
1.5	2.5		
1.6	-0.2		
1.7	0.1		
1.8	3.5		
1.9	6.1		
2.0	7.5		
2.1	7.9		
2.2	7.9		
2.3	7.4		
2.4	6.5		
2.5	5.2		
2.6	3.1		
2.7	0.3		
2.8	-3.1		
2.9	-5.1		
3.0	-4.5		
3.1	-3.2		
3.2	-2.2		
3.3	-1.7		
3.4	-2.0		
3.5	-2.9	7.9	-10.8
3.6	-4.3	7.6	-11.9
3.7	-5.3	7.3	-12.6
3.8	-5.0	7.0	-12.0
3.9	-4.0	6.7	-10.7
4.0	-3.5	6.4	-10.0
4.1	-4.4	6.2	-10.5
4.2	-6.6	5.9	-12.5
4.3	-10.1	5.7	-15.8
4.4	-15.7	5.4	-21.1
4.5	-18.3	5.2	-23.5
4.6	-13.8	4.9	-18.7
4.7	-10.7	4.7	-15.4
4.8	-9.2	4.5	-13.7
4.9	-9.6	4.2	-13.8
5.0	-11.0	4.0	-15.0
5.1	-14.0	3.8	-17.8
5.2	-15.8	3.6	-19.4
5.3	-12.4	3.4	-15.8
5.4	-9.3	3.2	-12.5
5.5	-8.0	3.0	-11.0
5.6	-8.2	2.8	-11.0
5.7	-10.1	2.6	-12.7
5.8	-14.5	2.4	-16.9
5.9	-25.5	2.2	-27.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	-10.4	6.4	-16.9
-3.9	-10.3	6.7	-17.0
-3.8	-8.1	7.0	-15.1
-3.7	-6.4	7.3	-13.7
-3.6	-5.5	7.6	-13.1
-3.5	-5.6	7.9	-13.5
-3.4	-6.1		
-3.3	-5.6		
-3.2	-3.8		
-3.1	-1.8		
-3.0	-0.2		
-2.9	0.5		
-2.8	0.7		
-2.7	0.7		
-2.6	1.1		
-2.5	1.6		
-2.4	2.1		
-2.3	2.0		
-2.2	1.2		
-2.1	0.3		
-2.0	0.3		
-1.9	1.5		
-1.8	3.7		
-1.7	6.2		
-1.6	8.4		
-1.5	9.8		
-1.4	10.3		
-1.3	9.8		
-1.2	8.0		
-1.1	6.9		
-1.0	10.6		
-0.9	16.1		
-0.8	20.9		
-0.7	24.9		
-0.6	28.2		
-0.5	31.0		
-0.4	33.1		
-0.3	34.8		
-0.2	36.1		
-0.1	36.7		
0.0	36.9		

6.0	-22.9	2.0	-25.0
6.1	-17.3	1.9	-19.2
6.2	-16.3	1.7	-18.0
6.3	-19.4	1.5	-20.9
6.4	-26.3	1.3	-27.6
6.5	-19.3	1.2	-20.5
6.6	-13.2	1.0	-14.2
6.7	-10.1	0.8	-10.9
6.8	-8.3	0.7	-9.0
6.9	-7.8	0.5	-8.4
7.0	-8.3	0.4	-8.7
7.1	-10.1	0.4	-10.4
7.2	-12.3	0.4	-12.7
7.3	-13.1	0.4	-13.5
7.4	-11.5	0.4	-11.8
7.5	-9.6	0.4	-10.0
7.6	-9.3	0.4	-9.7
7.7	-10.1	0.4	-10.4
7.8	-12.7	0.4	-13.1
7.9	-18.0	0.4	-18.4
8.0	-20.9	0.4	-21.2
8.1	-16.0	0.4	-16.4
8.2	-13.3	0.4	-13.7
8.3	-12.7	0.4	-13.1
8.4	-13.9	0.4	-14.3
8.5	-16.8	0.4	-17.2
8.6	-22.3	0.4	-22.7
8.7	-38.8	0.4	-39.2
8.8	-23.1	0.4	-23.5
8.9	-17.8	0.4	-18.2
9.0	-16.0	0.4	-16.3
9.1	-17.3	0.4	-17.7
9.2	-20.4	0.4	-20.7
9.3	-25.2	0.3	-25.5
9.4	-18.9	0.2	-19.1
9.5	-13.8	0.1	-13.8
9.6	-11.2	-0.1	-11.2
9.7	-10.1	-0.2	-9.9
9.8	-10.2	-0.3	-9.9
9.9	-11.7	-0.4	-11.3
10.0	-15.2	-0.5	-14.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.10 GHz @ -11.58 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-15.4	-12.6	-2.7
-9.9	-15.0	-12.6	-2.3
-9.8	-14.8	-12.6	-2.2
-9.7	-15.0	-12.6	-2.4
-9.6	-16.0	-12.6	-3.4
-9.5	-17.0	-12.6	-4.4
-9.4	-18.5	-12.6	-5.8
-9.3	-20.3	-12.6	-7.7
-9.2	-22.1	-12.6	-9.5
-9.1	-23.4	-12.6	-10.8
-9.0	-25.3	-12.6	-12.7
-8.9	-24.9	-12.6	-12.3
-8.8	-26.2	-12.6	-13.6
-8.7	-29.5	-12.6	-16.9
-8.6	-37.0	-12.6	-24.4
-8.5	-29.6	-12.6	-16.9
-8.4	-24.2	-12.6	-11.6
-8.3	-22.1	-12.6	-9.5
-8.2	-20.8	-12.6	-8.1
-8.1	-22.0	-12.6	-9.4
-8.0	-24.5	-12.6	-11.8
-7.9	-25.7	-12.6	-13.1
-7.8	-25.9	-12.6	-13.2
-7.7	-22.4	-12.6	-9.8
-7.6	-22.4	-12.6	-9.8
-7.5	-23.7	-12.6	-11.1
-7.4	-28.4	-12.6	-15.8
-7.3	-32.9	-12.6	-20.3
-7.2	-23.2	-12.6	-10.6
-7.1	-19.7	-12.6	-7.1
-7.0	-18.1	-12.6	-5.4
-6.9	-17.7	-12.5	-5.3
-6.8	-18.5	-12.3	-6.2
-6.7	-21.0	-12.2	-8.9
-6.6	-20.6	-12.0	-8.6
-6.5	-18.7	-11.8	-6.8
-6.4	-15.3	-11.7	-3.6
-6.3	-12.9	-11.5	-1.4
-6.2	-11.3	-11.3	0.0
-6.1	-11.2	-11.1	-0.1
-6.0	-12.2	-11.0	-1.2
-5.9	-14.7	-10.8	-3.9
-5.8	-19.8	-10.6	-9.2
-5.7	-24.2	-10.4	-13.9
-5.6	-19.7	-10.2	-9.5
-5.5	-16.2	-10.0	-6.2
-5.4	-14.9	-9.8	-5.1
-5.3	-16.1	-9.6	-6.5
-5.2	-17.3	-9.4	-7.9
-5.1	-17.3	-9.2	-8.1
-5.0	-16.4	-9.0	-7.5
-4.9	-15.2	-8.8	-6.5
-4.8	-14.7	-8.5	-6.2
-4.7	-14.6	-8.3	-6.3
-4.6	-15.0	-8.1	-6.9
-4.5	-13.7	-7.8	-5.9
-4.4	-12.3	-7.6	-4.7
-4.3	-10.7	-7.3	-3.4
-4.2	-9.1	-7.1	-2.1
-4.1	-7.7	-6.8	-0.9

29.10 GHz @ -11.58 dBW / 40 kHz in X-pol Az RHCP

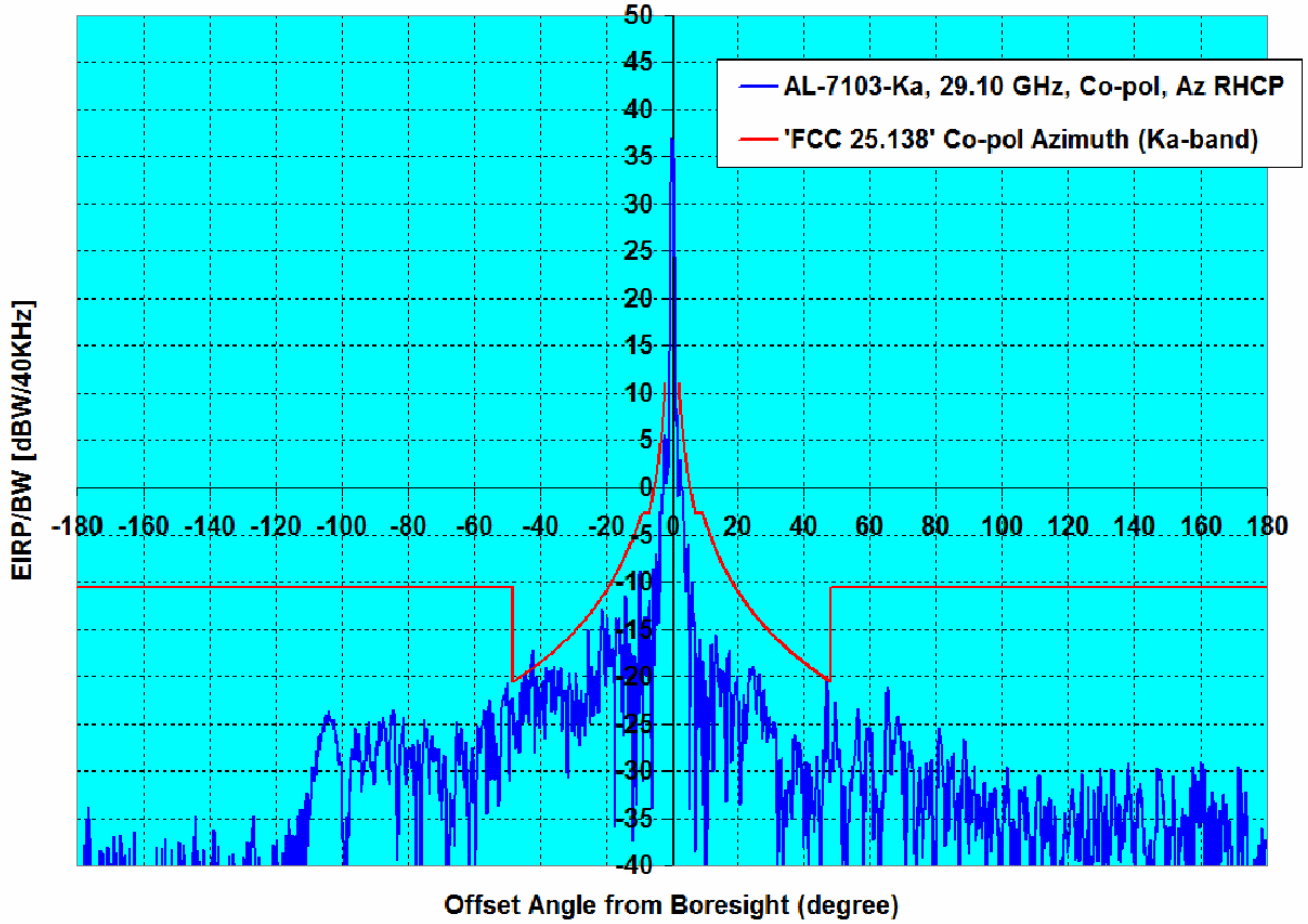
Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	6.9		
0.1	5.3		
0.2	4.9		
0.3	5.6		
0.4	6.8		
0.5	7.7		
0.6	8.1		
0.7	7.7		
0.8	6.6		
0.9	4.4		
1.0	0.7		
1.1	-5.2		
1.2	-15.4		
1.3	-13.1		
1.4	-10.9		
1.5	-12.9		
1.6	-14.4		
1.7	-12.2		
1.8	-10.2		
1.9	-10.7		
2.0	-14.5	1.0	-15.4
2.1	-23.9	0.4	-24.4
2.2	-20.7	-0.1	-20.6
2.3	-14.1	-0.5	-13.6
2.4	-13.4	-1.0	-12.4
2.5	-14.5	-1.4	-13.1
2.6	-16.3	-1.9	-14.5
2.7	-16.5	-2.3	-14.2
2.8	-14.6	-2.7	-11.9
2.9	-14.9	-3.1	-11.8
3.0	-16.9	-3.4	-13.5
3.1	-27.7	-3.8	-23.9
3.2	-26.4	-4.1	-22.2
3.3	-17.6	-4.5	-13.1
3.4	-16.4	-4.8	-11.6
3.5	-17.1	-5.1	-12.0
3.6	-18.5	-5.4	-13.1
3.7	-20.4	-5.7	-14.7
3.8	-19.5	-6.0	-13.5
3.9	-20.9	-6.3	-14.6
4.0	-24.0	-6.6	-17.4
4.1	-24.0	-6.8	-17.2
4.2	-19.8	-7.1	-12.8
4.3	-16.3	-7.3	-8.9
4.4	-15.9	-7.6	-8.3
4.5	-17.7	-7.8	-9.9
4.6	-24.4	-8.1	-16.3
4.7	-29.7	-8.3	-21.4
4.8	-21.3	-8.5	-12.7
4.9	-21.0	-8.8	-12.2
5.0	-22.2	-9.0	-13.2
5.1	-28.2	-9.2	-19.0
5.2	-32.0	-9.4	-22.6
5.3	-25.7	-9.6	-16.1
5.4	-20.8	-9.8	-10.9
5.5	-22.2	-10.0	-12.2
5.6	-28.8	-10.2	-18.6
5.7	-32.9	-10.4	-22.5
5.8	-24.4	-10.6	-13.8
5.9	-21.9	-10.8	-11.1

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd Data Table
 X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-7.1	-6.6	-0.5
-3.9	-6.9	-6.3	-0.7
-3.8	-7.6	-6.0	-1.6
-3.7	-9.0	-5.7	-3.3
-3.6	-10.7	-5.4	-5.3
-3.5	-12.3	-5.1	-7.2
-3.4	-12.0	-4.8	-7.2
-3.3	-10.8	-4.5	-6.3
-3.2	-9.5	-4.1	-5.3
-3.1	-8.6	-3.8	-4.8
-3.0	-8.5	-3.4	-5.0
-2.9	-9.3	-3.1	-6.3
-2.8	-11.8	-2.7	-9.1
-2.7	-16.6	-2.3	-14.3
-2.6	-22.3	-1.9	-20.4
-2.5	-16.4	-1.4	-15.0
-2.4	-13.9	-1.0	-12.9
-2.3	-13.4	-0.5	-12.9
-2.2	-11.5	-0.1	-11.5
-2.1	-8.4	0.4	-8.9
-2.0	-6.1	1.0	-7.1
-1.9	-5.6		
-1.8	-7.8		
-1.7	-11.9		
-1.6	-4.8		
-1.5	1.1		
-1.4	4.4		
-1.3	6.0		
-1.2	5.8		
-1.1	3.8		
-1.0	-1.3		
-0.9	-1.8		
-0.8	5.3		
-0.7	9.4		
-0.6	11.8		
-0.5	12.8		
-0.4	12.9		
-0.3	12.2		
-0.2	11.0		
-0.1	9.1		
0.0	6.9		

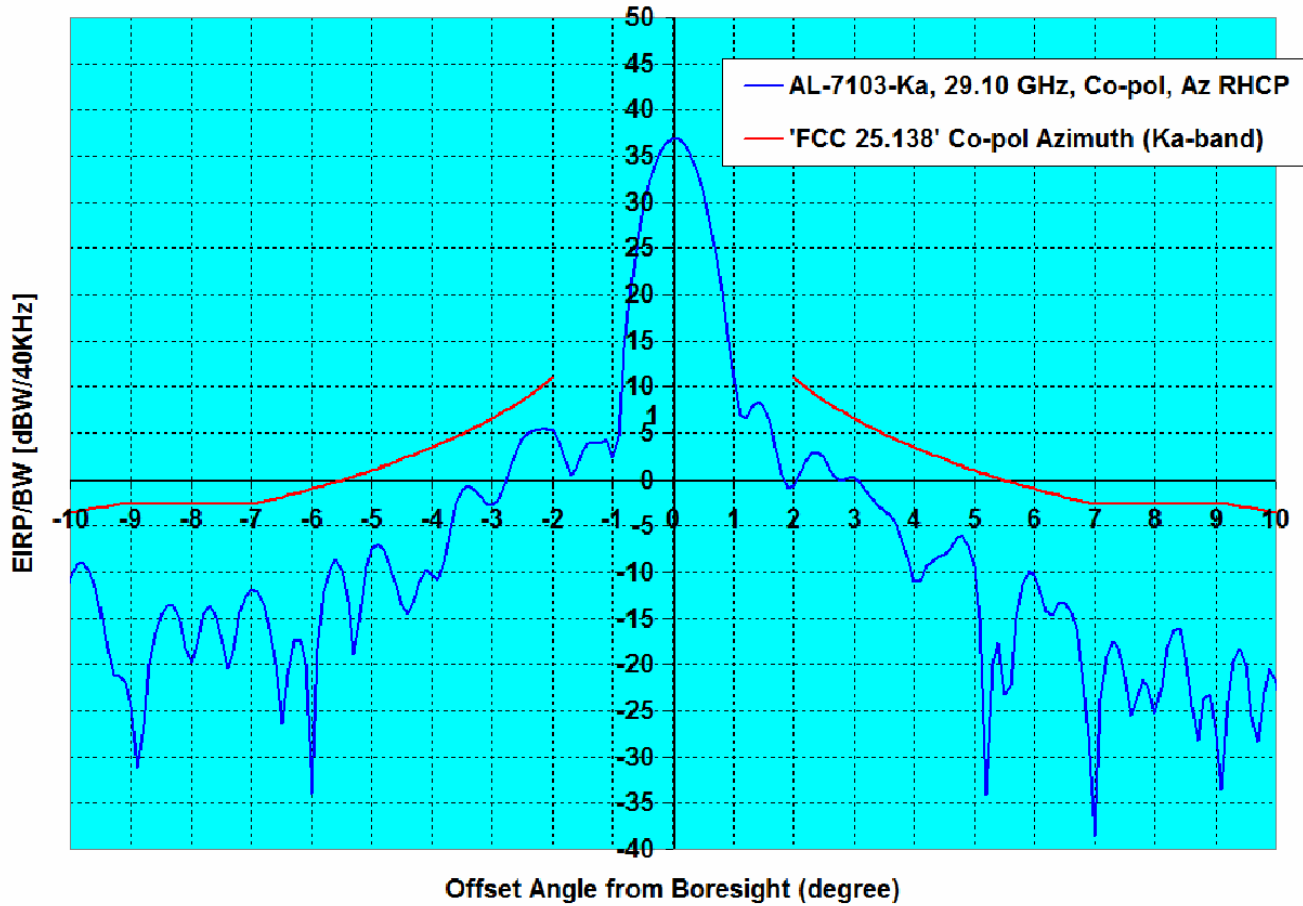
6.0	-22.6	-11.0	-11.7
6.1	-24.4	-11.1	-13.3
6.2	-28.2	-11.3	-16.9
6.3	-26.4	-11.5	-14.9
6.4	-25.3	-11.7	-13.6
6.5	-24.4	-11.8	-12.5
6.6	-28.2	-12.0	-16.2
6.7	-29.9	-12.2	-17.8
6.8	-27.0	-12.3	-14.7
6.9	-25.4	-12.5	-12.9
7.0	-27.1	-12.6	-14.5
7.1	-32.2	-12.6	-19.6
7.2	-36.3	-12.6	-23.7
7.3	-26.9	-12.6	-14.3
7.4	-24.7	-12.6	-12.1
7.5	-24.6	-12.6	-12.0
7.6	-26.9	-12.6	-14.3
7.7	-28.7	-12.6	-16.0
7.8	-26.8	-12.6	-14.1
7.9	-23.4	-12.6	-10.8
8.0	-24.5	-12.6	-11.9
8.1	-26.7	-12.6	-14.1
8.2	-36.4	-12.6	-23.8
8.3	-42.8	-12.6	-30.2
8.4	-36.0	-12.6	-23.3
8.5	-34.7	-12.6	-22.0
8.6	-40.0	-12.6	-27.4
8.7	-32.6	-12.6	-20.0
8.8	-33.4	-12.6	-20.8
8.9	-27.8	-12.6	-15.1
9.0	-29.1	-12.6	-16.4
9.1	-30.0	-12.6	-17.4
9.2	-31.7	-12.6	-19.1
9.3	-32.5	-12.6	-19.9
9.4	-30.6	-12.6	-18.0
9.5	-30.0	-12.6	-17.3
9.6	-31.4	-12.6	-18.8
9.7	-31.5	-12.6	-18.8
9.8	-38.5	-12.6	-25.8
9.9	-38.1	-12.6	-25.5
10.0	-35.4	-12.6	-22.7

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in Az RHCP
 Min BW of 3.63 MHz in case of 20W BUC**



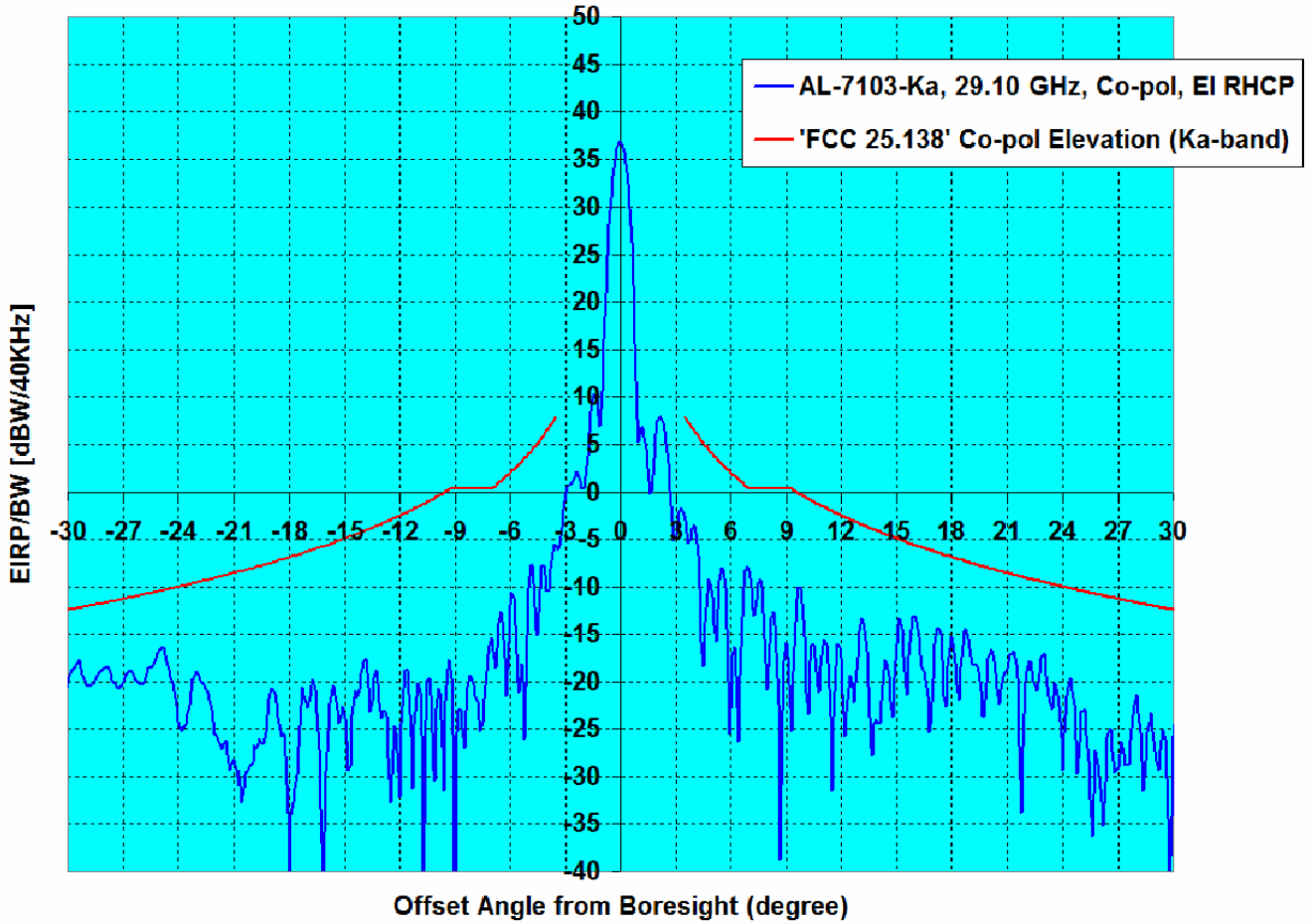
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 29.10 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.50	-11.58	-4.03	1.84	0.23

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in Az RHCP
 Min BW of 3.63 MHz in case of 20W BUC**



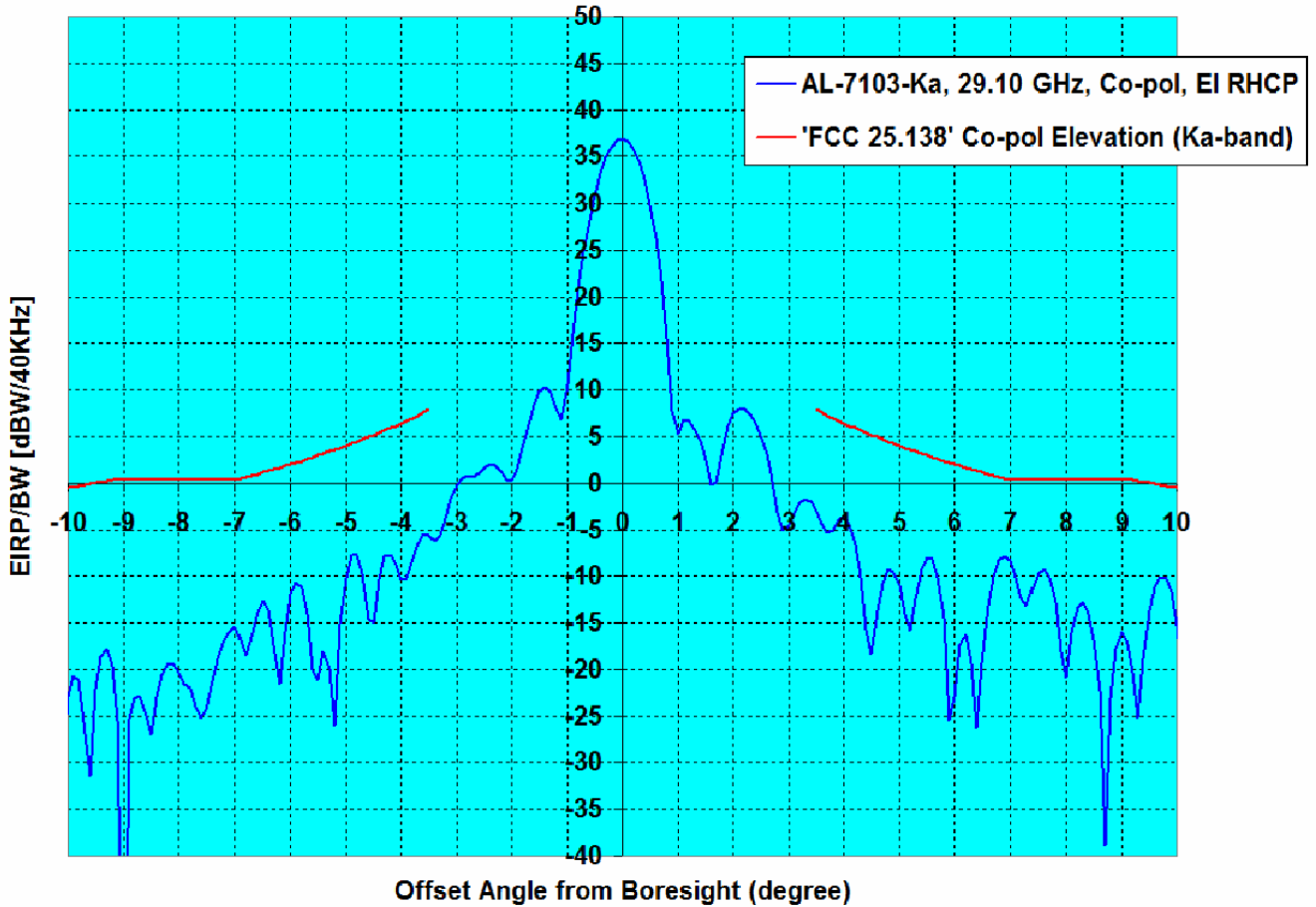
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7103-Ka, 29.10 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	48.50	-11.58	-4.03	1.84	0.23

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in EI RHCP
 Min BW of 3.63 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.6° to 10°)	± (10° to 30°)	%
AL-7103-Ka, 29.10 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.50	-11.58	-8.38	-5.52	0.00

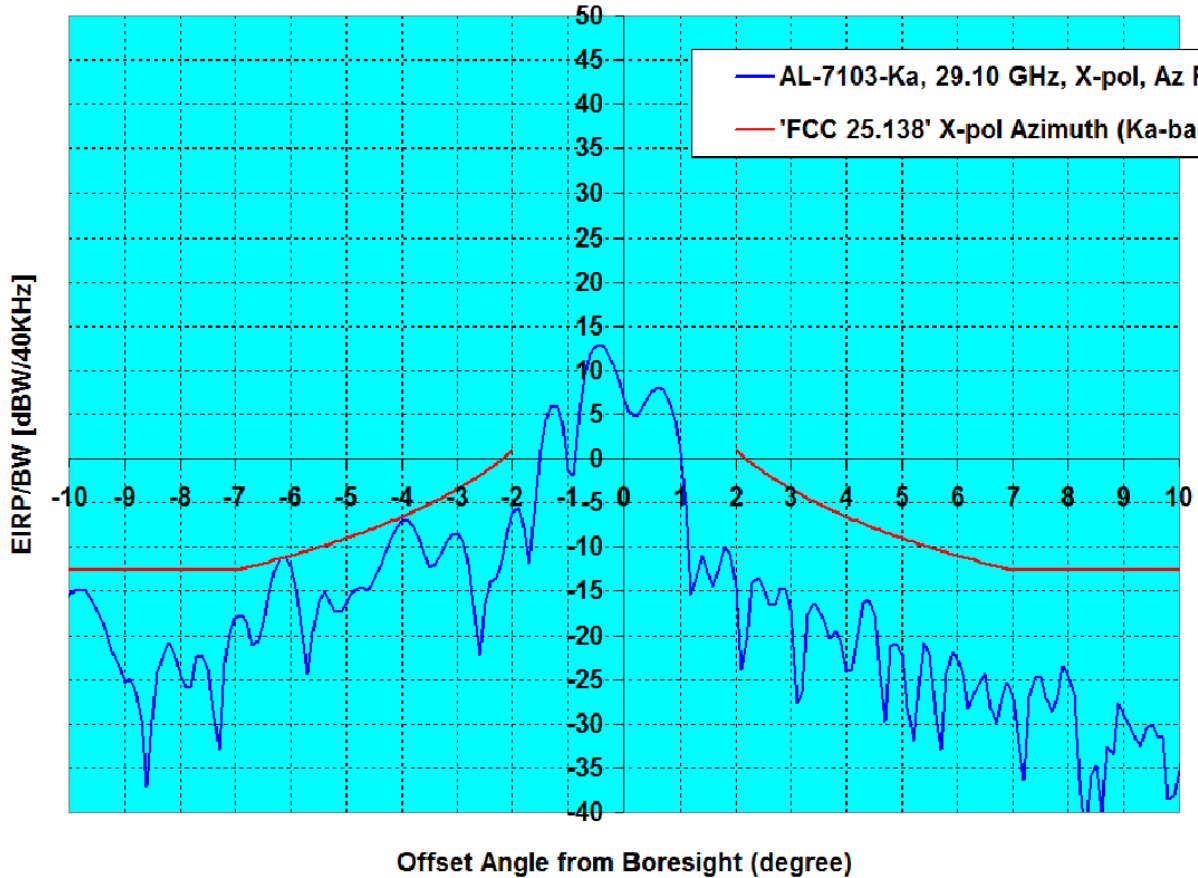
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in EI RHCP
 Min BW of 3.63 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7103-Ka, 29.10 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	48.50	-11.58	-8.38	-5.52	0.00

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, EIRPsd, X-pol, Azimuth RHCP

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -11.58 dBW/40KHz to Input and
 36.92 dBW/40KHz in the Output of AL-7103-Ka Antenna at 29.10 GHz in Az RHCP
 Min BW of 3.63 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7103-Ka, 29.10 GHz, X-pol, Az RHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	48.50	-11.58	0.00	0.00	0.68

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

27.60 GHz Antenna Pattern in Co-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-179.0	-27.1	0.0	-27.1
-178.0	-19.2	0.0	-19.2
-177.0	-25.7	0.0	-25.7
-176.0	-22.9	0.0	-22.9
-175.0	-31.9	0.0	-31.9
-174.0	-28.8	0.0	-28.8
-173.0	-32.6	0.0	-32.6
-172.0	-34.4	0.0	-34.4
-171.0	-32.1	0.0	-32.1
-170.0	-33.9	0.0	-33.9
-169.0	-37.3	0.0	-37.3
-168.0	-31.1	0.0	-31.1
-167.0	-33.4	0.0	-33.4
-166.0	-34.3	0.0	-34.3
-165.0	-31.1	0.0	-31.1
-164.0	-45.0	0.0	-45.0
-163.0	-36.6	0.0	-36.6
-162.0	-31.9	0.0	-31.9
-161.0	-30.6	0.0	-30.6
-160.0	-46.8	0.0	-46.8
-159.0	-28.9	0.0	-28.9
-158.0	-34.1	0.0	-34.1
-157.0	-32.1	0.0	-32.1
-156.0	-24.2	0.0	-24.2
-155.0	-28.2	0.0	-28.2
-154.0	-28.8	0.0	-28.8
-153.0	-32.7	0.0	-32.7
-152.0	-37.3	0.0	-37.3
-151.0	-26.6	0.0	-26.6
-150.0	-36.2	0.0	-36.2
-149.0	-36.3	0.0	-36.3
-148.0	-28.2	0.0	-28.2
-147.0	-34.0	0.0	-34.0
-146.0	-27.5	0.0	-27.5
-145.0	-31.5	0.0	-31.5
-144.0	-40.0	0.0	-40.0
-143.0	-31.5	0.0	-31.5
-142.0	-43.5	0.0	-43.5
-141.0	-25.7	0.0	-25.7
-140.0	-26.3	0.0	-26.3
-139.0	-25.3	0.0	-25.3
-138.0	-27.3	0.0	-27.3
-137.0	-29.8	0.0	-29.8
-136.0	-28.5	0.0	-28.5
-135.0	-30.8	0.0	-30.8
-134.0	-34.5	0.0	-34.5
-133.0	-22.2	0.0	-22.2
-132.0	-25.1	0.0	-25.1
-131.0	-29.0	0.0	-29.0
-130.0	-20.7	0.0	-20.7
-129.0	-21.5	0.0	-21.5
-128.0	-27.1	0.0	-27.1
-127.0	-34.1	0.0	-34.1
-126.0	-34.1	0.0	-34.1
-125.0	-26.0	0.0	-26.0
-124.0	-25.5	0.0	-25.5
-123.0	-31.3	0.0	-31.3
-122.0	-28.8	0.0	-28.8
-121.0	-24.0	0.0	-24.0
-120.0	-28.5	0.0	-28.5

27.60 GHz Antenna Pattern in Co-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	47.4		
1.0	19.6		
2.0	6.9	21.5	-14.6
3.0	10.8	17.1	-6.3
4.0	8.3	13.9	-5.6
5.0	0.9	11.5	-10.6
6.0	-4.2	9.5	-13.8
7.0	-1.9	7.9	-9.8
8.0	-1.1	8.0	-9.1
9.0	-17.4	8.0	-25.4
10.0	-13.6	7.0	-20.6
11.0	-8.0	6.0	-13.9
12.0	-9.8	5.0	-14.8
13.0	-11.7	4.2	-15.9
14.0	-9.0	3.3	-12.4
15.0	-13.8	2.6	-16.4
16.0	-19.1	1.9	-21.0
17.0	-13.6	1.2	-14.9
18.0	-12.9	0.6	-13.5
19.0	-14.6	0.0	-14.6
20.0	-15.9	-0.5	-15.4
21.0	-15.0	-1.1	-13.9
22.0	-23.0	-1.6	-21.5
23.0	-8.5	-2.0	-6.5
24.0	-13.0	-2.5	-10.5
25.0	-9.5	-2.9	-6.5
26.0	-12.4	-3.4	-9.0
27.0	-12.3	-3.8	-8.6
28.0	-10.4	-4.2	-6.3
29.0	-8.3	-4.6	-3.7
30.0	-11.5	-4.9	-6.5
31.0	-20.1	-5.3	-14.8
32.0	-16.2	-5.6	-10.6
33.0	-14.5	-6.0	-8.5
34.0	-15.6	-6.3	-9.3
35.0	-25.9	-6.6	-19.3
36.0	-23.3	-6.9	-16.4
37.0	-15.3	-7.2	-8.1
38.0	-21.3	-7.5	-13.8
39.0	-38.3	-7.8	-30.5
40.0	-23.5	-8.1	-15.4
41.0	-16.5	-8.3	-8.1
42.0	-11.7	-8.6	-3.2
43.0	-12.5	-8.8	-3.6
44.0	-16.2	-9.1	-7.1
45.0	-17.3	-9.3	-7.9
46.0	-13.6	-9.6	-4.0
47.0	-15.0	-9.8	-5.2
48.0	-13.8	-10.0	-3.8
49.0	-14.7	-10.0	-4.7
50.0	-18.9	-10.0	-8.9
51.0	-20.1	-10.0	-10.1
52.0	-24.9	-10.0	-14.9
53.0	-18.5	-10.0	-8.5
54.0	-19.0	-10.0	-9.0
55.0	-13.2	-10.0	-3.2
56.0	-15.6	-10.0	-5.6
57.0	-16.3	-10.0	-6.3
58.0	-19.0	-10.0	-9.0
59.0	-22.4	-10.0	-12.4

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-37.9	0.0	-37.9
-118.0	-23.1	0.0	-23.1
-117.0	-20.7	0.0	-20.7
-116.0	-22.4	0.0	-22.4
-115.0	-20.6	0.0	-20.6
-114.0	-22.3	0.0	-22.3
-113.0	-22.8	0.0	-22.8
-112.0	-22.0	0.0	-22.0
-111.0	-17.7	0.0	-17.7
-110.0	-16.6	0.0	-16.6
-109.0	-14.7	0.0	-14.7
-108.0	-13.3	0.0	-13.3
-107.0	-12.9	0.0	-12.9
-106.0	-11.1	0.0	-11.1
-105.0	-9.0	0.0	-9.0
-104.0	-8.1	0.0	-8.1
-103.0	-7.4	0.0	-7.4
-102.0	-7.5	0.0	-7.5
-101.0	-8.7	0.0	-8.7
-100.0	-10.5	0.0	-10.5
-99.0	-10.2	0.0	-10.2
-98.0	-7.9	0.0	-7.9
-97.0	-7.1	0.0	-7.1
-96.0	-10.1	0.0	-10.1
-95.0	-10.6	0.0	-10.6
-94.0	-7.5	0.0	-7.5
-93.0	-8.2	0.0	-8.2
-92.0	-12.2	0.0	-12.2
-91.0	-7.8	0.0	-7.8
-90.0	-9.3	0.0	-9.3
-89.0	-13.6	0.0	-13.6
-88.0	-12.8	0.0	-12.8
-87.0	-19.0	0.0	-19.0
-86.0	-14.9	0.0	-14.9
-85.0	-20.3	-10.0	-10.3
-84.0	-27.1	-10.0	-17.1
-83.0	-16.9	-10.0	-6.9
-82.0	-15.0	-10.0	-5.0
-81.0	-24.8	-10.0	-14.8
-80.0	-44.7	-10.0	-34.7
-79.0	-26.9	-10.0	-16.9
-78.0	-15.9	-10.0	-5.9
-77.0	-31.4	-10.0	-21.4
-76.0	-29.2	-10.0	-19.2
-75.0	-19.5	-10.0	-9.5
-74.0	-15.8	-10.0	-5.8
-73.0	-22.7	-10.0	-12.7
-72.0	-15.3	-10.0	-5.3
-71.0	-17.6	-10.0	-7.6
-70.0	-29.7	-10.0	-19.7
-69.0	-23.0	-10.0	-13.0
-68.0	-17.8	-10.0	-7.8
-67.0	-19.1	-10.0	-9.1
-66.0	-20.3	-10.0	-10.3
-65.0	-28.2	-10.0	-18.2
-64.0	-17.5	-10.0	-7.5
-63.0	-18.1	-10.0	-8.1
-62.0	-14.1	-10.0	-4.1
-61.0	-26.2	-10.0	-16.2
-60.0	-14.9	-10.0	-4.9
-59.0	-33.3	-10.0	-23.3
-58.0	-36.3	-10.0	-26.3
-57.0	-18.8	-10.0	-8.8

60.0	-17.1	-10.0	-7.1
61.0	-13.7	-10.0	-3.7
62.0	-15.4	-10.0	-5.4
63.0	-26.9	-10.0	-16.9
64.0	-32.0	-10.0	-22.0
65.0	-13.6	-10.0	-3.6
66.0	-13.3	-10.0	-3.3
67.0	-18.7	-10.0	-8.7
68.0	-27.7	-10.0	-17.7
69.0	-14.1	-10.0	-4.1
70.0	-17.1	-10.0	-7.1
71.0	-18.8	-10.0	-8.8
72.0	-18.4	-10.0	-8.4
73.0	-23.6	-10.0	-13.6
74.0	-17.0	-10.0	-7.0
75.0	-16.4	-10.0	-6.4
76.0	-19.3	-10.0	-9.3
77.0	-30.8	-10.0	-20.8
78.0	-18.7	-10.0	-8.7
79.0	-15.9	-10.0	-5.9
80.0	-22.9	-10.0	-12.9
81.0	-24.8	-10.0	-14.8
82.0	-24.7	-10.0	-14.7
83.0	-23.3	-10.0	-13.3
84.0	-23.0	-10.0	-13.0
85.0	-20.5	-10.0	-10.5
86.0	-21.8	0.0	-21.8
87.0	-20.0	0.0	-20.0
88.0	-24.9	0.0	-24.9
89.0	-27.0	0.0	-27.0
90.0	-22.9	0.0	-22.9
91.0	-21.2	0.0	-21.2
92.0	-26.4	0.0	-26.4
93.0	-21.0	0.0	-21.0
94.0	-23.3	0.0	-23.3
95.0	-20.2	0.0	-20.2
96.0	-25.1	0.0	-25.1
97.0	-27.4	0.0	-27.4
98.0	-16.0	0.0	-16.0
99.0	-22.5	0.0	-22.5
100.0	-21.1	0.0	-21.1
101.0	-23.7	0.0	-23.7
102.0	-20.9	0.0	-20.9
103.0	-22.6	0.0	-22.6
104.0	-22.6	0.0	-22.6
105.0	-22.1	0.0	-22.1
106.0	-24.5	0.0	-24.5
107.0	-20.8	0.0	-20.8
108.0	-32.2	0.0	-32.2
109.0	-23.3	0.0	-23.3
110.0	-28.0	0.0	-28.0
111.0	-19.5	0.0	-19.5
112.0	-23.2	0.0	-23.2
113.0	-24.9	0.0	-24.9
114.0	-24.9	0.0	-24.9
115.0	-21.2	0.0	-21.2
116.0	-23.3	0.0	-23.3
117.0	-20.5	0.0	-20.5
118.0	-24.3	0.0	-24.3
119.0	-23.4	0.0	-23.4
120.0	-20.1	0.0	-20.1
121.0	-21.4	0.0	-21.4
122.0	-18.6	0.0	-18.6

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-17.6	-10.0	-7.6
-55.0	-17.7	-10.0	-7.7
-54.0	-22.2	-10.0	-12.2
-53.0	-20.6	-10.0	-10.6
-52.0	-18.8	-10.0	-8.8
-51.0	-17.4	-10.0	-7.4
-50.0	-21.1	-10.0	-11.1
-49.0	-13.5	-10.0	-3.5
-48.0	-12.1	-10.0	-2.1
-47.0	-13.3	-9.8	-3.5
-46.0	-11.4	-9.6	-1.8
-45.0	-12.0	-9.3	-2.7
-44.0	-12.7	-9.1	-3.6
-43.0	-13.6	-8.8	-4.8
-42.0	-13.4	-8.6	-4.9
-41.0	-11.0	-8.3	-2.6
-40.0	-10.8	-8.1	-2.7
-39.0	-16.0	-7.8	-8.2
-38.0	-14.2	-7.5	-6.7
-37.0	-15.1	-7.2	-7.8
-36.0	-11.7	-6.9	-4.8
-35.0	-12.6	-6.6	-6.0
-34.0	-11.1	-6.3	-4.8
-33.0	-19.3	-6.0	-13.4
-32.0	-14.5	-5.6	-8.9
-31.0	-12.7	-5.3	-7.4
-30.0	-16.0	-4.9	-11.0
-29.0	-23.3	-4.6	-18.7
-28.0	-13.7	-4.2	-9.5
-27.0	-9.7	-3.8	-5.9
-26.0	-16.0	-3.4	-12.6
-25.0	-12.8	-2.9	-9.8
-24.0	-12.8	-2.5	-10.3
-23.0	-14.9	-2.0	-12.8
-22.0	-11.2	-1.6	-9.6
-21.0	-6.0	-1.1	-5.0
-20.0	-32.1	-0.5	-31.6
-19.0	-7.5	0.0	-7.5
-18.0	-9.1	0.6	-9.7
-17.0	-6.2	1.2	-7.5
-16.0	-3.4	1.9	-5.3
-15.0	-2.2	2.6	-4.8
-14.0	-6.1	3.3	-9.5
-13.0	-3.8	4.2	-8.0
-12.0	-12.5	5.0	-17.5
-11.0	-9.4	6.0	-15.4
-10.0	-6.1	7.0	-13.1
-9.0	-8.6	8.0	-16.6
-8.0	-9.2	8.0	-17.2
-7.0	0.4	7.9	-7.5
-6.0	-7.2	9.5	-16.8
-5.0	3.3	11.5	-8.2
-4.0	3.2	13.9	-10.7
-3.0	7.3	17.1	-9.8
-2.0	16.4	21.5	-5.1
-1.0	18.0		
0.0	47.4		

123.0	-22.8	0.0	-22.8
124.0	-20.1	0.0	-20.1
125.0	-26.0	0.0	-26.0
126.0	-34.3	0.0	-34.3
127.0	-27.0	0.0	-27.0
128.0	-35.6	0.0	-35.6
129.0	-28.1	0.0	-28.1
130.0	-22.7	0.0	-22.7
131.0	-30.0	0.0	-30.0
132.0	-21.3	0.0	-21.3
133.0	-25.2	0.0	-25.2
134.0	-24.5	0.0	-24.5
135.0	-19.2	0.0	-19.2
136.0	-19.4	0.0	-19.4
137.0	-24.8	0.0	-24.8
138.0	-22.7	0.0	-22.7
139.0	-17.7	0.0	-17.7
140.0	-21.4	0.0	-21.4
141.0	-35.3	0.0	-35.3
142.0	-27.9	0.0	-27.9
143.0	-22.5	0.0	-22.5
144.0	-27.3	0.0	-27.3
145.0	-19.0	0.0	-19.0
146.0	-21.9	0.0	-21.9
147.0	-20.8	0.0	-20.8
148.0	-30.2	0.0	-30.2
149.0	-36.2	0.0	-36.2
150.0	-27.3	0.0	-27.3
151.0	-26.6	0.0	-26.6
152.0	-34.5	0.0	-34.5
153.0	-28.0	0.0	-28.0
154.0	-27.8	0.0	-27.8
155.0	-22.5	0.0	-22.5
156.0	-24.5	0.0	-24.5
157.0	-25.2	0.0	-25.2
158.0	-32.8	0.0	-32.8
159.0	-30.1	0.0	-30.1
160.0	-38.4	0.0	-38.4
161.0	-25.6	0.0	-25.6
162.0	-39.5	0.0	-39.5
163.0	-21.8	0.0	-21.8
164.0	-21.2	0.0	-21.2
165.0	-24.2	0.0	-24.2
166.0	-21.7	0.0	-21.7
167.0	-30.2	0.0	-30.2
168.0	-22.9	0.0	-22.9
169.0	-29.9	0.0	-29.9
170.0	-40.0	0.0	-40.0
171.0	-21.0	0.0	-21.0
172.0	-21.7	0.0	-21.7
173.0	-22.2	0.0	-22.2
174.0	-22.2	0.0	-22.2
175.0	-26.1	0.0	-26.1
176.0	-23.4	0.0	-23.4
177.0	-34.5	0.0	-34.5
178.0	-25.3	0.0	-25.3
179.0	-20.4	0.0	-20.4

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

27.60 GHz Antenna Pattern in Co-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-6.1	7.0	-13.1
-9.9	-5.7	7.1	-12.8
-9.8	-7.2	7.2	-14.4
-9.7	-11.4	7.3	-18.7
-9.6	-17.0	7.4	-24.5
-9.5	-8.9	7.6	-16.4
-9.4	-5.0	7.7	-12.7
-9.3	-3.1	7.8	-10.9
-9.2	-3.1	8.0	-11.1
-9.1	-4.9	8.0	-12.9
-9.0	-8.6	8.0	-16.6
-8.9	-18.1	8.0	-26.1
-8.8	-12.3	8.0	-20.3
-8.7	-7.4	8.0	-15.4
-8.6	-4.9	8.0	-12.9
-8.5	-5.1	8.0	-13.1
-8.4	-6.5	8.0	-14.5
-8.3	-11.2	8.0	-19.2
-8.2	-20.6	8.0	-28.6
-8.1	-13.9	8.0	-21.9
-8.0	-9.2	8.0	-17.2
-7.9	-7.4	8.0	-15.4
-7.8	-8.1	8.0	-16.1
-7.7	-11.3	8.0	-19.3
-7.6	-14.7	8.0	-22.7
-7.5	-6.6	8.0	-14.6
-7.4	-1.6	8.0	-9.6
-7.3	1.0	8.0	-7.0
-7.2	2.0	8.0	-6.0
-7.1	1.8	8.0	-6.2
-7.0	0.4	7.9	-7.5
-6.9	-3.5	8.0	-11.5
-6.8	-16.1	8.2	-24.3
-6.7	-9.8	8.3	-18.2
-6.6	-1.9	8.5	-10.4
-6.5	0.5	8.7	-8.2
-6.4	1.0	8.8	-7.9
-6.3	-0.5	9.0	-9.5
-6.2	-2.9	9.2	-12.0
-6.1	-7.3	9.4	-16.6
-6.0	-7.2	9.5	-16.8
-5.9	-4.4	9.7	-14.2
-5.8	-3.3	9.9	-13.2
-5.7	-3.5	10.1	-13.6
-5.6	-4.1	10.3	-14.4
-5.5	-2.9	10.5	-13.4
-5.4	-1.3	10.7	-12.0
-5.3	0.5	10.9	-10.4
-5.2	1.9	11.1	-9.2
-5.1	2.9	11.3	-8.4
-5.0	3.3	11.5	-8.2
-4.9	2.6	11.7	-9.1
-4.8	0.6	12.0	-11.3
-4.7	-4.2	12.2	-16.4
-4.6	-11.7	12.4	-24.2
-4.5	-2.9	12.7	-15.5
-4.4	1.6	12.9	-11.3
-4.3	3.2	13.2	-9.9
-4.2	3.3	13.4	-10.1
-4.1	2.8	13.7	-10.8

27.60 GHz Antenna Pattern in Co-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	47.4		
0.1	47.2		
0.2	46.6		
0.3	45.4		
0.4	43.8		
0.5	41.6		
0.6	38.9		
0.7	35.6		
0.8	31.5		
0.9	26.4		
1.0	19.6		
1.1	9.1		
1.2	12.7		
1.3	17.3		
1.4	19.2		
1.5	19.5	24.6	-5.1
1.6	18.5	23.9	-5.4
1.7	16.5	23.2	-6.7
1.8	13.7	22.6	-8.9
1.9	10.4	22.0	-11.6
2.0	6.9	21.5	-14.6
2.1	4.1	20.9	-16.9
2.2	4.8	20.4	-15.7
2.3	8.3	20.0	-11.7
2.4	11.0	19.5	-8.5
2.5	12.0	19.1	-7.1
2.6	12.0	18.6	-6.6
2.7	11.2	18.2	-7.0
2.8	11.2	17.8	-6.6
2.9	10.8	17.4	-6.6
3.0	10.8	17.1	-6.3
3.1	10.5	16.7	-6.2
3.2	9.5	16.4	-6.9
3.3	7.6	16.0	-8.5
3.4	5.8	15.7	-10.0
3.5	5.3	15.4	-10.1
3.6	6.7	15.1	-8.4
3.7	8.0	14.8	-6.8
3.8	8.8	14.5	-5.7
3.9	8.9	14.2	-5.3
4.0	8.3	13.9	-5.6
4.1	6.7	13.7	-7.0
4.2	4.8	13.4	-8.6
4.3	2.8	13.2	-10.4
4.4	1.4	12.9	-11.6
4.5	0.7	12.7	-12.0
4.6	-1.1	12.4	-13.5
4.7	-5.6	12.2	-17.8
4.8	-15.4	12.0	-27.4
4.9	-2.7	11.7	-14.5
5.0	0.9	11.5	-10.6
5.1	1.6	11.3	-9.8
5.2	1.5	11.1	-9.6
5.3	-0.1	10.9	-11.0
5.4	-2.1	10.7	-12.8
5.5	-1.4	10.5	-11.9
5.6	-1.6	10.3	-11.9
5.7	-2.8	10.1	-12.9
5.8	-7.0	9.9	-16.9
5.9	-13.4	9.7	-23.2

Orbit Communication Systems Ltd.
AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	3.2	13.9	-10.7
-3.9	5.2	14.2	-9.0
-3.8	7.6	14.5	-6.9
-3.7	9.4	14.8	-5.4
-3.6	10.6	15.1	-4.5
-3.5	11.4	15.4	-4.0
-3.4	11.8	15.7	-3.9
-3.3	11.6	16.0	-4.5
-3.2	10.7	16.4	-5.7
-3.1	8.8	16.7	-7.9
-3.0	7.3	17.1	-9.8
-2.9	8.5	17.4	-8.9
-2.8	11.1	17.8	-6.7
-2.7	13.0	18.2	-5.3
-2.6	14.0	18.6	-4.6
-2.5	14.8	19.1	-4.2
-2.4	15.9	19.5	-3.6
-2.3	17.0	20.0	-2.9
-2.2	17.9	20.4	-2.5
-2.1	17.9	20.9	-3.1
-2.0	16.4	21.5	-5.1
-1.9	12.6	22.0	-9.5
-1.8	4.6	22.6	-18.0
-1.7	10.9	23.2	-12.4
-1.6	16.0	23.9	-7.9
-1.5	17.9	24.6	-6.7
-1.4	17.9		
-1.3	16.9		
-1.2	16.5		
-1.1	17.2		
-1.0	18.0		
-0.9	21.7		
-0.8	27.9		
-0.7	33.2		
-0.6	37.5		
-0.5	40.8		
-0.4	43.3		
-0.3	45.1		
-0.2	46.4		
-0.1	47.1		
0.0	47.4		

6.0	-4.2	9.5	-13.8
6.1	-0.3	9.4	-9.7
6.2	1.8	9.2	-7.4
6.3	1.5	9.0	-7.5
6.4	-0.6	8.8	-9.5
6.5	-5.4	8.7	-14.1
6.6	-14.9	8.5	-23.4
6.7	-8.3	8.3	-16.6
6.8	-3.8	8.2	-11.9
6.9	-1.8	8.0	-9.9
7.0	-1.9	7.9	-9.8
7.1	-2.3	8.0	-10.3
7.2	-3.6	8.0	-11.6
7.3	-5.9	8.0	-13.9
7.4	-10.3	8.0	-18.3
7.5	-14.4	8.0	-22.4
7.6	-9.5	8.0	-17.5
7.7	-4.5	8.0	-12.5
7.8	-2.0	8.0	-10.0
7.9	-1.2	8.0	-9.2
8.0	-1.1	8.0	-9.1
8.1	-3.3	8.0	-11.3
8.2	-7.0	8.0	-15.0
8.3	-14.1	8.0	-22.1
8.4	-8.6	8.0	-16.6
8.5	-3.0	8.0	-11.0
8.6	-0.9	8.0	-8.9
8.7	-1.6	8.0	-9.6
8.8	-3.1	8.0	-11.1
8.9	-8.0	8.0	-16.0
9.0	-17.4	8.0	-25.4
9.1	-10.8	8.0	-18.8
9.2	-6.8	8.0	-14.8
9.3	-5.3	7.8	-13.1
9.4	-6.8	7.7	-14.4
9.5	-11.3	7.6	-18.8
9.6	-13.3	7.4	-20.8
9.7	-8.4	7.3	-15.7
9.8	-7.4	7.2	-14.6
9.9	-8.5	7.1	-15.7
10.0	-13.6	7.0	-20.6

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

27.60 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-13.5	-4.9	-8.5
-29.5	-13.8	-4.7	-9.1
-29.0	-10.0	-4.6	-5.4
-28.5	-12.3	-4.4	-8.0
-28.0	-16.4	-4.2	-12.3
-27.5	-14.3	-4.0	-10.3
-27.0	-15.9	-3.8	-12.1
-26.5	-14.0	-3.6	-10.4
-26.0	-10.8	-3.4	-7.4
-25.5	-8.9	-3.2	-5.7
-25.0	-8.9	-2.9	-6.0
-24.5	-10.4	-2.7	-7.7
-24.0	-9.1	-2.5	-6.6
-23.5	-12.9	-2.3	-10.6
-23.0	-9.7	-2.0	-7.6
-22.5	-8.1	-1.8	-6.3
-22.0	-11.6	-1.6	-10.0
-21.5	-11.6	-1.3	-10.3
-21.0	-8.5	-1.1	-7.4
-20.5	-8.9	-0.8	-8.1
-20.0	-11.4	-0.5	-10.9
-19.5	-11.6	-0.3	-11.3
-19.0	-12.1	0.0	-12.1
-18.5	-8.0	0.3	-8.3
-18.0	-7.2	0.6	-7.8
-17.5	-8.9	0.9	-9.8
-17.0	-14.2	1.2	-15.4
-16.5	-23.0	1.6	-24.6
-16.0	-12.5	1.9	-14.4
-15.5	-11.1	2.2	-13.4
-15.0	-13.6	2.6	-16.2
-14.5	-12.0	3.0	-14.9
-14.0	-6.5	3.3	-9.8
-13.5	-6.4	3.7	-10.2
-13.0	-10.9	4.2	-15.1
-12.5	-23.4	4.6	-28.0
-12.0	-12.5	5.0	-17.5
-11.5	-28.5	5.5	-34.0
-11.0	-5.8	6.0	-11.8
-10.5	-7.3	6.5	-13.8
-10.0	-11.1	7.0	-18.1
-9.5	-9.5	7.6	-17.0
-9.0	-14.1	8.1	-22.2
-8.5	-5.8	8.8	-14.5
-8.0	-6.5	9.4	-15.9
-7.5	-8.3	10.1	-18.5
-7.0	-3.8	10.9	-14.6
-6.5	-14.9	11.7	-26.6
-6.0	-3.6	12.5	-16.1
-5.5	-7.4	13.5	-20.9
-5.0	1.6	14.5	-12.9
-4.5	2.1	15.7	-13.6
-4.0	5.9	16.9	-11.0
-3.5	-0.6	18.4	-19.0
-3.0	11.0	20.1	-9.1
-2.5	12.4		
-2.0	10.7		
-1.5	20.5		
-1.0	21.7		
-0.5	41.3		
0.0	47.4		

27.60 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	47.4		
0.5	39.9		
1.0	19.6		
1.5	16.9		
2.0	17.7		
2.5	15.6		
3.0	6.8	20.1	-13.3
3.5	7.7	18.4	-10.7
4.0	5.7	16.9	-11.2
4.5	-3.0	15.7	-18.6
5.0	-0.8	14.5	-15.4
5.5	-6.4	13.5	-19.9
6.0	-7.5	12.5	-20.0
6.5	0.2	11.7	-11.5
7.0	1.0	10.9	-9.8
7.5	-6.4	10.1	-16.5
8.0	-6.3	9.4	-15.7
8.5	-5.9	8.8	-14.7
9.0	-4.2	8.1	-12.4
9.5	-9.9	7.6	-17.5
10.0	-10.3	7.0	-17.3
10.5	-2.1	6.5	-8.6
11.0	-19.9	6.0	-25.8
11.5	-1.1	5.5	-6.5
12.0	-1.2	5.0	-6.2
12.5	-6.7	4.6	-11.3
13.0	-4.3	4.2	-8.5
13.5	-3.8	3.7	-7.5
14.0	-20.3	3.3	-23.7
14.5	-3.7	3.0	-6.7
15.0	-3.2	2.6	-5.7
15.5	-2.2	2.2	-4.5
16.0	-5.3	1.9	-7.2
16.5	0.1	1.6	-1.5
17.0	-8.0	1.2	-9.2
17.5	-7.2	0.9	-8.1
18.0	-6.8	0.6	-7.5
18.5	-7.2	0.3	-7.5
19.0	-17.1	0.0	-17.1
19.5	-4.3	-0.3	-4.1
20.0	-12.4	-0.5	-11.9
20.5	-5.9	-0.8	-5.2
21.0	-3.5	-1.1	-2.5
21.5	-8.0	-1.3	-6.6
22.0	-11.0	-1.6	-9.4
22.5	-3.2	-1.8	-1.4
23.0	-8.3	-2.0	-6.2
23.5	-7.2	-2.3	-4.9
24.0	-8.5	-2.5	-6.0
24.5	-6.9	-2.7	-4.1
25.0	-7.7	-2.9	-4.7
25.5	-4.6	-3.2	-1.4
26.0	-5.7	-3.4	-2.3
26.5	-6.9	-3.6	-3.3
27.0	-5.8	-3.8	-2.0
27.5	-9.8	-4.0	-5.8
28.0	-15.0	-4.2	-10.8
28.5	-8.8	-4.4	-4.4
29.0	-14.9	-4.6	-10.3
29.5	-14.4	-4.7	-9.6
30.0	-6.6	-4.9	-1.6

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

27.60 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-11.1	7.0	-18.1
-9.9	-9.0	7.1	-16.1
-9.8	-10.1	7.2	-17.4
-9.7	-14.0	7.3	-21.4
-9.6	-16.5	7.4	-23.9
-9.5	-9.5	7.6	-17.0
-9.4	-5.3	7.7	-12.9
-9.3	-5.5	7.8	-13.3
-9.2	-7.5	7.9	-15.4
-9.1	-11.9	8.0	-19.9
-9.0	-14.1	8.1	-22.2
-8.9	-7.3	8.3	-15.5
-8.8	-4.0	8.4	-12.4
-8.7	-3.3	8.5	-11.8
-8.6	-3.9	8.6	-12.5
-8.5	-5.8	8.8	-14.5
-8.4	-8.6	8.9	-17.5
-8.3	-17.6	9.0	-26.6
-8.2	-15.9	9.2	-25.0
-8.1	-9.9	9.3	-19.2
-8.0	-6.5	9.4	-15.9
-7.9	-4.7	9.6	-14.2
-7.8	-4.5	9.7	-14.2
-7.7	-6.1	9.8	-15.9
-7.6	-7.5	10.0	-17.4
-7.5	-8.3	10.1	-18.5
-7.4	-7.2	10.3	-17.5
-7.3	-6.8	10.4	-17.2
-7.2	-7.7	10.6	-18.3
-7.1	-7.1	10.7	-17.8
-7.0	-3.8	10.9	-14.6
-6.9	-1.1	11.0	-12.1
-6.8	-0.1	11.2	-11.3
-6.7	-1.0	11.3	-12.3
-6.6	-4.7	11.5	-16.2
-6.5	-14.9	11.7	-26.6
-6.4	-5.5	11.8	-17.3
-6.3	-0.5	12.0	-12.5
-6.2	1.0	12.2	-11.2
-6.1	0.4	12.4	-11.9
-6.0	-3.6	12.5	-16.1
-5.9	-17.3	12.7	-30.1
-5.8	-8.1	12.9	-21.0
-5.7	-3.0	13.1	-16.1
-5.6	-2.7	13.3	-16.0
-5.5	-7.4	13.5	-20.9
-5.4	-20.5	13.7	-34.2
-5.3	-3.2	13.9	-17.1
-5.2	1.6	14.1	-12.5
-5.1	2.8	14.3	-11.5
-5.0	1.6	14.5	-12.9
-4.9	-3.2	14.7	-18.0
-4.8	-27.5	15.0	-42.5
-4.7	-4.0	15.2	-19.2
-4.6	1.2	15.4	-14.3
-4.5	2.1	15.7	-13.6
-4.4	0.8	15.9	-15.1
-4.3	-0.3	16.2	-16.5
-4.2	1.9	16.4	-14.5
-4.1	4.6	16.7	-12.1

27.60 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	47.4		
0.1	47.1		
0.2	46.2		
0.3	44.8		
0.4	42.7		
0.5	39.9		
0.6	36.2		
0.7	31.2		
0.8	25.2		
0.9	20.5		
1.0	19.6		
1.1	18.4		
1.2	16.4		
1.3	16.3		
1.4	17.3		
1.5	16.9		
1.6	14.5		
1.7	10.5		
1.8	12.3		
1.9	16.0		
2.0	17.7		
2.1	18.0		
2.2	17.3		
2.3	16.2		
2.4	15.6		
2.5	15.6		
2.6	15.5		
2.7	14.3		
2.8	12.1		
2.9	9.0		
3.0	6.8	20.1	-13.3
3.1	7.1	19.7	-12.6
3.2	8.3	19.4	-11.1
3.3	8.5	19.0	-10.6
3.4	8.4	18.7	-10.4
3.5	7.7	18.4	-10.7
3.6	7.0	18.1	-11.1
3.7	5.3	17.8	-12.5
3.8	4.3	17.5	-13.2
3.9	4.4	17.2	-12.9
4.0	5.7	16.9	-11.2
4.1	7.0	16.7	-9.7
4.2	7.3	16.4	-9.2
4.3	5.9	16.2	-10.2
4.4	3.1	15.9	-12.8
4.5	-3.0	15.7	-18.6
4.6	-15.9	15.4	-31.3
4.7	-5.2	15.2	-20.4
4.8	-2.1	15.0	-17.0
4.9	-0.8	14.7	-15.5
5.0	-0.8	14.5	-15.4
5.1	-0.7	14.3	-15.0
5.2	-0.9	14.1	-15.0
5.3	-1.6	13.9	-15.5
5.4	-3.5	13.7	-17.2
5.5	-6.4	13.5	-19.9
5.6	-7.5	13.3	-20.8
5.7	-5.7	13.1	-18.8
5.8	-5.7	12.9	-18.6
5.9	-7.7	12.7	-20.4

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	5.9	16.9	-11.0
-3.9	6.0	17.2	-11.2
-3.8	5.0	17.5	-12.5
-3.7	3.4	17.8	-14.4
-3.6	0.9	18.1	-17.2
-3.5	-0.6	18.4	-19.0
-3.4	2.0	18.7	-16.7
-3.3	5.9	19.0	-13.1
-3.2	9.0	19.4	-10.4
-3.1	10.6	19.7	-9.1
-3.0	11.0	20.1	-9.1
-2.9	10.1		
-2.8	8.7		
-2.7	8.9		
-2.6	10.8		
-2.5	12.4		
-2.4	12.8		
-2.3	12.1		
-2.2	10.6		
-2.1	10.0		
-2.0	10.7		
-1.9	11.7		
-1.8	13.7		
-1.7	16.5		
-1.6	19.0		
-1.5	20.5		
-1.4	20.8		
-1.3	19.4		
-1.2	15.6		
-1.1	11.6		
-1.0	21.7		
-0.9	26.8		
-0.8	31.2		
-0.7	35.1		
-0.6	38.5		
-0.5	41.3		
-0.4	43.6		
-0.3	45.4		
-0.2	46.5		
-0.1	47.2		
0.0	47.4		

6.0	-7.5	12.5	-20.0
6.1	-3.5	12.4	-15.8
6.2	0.4	12.2	-11.8
6.3	2.1	12.0	-9.9
6.4	2.1	11.8	-9.8
6.5	0.2	11.7	-11.5
6.6	-4.4	11.5	-15.9
6.7	-15.8	11.3	-27.1
6.8	-5.6	11.2	-16.8
6.9	-1.4	11.0	-12.4
7.0	1.0	10.9	-9.8
7.1	1.5	10.7	-9.3
7.2	0.9	10.6	-9.7
7.3	-0.6	10.4	-11.0
7.4	-2.7	10.3	-13.0
7.5	-6.4	10.1	-16.5
7.6	-14.6	10.0	-24.6
7.7	-21.6	9.8	-31.5
7.8	-9.7	9.7	-19.4
7.9	-6.6	9.6	-16.2
8.0	-6.3	9.4	-15.7
8.1	-7.7	9.3	-16.9
8.2	-11.8	9.2	-20.9
8.3	-12.0	9.0	-21.0
8.4	-8.6	8.9	-17.5
8.5	-5.9	8.8	-14.7
8.6	-6.4	8.6	-15.1
8.7	-10.1	8.5	-18.6
8.8	-25.1	8.4	-33.5
8.9	-10.3	8.3	-18.6
9.0	-4.2	8.1	-12.4
9.1	-1.9	8.0	-9.9
9.2	-1.3	7.9	-9.2
9.3	-2.0	7.8	-9.8
9.4	-5.1	7.7	-12.8
9.5	-9.9	7.6	-17.5
9.6	-12.3	7.4	-19.7
9.7	-8.0	7.3	-15.3
9.8	-7.1	7.2	-14.3
9.9	-7.6	7.1	-14.7
10.0	-10.3	7.0	-17.3

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

27.60 GHz Antenna Pattern in X-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-9.4	-2.0	-7.4
-9.9	-15.1	-2.0	-13.1
-9.8	-19.7	-2.0	-17.7
-9.7	-13.1	-2.0	-11.1
-9.6	-11.0	-2.0	-9.0
-9.5	-9.8	-2.0	-7.8
-9.4	-10.4	-2.0	-8.4
-9.3	-11.8	-2.0	-9.8
-9.2	-11.4	-2.0	-9.4
-9.1	-8.7	-2.0	-6.7
-9.0	-6.7	-2.0	-4.7
-8.9	-5.9	-2.0	-3.9
-8.8	-6.6	-2.0	-4.6
-8.7	-8.1	-2.0	-6.1
-8.6	-11.9	-2.0	-9.9
-8.5	-17.5	-2.0	-15.5
-8.4	-21.3	-2.0	-19.3
-8.3	-15.5	-2.0	-13.5
-8.2	-13.3	-2.0	-11.3
-8.1	-9.5	-2.0	-7.5
-8.0	-8.7	-2.0	-6.7
-7.9	-8.7	-2.0	-6.7
-7.8	-8.5	-2.0	-6.5
-7.7	-9.3	-2.0	-7.3
-7.6	-10.0	-2.0	-8.0
-7.5	-10.6	-2.0	-8.6
-7.4	-12.6	-2.0	-10.6
-7.3	-15.1	-2.0	-13.1
-7.2	-12.9	-2.0	-10.9
-7.1	-8.7	-2.0	-6.7
-7.0	-5.5	-2.1	-3.3
-6.9	-4.2	-2.0	-2.2
-6.8	-3.3	-1.8	-1.4
-6.7	-4.0	-1.7	-2.3
-6.6	-7.1	-1.5	-5.6
-6.5	-13.5	-1.3	-12.2
-6.4	-18.6	-1.2	-17.5
-6.3	-10.5	-1.0	-9.5
-6.2	-7.6	-0.8	-6.8
-6.1	-7.5	-0.6	-6.9
-6.0	-9.4	-0.5	-9.0
-5.9	-10.9	-0.3	-10.6
-5.8	-7.6	-0.1	-7.5
-5.7	-4.6	0.1	-4.7
-5.6	-3.0	0.3	-3.3
-5.5	-2.9	0.5	-3.4
-5.4	-4.3	0.7	-4.9
-5.3	-7.1	0.9	-8.0
-5.2	-10.9	1.1	-12.0
-5.1	-17.8	1.3	-19.2
-5.0	-15.7	1.5	-17.2
-4.9	-7.3	1.7	-9.0
-4.8	-2.7	2.0	-4.6
-4.7	-0.2	2.2	-2.3
-4.6	1.2	2.4	-1.3
-4.5	0.6	2.7	-2.1
-4.4	-1.8	2.9	-4.7
-4.3	-7.3	3.2	-10.4
-4.2	-20.0	3.4	-23.4
-4.1	-7.8	3.7	-11.5

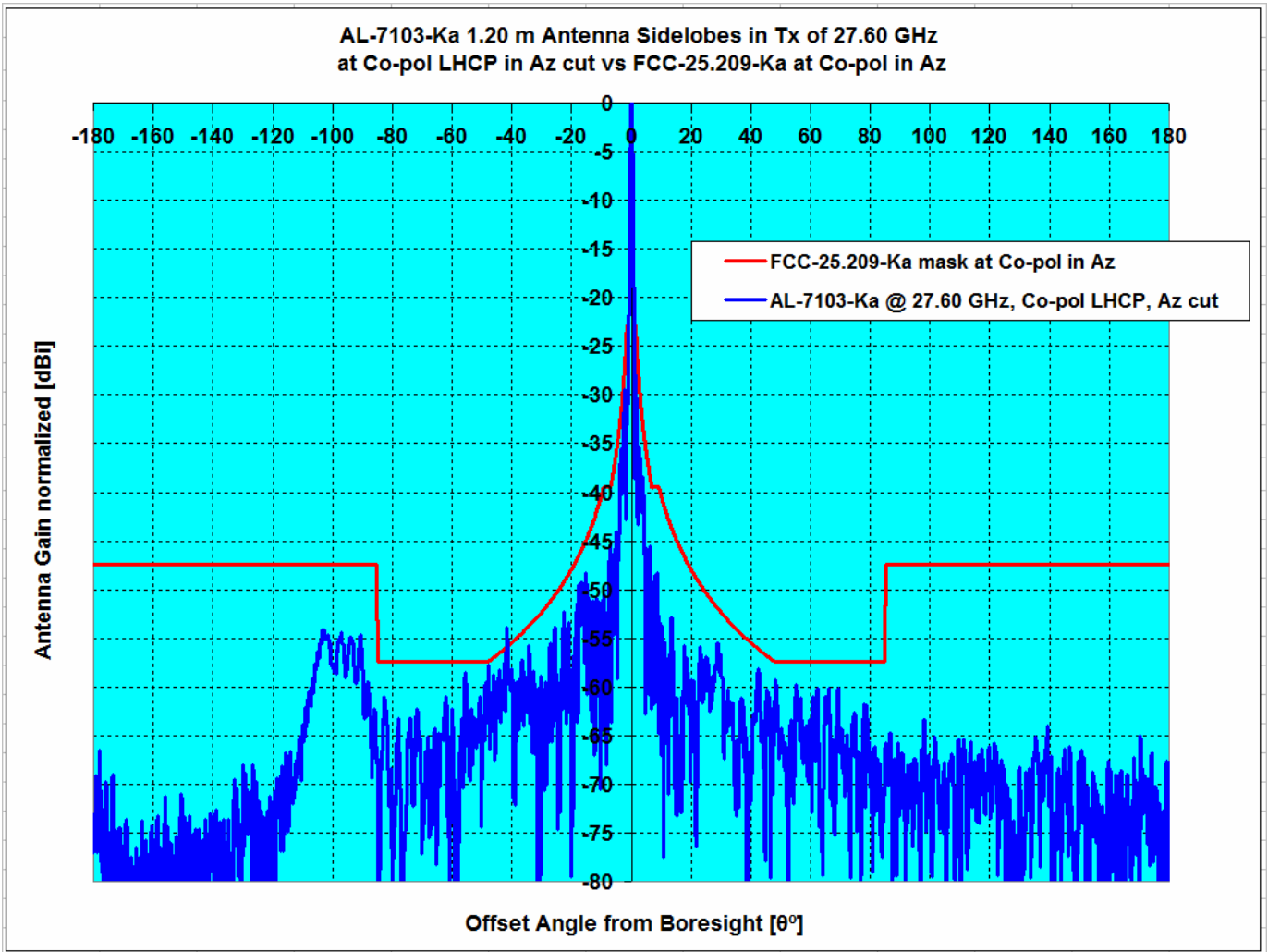
27.60 GHz Antenna Pattern in X-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	14.4		
0.1	22.5		
0.2	26.2		
0.3	27.9		
0.4	28.3		
0.5	27.8		
0.6	26.3		
0.7	23.9		
0.8	20.5		
0.9	16.4		
1.0	13.1		
1.1	11.5		
1.2	8.9		
1.3	3.5		
1.4	-11.8		
1.5	2.9		
1.6	6.3		
1.7	6.4		
1.8	3.9	12.6	-8.7
1.9	-2.0	12.0	-14.0
2.0	-3.1	11.5	-14.5
2.1	0.4	10.9	-10.6
2.2	1.1	10.4	-9.3
2.3	-2.5	10.0	-12.5
2.4	-12.2	9.5	-21.7
2.5	-6.2	9.1	-15.2
2.6	0.9	8.6	-7.7
2.7	3.5	8.2	-4.7
2.8	3.4	7.8	-4.4
2.9	0.6	7.4	-6.9
3.0	-5.1	7.1	-12.2
3.1	-15.1	6.7	-21.8
3.2	-7.5	6.4	-13.8
3.3	-5.0	6.0	-11.0
3.4	-4.6	5.7	-10.3
3.5	-5.4	5.4	-10.8
3.6	-6.9	5.1	-12.0
3.7	-8.8	4.8	-13.6
3.8	-11.9	4.5	-16.4
3.9	-43.0	4.2	-47.2
4.0	-9.3	3.9	-13.3
4.1	-5.2	3.7	-8.9
4.2	-2.6	3.4	-6.0
4.3	-3.1	3.2	-6.2
4.4	-6.7	2.9	-9.6
4.5	-13.7	2.7	-16.3
4.6	-13.5	2.4	-15.9
4.7	-6.6	2.2	-8.8
4.8	-5.4	2.0	-7.4
4.9	-6.9	1.7	-8.7
5.0	-12.4	1.5	-13.9
5.1	-10.1	1.3	-11.5
5.2	-5.1	1.1	-6.2
5.3	-3.5	0.9	-4.4
5.4	-4.2	0.7	-4.9
5.5	-7.4	0.5	-7.9
5.6	-17.9	0.3	-18.1
5.7	-11.9	0.1	-12.0
5.8	-5.0	-0.1	-4.9
5.9	-3.2	-0.3	-2.9

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

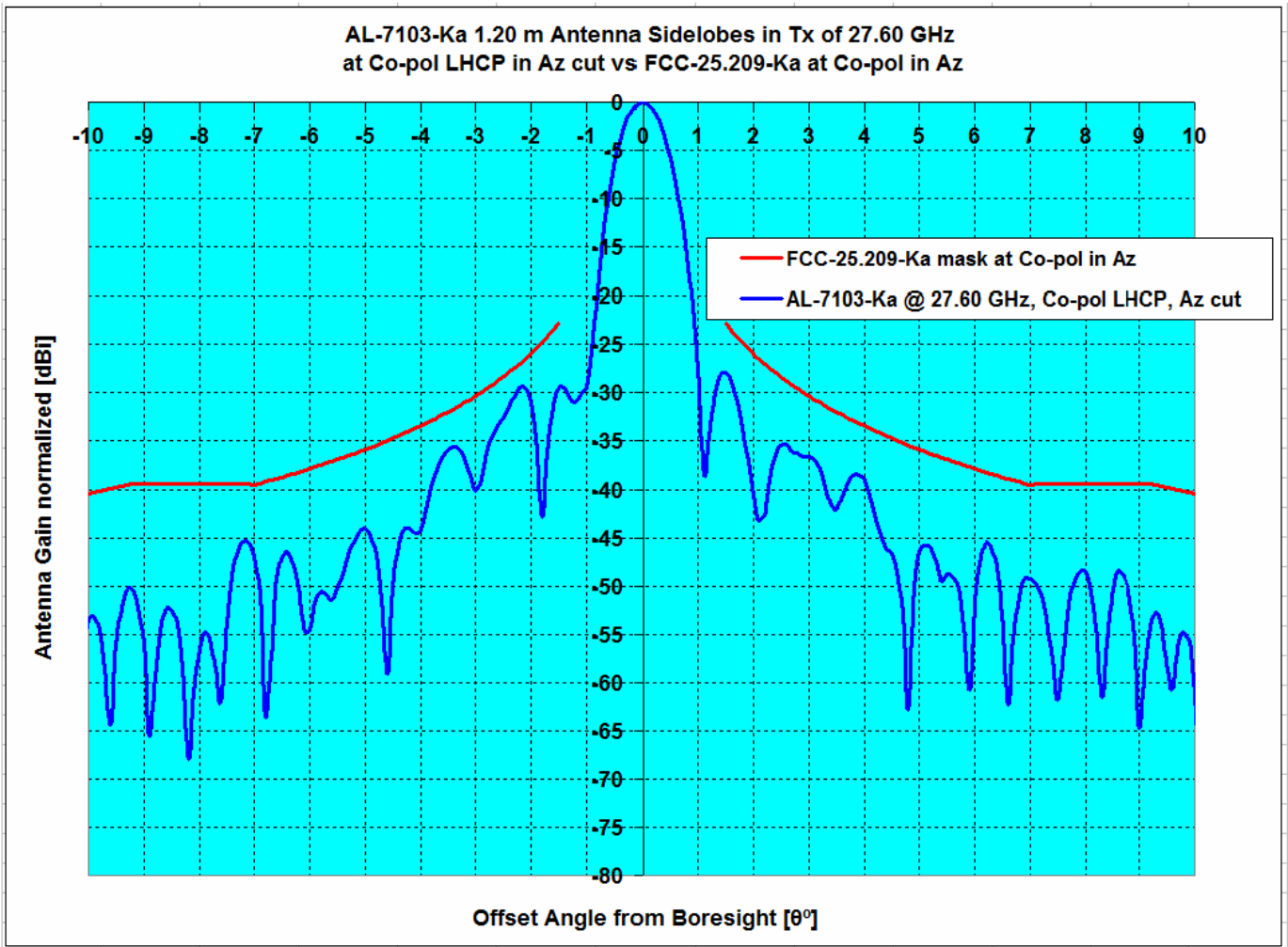
-4.0	-3.3	3.9	-7.3
-3.9	-2.6	4.2	-6.8
-3.8	-3.4	4.5	-7.9
-3.7	-2.9	4.8	-7.7
-3.6	-1.5	5.1	-6.6
-3.5	-0.3	5.4	-5.7
-3.4	-1.1	5.7	-6.8
-3.3	-4.6	6.0	-10.6
-3.2	-8.3	6.4	-14.7
-3.1	-1.1	6.7	-7.8
-3.0	2.4	7.1	-4.6
-2.9	3.8	7.4	-3.7
-2.8	2.3	7.8	-5.5
-2.7	-3.8	8.2	-12.1
-2.6	-7.5	8.6	-16.1
-2.5	3.0	9.1	-6.1
-2.4	6.6	9.5	-2.9
-2.3	7.1	10.0	-2.8
-2.2	4.8	10.4	-5.7
-2.1	-4.5	10.9	-15.4
-2.0	1.4	11.5	-10.0
-1.9	8.8	12.0	-3.2
-1.8	11.8	12.6	-0.9
-1.7	12.2		
-1.6	10.3		
-1.5	3.6		
-1.4	2.4		
-1.3	11.3		
-1.2	14.9		
-1.1	16.7		
-1.0	17.8		
-0.9	19.8		
-0.8	22.6		
-0.7	25.1		
-0.6	26.8		
-0.5	27.7		
-0.4	27.7		
-0.3	26.4		
-0.2	23.3		
-0.1	16.2		
0.0	14.4		

6.0	-3.8	-0.5	-3.3
6.1	-6.6	-0.6	-6.0
6.2	-11.8	-0.8	-10.9
6.3	-12.4	-1.0	-11.5
6.4	-7.9	-1.2	-6.8
6.5	-6.7	-1.3	-5.4
6.6	-7.2	-1.5	-5.7
6.7	-9.0	-1.7	-7.4
6.8	-12.3	-1.8	-10.5
6.9	-15.2	-2.0	-13.2
7.0	-19.9	-2.1	-17.7
7.1	-29.7	-2.0	-27.7
7.2	-23.1	-2.0	-21.1
7.3	-14.2	-2.0	-12.2
7.4	-10.5	-2.0	-8.5
7.5	-10.1	-2.0	-8.1
7.6	-9.8	-2.0	-7.8
7.7	-12.1	-2.0	-10.1
7.8	-16.0	-2.0	-14.0
7.9	-27.4	-2.0	-25.4
8.0	-22.6	-2.0	-20.6
8.1	-13.3	-2.0	-11.3
8.2	-11.1	-2.0	-9.1
8.3	-9.2	-2.0	-7.2
8.4	-9.0	-2.0	-7.0
8.5	-11.7	-2.0	-9.7
8.6	-14.8	-2.0	-12.8
8.7	-14.0	-2.0	-12.0
8.8	-11.7	-2.0	-9.7
8.9	-9.7	-2.0	-7.7
9.0	-9.1	-2.0	-7.1
9.1	-10.9	-2.0	-8.9
9.2	-14.6	-2.0	-12.6
9.3	-21.6	-2.0	-19.6
9.4	-16.7	-2.0	-14.7
9.5	-14.3	-2.0	-12.3
9.6	-12.9	-2.0	-10.9
9.7	-17.6	-2.0	-15.6
9.8	-24.7	-2.0	-22.7
9.9	-20.4	-2.0	-18.4
10.0	-16.8	-2.0	-14.8



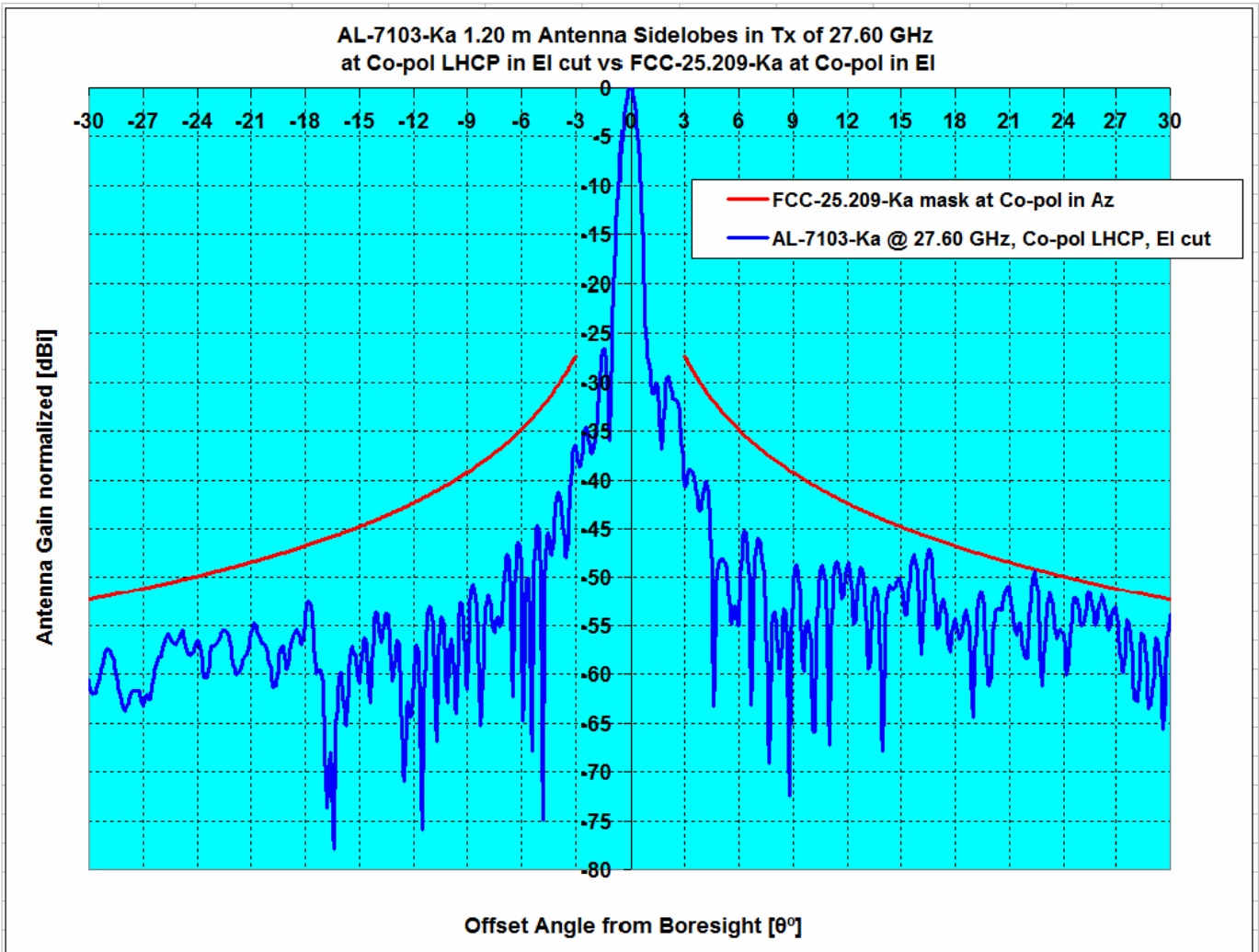
Description	Plane, CirP Type	Frequency GHz	Ant. Gain dBi	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , LHCP	27.60	47.40	-2.53	2.02	0.00%	0.14%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth LHCP



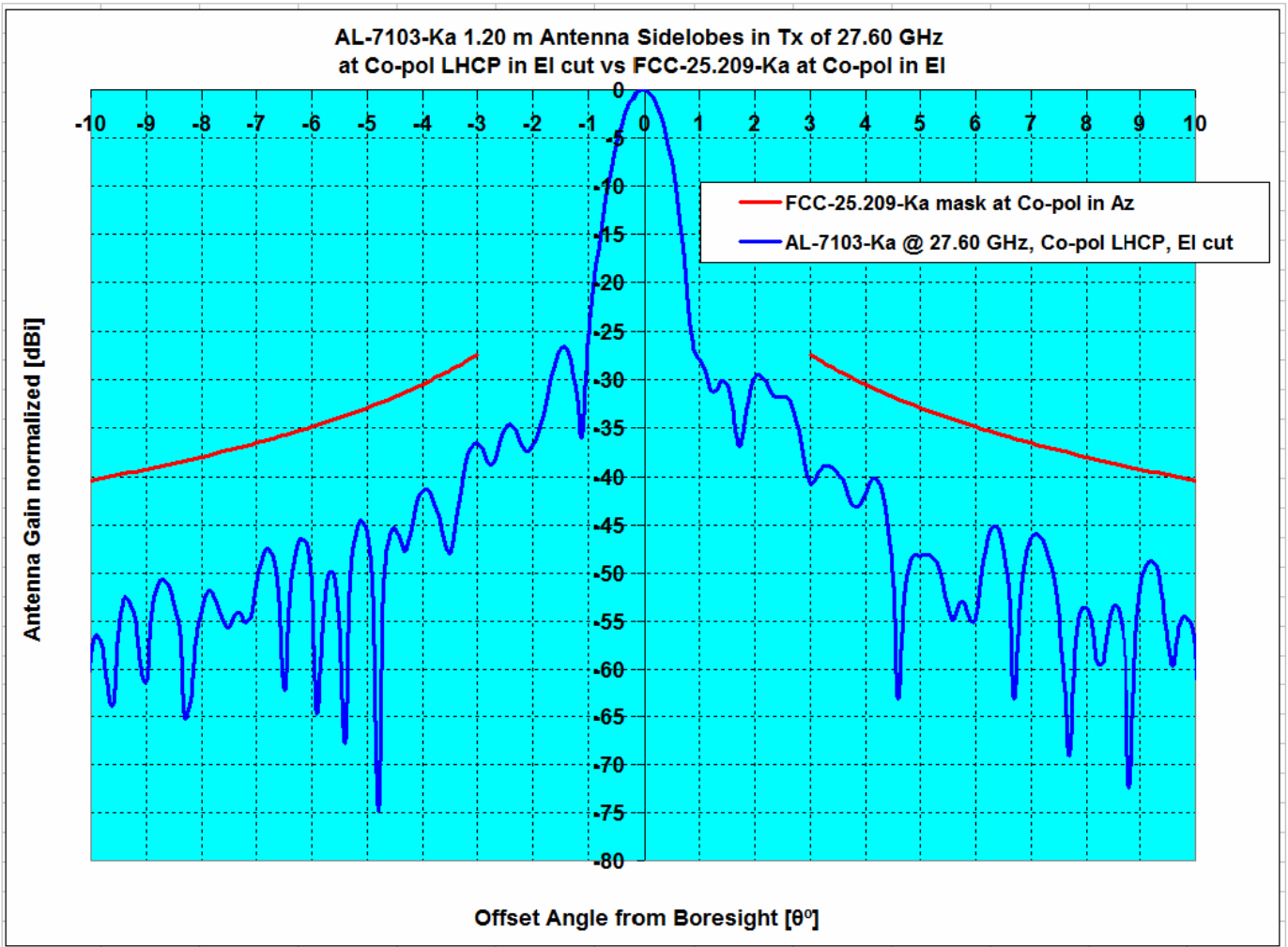
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , LHCP	27.60	47.40	-2.53	2.02	0.00%	0.14%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Elevation LHCP



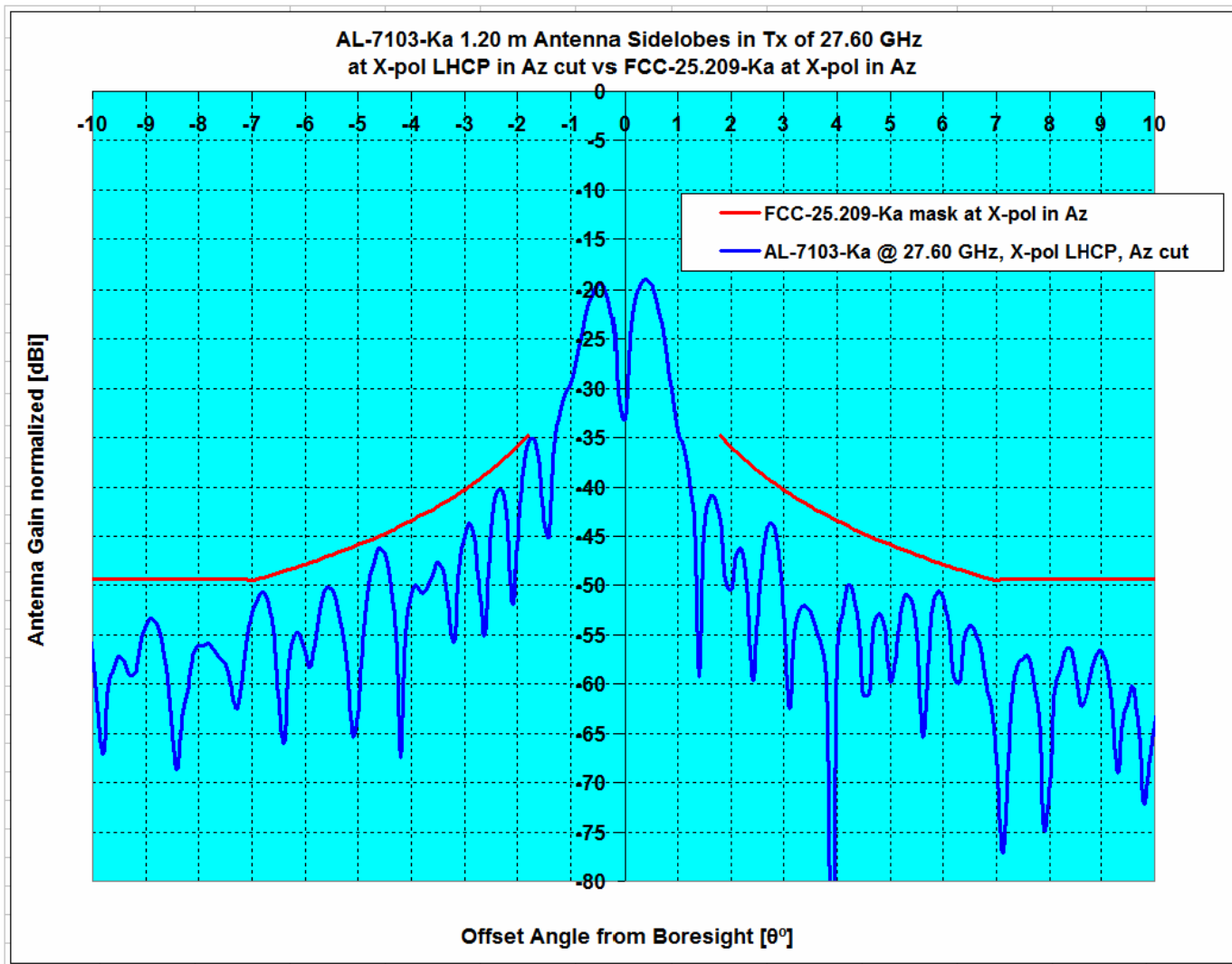
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , LHCP	27.60	47.40	-9.11	-0.19	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Elevation LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , LHCP	27.60	47.40	-9.11	-0.19	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, X-pol, Azimuth LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7103-Ka	Az , LHCP	27.60	47.40	-0.86	-0.86	0.00%	0.00%

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

27.60 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-29.1	0.0	-29.1
-178.0	-29.4	0.0	-29.4
-177.0	-23.9	0.0	-23.9
-176.0	-31.5	0.0	-31.5
-175.0	-30.9	0.0	-30.9
-174.0	-27.9	0.0	-27.9
-173.0	-35.8	0.0	-35.8
-172.0	-27.8	0.0	-27.8
-171.0	-37.8	0.0	-37.8
-170.0	-29.7	0.0	-29.7
-169.0	-27.2	0.0	-27.2
-168.0	-31.6	0.0	-31.6
-167.0	-42.9	0.0	-42.9
-166.0	-32.3	0.0	-32.3
-165.0	-26.0	0.0	-26.0
-164.0	-39.5	0.0	-39.5
-163.0	-38.1	0.0	-38.1
-162.0	-31.0	0.0	-31.0
-161.0	-31.4	0.0	-31.4
-160.0	-28.0	0.0	-28.0
-159.0	-33.1	0.0	-33.1
-158.0	-32.3	0.0	-32.3
-157.0	-25.0	0.0	-25.0
-156.0	-31.3	0.0	-31.3
-155.0	-39.0	0.0	-39.0
-154.0	-23.3	0.0	-23.3
-153.0	-34.3	0.0	-34.3
-152.0	-32.9	0.0	-32.9
-151.0	-35.2	0.0	-35.2
-150.0	-28.9	0.0	-28.9
-149.0	-33.7	0.0	-33.7
-148.0	-38.8	0.0	-38.8
-147.0	-28.5	0.0	-28.5
-146.0	-33.4	0.0	-33.4
-145.0	-30.4	0.0	-30.4
-144.0	-27.6	0.0	-27.6
-143.0	-28.9	0.0	-28.9
-142.0	-33.7	0.0	-33.7
-141.0	-29.4	0.0	-29.4
-140.0	-34.2	0.0	-34.2
-139.0	-34.9	0.0	-34.9
-138.0	-34.2	0.0	-34.2
-137.0	-28.8	0.0	-28.8
-136.0	-30.3	0.0	-30.3
-135.0	-35.5	0.0	-35.5
-134.0	-37.7	0.0	-37.7
-133.0	-29.7	0.0	-29.7
-132.0	-28.1	0.0	-28.1
-131.0	-39.4	0.0	-39.4
-130.0	-27.4	0.0	-27.4
-129.0	-33.2	0.0	-33.2
-128.0	-27.7	0.0	-27.7
-127.0	-28.0	0.0	-28.0
-126.0	-37.8	0.0	-37.8
-125.0	-30.0	0.0	-30.0
-124.0	-38.9	0.0	-38.9
-123.0	-37.9	0.0	-37.9
-122.0	-31.7	0.0	-31.7
-121.0	-29.6	0.0	-29.6
-120.0	-47.9	0.0	-47.9

27.60 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	47.2		
1.0	22.2		
2.0	9.4	21.5	-12.1
3.0	10.6	17.1	-6.5
4.0	8.5	13.9	-5.5
5.0	1.4	11.5	-10.1
6.0	-4.6	9.5	-14.1
7.0	-6.6	7.9	-14.4
8.0	-4.6	8.0	-12.6
9.0	-7.6	8.0	-15.6
10.0	-10.2	7.0	-17.2
11.0	-7.8	6.0	-13.8
12.0	-8.6	5.0	-13.6
13.0	-8.0	4.2	-12.1
14.0	-6.8	3.3	-10.1
15.0	-40.4	2.6	-43.0
16.0	-17.7	1.9	-19.6
17.0	-10.3	1.2	-11.6
18.0	-9.4	0.6	-10.1
19.0	-10.5	0.0	-10.5
20.0	-11.1	-0.5	-10.6
21.0	-7.8	-1.1	-6.7
22.0	-12.1	-1.6	-10.5
23.0	-9.8	-2.0	-7.8
24.0	-7.8	-2.5	-5.3
25.0	-8.1	-2.9	-5.2
26.0	-9.6	-3.4	-6.2
27.0	-8.4	-3.8	-4.6
28.0	-12.2	-4.2	-8.0
29.0	-9.9	-4.6	-5.4
30.0	-9.6	-4.9	-4.7
31.0	-18.3	-5.3	-13.0
32.0	-18.9	-5.6	-13.3
33.0	-20.1	-6.0	-14.1
34.0	-17.6	-6.3	-11.3
35.0	-14.9	-6.6	-8.3
36.0	-17.8	-6.9	-10.9
37.0	-22.5	-7.2	-15.3
38.0	-32.0	-7.5	-24.5
39.0	-23.5	-7.8	-15.8
40.0	-18.0	-8.1	-10.0
41.0	-16.5	-8.3	-8.2
42.0	-15.0	-8.6	-6.4
43.0	-23.5	-8.8	-14.7
44.0	-20.7	-9.1	-11.6
45.0	-19.7	-9.3	-10.4
46.0	-21.9	-9.6	-12.3
47.0	-13.5	-9.8	-3.7
48.0	-16.0	-10.0	-6.0
49.0	-35.9	-10.0	-25.9
50.0	-22.2	-10.0	-12.2
51.0	-29.4	-10.0	-19.4
52.0	-30.1	-10.0	-20.1
53.0	-19.7	-10.0	-9.7
54.0	-21.2	-10.0	-11.2
55.0	-25.1	-10.0	-15.1
56.0	-19.2	-10.0	-9.2
57.0	-25.1	-10.0	-15.1
58.0	-42.1	-10.0	-32.1
59.0	-26.1	-10.0	-16.1

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-30.2	0.0	-30.2
-118.0	-22.4	0.0	-22.4
-117.0	-29.3	0.0	-29.3
-116.0	-28.5	0.0	-28.5
-115.0	-32.0	0.0	-32.0
-114.0	-32.5	0.0	-32.5
-113.0	-31.1	0.0	-31.1
-112.0	-34.5	0.0	-34.5
-111.0	-28.0	0.0	-28.0
-110.0	-34.3	0.0	-34.3
-109.0	-29.5	0.0	-29.5
-108.0	-24.0	0.0	-24.0
-107.0	-22.8	0.0	-22.8
-106.0	-19.5	0.0	-19.5
-105.0	-16.6	0.0	-16.6
-104.0	-16.2	0.0	-16.2
-103.0	-14.7	0.0	-14.7
-102.0	-14.7	0.0	-14.7
-101.0	-15.4	0.0	-15.4
-100.0	-17.1	0.0	-17.1
-99.0	-14.4	0.0	-14.4
-98.0	-13.9	0.0	-13.9
-97.0	-15.3	0.0	-15.3
-96.0	-17.1	0.0	-17.1
-95.0	-19.9	0.0	-19.9
-94.0	-26.9	0.0	-26.9
-93.0	-18.8	0.0	-18.8
-92.0	-23.2	0.0	-23.2
-91.0	-20.4	0.0	-20.4
-90.0	-18.2	0.0	-18.2
-89.0	-21.8	0.0	-21.8
-88.0	-22.0	0.0	-22.0
-87.0	-24.4	0.0	-24.4
-86.0	-22.0	0.0	-22.0
-85.0	-18.9	-10.0	-8.9
-84.0	-19.1	-10.0	-9.1
-83.0	-22.6	-10.0	-12.6
-82.0	-20.9	-10.0	-10.9
-81.0	-16.3	-10.0	-6.3
-80.0	-16.7	-10.0	-6.7
-79.0	-17.1	-10.0	-7.1
-78.0	-15.1	-10.0	-5.1
-77.0	-17.9	-10.0	-7.9
-76.0	-23.5	-10.0	-13.5
-75.0	-20.9	-10.0	-10.9
-74.0	-14.1	-10.0	-4.1
-73.0	-28.0	-10.0	-18.0
-72.0	-16.9	-10.0	-6.9
-71.0	-34.7	-10.0	-24.7
-70.0	-26.2	-10.0	-16.2
-69.0	-20.7	-10.0	-10.7
-68.0	-16.8	-10.0	-6.8
-67.0	-18.5	-10.0	-8.5
-66.0	-20.3	-10.0	-10.3
-65.0	-31.2	-10.0	-21.2
-64.0	-23.1	-10.0	-13.1
-63.0	-15.8	-10.0	-5.8
-62.0	-13.6	-10.0	-3.6
-61.0	-17.7	-10.0	-7.7
-60.0	-20.7	-10.0	-10.7
-59.0	-26.8	-10.0	-16.8
-58.0	-18.8	-10.0	-8.8
-57.0	-18.3	-10.0	-8.3

60.0	-15.8	-10.0	-5.8
61.0	-18.2	-10.0	-8.2
62.0	-29.2	-10.0	-19.2
63.0	-26.1	-10.0	-16.1
64.0	-33.7	-10.0	-23.7
65.0	-15.5	-10.0	-5.5
66.0	-22.5	-10.0	-12.5
67.0	-20.0	-10.0	-10.0
68.0	-20.1	-10.0	-10.1
69.0	-23.9	-10.0	-13.9
70.0	-23.7	-10.0	-13.7
71.0	-20.5	-10.0	-10.5
72.0	-32.1	-10.0	-22.1
73.0	-18.3	-10.0	-8.3
74.0	-18.3	-10.0	-8.3
75.0	-18.0	-10.0	-8.0
76.0	-22.2	-10.0	-12.2
77.0	-16.0	-10.0	-6.0
78.0	-15.4	-10.0	-5.4
79.0	-22.9	-10.0	-12.9
80.0	-24.1	-10.0	-14.1
81.0	-28.9	-10.0	-18.9
82.0	-20.2	-10.0	-10.2
83.0	-23.2	-10.0	-13.2
84.0	-31.8	-10.0	-21.8
85.0	-30.9	-10.0	-20.9
86.0	-26.7	0.0	-26.7
87.0	-18.9	0.0	-18.9
88.0	-21.1	0.0	-21.1
89.0	-27.1	0.0	-27.1
90.0	-28.2	0.0	-28.2
91.0	-20.7	0.0	-20.7
92.0	-23.8	0.0	-23.8
93.0	-26.6	0.0	-26.6
94.0	-24.4	0.0	-24.4
95.0	-30.8	0.0	-30.8
96.0	-28.5	0.0	-28.5
97.0	-25.7	0.0	-25.7
98.0	-25.9	0.0	-25.9
99.0	-22.8	0.0	-22.8
100.0	-35.1	0.0	-35.1
101.0	-23.0	0.0	-23.0
102.0	-32.6	0.0	-32.6
103.0	-24.5	0.0	-24.5
104.0	-28.7	0.0	-28.7
105.0	-34.5	0.0	-34.5
106.0	-22.1	0.0	-22.1
107.0	-31.9	0.0	-31.9
108.0	-25.9	0.0	-25.9
109.0	-25.1	0.0	-25.1
110.0	-35.4	0.0	-35.4
111.0	-26.2	0.0	-26.2
112.0	-26.4	0.0	-26.4
113.0	-26.1	0.0	-26.1
114.0	-28.4	0.0	-28.4
115.0	-24.4	0.0	-24.4
116.0	-26.3	0.0	-26.3
117.0	-30.8	0.0	-30.8
118.0	-24.7	0.0	-24.7
119.0	-21.4	0.0	-21.4
120.0	-24.8	0.0	-24.8
121.0	-20.8	0.0	-20.8
122.0	-32.8	0.0	-32.8

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-17.6	-10.0	-7.6
-55.0	-15.3	-10.0	-5.3
-54.0	-17.2	-10.0	-7.2
-53.0	-17.1	-10.0	-7.1
-52.0	-14.4	-10.0	-4.4
-51.0	-18.8	-10.0	-8.8
-50.0	-23.6	-10.0	-13.6
-49.0	-20.7	-10.0	-10.7
-48.0	-15.5	-10.0	-5.4
-47.0	-20.5	-9.8	-10.7
-46.0	-13.1	-9.6	-3.6
-45.0	-17.6	-9.3	-8.2
-44.0	-14.2	-9.1	-5.1
-43.0	-11.5	-8.8	-2.7
-42.0	-12.1	-8.6	-3.5
-41.0	-12.2	-8.3	-3.9
-40.0	-13.7	-8.1	-5.7
-39.0	-9.1	-7.8	-1.3
-38.0	-6.6	-7.5	0.9
-37.0	-12.5	-7.2	-5.3
-36.0	-14.4	-6.9	-7.5
-35.0	-13.1	-6.6	-6.5
-34.0	-6.5	-6.3	-0.2
-33.0	-13.4	-6.0	-7.5
-32.0	-10.4	-5.6	-4.7
-31.0	-8.4	-5.3	-3.1
-30.0	-14.0	-4.9	-9.1
-29.0	-17.6	-4.6	-13.0
-28.0	-8.3	-4.2	-4.1
-27.0	-7.7	-3.8	-3.9
-26.0	-9.6	-3.4	-6.2
-25.0	-8.9	-2.9	-6.0
-24.0	-13.2	-2.5	-10.7
-23.0	-13.0	-2.0	-11.0
-22.0	-7.2	-1.6	-5.6
-21.0	-5.0	-1.1	-3.9
-20.0	-26.6	-0.5	-26.1
-19.0	-6.5	0.0	-6.5
-18.0	-11.3	0.6	-11.9
-17.0	-8.3	1.2	-9.5
-16.0	-2.4	1.9	-4.3
-15.0	-5.5	2.6	-8.1
-14.0	-20.5	3.3	-23.8
-13.0	-2.3	4.2	-6.5
-12.0	-6.4	5.0	-11.4
-11.0	-19.1	6.0	-25.1
-10.0	-4.3	7.0	-11.3
-9.0	-8.3	8.0	-16.3
-8.0	-7.2	8.0	-15.2
-7.0	-0.4	7.9	-8.2
-6.0	-12.0	9.5	-21.6
-5.0	3.4	11.5	-8.1
-4.0	2.4	13.9	-11.5
-3.0	8.3	17.1	-8.8
-2.0	17.1	21.5	-4.3
-1.0	18.1		
0.0	47.2		

123.0	-23.2	0.0	-23.2
124.0	-37.6	0.0	-37.6
125.0	-22.9	0.0	-22.9
126.0	-22.8	0.0	-22.8
127.0	-36.4	0.0	-36.4
128.0	-24.7	0.0	-24.7
129.0	-31.0	0.0	-31.0
130.0	-25.9	0.0	-25.9
131.0	-30.4	0.0	-30.4
132.0	-25.5	0.0	-25.5
133.0	-23.8	0.0	-23.8
134.0	-23.0	0.0	-23.0
135.0	-20.7	0.0	-20.7
136.0	-38.7	0.0	-38.7
137.0	-22.9	0.0	-22.9
138.0	-21.0	0.0	-21.0
139.0	-26.3	0.0	-26.3
140.0	-24.0	0.0	-24.0
141.0	-22.1	0.0	-22.1
142.0	-26.4	0.0	-26.4
143.0	-25.5	0.0	-25.5
144.0	-31.8	0.0	-31.8
145.0	-26.3	0.0	-26.3
146.0	-21.2	0.0	-21.2
147.0	-23.4	0.0	-23.4
148.0	-36.2	0.0	-36.2
149.0	-33.2	0.0	-33.2
150.0	-30.6	0.0	-30.6
151.0	-29.0	0.0	-29.0
152.0	-24.4	0.0	-24.4
153.0	-24.1	0.0	-24.1
154.0	-27.7	0.0	-27.7
155.0	-22.1	0.0	-22.1
156.0	-28.2	0.0	-28.2
157.0	-24.4	0.0	-24.4
158.0	-21.8	0.0	-21.8
159.0	-23.4	0.0	-23.4
160.0	-25.7	0.0	-25.7
161.0	-37.5	0.0	-37.5
162.0	-23.4	0.0	-23.4
163.0	-22.9	0.0	-22.9
164.0	-25.5	0.0	-25.5
165.0	-26.2	0.0	-26.2
166.0	-23.0	0.0	-23.0
167.0	-24.1	0.0	-24.1
168.0	-21.6	0.0	-21.6
169.0	-28.4	0.0	-28.4
170.0	-34.9	0.0	-34.9
171.0	-19.2	0.0	-19.2
172.0	-23.3	0.0	-23.3
173.0	-27.0	0.0	-27.0
174.0	-20.9	0.0	-20.9
175.0	-39.1	0.0	-39.1
176.0	-27.1	0.0	-27.1
177.0	-34.1	0.0	-34.1
178.0	-27.0	0.0	-27.0
179.0	-27.0	0.0	-27.0

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.60 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-4.3	7.0	-11.3
-9.9	-4.4	7.1	-11.5
-9.8	-5.8	7.2	-13.0
-9.7	-9.9	7.3	-17.2
-9.6	-10.9	7.4	-18.3
-9.5	-6.5	7.6	-14.0
-9.4	-2.7	7.7	-10.4
-9.3	-1.3	7.8	-9.0
-9.2	-1.8	8.0	-9.8
-9.1	-3.1	8.0	-11.1
-9.0	-8.3	8.0	-16.3
-8.9	-35.6	8.0	-43.6
-8.8	-9.6	8.0	-17.6
-8.7	-4.1	8.0	-12.1
-8.6	-2.6	8.0	-10.6
-8.5	-2.8	8.0	-10.8
-8.4	-5.1	8.0	-13.1
-8.3	-10.2	8.0	-18.2
-8.2	-27.6	8.0	-35.6
-8.1	-13.2	8.0	-21.2
-8.0	-7.2	8.0	-15.2
-7.9	-5.2	8.0	-13.2
-7.8	-4.2	8.0	-12.2
-7.7	-5.0	8.0	-13.0
-7.6	-7.0	8.0	-15.0
-7.5	-8.5	8.0	-16.5
-7.4	-5.6	8.0	-13.6
-7.3	-2.4	8.0	-10.4
-7.2	0.0	8.0	-8.0
-7.1	0.4	8.0	-7.6
-7.0	-0.4	7.9	-8.2
-6.9	-3.4	8.0	-11.5
-6.8	-12.7	8.2	-20.9
-6.7	-9.7	8.3	-18.1
-6.6	-1.7	8.5	-10.2
-6.5	1.4	8.7	-7.3
-6.4	2.4	8.8	-6.5
-6.3	1.8	9.0	-7.2
-6.2	-0.4	9.2	-9.6
-6.1	-4.6	9.4	-14.0
-6.0	-12.0	9.5	-21.6
-5.9	-19.8	9.7	-29.6
-5.8	-23.0	9.9	-32.9
-5.7	-17.3	10.1	-27.4
-5.6	-6.1	10.3	-16.4
-5.5	-0.4	10.5	-10.9
-5.4	1.8	10.7	-8.9
-5.3	3.1	10.9	-7.8
-5.2	3.6	11.1	-7.5
-5.1	3.5	11.3	-7.8
-5.0	3.4	11.5	-8.1
-4.9	3.4	11.7	-8.3
-4.8	2.7	12.0	-9.3
-4.7	0.4	12.2	-11.8
-4.6	-4.7	12.4	-17.1
-4.5	-4.5	12.7	-17.2
-4.4	0.8	12.9	-12.1
-4.3	3.3	13.2	-9.9
-4.2	4.0	13.4	-9.4
-4.1	3.2	13.7	-10.5

27.60 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	47.2		
0.1	47.0		
0.2	46.4		
0.3	45.2		
0.4	43.6		
0.5	41.3		
0.6	38.5		
0.7	35.2		
0.8	31.5		
0.9	27.2		
1.0	22.2		
1.1	15.1		
1.2	9.3		
1.3	16.1		
1.4	18.8		
1.5	19.2	24.6	-5.4
1.6	18.1	23.9	-5.8
1.7	15.9	23.2	-7.3
1.8	13.1	22.6	-9.6
1.9	11.0	22.0	-11.1
2.0	9.4	21.5	-12.1
2.1	8.5	20.9	-12.5
2.2	9.0	20.4	-11.4
2.3	11.3	20.0	-8.6
2.4	13.1	19.5	-6.4
2.5	13.8	19.1	-5.3
2.6	13.1	18.6	-5.5
2.7	11.6	18.2	-6.6
2.8	10.1	17.8	-7.7
2.9	9.8	17.4	-7.6
3.0	10.6	17.1	-6.5
3.1	10.5	16.7	-6.3
3.2	9.0	16.4	-7.4
3.3	6.6	16.0	-9.4
3.4	4.1	15.7	-11.6
3.5	3.0	15.4	-12.4
3.6	4.5	15.1	-10.5
3.7	6.3	14.8	-8.5
3.8	7.8	14.5	-6.7
3.9	8.6	14.2	-5.7
4.0	8.5	13.9	-5.5
4.1	7.2	13.7	-6.5
4.2	4.8	13.4	-8.6
4.3	1.8	13.2	-11.3
4.4	0.9	12.9	-12.0
4.5	1.4	12.7	-11.3
4.6	1.0	12.4	-11.4
4.7	-2.0	12.2	-14.2
4.8	-11.1	12.0	-23.1
4.9	-3.8	11.7	-15.6
5.0	1.4	11.5	-10.1
5.1	2.6	11.3	-8.7
5.2	2.0	11.1	-9.1
5.3	-0.9	10.9	-11.7
5.4	-5.7	10.7	-16.4
5.5	-5.2	10.5	-15.7
5.6	-1.6	10.3	-11.9
5.7	-1.8	10.1	-11.9
5.8	-5.1	9.9	-15.0
5.9	-18.6	9.7	-28.3

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	2.4	13.9	-11.5
-3.9	3.9	14.2	-10.3
-3.8	6.6	14.5	-7.9
-3.7	8.7	14.8	-6.1
-3.6	9.8	15.1	-5.3
-3.5	10.3	15.4	-5.1
-3.4	10.7	15.7	-5.0
-3.3	10.8	16.0	-5.2
-3.2	10.7	16.4	-5.7
-3.1	9.6	16.7	-7.1
-3.0	8.3	17.1	-8.8
-2.9	8.7	17.4	-8.8
-2.8	11.3	17.8	-6.6
-2.7	13.3	18.2	-4.9
-2.6	14.3	18.6	-4.3
-2.5	14.6	19.1	-4.4
-2.4	14.9	19.5	-4.6
-2.3	15.8	20.0	-4.2
-2.2	17.0	20.4	-3.4
-2.1	17.7	20.9	-3.3
-2.0	17.1	21.5	-4.3
-1.9	14.7	22.0	-7.3
-1.8	9.2	22.6	-13.4
-1.7	10.0	23.2	-13.3
-1.6	15.4	23.9	-8.5
-1.5	17.7	24.6	-6.9
-1.4	17.8		
-1.3	16.2		
-1.2	14.9		
-1.1	16.6		
-1.0	18.1		
-0.9	19.8		
-0.8	25.3		
-0.7	31.4		
-0.6	36.2		
-0.5	39.9		
-0.4	42.6		
-0.3	44.6		
-0.2	46.0		
-0.1	46.9		
0.0	47.2		

6.0	-4.6	9.5	-14.1
6.1	0.1	9.4	-9.3
6.2	2.0	9.2	-7.2
6.3	1.5	9.0	-7.5
6.4	-1.1	8.8	-10.0
6.5	-7.1	8.7	-15.8
6.6	-21.3	8.5	-29.9
6.7	-10.0	8.3	-18.3
6.8	-8.2	8.2	-16.4
6.9	-7.4	8.0	-15.5
7.0	-6.6	7.9	-14.4
7.1	-4.4	8.0	-12.4
7.2	-3.7	8.0	-11.7
7.3	-5.3	8.0	-13.3
7.4	-11.7	8.0	-19.7
7.5	-13.9	8.0	-21.9
7.6	-6.9	8.0	-14.9
7.7	-3.7	8.0	-11.7
7.8	-2.8	8.0	-10.8
7.9	-3.0	8.0	-11.0
8.0	-4.6	8.0	-12.6
8.1	-6.3	8.0	-14.3
8.2	-8.9	8.0	-16.9
8.3	-11.5	8.0	-19.5
8.4	-25.6	8.0	-33.6
8.5	-11.8	8.0	-19.8
8.6	-5.2	8.0	-13.2
8.7	-2.7	8.0	-10.7
8.8	-1.9	8.0	-9.9
8.9	-3.5	8.0	-11.5
9.0	-7.6	8.0	-15.6
9.1	-15.7	8.0	-23.7
9.2	-10.5	8.0	-18.5
9.3	-6.0	7.8	-13.7
9.4	-5.5	7.7	-13.1
9.5	-7.3	7.6	-14.9
9.6	-13.1	7.4	-20.6
9.7	-13.9	7.3	-21.2
9.8	-9.0	7.2	-16.2
9.9	-7.8	7.1	-14.9
10.0	-10.2	7.0	-17.2

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

27.60 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-12.7	-4.9	-7.8
-29.5	-11.0	-4.7	-6.3
-29.0	-10.4	-4.6	-5.9
-28.5	-9.9	-4.4	-5.6
-28.0	-10.8	-4.2	-6.7
-27.5	-13.0	-4.0	-9.0
-27.0	-14.4	-3.8	-10.6
-26.5	-13.3	-3.6	-9.7
-26.0	-11.4	-3.4	-8.0
-25.5	-10.2	-3.2	-7.1
-25.0	-10.1	-2.9	-7.1
-24.5	-13.6	-2.7	-10.9
-24.0	-12.9	-2.5	-10.4
-23.5	-12.7	-2.3	-10.4
-23.0	-12.6	-2.0	-10.5
-22.5	-16.8	-1.8	-15.0
-22.0	-27.6	-1.6	-26.0
-21.5	-17.6	-1.3	-16.3
-21.0	-12.5	-1.1	-11.4
-20.5	-12.8	-0.8	-12.0
-20.0	-17.4	-0.5	-16.9
-19.5	-14.3	-0.3	-14.1
-19.0	-13.3	0.0	-13.3
-18.5	-8.3	0.3	-8.6
-18.0	-10.4	0.6	-11.0
-17.5	-11.7	0.9	-12.7
-17.0	-14.5	1.2	-15.7
-16.5	-19.8	1.6	-21.4
-16.0	-23.1	1.9	-25.0
-15.5	-15.0	2.2	-17.3
-15.0	-16.2	2.6	-18.8
-14.5	-17.3	3.0	-20.3
-14.0	-10.0	3.3	-13.4
-13.5	-7.3	3.7	-11.1
-13.0	-10.8	4.2	-14.9
-12.5	-23.5	4.6	-28.1
-12.0	-10.7	5.0	-15.7
-11.5	-17.5	5.5	-23.0
-11.0	-8.0	6.0	-14.0
-10.5	-8.6	6.5	-15.1
-10.0	-11.3	7.0	-18.3
-9.5	-9.4	7.6	-17.0
-9.0	-16.4	8.1	-24.6
-8.5	-2.7	8.8	-11.5
-8.0	-3.2	9.4	-12.7
-7.5	-10.5	10.1	-20.6
-7.0	-2.7	10.9	-13.6
-6.5	-7.8	11.7	-19.5
-6.0	-4.4	12.5	-17.0
-5.5	-4.9	13.5	-18.4
-5.0	-1.5	14.5	-16.0
-4.5	0.8	15.7	-14.8
-4.0	4.9	16.9	-12.1
-3.5	2.4	18.4	-16.0
-3.0	10.6	20.1	-9.5
-2.5	10.9		
-2.0	10.0		
-1.5	20.2		
-1.0	19.4		
-0.5	41.4		
0.0	47.2		

27.60 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	47.2		
0.5	40.3		
1.0	18.1		
1.5	16.3		
2.0	17.0		
2.5	15.5		
3.0	5.9	20.1	-14.1
3.5	8.3	18.4	-10.1
4.0	6.1	16.9	-10.8
4.5	-1.4	15.7	-17.1
5.0	-1.7	14.5	-16.2
5.5	0.5	13.5	-13.0
6.0	-6.2	12.5	-18.8
6.5	-0.6	11.7	-12.3
7.0	1.1	10.9	-9.8
7.5	-7.0	10.1	-17.1
8.0	-16.1	9.4	-25.5
8.5	-2.9	8.8	-11.6
9.0	-6.8	8.1	-14.9
9.5	-17.1	7.6	-24.6
10.0	-3.2	7.0	-10.2
10.5	-4.2	6.5	-10.7
11.0	-15.0	6.0	-20.9
11.5	-3.2	5.5	-8.7
12.0	-5.7	5.0	-10.7
12.5	-9.5	4.6	-14.0
13.0	-3.6	4.2	-7.7
13.5	-7.9	3.7	-11.6
14.0	-5.0	3.3	-8.3
14.5	-11.3	3.0	-14.2
15.0	-0.4	2.6	-3.0
15.5	-6.1	2.2	-8.3
16.0	-7.0	1.9	-8.9
16.5	-3.4	1.6	-4.9
17.0	-2.5	1.2	-3.8
17.5	-4.5	0.9	-5.4
18.0	-3.7	0.6	-4.4
18.5	-16.1	0.3	-16.4
19.0	-10.1	0.0	-10.1
19.5	-11.8	-0.3	-11.6
20.0	-12.8	-0.5	-12.3
20.5	-18.1	-0.8	-17.3
21.0	-9.0	-1.1	-8.0
21.5	-13.9	-1.3	-12.6
22.0	-13.6	-1.6	-12.0
22.5	-7.1	-1.8	-5.3
23.0	-9.5	-2.0	-7.5
23.5	-11.8	-2.3	-9.5
24.0	-10.3	-2.5	-7.8
24.5	-12.6	-2.7	-9.8
25.0	-13.6	-2.9	-10.7
25.5	-10.9	-3.2	-7.8
26.0	-8.9	-3.4	-5.6
26.5	-12.8	-3.6	-9.2
27.0	-8.7	-3.8	-5.0
27.5	-10.1	-4.0	-6.1
28.0	-19.4	-4.2	-15.3
28.5	-10.9	-4.4	-6.5
29.0	-16.5	-4.6	-11.9
29.5	-22.7	-4.7	-17.9
30.0	-10.7	-4.9	-5.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

27.60 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-11.3	7.0	-18.3
-9.9	-9.6	7.1	-16.7
-9.8	-11.0	7.2	-18.2
-9.7	-14.1	7.3	-21.4
-9.6	-16.5	7.4	-23.9
-9.5	-9.4	7.6	-17.0
-9.4	-6.9	7.7	-14.6
-9.3	-6.0	7.8	-13.8
-9.2	-7.4	7.9	-15.3
-9.1	-12.6	8.0	-20.6
-9.0	-16.4	8.1	-24.6
-8.9	-7.9	8.3	-16.2
-8.8	-3.4	8.4	-11.8
-8.7	-1.6	8.5	-10.1
-8.6	-1.4	8.6	-10.1
-8.5	-2.7	8.8	-11.5
-8.4	-6.4	8.9	-15.3
-8.3	-14.9	9.0	-24.0
-8.2	-13.0	9.2	-22.2
-8.1	-6.1	9.3	-15.4
-8.0	-3.2	9.4	-12.7
-7.9	-2.7	9.6	-12.3
-7.8	-3.8	9.7	-13.5
-7.7	-7.6	9.8	-17.5
-7.6	-12.6	10.0	-22.6
-7.5	-10.5	10.1	-20.6
-7.4	-6.0	10.3	-16.2
-7.3	-4.3	10.4	-14.7
-7.2	-3.2	10.6	-13.7
-7.1	-3.3	10.7	-14.0
-7.0	-2.7	10.9	-13.6
-6.9	-2.5	11.0	-13.6
-6.8	-3.6	11.2	-14.7
-6.7	-7.4	11.3	-18.7
-6.6	-21.1	11.5	-32.6
-6.5	-7.8	11.7	-19.5
-6.4	-1.8	11.8	-13.6
-6.3	0.5	12.0	-11.5
-6.2	0.8	12.2	-11.4
-6.1	-0.8	12.4	-13.1
-6.0	-4.4	12.5	-17.0
-5.9	-8.5	12.7	-21.2
-5.8	-6.0	12.9	-19.0
-5.7	-3.5	13.1	-16.6
-5.6	-3.3	13.3	-16.6
-5.5	-4.9	13.5	-18.4
-5.4	-4.2	13.7	-17.9
-5.3	-2.1	13.9	-16.0
-5.2	0.0	14.1	-14.1
-5.1	0.1	14.3	-14.2
-5.0	-1.5	14.5	-16.0
-4.9	-7.4	14.7	-22.1
-4.8	-12.1	15.0	-27.1
-4.7	-3.9	15.2	-19.1
-4.6	-0.3	15.4	-15.7
-4.5	0.8	15.7	-14.8
-4.4	1.0	15.9	-14.9
-4.3	1.2	16.2	-15.0
-4.2	2.3	16.4	-14.1
-4.1	3.8	16.7	-12.9

27.60 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	47.2		
0.1	46.9		
0.2	46.1		
0.3	44.8		
0.4	42.9		
0.5	40.3		
0.6	37.0		
0.7	32.7		
0.8	27.2		
0.9	21.2		
1.0	18.1		
1.1	17.5		
1.2	16.7		
1.3	16.6		
1.4	16.8		
1.5	16.3		
1.6	13.8		
1.7	8.6		
1.8	8.9		
1.9	14.3		
2.0	17.0		
2.1	17.9		
2.2	17.7		
2.3	16.9		
2.4	16.0		
2.5	15.5		
2.6	15.0		
2.7	13.8		
2.8	11.7		
2.9	8.8		
3.0	5.9	20.1	-14.1
3.1	6.6	19.7	-13.1
3.2	8.5	19.4	-10.8
3.3	9.3	19.0	-9.7
3.4	9.2	18.7	-9.6
3.5	8.3	18.4	-10.1
3.6	7.2	18.1	-10.9
3.7	5.9	17.8	-11.9
3.8	5.1	17.5	-12.4
3.9	5.3	17.2	-11.9
4.0	6.1	16.9	-10.8
4.1	6.8	16.7	-9.9
4.2	6.7	16.4	-9.7
4.3	5.4	16.2	-10.8
4.4	3.2	15.9	-12.8
4.5	-1.4	15.7	-17.1
4.6	-12.7	15.4	-28.2
4.7	-9.4	15.2	-24.6
4.8	-3.5	15.0	-18.5
4.9	-1.9	14.7	-16.7
5.0	-1.7	14.5	-16.2
5.1	-2.5	14.3	-16.8
5.2	-2.7	14.1	-16.8
5.3	-1.4	13.9	-15.3
5.4	-0.4	13.7	-14.1
5.5	0.5	13.5	-13.0
5.6	1.0	13.3	-12.3
5.7	0.7	13.1	-12.4
5.8	-1.1	12.9	-14.1
5.9	-3.9	12.7	-16.6

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	4.9	16.9	-12.1
-3.9	5.3	17.2	-11.9
-3.8	5.1	17.5	-12.4
-3.7	4.2	17.8	-13.6
-3.6	2.7	18.1	-15.3
-3.5	2.4	18.4	-16.0
-3.4	4.9	18.7	-13.8
-3.3	7.7	19.0	-11.4
-3.2	9.7	19.4	-9.7
-3.1	10.6	19.7	-9.1
-3.0	10.6	20.1	-9.5
-2.9	10.0		
-2.8	9.5		
-2.7	9.9		
-2.6	10.6		
-2.5	10.9		
-2.4	10.1		
-2.3	8.5		
-2.2	6.9		
-2.1	7.6		
-2.0	10.0		
-1.9	12.8		
-1.8	15.4		
-1.7	17.8		
-1.6	19.5		
-1.5	20.2		
-1.4	19.8		
-1.3	17.8		
-1.2	12.8		
-1.1	7.7		
-1.0	19.4		
-0.9	26.3		
-0.8	31.3		
-0.7	35.4		
-0.6	38.7		
-0.5	41.4		
-0.4	43.6		
-0.3	45.2		
-0.2	46.4		
-0.1	47.0		
0.0	47.2		

6.0	-6.2	12.5	-18.8
6.1	-3.9	12.4	-16.3
6.2	-0.6	12.2	-12.8
6.3	0.8	12.0	-11.2
6.4	0.9	11.8	-10.9
6.5	-0.6	11.7	-12.3
6.6	-5.1	11.5	-16.6
6.7	-10.7	11.3	-22.0
6.8	-5.3	11.2	-16.5
6.9	-0.7	11.0	-11.7
7.0	1.1	10.9	-9.8
7.1	1.7	10.7	-9.1
7.2	1.4	10.6	-9.1
7.3	-0.2	10.4	-10.6
7.4	-2.8	10.3	-13.1
7.5	-7.0	10.1	-17.1
7.6	-12.6	10.0	-22.6
7.7	-19.8	9.8	-29.6
7.8	-19.7	9.7	-29.4
7.9	-15.7	9.6	-25.3
8.0	-16.1	9.4	-25.5
8.1	-11.9	9.3	-21.1
8.2	-7.7	9.2	-16.8
8.3	-4.2	9.0	-13.2
8.4	-2.9	8.9	-11.8
8.5	-2.9	8.8	-11.6
8.6	-4.3	8.6	-12.9
8.7	-7.3	8.5	-15.8
8.8	-14.8	8.4	-23.1
8.9	-12.7	8.3	-21.0
9.0	-6.8	8.1	-14.9
9.1	-4.5	8.0	-12.6
9.2	-4.3	7.9	-12.2
9.3	-6.2	7.8	-14.0
9.4	-11.3	7.7	-19.0
9.5	-17.1	7.6	-24.6
9.6	-8.1	7.4	-15.6
9.7	-4.1	7.3	-11.5
9.8	-2.4	7.2	-9.6
9.9	-2.3	7.1	-9.4
10.0	-3.2	7.0	-10.2

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.60 GHz Antenna Pattern in X-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-13.0	-2.0	-11.0
-9.9	-13.6	-2.0	-11.6
-9.8	-13.8	-2.0	-11.8
-9.7	-13.3	-2.0	-11.3
-9.6	-12.4	-2.0	-10.4
-9.5	-11.6	-2.0	-9.6
-9.4	-9.5	-2.0	-7.5
-9.3	-9.3	-2.0	-7.3
-9.2	-9.0	-2.0	-7.0
-9.1	-10.4	-2.0	-8.4
-9.0	-14.4	-2.0	-12.4
-8.9	-20.5	-2.0	-18.5
-8.8	-23.9	-2.0	-21.9
-8.7	-14.5	-2.0	-12.5
-8.6	-10.7	-2.0	-8.7
-8.5	-9.7	-2.0	-7.7
-8.4	-9.4	-2.0	-7.4
-8.3	-11.5	-2.0	-9.5
-8.2	-13.2	-2.0	-11.2
-8.1	-13.5	-2.0	-11.5
-8.0	-14.9	-2.0	-12.9
-7.9	-13.4	-2.0	-11.4
-7.8	-11.0	-2.0	-9.0
-7.7	-10.8	-2.0	-8.8
-7.6	-11.2	-2.0	-9.2
-7.5	-10.9	-2.0	-8.9
-7.4	-11.8	-2.0	-9.8
-7.3	-14.5	-2.0	-12.5
-7.2	-15.0	-2.0	-13.0
-7.1	-16.1	-2.0	-14.1
-7.0	-14.2	-2.1	-12.1
-6.9	-12.0	-2.0	-10.1
-6.8	-10.3	-1.8	-8.5
-6.7	-8.8	-1.7	-7.1
-6.6	-7.4	-1.5	-5.9
-6.5	-6.7	-1.3	-5.4
-6.4	-6.3	-1.2	-5.1
-6.3	-5.8	-1.0	-4.8
-6.2	-4.9	-0.8	-4.1
-6.1	-3.7	-0.6	-3.1
-6.0	-2.8	-0.5	-2.3
-5.9	-2.1	-0.3	-1.8
-5.8	-2.3	-0.1	-2.2
-5.7	-2.2	0.1	-2.3
-5.6	-2.5	0.3	-2.8
-5.5	-3.1	0.5	-3.6
-5.4	-2.9	0.7	-3.6
-5.3	-2.9	0.9	-3.8
-5.2	-2.5	1.1	-3.6
-5.1	-2.3	1.3	-3.6
-5.0	-1.8	1.5	-3.4
-4.9	-0.9	1.7	-2.7
-4.8	0.1	2.0	-1.8
-4.7	0.9	2.2	-1.3
-4.6	2.1	2.4	-0.3
-4.5	2.9	2.7	0.3
-4.4	3.3	2.9	0.3
-4.3	3.6	3.2	0.4
-4.2	3.3	3.4	-0.1
-4.1	2.8	3.7	-0.9

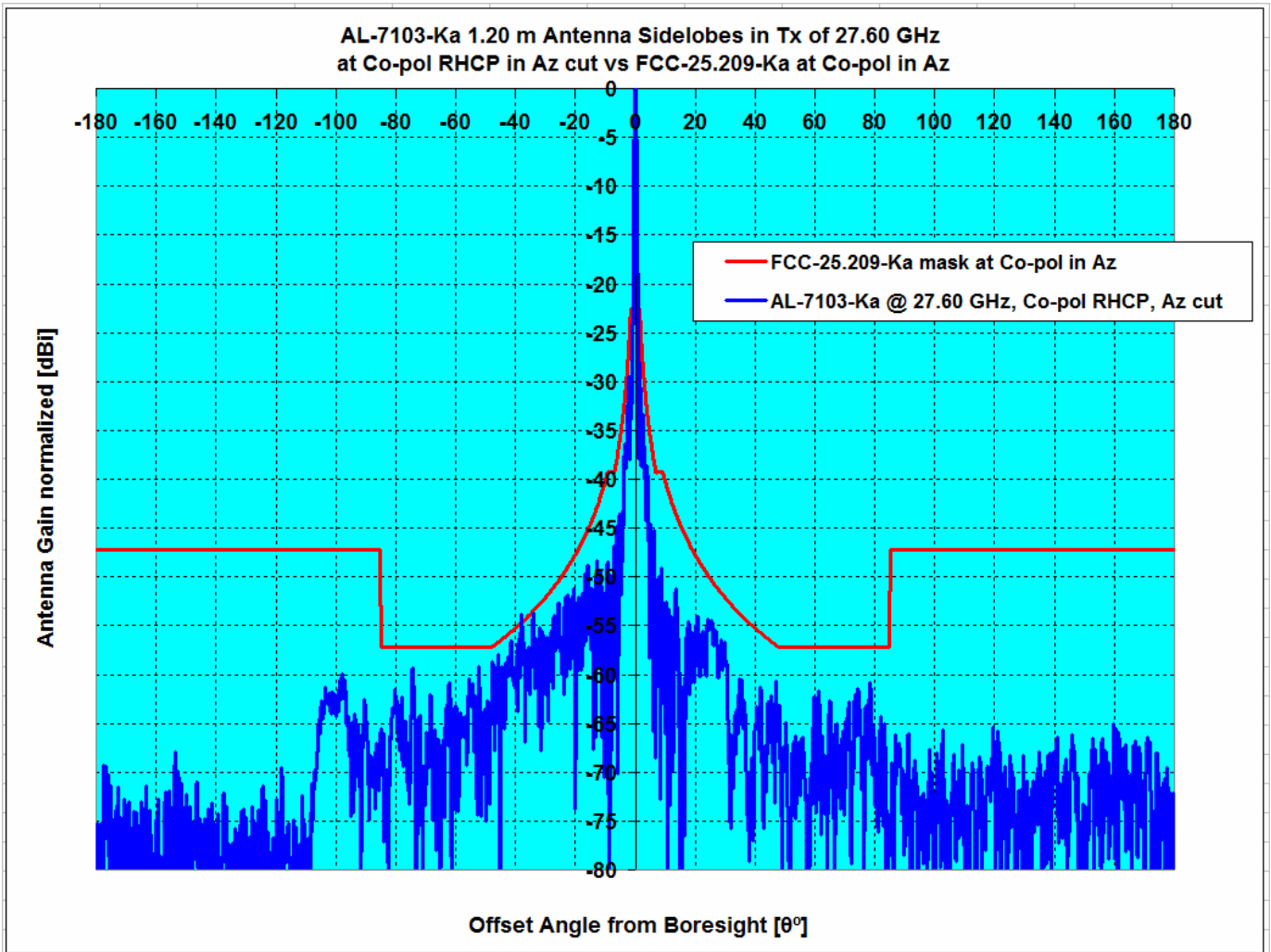
27.60 GHz Antenna Pattern in X-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	14.2		
0.1	11.4		
0.2	9.3		
0.3	8.2		
0.4	8.0		
0.5	8.2		
0.6	7.8		
0.7	7.5		
0.8	6.6		
0.9	5.5		
1.0	4.4		
1.1	2.8		
1.2	1.4		
1.3	-0.2		
1.4	-0.7		
1.5	-1.5		
1.6	-1.6		
1.7	-3.1		
1.8	-4.1	12.6	-16.7
1.9	-5.2	12.0	-17.2
2.0	-7.4	11.5	-18.9
2.1	-7.9	10.9	-18.8
2.2	-7.1	10.4	-17.5
2.3	-5.2	10.0	-15.2
2.4	-3.0	9.5	-12.5
2.5	-3.2	9.1	-12.3
2.6	-1.7	8.6	-10.3
2.7	-1.5	8.2	-9.7
2.8	-2.5	7.8	-10.3
2.9	-2.2	7.4	-9.6
3.0	-5.5	7.1	-12.6
3.1	-9.8	6.7	-16.5
3.2	-14.5	6.4	-20.8
3.3	-12.1	6.0	-18.1
3.4	-10.7	5.7	-16.4
3.5	-15.3	5.4	-20.7
3.6	-16.6	5.1	-21.7
3.7	-12.9	4.8	-17.7
3.8	-12.6	4.5	-17.1
3.9	-13.7	4.2	-18.0
4.0	-15.1	3.9	-19.0
4.1	-26.4	3.7	-30.0
4.2	-16.2	3.4	-19.6
4.3	-19.4	3.2	-22.6
4.4	-13.7	2.9	-16.6
4.5	-16.6	2.7	-19.3
4.6	-17.7	2.4	-20.2
4.7	-17.5	2.2	-19.7
4.8	-23.1	2.0	-25.0
4.9	-15.4	1.7	-17.1
5.0	-15.0	1.5	-16.5
5.1	-18.4	1.3	-19.7
5.2	-22.5	1.1	-23.6
5.3	-22.8	0.9	-23.7
5.4	-24.2	0.7	-24.9
5.5	-22.2	0.5	-22.7
5.6	-19.8	0.3	-20.1
5.7	-24.5	0.1	-24.6
5.8	-20.0	-0.1	-19.9
5.9	-18.7	-0.3	-18.4

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

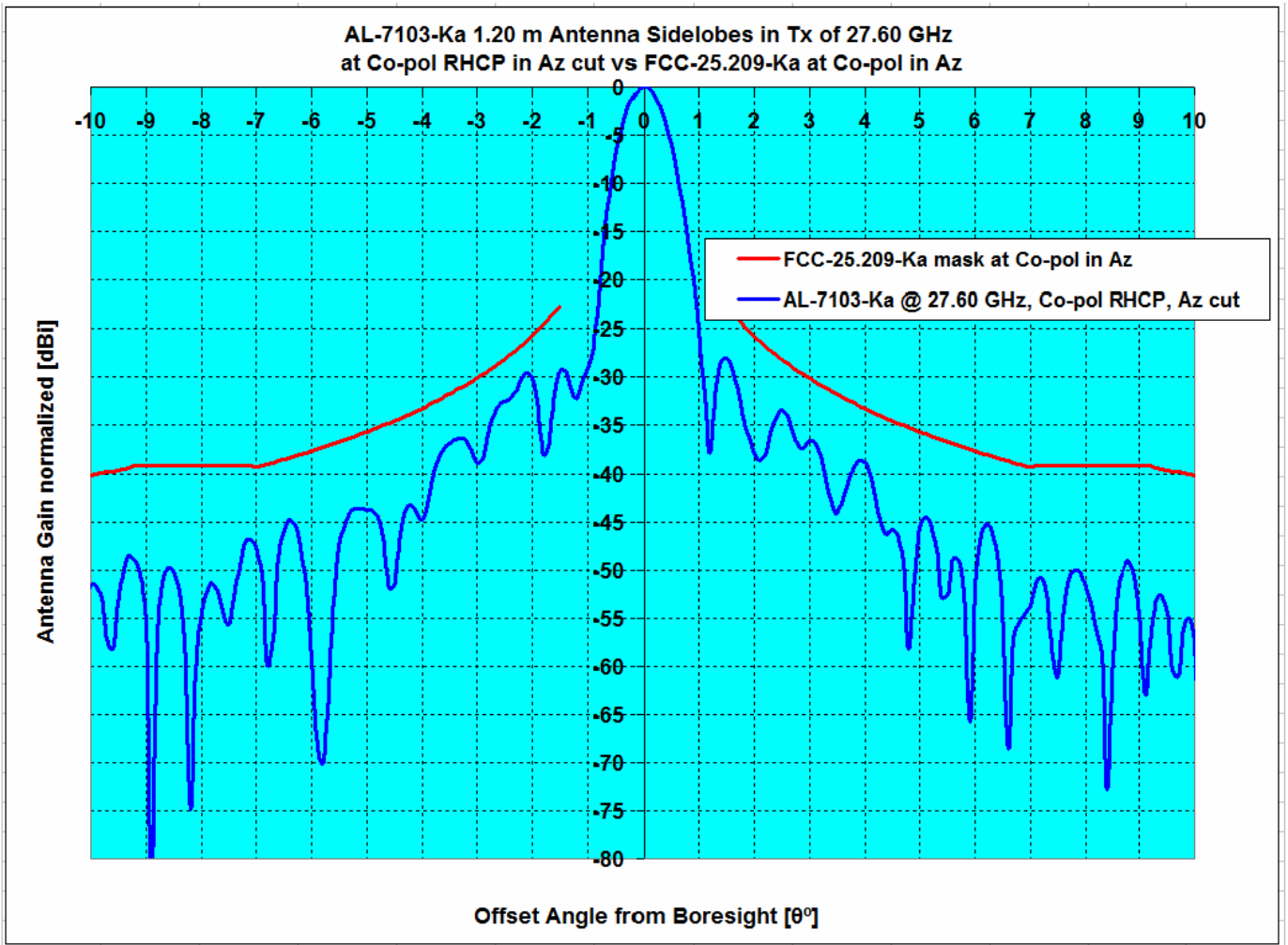
-4.0	2.2	3.9	-1.8
-3.9	1.5	4.2	-2.7
-3.8	1.0	4.5	-3.5
-3.7	0.9	4.8	-3.9
-3.6	0.6	5.1	-4.5
-3.5	1.0	5.4	-4.4
-3.4	1.2	5.7	-4.5
-3.3	1.1	6.0	-4.9
-3.2	0.9	6.4	-5.5
-3.1	-0.1	6.7	-6.8
-3.0	-1.4	7.1	-8.5
-2.9	-1.9	7.4	-9.3
-2.8	-1.3	7.8	-9.1
-2.7	0.5	8.2	-7.7
-2.6	1.5	8.6	-7.1
-2.5	1.4	9.1	-7.6
-2.4	0.7	9.5	-8.8
-2.3	-1.8	10.0	-11.7
-2.2	-4.4	10.4	-14.9
-2.1	-4.7	10.9	-15.7
-2.0	-3.5	11.5	-15.0
-1.9	-2.9	12.0	-15.0
-1.8	-2.6	12.6	-15.2
-1.7	0.0		
-1.6	3.0		
-1.5	5.2		
-1.4	6.1		
-1.3	5.4		
-1.2	1.0		
-1.1	-7.3		
-1.0	6.6		
-0.9	12.6		
-0.8	16.1		
-0.7	18.0		
-0.6	19.1		
-0.5	19.5		
-0.4	19.7		
-0.3	19.4		
-0.2	18.4		
-0.1	16.6		
0.0	14.2		

6.0	-15.2	-0.5	-14.7
6.1	-15.2	-0.6	-14.5
6.2	-13.2	-0.8	-12.4
6.3	-12.5	-1.0	-11.6
6.4	-13.1	-1.2	-12.0
6.5	-12.8	-1.3	-11.5
6.6	-13.7	-1.5	-12.2
6.7	-14.4	-1.7	-12.8
6.8	-15.3	-1.8	-13.5
6.9	-18.5	-2.0	-16.5
7.0	-22.5	-2.1	-20.4
7.1	-24.2	-2.0	-22.2
7.2	-17.1	-2.0	-15.1
7.3	-12.4	-2.0	-10.4
7.4	-9.3	-2.0	-7.3
7.5	-8.5	-2.0	-6.5
7.6	-8.1	-2.0	-6.1
7.7	-8.6	-2.0	-6.6
7.8	-9.7	-2.0	-7.7
7.9	-9.3	-2.0	-7.3
8.0	-10.2	-2.0	-8.2
8.1	-11.7	-2.0	-9.7
8.2	-11.8	-2.0	-9.8
8.3	-13.5	-2.0	-11.5
8.4	-16.2	-2.0	-14.2
8.5	-20.3	-2.0	-18.3
8.6	-24.2	-2.0	-22.2
8.7	-22.5	-2.0	-20.5
8.8	-22.3	-2.0	-20.3
8.9	-24.8	-2.0	-22.8
9.0	-23.0	-2.0	-21.0
9.1	-20.9	-2.0	-18.9
9.2	-26.6	-2.0	-24.6
9.3	-27.8	-2.0	-25.8
9.4	-32.2	-2.0	-30.2
9.5	-24.8	-2.0	-22.8
9.6	-21.7	-2.0	-19.7
9.7	-22.5	-2.0	-20.5
9.8	-27.2	-2.0	-25.2
9.9	-33.2	-2.0	-31.2
10.0	-28.7	-2.0	-26.7



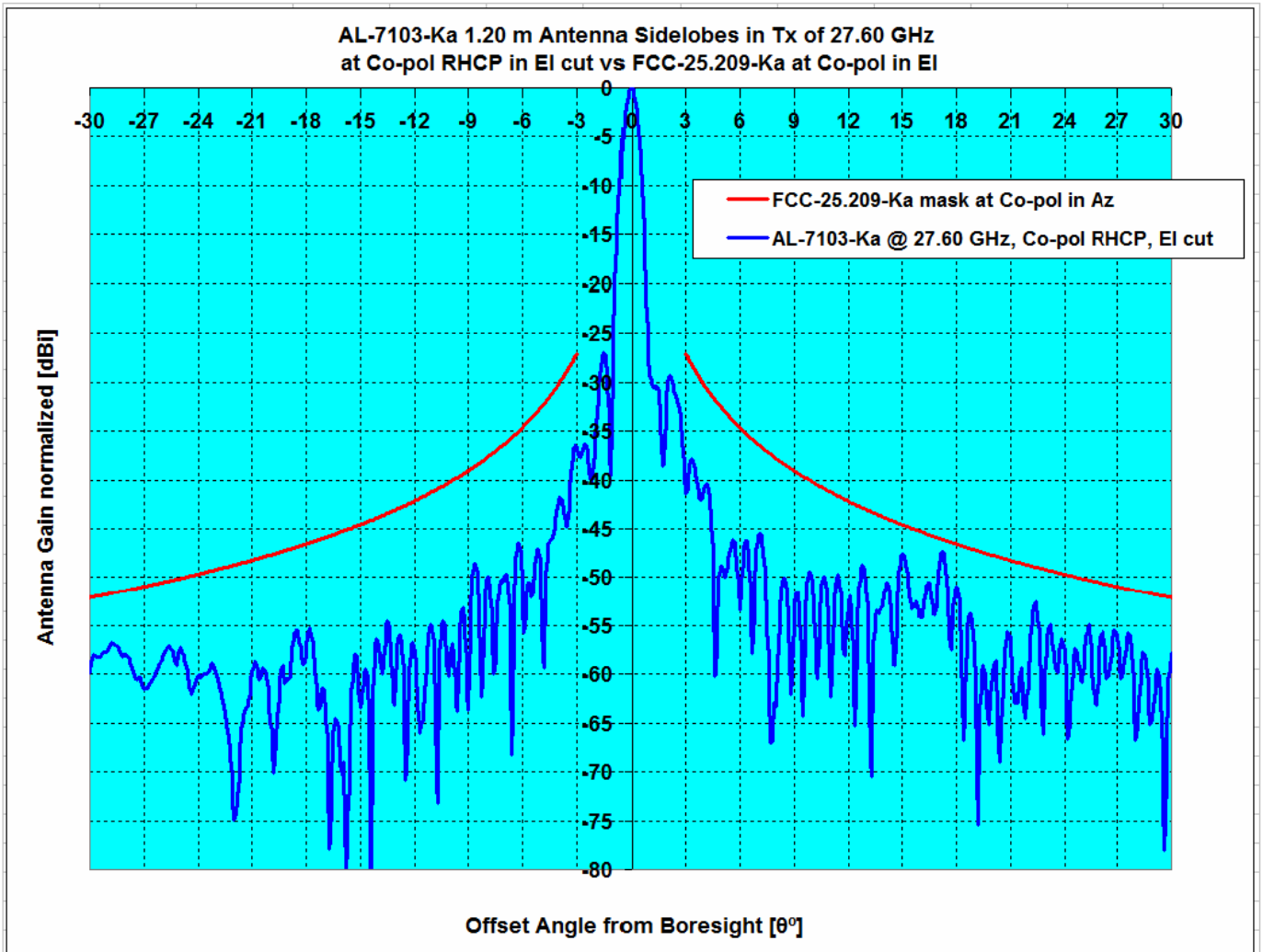
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , RHCP	27.60	47.20	-3.26	0.90	0.00%	0.08%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth RHCP

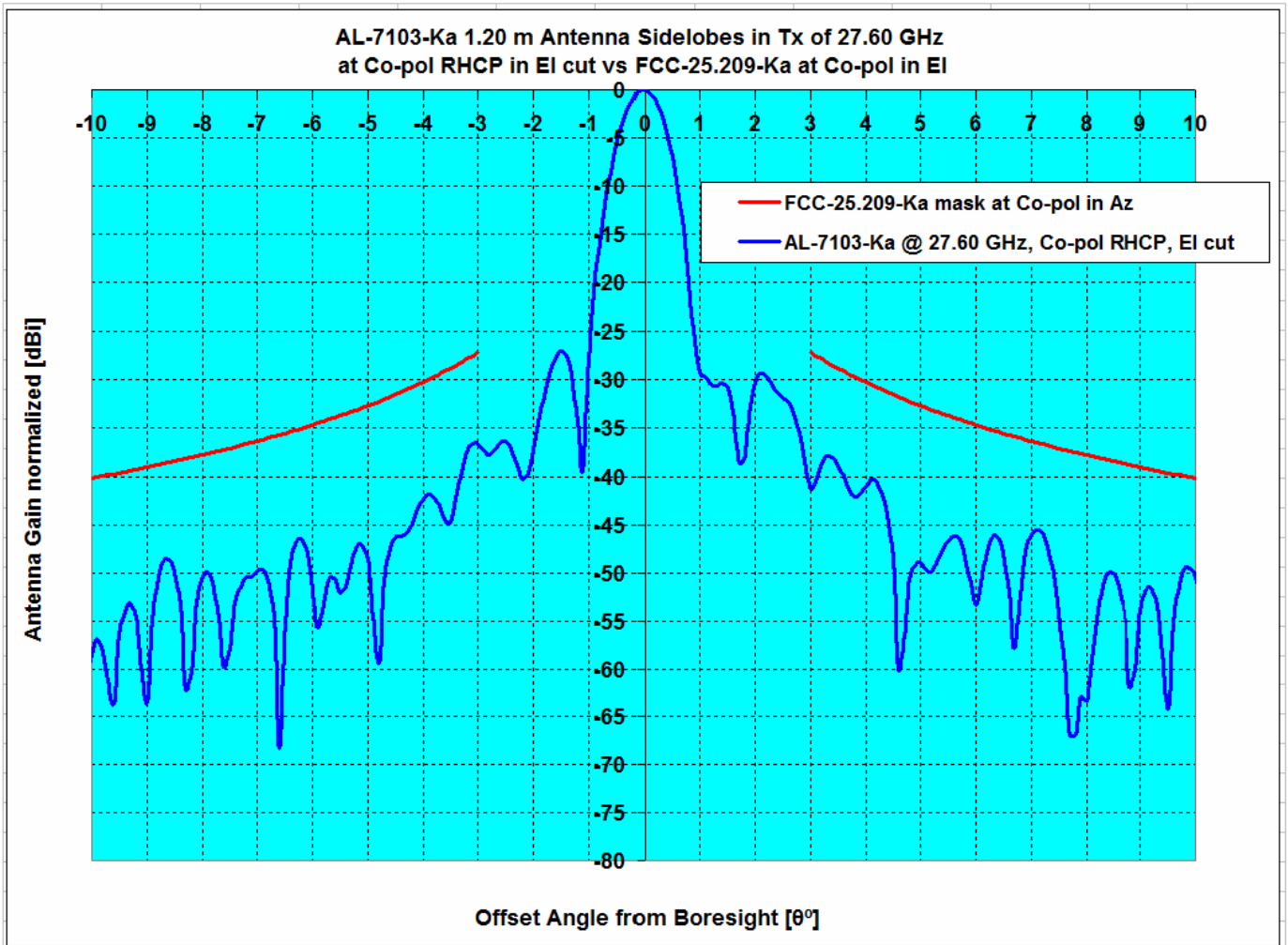


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , RHCP	27.60	47.20	-3.26	0.90	0.00%	0.08%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Elevation RHCP

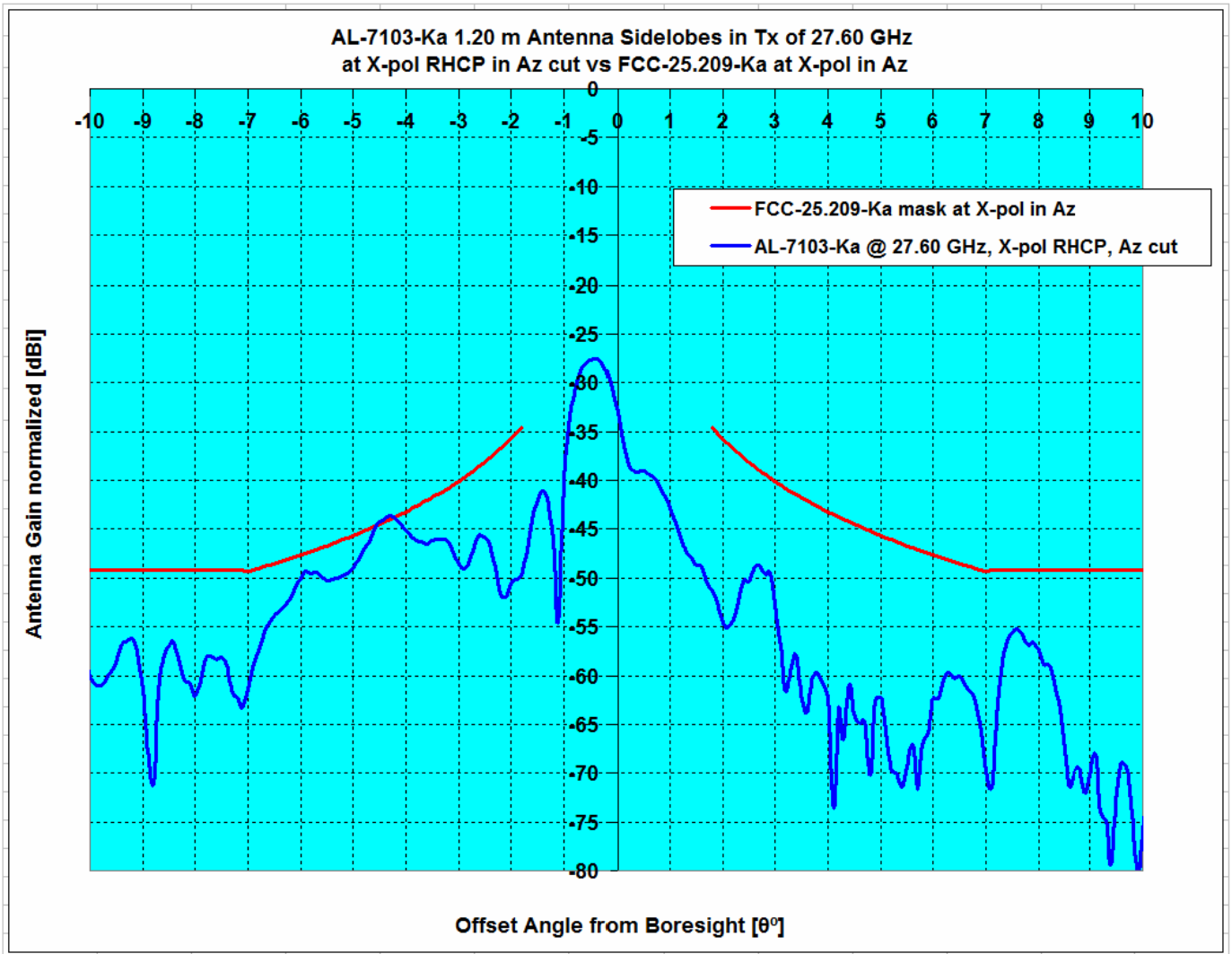


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI, RHCP	27.60	47.20	-9.09	-1.24	0.00%	0.00%



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3° ≤ θ ≤ 7°	7° ≤ θ ≤ 30°	3° ≤ θ ≤ 7°	7° ≤ θ ≤ 30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI, RHCP	27.60	47.20	-9.09	-1.24	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, X-pol, Azimuth RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7103-Ka	Az, RHCP	27.60	47.20	0.44	0.44	2.83%	1.81%

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-30.3	0.0	-30.3
-178.0	-30.9	0.0	-30.9
-177.0	-24.1	0.0	-24.1
-176.0	-27.0	0.0	-27.0
-175.0	-26.0	0.0	-26.0
-174.0	-32.8	0.0	-32.8
-173.0	-23.0	0.0	-23.0
-172.0	-45.2	0.0	-45.2
-171.0	-26.5	0.0	-26.5
-170.0	-28.4	0.0	-28.4
-169.0	-28.9	0.0	-28.9
-168.0	-38.7	0.0	-38.7
-167.0	-31.5	0.0	-31.5
-166.0	-32.7	0.0	-32.7
-165.0	-34.3	0.0	-34.3
-164.0	-29.4	0.0	-29.4
-163.0	-37.3	0.0	-37.3
-162.0	-34.9	0.0	-34.9
-161.0	-39.4	0.0	-39.4
-160.0	-27.7	0.0	-27.7
-159.0	-38.1	0.0	-38.1
-158.0	-35.8	0.0	-35.8
-157.0	-38.9	0.0	-38.9
-156.0	-38.9	0.0	-38.9
-155.0	-27.2	0.0	-27.2
-154.0	-30.6	0.0	-30.6
-153.0	-30.8	0.0	-30.8
-152.0	-33.4	0.0	-33.4
-151.0	-31.6	0.0	-31.6
-150.0	-31.7	0.0	-31.7
-149.0	-33.0	0.0	-33.0
-148.0	-38.0	0.0	-38.0
-147.0	-28.3	0.0	-28.3
-146.0	-36.8	0.0	-36.8
-145.0	-38.4	0.0	-38.4
-144.0	-32.8	0.0	-32.8
-143.0	-34.6	0.0	-34.6
-142.0	-47.7	0.0	-47.7
-141.0	-34.4	0.0	-34.4
-140.0	-28.4	0.0	-28.4
-139.0	-34.3	0.0	-34.3
-138.0	-28.0	0.0	-28.0
-137.0	-31.9	0.0	-31.9
-136.0	-28.8	0.0	-28.8
-135.0	-27.6	0.0	-27.6
-134.0	-25.1	0.0	-25.1
-133.0	-30.2	0.0	-30.2
-132.0	-30.5	0.0	-30.5
-131.0	-27.7	0.0	-27.7
-130.0	-26.3	0.0	-26.3
-129.0	-23.8	0.0	-23.8
-128.0	-26.0	0.0	-26.0
-127.0	-27.5	0.0	-27.5
-126.0	-37.2	0.0	-37.2
-125.0	-36.3	0.0	-36.3
-124.0	-31.3	0.0	-31.3
-123.0	-31.6	0.0	-31.6
-122.0	-26.4	0.0	-26.4
-121.0	-26.9	0.0	-26.9
-120.0	-27.2	0.0	-27.2

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.2		
1.0	20.0		
2.0	9.4	21.5	-12.1
3.0	10.0	17.1	-7.1
4.0	6.8	13.9	-7.2
5.0	1.4	11.5	-10.1
6.0	4.3	9.5	-5.3
7.0	1.7	7.9	-6.1
8.0	-6.5	8.0	-14.5
9.0	-6.0	8.0	-14.0
10.0	-4.7	7.0	-11.7
11.0	-10.8	6.0	-16.8
12.0	-9.8	5.0	-14.8
13.0	-6.0	4.2	-10.1
14.0	-9.1	3.3	-12.4
15.0	-8.5	2.6	-11.1
16.0	-13.4	1.9	-15.3
17.0	-14.0	1.2	-15.2
18.0	-17.6	0.6	-18.2
19.0	-22.1	0.0	-22.1
20.0	-15.5	-0.5	-15.0
21.0	-8.6	-1.1	-7.6
22.0	-14.2	-1.6	-12.6
23.0	-14.4	-2.0	-12.3
24.0	-17.7	-2.5	-15.2
25.0	-13.2	-2.9	-10.3
26.0	-9.8	-3.4	-6.4
27.0	-13.9	-3.8	-10.1
28.0	-19.1	-4.2	-14.9
29.0	-7.7	-4.6	-3.1
30.0	-9.8	-4.9	-4.9
31.0	-10.4	-5.3	-5.1
32.0	-8.5	-5.6	-2.9
33.0	-6.9	-6.0	-0.9
34.0	-8.9	-6.3	-2.6
35.0	-14.7	-6.6	-8.1
36.0	-23.5	-6.9	-16.6
37.0	-25.0	-7.2	-17.8
38.0	-20.0	-7.5	-12.5
39.0	-19.9	-7.8	-12.1
40.0	-17.1	-8.1	-9.0
41.0	-36.4	-8.3	-28.1
42.0	-22.8	-8.6	-14.2
43.0	-21.7	-8.8	-12.9
44.0	-20.2	-9.1	-11.2
45.0	-12.1	-9.3	-2.8
46.0	-12.2	-9.6	-2.6
47.0	-10.4	-9.8	-0.6
48.0	-10.7	-10.0	-0.7
49.0	-16.6	-10.0	-6.6
50.0	-18.9	-10.0	-8.9
51.0	-16.9	-10.0	-6.9
52.0	-14.8	-10.0	-4.8
53.0	-18.0	-10.0	-8.0
54.0	-22.0	-10.0	-12.0
55.0	-22.1	-10.0	-12.1
56.0	-18.7	-10.0	-8.7
57.0	-16.0	-10.0	-6.0
58.0	-24.7	-10.0	-14.7
59.0	-19.2	-10.0	-9.2

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-33.8	0.0	-33.8
-118.0	-27.1	0.0	-27.1
-117.0	-25.7	0.0	-25.7
-116.0	-25.3	0.0	-25.3
-115.0	-24.9	0.0	-24.9
-114.0	-23.3	0.0	-23.3
-113.0	-30.0	0.0	-30.0
-112.0	-24.9	0.0	-24.9
-111.0	-25.4	0.0	-25.4
-110.0	-25.5	0.0	-25.5
-109.0	-21.7	0.0	-21.7
-108.0	-22.6	0.0	-22.6
-107.0	-21.5	0.0	-21.5
-106.0	-16.7	0.0	-16.7
-105.0	-14.7	0.0	-14.7
-104.0	-14.6	0.0	-14.6
-103.0	-12.3	0.0	-12.3
-102.0	-12.3	0.0	-12.3
-101.0	-12.0	0.0	-12.0
-100.0	-14.1	0.0	-14.1
-99.0	-16.9	0.0	-16.9
-98.0	-18.7	0.0	-18.7
-97.0	-13.5	0.0	-13.5
-96.0	-14.1	0.0	-14.1
-95.0	-14.6	0.0	-14.6
-94.0	-13.0	0.0	-13.0
-93.0	-12.2	0.0	-12.2
-92.0	-12.9	0.0	-12.9
-91.0	-12.7	0.0	-12.7
-90.0	-19.7	0.0	-19.7
-89.0	-13.4	0.0	-13.4
-88.0	-15.1	0.0	-15.1
-87.0	-15.6	0.0	-15.6
-86.0	-12.8	0.0	-12.8
-85.0	-27.9	-10.0	-17.9
-84.0	-13.8	-10.0	-3.8
-83.0	-18.1	-10.0	-8.1
-82.0	-19.9	-10.0	-9.9
-81.0	-16.8	-10.0	-6.8
-80.0	-34.9	-10.0	-24.9
-79.0	-15.6	-10.0	-5.6
-78.0	-15.5	-10.0	-5.5
-77.0	-31.6	-10.0	-21.6
-76.0	-15.6	-10.0	-5.6
-75.0	-16.4	-10.0	-6.4
-74.0	-18.1	-10.0	-8.1
-73.0	-18.2	-10.0	-8.2
-72.0	-20.5	-10.0	-10.5
-71.0	-17.7	-10.0	-7.7
-70.0	-17.9	-10.0	-7.9
-69.0	-25.4	-10.0	-15.4
-68.0	-19.7	-10.0	-9.7
-67.0	-16.8	-10.0	-6.8
-66.0	-24.3	-10.0	-14.3
-65.0	-22.1	-10.0	-12.1
-64.0	-15.0	-10.0	-5.0
-63.0	-13.4	-10.0	-3.4
-62.0	-22.5	-10.0	-12.5
-61.0	-19.0	-10.0	-9.0
-60.0	-20.8	-10.0	-10.8
-59.0	-16.2	-10.0	-6.2
-58.0	-15.0	-10.0	-5.0
-57.0	-15.1	-10.0	-5.1

60.0	-27.5	-10.0	-17.5
61.0	-14.6	-10.0	-4.6
62.0	-16.6	-10.0	-6.6
63.0	-15.3	-10.0	-5.3
64.0	-20.0	-10.0	-10.0
65.0	-21.0	-10.0	-11.0
66.0	-20.6	-10.0	-10.6
67.0	-18.0	-10.0	-8.0
68.0	-19.1	-10.0	-9.1
69.0	-21.6	-10.0	-11.6
70.0	-17.3	-10.0	-7.3
71.0	-20.6	-10.0	-10.6
72.0	-19.9	-10.0	-9.9
73.0	-22.0	-10.0	-12.0
74.0	-14.3	-10.0	-4.3
75.0	-17.6	-10.0	-7.6
76.0	-14.8	-10.0	-4.8
77.0	-20.9	-10.0	-10.9
78.0	-17.3	-10.0	-7.3
79.0	-26.4	-10.0	-16.4
80.0	-27.1	-10.0	-17.1
81.0	-33.8	-10.0	-23.8
82.0	-26.9	-10.0	-16.9
83.0	-23.4	-10.0	-13.4
84.0	-28.3	-10.0	-18.3
85.0	-17.3	-10.0	-7.3
86.0	-26.8	0.0	-26.8
87.0	-20.5	0.0	-20.5
88.0	-30.2	0.0	-30.2
89.0	-20.4	0.0	-20.4
90.0	-21.4	0.0	-21.4
91.0	-27.9	0.0	-27.9
92.0	-31.0	0.0	-31.0
93.0	-25.3	0.0	-25.3
94.0	-23.4	0.0	-23.4
95.0	-20.9	0.0	-20.9
96.0	-28.4	0.0	-28.4
97.0	-19.2	0.0	-19.2
98.0	-22.3	0.0	-22.3
99.0	-18.2	0.0	-18.2
100.0	-21.9	0.0	-21.9
101.0	-25.2	0.0	-25.2
102.0	-24.7	0.0	-24.7
103.0	-19.8	0.0	-19.8
104.0	-20.9	0.0	-20.9
105.0	-26.2	0.0	-26.2
106.0	-20.1	0.0	-20.1
107.0	-31.4	0.0	-31.4
108.0	-22.8	0.0	-22.8
109.0	-19.1	0.0	-19.1
110.0	-24.9	0.0	-24.9
111.0	-20.4	0.0	-20.4
112.0	-26.8	0.0	-26.8
113.0	-34.9	0.0	-34.9
114.0	-35.1	0.0	-35.1
115.0	-21.1	0.0	-21.1
116.0	-24.3	0.0	-24.3
117.0	-30.2	0.0	-30.2
118.0	-19.4	0.0	-19.4
119.0	-19.0	0.0	-19.0
120.0	-45.6	0.0	-45.6
121.0	-27.7	0.0	-27.7
122.0	-20.8	0.0	-20.8

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-34.5	-10.0	-24.5
-55.0	-19.8	-10.0	-9.8
-54.0	-17.1	-10.0	-7.1
-53.0	-15.2	-10.0	-5.2
-52.0	-26.5	-10.0	-16.5
-51.0	-21.9	-10.0	-11.9
-50.0	-18.2	-10.0	-8.2
-49.0	-13.5	-10.0	-3.5
-48.0	-9.1	-10.0	0.9
-47.0	-11.2	-9.8	-1.4
-46.0	-11.2	-9.6	-1.7
-45.0	-12.4	-9.3	-3.1
-44.0	-12.6	-9.1	-3.5
-43.0	-14.5	-8.8	-5.7
-42.0	-11.3	-8.6	-2.7
-41.0	-18.6	-8.3	-10.3
-40.0	-12.8	-8.1	-4.8
-39.0	-11.2	-7.8	-3.4
-38.0	-10.4	-7.5	-2.9
-37.0	-9.3	-7.2	-2.1
-36.0	-11.5	-6.9	-4.6
-35.0	-12.9	-6.6	-6.3
-34.0	-16.4	-6.3	-10.1
-33.0	-15.3	-6.0	-9.4
-32.0	-12.8	-5.6	-7.2
-31.0	-8.2	-5.3	-2.9
-30.0	-10.2	-4.9	-5.3
-29.0	-11.2	-4.6	-6.7
-28.0	-7.4	-4.2	-3.2
-27.0	-5.8	-3.8	-2.0
-26.0	-19.7	-3.4	-16.3
-25.0	-4.6	-2.9	-1.6
-24.0	-4.7	-2.5	-2.2
-23.0	-10.9	-2.0	-8.9
-22.0	-6.7	-1.6	-5.1
-21.0	-7.8	-1.1	-6.8
-20.0	-3.3	-0.5	-2.8
-19.0	-3.4	0.0	-3.5
-18.0	-2.5	0.6	-3.1
-17.0	-4.7	1.2	-6.0
-16.0	-6.5	1.9	-8.4
-15.0	-1.1	2.6	-3.7
-14.0	0.3	3.3	-3.1
-13.0	-8.1	4.2	-12.3
-12.0	-0.7	5.0	-5.7
-11.0	-5.0	6.0	-11.0
-10.0	-11.9	7.0	-18.9
-9.0	-1.9	8.0	-9.9
-8.0	-8.2	8.0	-16.2
-7.0	2.0	7.9	-5.8
-6.0	-16.0	9.5	-25.5
-5.0	3.5	11.5	-8.0
-4.0	5.3	13.9	-8.6
-3.0	11.3	17.1	-5.8
-2.0	17.7	21.5	-3.8
-1.0	14.0		
0.0	48.2		

123.0	-26.2	0.0	-26.2
124.0	-29.9	0.0	-29.9
125.0	-33.1	0.0	-33.1
126.0	-33.4	0.0	-33.4
127.0	-27.3	0.0	-27.3
128.0	-26.6	0.0	-26.6
129.0	-22.4	0.0	-22.4
130.0	-19.1	0.0	-19.1
131.0	-19.6	0.0	-19.6
132.0	-28.5	0.0	-28.5
133.0	-20.0	0.0	-20.0
134.0	-23.9	0.0	-23.9
135.0	-24.0	0.0	-24.0
136.0	-25.9	0.0	-25.9
137.0	-21.6	0.0	-21.6
138.0	-25.2	0.0	-25.2
139.0	-29.6	0.0	-29.6
140.0	-26.8	0.0	-26.8
141.0	-23.9	0.0	-23.9
142.0	-22.7	0.0	-22.7
143.0	-23.8	0.0	-23.8
144.0	-30.0	0.0	-30.0
145.0	-24.1	0.0	-24.1
146.0	-26.8	0.0	-26.8
147.0	-24.4	0.0	-24.4
148.0	-25.6	0.0	-25.6
149.0	-27.2	0.0	-27.2
150.0	-37.3	0.0	-37.3
151.0	-18.7	0.0	-18.7
152.0	-20.3	0.0	-20.3
153.0	-31.6	0.0	-31.6
154.0	-30.8	0.0	-30.8
155.0	-23.1	0.0	-23.1
156.0	-29.6	0.0	-29.6
157.0	-28.1	0.0	-28.1
158.0	-23.4	0.0	-23.4
159.0	-23.6	0.0	-23.6
160.0	-23.6	0.0	-23.6
161.0	-28.8	0.0	-28.8
162.0	-30.2	0.0	-30.2
163.0	-27.8	0.0	-27.8
164.0	-37.0	0.0	-37.0
165.0	-25.7	0.0	-25.7
166.0	-26.1	0.0	-26.1
167.0	-25.9	0.0	-25.9
168.0	-27.0	0.0	-27.0
169.0	-22.5	0.0	-22.5
170.0	-37.3	0.0	-37.3
171.0	-22.4	0.0	-22.4
172.0	-26.0	0.0	-26.0
173.0	-32.0	0.0	-32.0
174.0	-25.8	0.0	-25.8
175.0	-25.5	0.0	-25.5
176.0	-30.4	0.0	-30.4
177.0	-26.3	0.0	-26.3
178.0	-34.8	0.0	-34.8
179.0	-26.2	0.0	-26.2

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-11.9	7.0	-18.9
-9.9	-23.4	7.1	-30.5
-9.8	-9.6	7.2	-16.8
-9.7	-6.6	7.3	-13.9
-9.6	-6.7	7.4	-14.2
-9.5	-10.2	7.6	-17.8
-9.4	-23.4	7.7	-31.1
-9.3	-11.3	7.8	-19.1
-9.2	-5.1	8.0	-13.1
-9.1	-2.4	8.0	-10.4
-9.0	-1.9	8.0	-9.9
-8.9	-2.9	8.0	-10.9
-8.8	-5.7	8.0	-13.7
-8.7	-11.6	8.0	-19.6
-8.6	-13.6	8.0	-21.6
-8.5	-9.5	8.0	-17.5
-8.4	-8.5	8.0	-16.5
-8.3	-10.8	8.0	-18.8
-8.2	-15.6	8.0	-23.6
-8.1	-12.1	8.0	-20.1
-8.0	-8.2	8.0	-16.2
-7.9	-6.1	8.0	-14.1
-7.8	-6.7	8.0	-14.7
-7.7	-9.6	8.0	-17.6
-7.6	-18.8	8.0	-26.8
-7.5	-18.1	8.0	-26.1
-7.4	-7.7	8.0	-15.7
-7.3	-3.4	8.0	-11.4
-7.2	-0.3	8.0	-8.3
-7.1	1.4	8.0	-6.6
-7.0	2.0	7.9	-5.8
-6.9	1.2	8.0	-6.9
-6.8	-1.4	8.2	-9.6
-6.7	-6.8	8.3	-15.2
-6.6	-9.6	8.5	-18.1
-6.5	-3.0	8.7	-11.7
-6.4	0.1	8.8	-8.7
-6.3	0.8	9.0	-8.2
-6.2	-0.4	9.2	-9.6
-6.1	-4.6	9.4	-14.0
-6.0	-16.0	9.5	-25.5
-5.9	-8.3	9.7	-18.0
-5.8	-2.4	9.9	-12.3
-5.7	-0.7	10.1	-10.8
-5.6	-0.5	10.3	-10.8
-5.5	-1.1	10.5	-11.6
-5.4	-1.1	10.7	-11.8
-5.3	0.1	10.9	-10.8
-5.2	1.5	11.1	-9.6
-5.1	2.6	11.3	-8.7
-5.0	3.5	11.5	-8.0
-4.9	4.2	11.7	-7.6
-4.8	4.3	12.0	-7.7
-4.7	3.2	12.2	-9.0
-4.6	0.4	12.4	-12.0
-4.5	-0.2	12.7	-12.9
-4.4	3.2	12.9	-9.7
-4.3	6.1	13.2	-7.0
-4.2	7.4	13.4	-6.0
-4.1	7.0	13.7	-6.6

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.2		
0.1	47.8		
0.2	47.0		
0.3	45.7		
0.4	43.9		
0.5	41.4		
0.6	38.5		
0.7	35.0		
0.8	30.8		
0.9	25.9		
1.0	20.0		
1.1	16.2		
1.2	18.8		
1.3	20.8		
1.4	21.2		
1.5	20.2	24.6	-4.4
1.6	18.1	23.9	-5.8
1.7	15.4	23.2	-7.9
1.8	12.7	22.6	-9.9
1.9	10.9	22.0	-11.2
2.0	9.4	21.5	-12.1
2.1	10.0	20.9	-10.9
2.2	12.5	20.4	-7.9
2.3	14.3	20.0	-5.7
2.4	14.8	19.5	-4.7
2.5	14.4	19.1	-4.6
2.6	13.0	18.6	-5.6
2.7	10.6	18.2	-7.6
2.8	9.0	17.8	-8.8
2.9	9.3	17.4	-8.1
3.0	10.0	17.1	-7.1
3.1	9.7	16.7	-7.0
3.2	8.7	16.4	-7.7
3.3	8.0	16.0	-8.1
3.4	8.1	15.7	-7.6
3.5	9.1	15.4	-6.3
3.6	10.2	15.1	-4.9
3.7	10.7	14.8	-4.1
3.8	10.5	14.5	-4.0
3.9	9.2	14.2	-5.0
4.0	6.8	13.9	-7.2
4.1	3.1	13.7	-10.6
4.2	-0.2	13.4	-13.6
4.3	0.3	13.2	-12.9
4.4	0.8	12.9	-12.1
4.5	-1.9	12.7	-14.6
4.6	-8.1	12.4	-20.5
4.7	-3.9	12.2	-16.1
4.8	0.8	12.0	-11.2
4.9	2.3	11.7	-9.4
5.0	1.4	11.5	-10.1
5.1	-2.3	11.3	-13.6
5.2	-8.9	11.1	-20.0
5.3	-2.5	10.9	-13.4
5.4	1.1	10.7	-9.6
5.5	1.1	10.5	-9.4
5.6	-2.8	10.3	-13.0
5.7	-13.6	10.1	-23.7
5.8	-2.9	9.9	-12.8
5.9	2.4	9.7	-7.3

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	5.3	13.9	-8.6
-3.9	3.2	14.2	-11.0
-3.8	4.3	14.5	-10.2
-3.7	7.1	14.8	-7.7
-3.6	9.3	15.1	-5.8
-3.5	10.6	15.4	-4.8
-3.4	11.6	15.7	-4.1
-3.3	12.2	16.0	-3.8
-3.2	12.4	16.4	-3.9
-3.1	12.0	16.7	-4.7
-3.0	11.3	17.1	-5.8
-2.9	11.6	17.4	-5.9
-2.8	13.5	17.8	-4.3
-2.7	15.5	18.2	-2.7
-2.6	16.6	18.6	-2.0
-2.5	16.9	19.1	-2.2
-2.4	16.5	19.5	-3.0
-2.3	16.3	20.0	-3.6
-2.2	17.0	20.4	-3.4
-2.1	17.8	20.9	-3.1
-2.0	17.7	21.5	-3.8
-1.9	16.0	22.0	-6.0
-1.8	12.4	22.6	-10.2
-1.7	12.3	23.2	-10.9
-1.6	16.9	23.9	-7.0
-1.5	19.8	24.6	-4.8
-1.4	21.0		
-1.3	20.9		
-1.2	20.0		
-1.1	17.7		
-1.0	14.0		
-0.9	21.3		
-0.8	29.3		
-0.7	34.7		
-0.6	38.9		
-0.5	42.0		
-0.4	44.5		
-0.3	46.2		
-0.2	47.4		
-0.1	48.1		
0.0	48.2		

6.0	4.3	9.5	-5.3
6.1	3.9	9.4	-5.4
6.2	1.9	9.2	-7.3
6.3	-2.4	9.0	-11.4
6.4	-11.7	8.8	-20.5
6.5	-14.4	8.7	-23.0
6.6	-8.0	8.5	-16.5
6.7	-4.6	8.3	-12.9
6.8	-1.2	8.2	-9.4
6.9	0.8	8.0	-7.2
7.0	1.7	7.9	-6.1
7.1	0.9	8.0	-7.1
7.2	-2.3	8.0	-10.3
7.3	-9.1	8.0	-17.1
7.4	-6.9	8.0	-14.9
7.5	-0.9	8.0	-8.9
7.6	1.5	8.0	-6.5
7.7	2.0	8.0	-6.0
7.8	0.9	8.0	-7.1
7.9	-1.7	8.0	-9.7
8.0	-6.5	8.0	-14.5
8.1	-7.6	8.0	-15.6
8.2	-3.2	8.0	-11.2
8.3	-0.6	8.0	-8.6
8.4	0.0	8.0	-8.0
8.5	-0.9	8.0	-8.9
8.6	-4.0	8.0	-12.0
8.7	-10.8	8.0	-18.8
8.8	-15.6	8.0	-23.6
8.9	-8.3	8.0	-16.3
9.0	-6.0	8.0	-14.0
9.1	-6.1	8.0	-14.1
9.2	-9.2	8.0	-17.2
9.3	-12.4	7.8	-20.2
9.4	-9.7	7.7	-17.4
9.5	-7.1	7.6	-14.6
9.6	-8.2	7.4	-15.6
9.7	-14.0	7.3	-21.3
9.8	-21.9	7.2	-29.1
9.9	-8.7	7.1	-15.8
10.0	-4.7	7.0	-11.7

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-11.0	-4.9	-6.1
-29.5	-10.4	-4.7	-5.7
-29.0	-11.3	-4.6	-6.8
-28.5	-17.9	-4.4	-13.5
-28.0	-16.4	-4.2	-12.2
-27.5	-30.6	-4.0	-26.6
-27.0	-20.6	-3.8	-16.8
-26.5	-17.0	-3.6	-13.4
-26.0	-11.3	-3.4	-8.0
-25.5	-14.7	-3.2	-11.6
-25.0	-33.5	-2.9	-30.6
-24.5	-27.2	-2.7	-24.4
-24.0	-33.7	-2.5	-31.2
-23.5	-29.3	-2.3	-27.0
-23.0	-14.9	-2.0	-12.8
-22.5	-13.3	-1.8	-11.5
-22.0	-18.8	-1.6	-17.3
-21.5	-19.2	-1.3	-17.9
-21.0	-20.1	-1.1	-19.0
-20.5	-27.2	-0.8	-26.4
-20.0	-17.3	-0.5	-16.8
-19.5	-13.0	-0.3	-12.8
-19.0	-14.1	0.0	-14.1
-18.5	-14.3	0.3	-14.6
-18.0	-8.3	0.6	-8.9
-17.5	-6.7	0.9	-7.6
-17.0	-14.0	1.2	-15.3
-16.5	-19.5	1.6	-21.1
-16.0	-18.4	1.9	-20.3
-15.5	-11.2	2.2	-13.4
-15.0	-7.6	2.6	-10.2
-14.5	-8.8	3.0	-11.8
-14.0	-20.3	3.3	-23.7
-13.5	-8.5	3.7	-12.3
-13.0	-7.6	4.2	-11.7
-12.5	-7.9	4.6	-12.4
-12.0	-13.3	5.0	-18.3
-11.5	-11.4	5.5	-16.9
-11.0	-9.3	6.0	-15.3
-10.5	-14.1	6.5	-20.5
-10.0	-11.8	7.0	-18.8
-9.5	-19.5	7.6	-27.0
-9.0	-4.0	8.1	-12.1
-8.5	-1.1	8.8	-9.9
-8.0	-10.4	9.4	-19.8
-7.5	-9.7	10.1	-19.8
-7.0	-1.0	10.9	-11.9
-6.5	-2.5	11.7	-14.2
-6.0	1.5	12.5	-11.1
-5.5	0.8	13.5	-12.7
-5.0	0.8	14.5	-13.7
-4.5	-1.0	15.7	-16.7
-4.0	5.4	16.9	-11.6
-3.5	5.8	18.4	-12.6
-3.0	10.1		
-2.5	13.4		
-2.0	10.7		
-1.5	21.2		
-1.0	23.1		
-0.5	42.5		
0.0	48.2		

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	48.2		
0.5	40.0		
1.0	13.7		
1.5	18.5		
2.0	17.2		
2.5	17.4		
3.0	10.0		
3.5	3.8	18.4	-14.6
4.0	9.2	16.9	-7.8
4.5	-4.7	15.7	-20.4
5.0	-4.0	14.5	-18.6
5.5	1.1	13.5	-12.4
6.0	-2.8	12.5	-15.3
6.5	-1.9	11.7	-13.6
7.0	2.3	10.9	-8.6
7.5	-11.6	10.1	-21.7
8.0	-18.4	9.4	-27.8
8.5	-5.8	8.8	-14.6
9.0	-2.0	8.1	-10.1
9.5	-10.6	7.6	-18.2
10.0	-8.7	7.0	-15.7
10.5	-3.7	6.5	-10.2
11.0	-3.5	6.0	-9.4
11.5	0.9	5.5	-4.6
12.0	-6.0	5.0	-11.0
12.5	-1.4	4.6	-5.9
13.0	-3.6	4.2	-7.8
13.5	-5.3	3.7	-9.0
14.0	-3.7	3.3	-7.0
14.5	1.8	3.0	-1.2
15.0	-4.6	2.6	-7.2
15.5	-1.8	2.2	-4.1
16.0	-4.4	1.9	-6.3
16.5	-2.8	1.6	-4.4
17.0	-5.9	1.2	-7.1
17.5	-1.4	0.9	-2.4
18.0	-3.0	0.6	-3.6
18.5	-3.5	0.3	-3.8
19.0	-3.1	0.0	-3.1
19.5	-4.4	-0.3	-4.2
20.0	-5.2	-0.5	-4.7
20.5	-2.2	-0.8	-1.4
21.0	-5.2	-1.1	-4.1
21.5	-11.0	-1.3	-9.7
22.0	-4.1	-1.6	-2.5
22.5	-5.2	-1.8	-3.4
23.0	-2.6	-2.0	-0.5
23.5	-7.5	-2.3	-5.2
24.0	-2.6	-2.5	-0.1
24.5	-5.0	-2.7	-2.3
25.0	-5.2	-2.9	-2.2
25.5	-4.2	-3.2	-1.1
26.0	-4.3	-3.4	-0.9
26.5	-6.0	-3.6	-2.4
27.0	-6.6	-3.8	-2.8
27.5	-5.5	-4.0	-1.5
28.0	-7.2	-4.2	-3.0
28.5	-8.2	-4.4	-3.8
29.0	-9.6	-4.6	-5.0
29.5	-9.6	-4.7	-4.8
30.0	-7.8	-4.9	-2.8

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-11.8	7.0	-18.8
-9.9	-12.0	7.1	-19.1
-9.8	-9.8	7.2	-17.0
-9.7	-10.0	7.3	-17.3
-9.6	-12.8	7.4	-20.2
-9.5	-19.5	7.6	-27.0
-9.4	-10.1	7.7	-17.7
-9.3	-5.1	7.8	-12.9
-9.2	-3.1	7.9	-11.0
-9.1	-2.8	8.0	-10.9
-9.0	-4.0	8.1	-12.1
-8.9	-6.0	8.3	-14.3
-8.8	-6.0	8.4	-14.4
-8.7	-3.4	8.5	-11.9
-8.6	-1.6	8.6	-10.2
-8.5	-1.1	8.8	-9.9
-8.4	-1.6	8.9	-10.5
-8.3	-3.4	9.0	-12.5
-8.2	-7.5	9.2	-16.6
-8.1	-11.6	9.3	-20.9
-8.0	-10.4	9.4	-19.8
-7.9	-5.4	9.6	-15.0
-7.8	-3.4	9.7	-13.1
-7.7	-3.1	9.8	-12.9
-7.6	-4.9	10.0	-14.9
-7.5	-9.7	10.1	-19.8
-7.4	-29.5	10.3	-39.7
-7.3	-8.9	10.4	-19.3
-7.2	-3.8	10.6	-14.4
-7.1	-1.9	10.7	-12.7
-7.0	-1.0	10.9	-11.9
-6.9	-0.2	11.0	-11.2
-6.8	0.3	11.2	-10.9
-6.7	0.3	11.3	-11.1
-6.6	-1.0	11.5	-12.5
-6.5	-2.5	11.7	-14.2
-6.4	-1.3	11.8	-13.1
-6.3	1.7	12.0	-10.3
-6.2	3.3	12.2	-8.9
-6.1	3.5	12.4	-8.9
-6.0	1.5	12.5	-11.1
-5.9	-3.0	12.7	-15.8
-5.8	-6.6	12.9	-19.5
-5.7	-1.6	13.1	-14.7
-5.6	1.0	13.3	-12.3
-5.5	0.8	13.5	-12.7
-5.4	-2.5	13.7	-16.2
-5.3	-15.0	13.9	-28.9
-5.2	-6.2	14.1	-20.3
-5.1	-0.8	14.3	-15.1
-5.0	0.8	14.5	-13.7
-4.9	-1.1	14.7	-15.8
-4.8	-7.2	15.0	-22.2
-4.7	-12.4	15.2	-27.6
-4.6	-3.6	15.4	-19.0
-4.5	-1.0	15.7	-16.7
-4.4	-2.1	15.9	-18.0
-4.3	-5.4	16.2	-21.6
-4.2	-1.4	16.4	-17.9
-4.1	3.0	16.7	-13.7

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.2		
0.1	47.7		
0.2	46.8		
0.3	45.2		
0.4	43.0		
0.5	40.0		
0.6	36.2		
0.7	31.1		
0.8	24.2		
0.9	14.9		
1.0	13.7		
1.1	16.9		
1.2	19.1		
1.3	20.1		
1.4	20.0		
1.5	18.5		
1.6	16.4		
1.7	15.4		
1.8	16.4		
1.9	17.4		
2.0	17.2		
2.1	15.9		
2.2	15.0		
2.3	15.7		
2.4	17.0		
2.5	17.4		
2.6	16.9		
2.7	15.6		
2.8	13.3		
2.9	11.1		
3.0	10.0		
3.1	9.7		
3.2	8.8		
3.3	7.5		
3.4	5.7		
3.5	3.8	18.4	-14.6
3.6	2.5	18.1	-15.6
3.7	3.5	17.8	-14.3
3.8	6.1	17.5	-11.4
3.9	8.3	17.2	-8.9
4.0	9.2	16.9	-7.8
4.1	9.0	16.7	-7.6
4.2	7.7	16.4	-8.7
4.3	4.7	16.2	-11.5
4.4	-0.4	15.9	-16.3
4.5	-4.7	15.7	-20.4
4.6	-3.2	15.4	-18.7
4.7	-1.8	15.2	-17.0
4.8	-2.1	15.0	-17.1
4.9	-4.0	14.7	-18.7
5.0	-4.0	14.5	-18.6
5.1	-4.3	14.3	-18.6
5.2	-4.8	14.1	-18.9
5.3	-4.0	13.9	-17.9
5.4	-0.4	13.7	-14.1
5.5	1.1	13.5	-12.4
5.6	2.0	13.3	-11.3
5.7	0.4	13.1	-12.7
5.8	-2.9	12.9	-15.8
5.9	-5.8	12.7	-18.5

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	5.4	16.9	-11.6
-3.9	6.3	17.2	-11.0
-3.8	6.3	17.5	-11.2
-3.7	6.1	17.8	-11.7
-3.6	5.8	18.1	-12.3
-3.5	5.8	18.4	-12.6
-3.4	6.5		
-3.3	8.0		
-3.2	9.7		
-3.1	10.5		
-3.0	10.1		
-2.9	8.1		
-2.8	5.8		
-2.7	8.2		
-2.6	11.6		
-2.5	13.4		
-2.4	13.9		
-2.3	13.4		
-2.2	12.2		
-2.1	11.3		
-2.0	10.7		
-1.9	11.4		
-1.8	14.2		
-1.7	17.4		
-1.6	19.9		
-1.5	21.2		
-1.4	21.2		
-1.3	20.0		
-1.2	18.3		
-1.1	19.1		
-1.0	23.1		
-0.9	27.7		
-0.8	32.1		
-0.7	36.1		
-0.6	39.6		
-0.5	42.5		
-0.4	44.7		
-0.3	46.4		
-0.2	47.5		
-0.1	48.1		
0.0	48.2		

6.0	-2.8	12.5	-15.3
6.1	0.7	12.4	-11.6
6.2	2.1	12.2	-10.1
6.3	1.5	12.0	-10.6
6.4	-0.6	11.8	-12.4
6.5	-1.9	11.7	-13.6
6.6	-0.7	11.5	-12.2
6.7	1.0	11.3	-10.4
6.8	2.4	11.2	-8.7
6.9	2.7	11.0	-8.3
7.0	2.3	10.9	-8.6
7.1	0.7	10.7	-10.0
7.2	-1.8	10.6	-12.3
7.3	-5.3	10.4	-15.7
7.4	-10.9	10.3	-21.2
7.5	-11.6	10.1	-21.7
7.6	-8.5	10.0	-18.5
7.7	-7.2	9.8	-17.1
7.8	-8.1	9.7	-17.8
7.9	-14.2	9.6	-23.8
8.0	-18.4	9.4	-27.8
8.1	-7.9	9.3	-17.2
8.2	-4.0	9.2	-13.1
8.3	-2.7	9.0	-11.7
8.4	-3.4	8.9	-12.3
8.5	-5.8	8.8	-14.6
8.6	-8.5	8.6	-17.2
8.7	-5.8	8.5	-14.3
8.8	-2.7	8.4	-11.1
8.9	-1.2	8.3	-9.5
9.0	-2.0	8.1	-10.1
9.1	-3.7	8.0	-11.7
9.2	-7.6	7.9	-15.5
9.3	-12.8	7.8	-20.5
9.4	-12.9	7.7	-20.6
9.5	-10.6	7.6	-18.2
9.6	-9.6	7.4	-17.1
9.7	-11.8	7.3	-19.2
9.8	-15.2	7.2	-22.4
9.9	-13.4	7.1	-20.5
10.0	-8.7	7.0	-15.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in X-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-16.3	-2.0	-14.3
-9.9	-15.3	-2.0	-13.3
-9.8	-16.1	-2.0	-14.1
-9.7	-21.6	-2.0	-19.6
-9.6	-29.6	-2.0	-27.6
-9.5	-17.2	-2.0	-15.2
-9.4	-10.7	-2.0	-8.7
-9.3	-8.5	-2.0	-6.5
-9.2	-7.0	-2.0	-5.0
-9.1	-7.2	-2.0	-5.2
-9.0	-7.2	-2.0	-5.2
-8.9	-6.6	-2.0	-4.6
-8.8	-6.4	-2.0	-4.4
-8.7	-5.8	-2.0	-3.8
-8.6	-6.4	-2.0	-4.4
-8.5	-8.3	-2.0	-6.3
-8.4	-12.3	-2.0	-10.3
-8.3	-15.0	-2.0	-13.0
-8.2	-14.5	-2.0	-12.5
-8.1	-11.1	-2.0	-9.1
-8.0	-8.7	-2.0	-6.7
-7.9	-8.1	-2.0	-6.1
-7.8	-7.5	-2.0	-5.5
-7.7	-8.4	-2.0	-6.4
-7.6	-9.3	-2.0	-7.3
-7.5	-11.0	-2.0	-9.0
-7.4	-13.9	-2.0	-11.9
-7.3	-19.4	-2.0	-17.4
-7.2	-22.5	-2.0	-20.5
-7.1	-28.3	-2.0	-26.3
-7.0	-22.6	-2.1	-20.5
-6.9	-12.7	-2.0	-10.8
-6.8	-8.1	-1.8	-6.3
-6.7	-4.9	-1.7	-3.2
-6.6	-3.7	-1.5	-2.2
-6.5	-3.2	-1.3	-1.9
-6.4	-4.4	-1.2	-3.3
-6.3	-7.2	-1.0	-6.2
-6.2	-12.1	-0.8	-11.3
-6.1	-15.5	-0.6	-14.9
-6.0	-12.7	-0.5	-12.2
-5.9	-9.7	-0.3	-9.4
-5.8	-8.6	-0.1	-8.5
-5.7	-6.7	0.1	-6.8
-5.6	-5.1	0.3	-5.4
-5.5	-3.9	0.5	-4.4
-5.4	-3.5	0.7	-4.2
-5.3	-4.6	0.9	-5.5
-5.2	-7.2	1.1	-8.3
-5.1	-12.3	1.3	-13.6
-5.0	-17.0	1.5	-18.5
-4.9	-17.8	1.7	-19.5
-4.8	-10.8	2.0	-12.8
-4.7	-4.8	2.2	-7.0
-4.6	-1.2	2.4	-3.6
-4.5	1.1	2.7	-1.6
-4.4	2.0	2.9	-0.9
-4.3	1.6	3.2	-1.6
-4.2	-0.7	3.4	-4.1
-4.1	-5.7	3.7	-9.4

28.30 GHz Antenna Pattern in X-pol Az LHCP

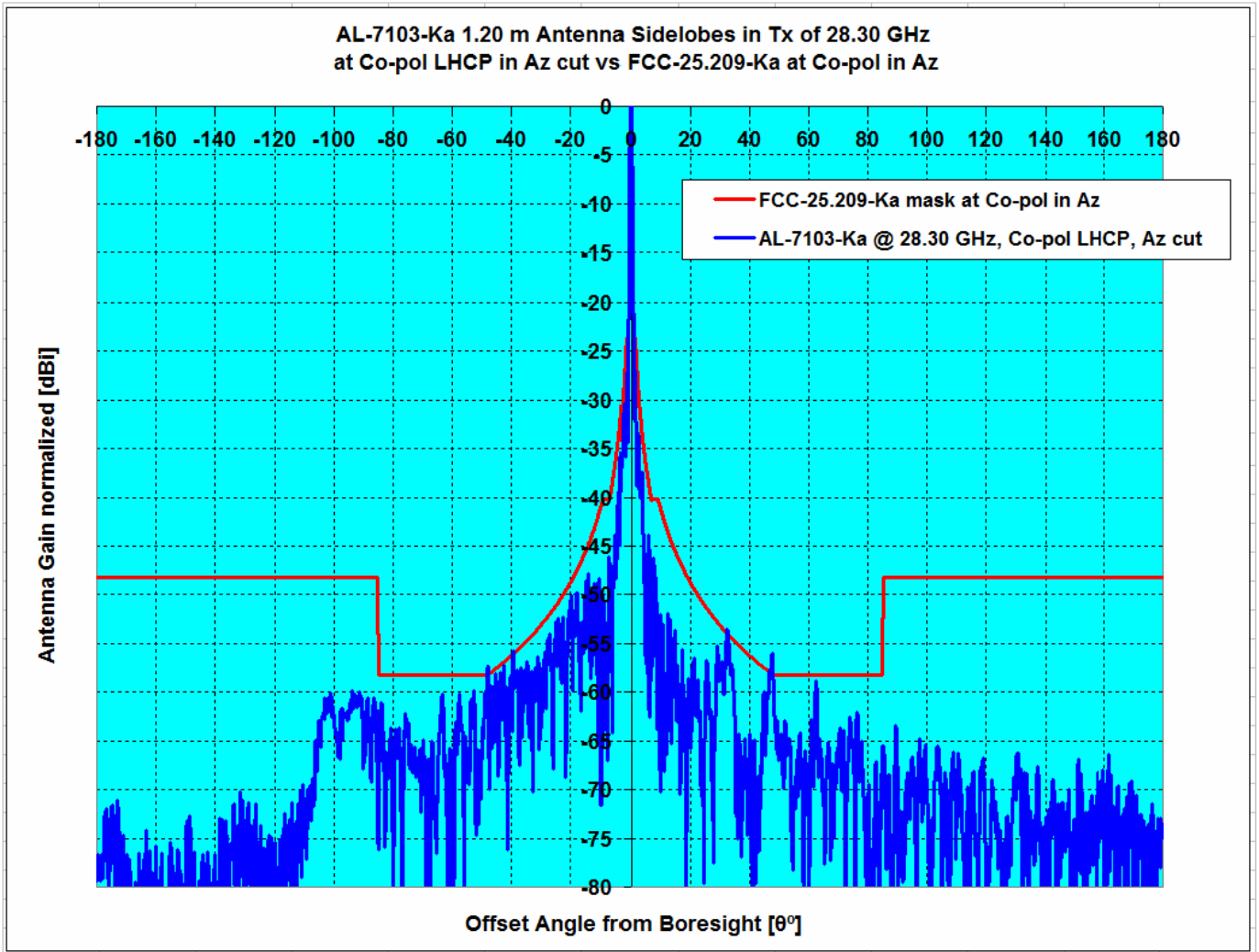
Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	19.2		
0.1	20.1		
0.2	23.1		
0.3	25.2		
0.4	26.1		
0.5	26.0		
0.6	24.9		
0.7	22.8		
0.8	19.9		
0.9	16.1		
1.0	12.5		
1.1	9.7		
1.2	6.8		
1.3	1.8		
1.4	-11.5		
1.5	-0.2		
1.6	3.1		
1.7	2.8		
1.8	-0.3	12.6	-12.9
1.9	-8.3	12.0	-20.3
2.0	-4.1	11.5	-15.6
2.1	-0.9	10.9	-11.8
2.2	-1.3	10.4	-11.7
2.3	-7.9	10.0	-17.9
2.4	-9.7	9.5	-19.2
2.5	-0.4	9.1	-9.5
2.6	2.7	8.6	-6.0
2.7	3.7	8.2	-4.5
2.8	2.2	7.8	-5.7
2.9	-1.5	7.4	-8.9
3.0	-10.0	7.1	-17.1
3.1	-7.2	6.7	-14.0
3.2	-2.1	6.4	-8.4
3.3	-1.0	6.0	-7.1
3.4	-2.0	5.7	-7.7
3.5	-3.9	5.4	-9.3
3.6	-8.0	5.1	-13.1
3.7	-13.2	4.8	-18.0
3.8	-15.9	4.5	-20.5
3.9	-9.6	4.2	-13.9
4.0	-7.0	3.9	-10.9
4.1	-5.8	3.7	-9.5
4.2	-6.2	3.4	-9.7
4.3	-9.4	3.2	-12.5
4.4	-14.6	2.9	-17.5
4.5	-13.6	2.7	-16.2
4.6	-10.6	2.4	-13.0
4.7	-11.5	2.2	-13.7
4.8	-22.6	2.0	-24.6
4.9	-16.0	1.7	-17.8
5.0	-7.3	1.5	-8.8
5.1	-5.1	1.3	-6.4
5.2	-4.2	1.1	-5.3
5.3	-5.9	0.9	-6.8
5.4	-11.8	0.7	-12.5
5.5	-14.7	0.5	-15.2
5.6	-7.8	0.3	-8.1
5.7	-3.9	0.1	-4.0
5.8	-3.4	-0.1	-3.3
5.9	-4.6	-0.3	-4.3

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-14.3	3.9	-18.2
-3.9	-7.8	4.2	-12.1
-3.8	-3.8	4.5	-8.3
-3.7	-2.4	4.8	-7.2
-3.6	-2.2	5.1	-7.3
-3.5	-1.5	5.4	-6.9
-3.4	-0.7	5.7	-6.4
-3.3	-1.1	6.0	-7.1
-3.2	-4.5	6.4	-10.9
-3.1	-23.2	6.7	-29.9
-3.0	-5.4	7.1	-12.5
-2.9	1.0	7.4	-6.4
-2.8	3.4	7.8	-4.4
-2.7	2.9	8.2	-5.3
-2.6	-1.1	8.6	-9.8
-2.5	-23.3	9.1	-32.3
-2.4	0.6	9.5	-8.9
-2.3	5.6	10.0	-4.4
-2.2	7.3	10.4	-3.1
-2.1	6.3	10.9	-4.6
-2.0	1.3	11.5	-10.2
-1.9	-4.4	12.0	-16.4
-1.8	6.3	12.6	-6.3
-1.7	10.5		
-1.6	12.0		
-1.5	11.4		
-1.4	8.0		
-1.3	-2.1		
-1.2	5.3		
-1.1	12.4		
-1.0	15.7		
-0.9	18.1		
-0.8	20.5		
-0.7	22.9		
-0.6	24.9		
-0.5	26.2		
-0.4	26.7		
-0.3	26.2		
-0.2	24.7		
-0.1	22.0		
0.0	19.2		

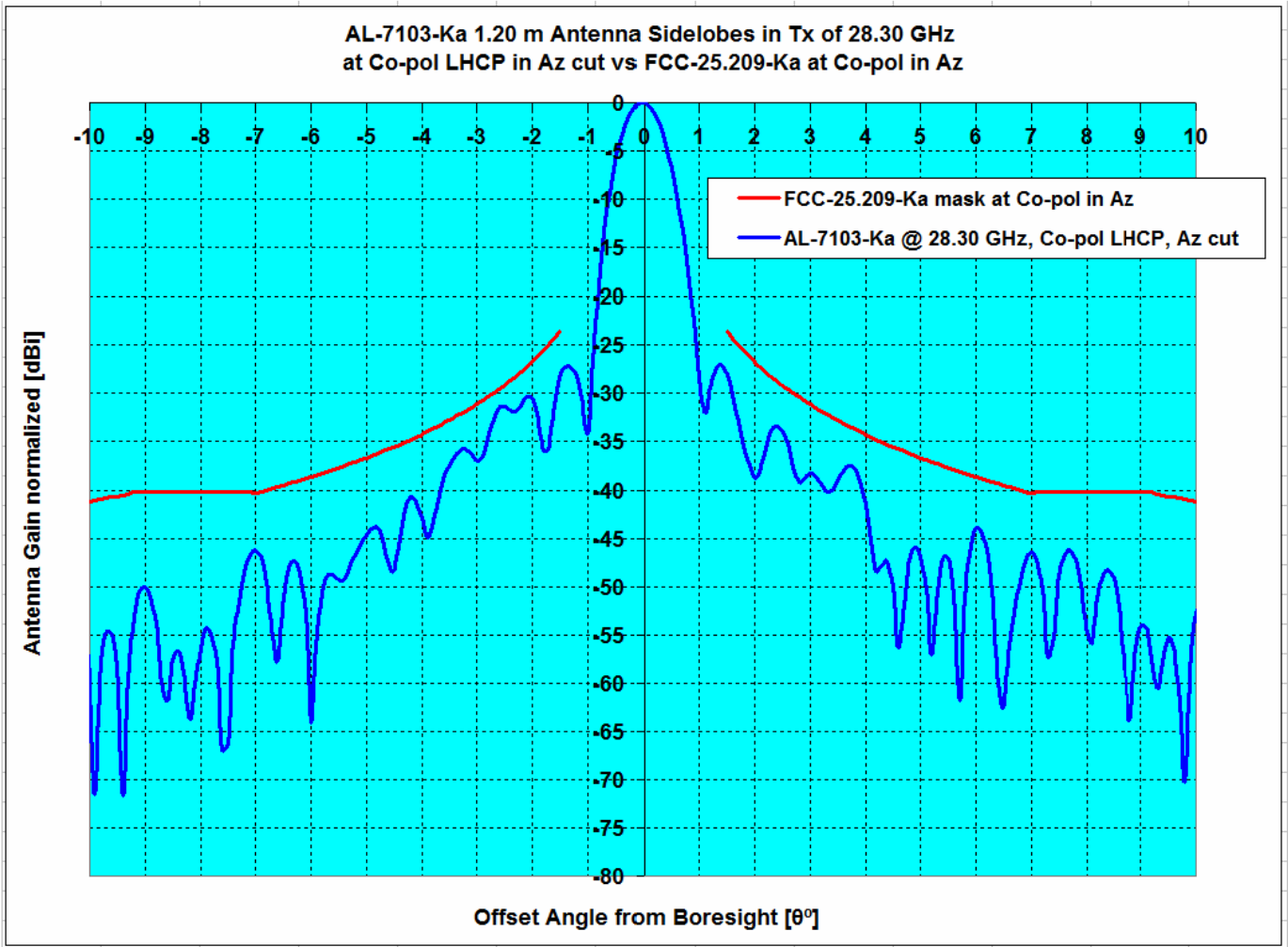
6.0	-7.9	-0.5	-7.4
6.1	-12.6	-0.6	-12.0
6.2	-15.5	-0.8	-14.7
6.3	-12.7	-1.0	-11.8
6.4	-10.7	-1.2	-9.6
6.5	-9.1	-1.3	-7.8
6.6	-6.9	-1.5	-5.4
6.7	-5.5	-1.7	-3.9
6.8	-5.0	-1.8	-3.2
6.9	-6.7	-2.0	-4.7
7.0	-10.1	-2.1	-7.9
7.1	-10.2	-2.0	-8.2
7.2	-7.8	-2.0	-5.8
7.3	-5.7	-2.0	-3.7
7.4	-5.7	-2.0	-3.7
7.5	-6.6	-2.0	-4.6
7.6	-9.0	-2.0	-7.0
7.7	-10.4	-2.0	-8.4
7.8	-9.7	-2.0	-7.7
7.9	-7.8	-2.0	-5.8
8.0	-7.2	-2.0	-5.2
8.1	-8.3	-2.0	-6.3
8.2	-9.7	-2.0	-7.7
8.3	-11.4	-2.0	-9.4
8.4	-14.7	-2.0	-12.7
8.5	-16.5	-2.0	-14.5
8.6	-14.7	-2.0	-12.7
8.7	-11.7	-2.0	-9.7
8.8	-9.2	-2.0	-7.2
8.9	-8.5	-2.0	-6.5
9.0	-9.2	-2.0	-7.2
9.1	-12.1	-2.0	-10.1
9.2	-17.8	-2.0	-15.8
9.3	-19.3	-2.0	-17.3
9.4	-17.3	-2.0	-15.3
9.5	-14.3	-2.0	-12.3
9.6	-13.3	-2.0	-11.3
9.7	-14.0	-2.0	-12.0
9.8	-14.2	-2.0	-12.2
9.9	-14.8	-2.0	-12.8
10.0	-18.5	-2.0	-16.5

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth LHCP

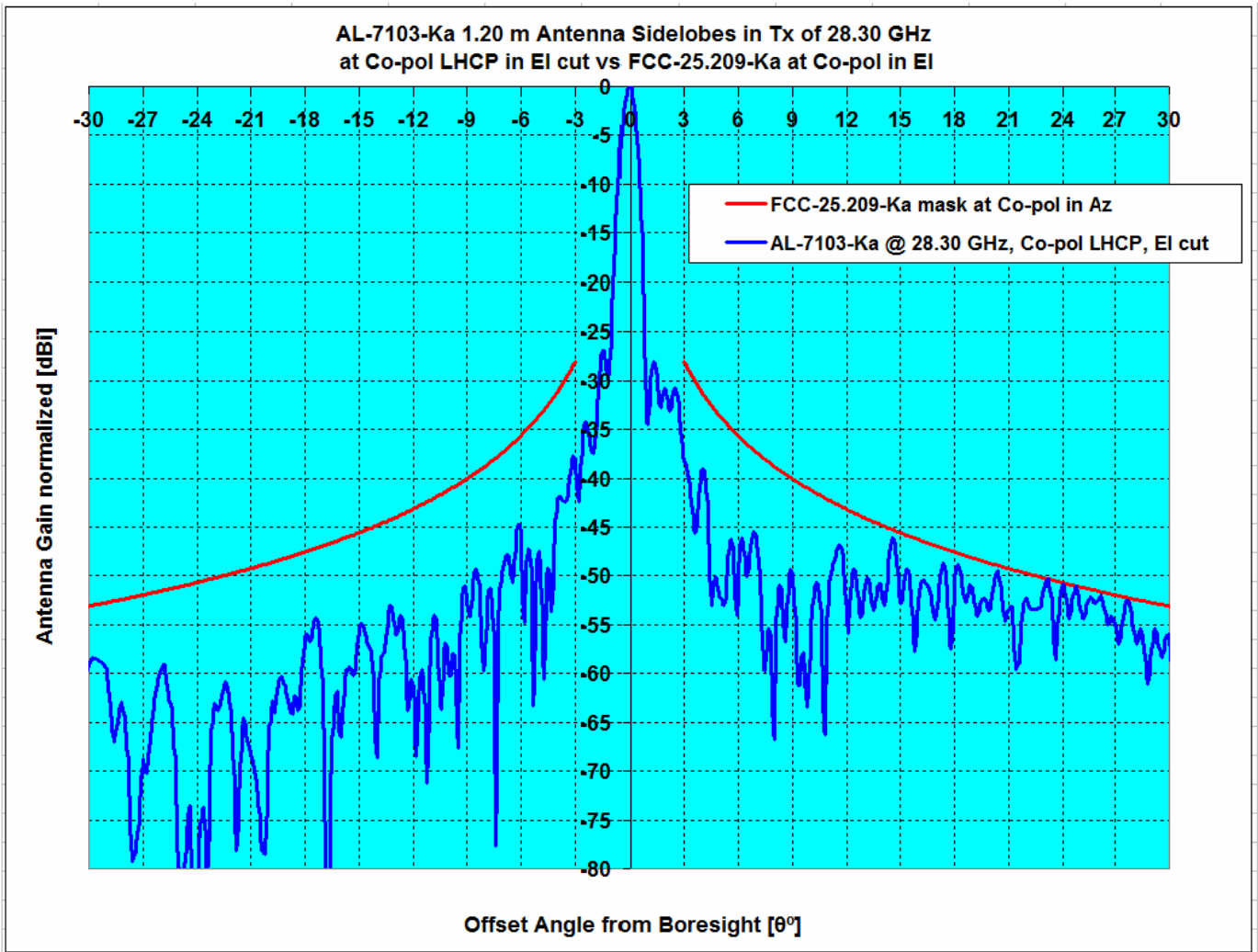


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , LHCP	28.30	48.20	-1.98	2.11	0.00%	0.45%

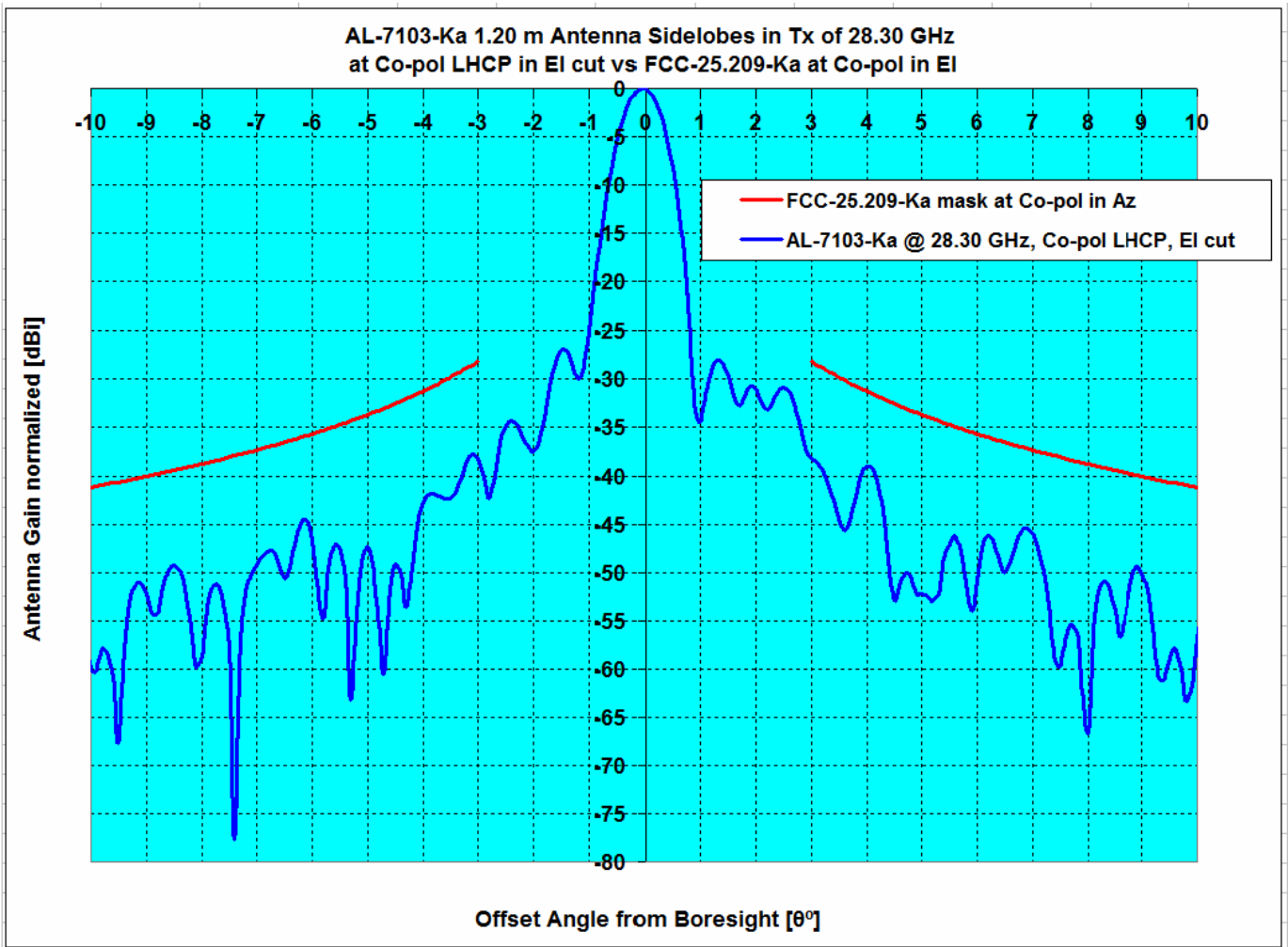
Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth LHCP



Description	Plane, CirP Type	Frequency GHz	Ant. Gain dBi	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , LHCP	28.30	48.20	-1.98	2.11	0.00%	0.45%

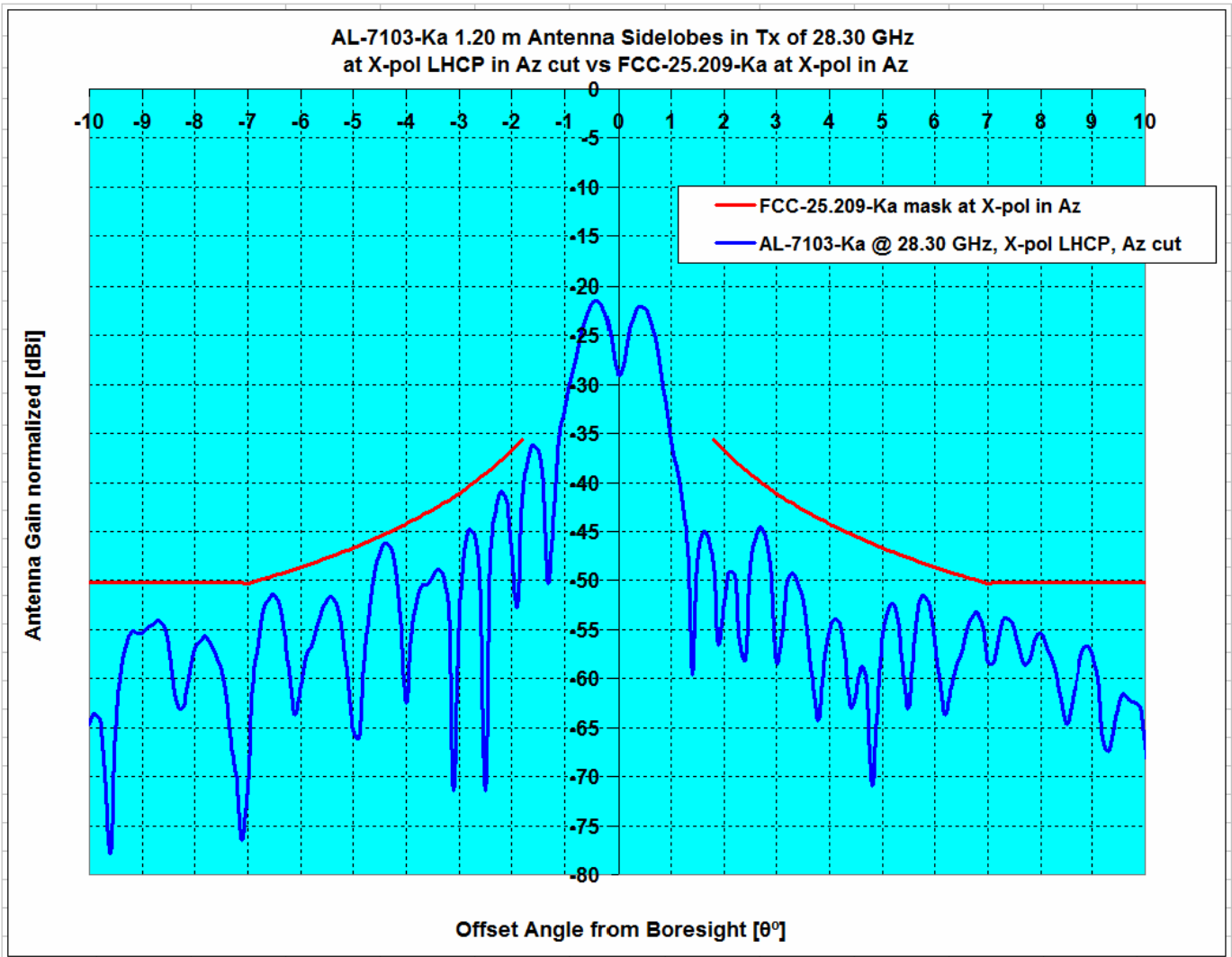


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , LHCP	28.30	48.20	-7.63	0.07	0.00%	0.18%



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , LHCP	28.30	48.20	-7.63	0.07	0.00%	0.18%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, X-pol, Azimuth LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7103-Ka	Az , LHCP	28.30	48.20	-0.88	-0.88	0.00%	0.00%

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-22.7	0.0	-22.7
-178.0	-36.7	0.0	-36.7
-177.0	-27.2	0.0	-27.2
-176.0	-23.3	0.0	-23.3
-175.0	-25.0	0.0	-25.0
-174.0	-26.3	0.0	-26.3
-173.0	-35.2	0.0	-35.2
-172.0	-31.2	0.0	-31.2
-171.0	-30.7	0.0	-30.7
-170.0	-25.8	0.0	-25.8
-169.0	-32.2	0.0	-32.2
-168.0	-32.3	0.0	-32.3
-167.0	-31.9	0.0	-31.9
-166.0	-32.9	0.0	-32.9
-165.0	-33.3	0.0	-33.3
-164.0	-32.2	0.0	-32.2
-163.0	-29.3	0.0	-29.3
-162.0	-30.0	0.0	-30.0
-161.0	-42.4	0.0	-42.4
-160.0	-30.6	0.0	-30.6
-159.0	-32.7	0.0	-32.7
-158.0	-32.6	0.0	-32.6
-157.0	-33.8	0.0	-33.8
-156.0	-27.6	0.0	-27.6
-155.0	-30.4	0.0	-30.4
-154.0	-36.4	0.0	-36.4
-153.0	-28.7	0.0	-28.7
-152.0	-38.3	0.0	-38.3
-151.0	-31.9	0.0	-31.9
-150.0	-34.5	0.0	-34.5
-149.0	-27.2	0.0	-27.2
-148.0	-31.6	0.0	-31.6
-147.0	-29.1	0.0	-29.1
-146.0	-34.5	0.0	-34.5
-145.0	-28.4	0.0	-28.4
-144.0	-33.0	0.0	-33.0
-143.0	-30.3	0.0	-30.3
-142.0	-32.9	0.0	-32.9
-141.0	-27.4	0.0	-27.4
-140.0	-40.8	0.0	-40.8
-139.0	-30.8	0.0	-30.8
-138.0	-31.1	0.0	-31.1
-137.0	-30.6	0.0	-30.6
-136.0	-27.9	0.0	-27.9
-135.0	-29.7	0.0	-29.7
-134.0	-33.0	0.0	-33.0
-133.0	-28.5	0.0	-28.5
-132.0	-37.5	0.0	-37.5
-131.0	-28.5	0.0	-28.5
-130.0	-33.6	0.0	-33.6
-129.0	-37.7	0.0	-37.7
-128.0	-36.4	0.0	-36.4
-127.0	-32.8	0.0	-32.8
-126.0	-38.3	0.0	-38.3
-125.0	-34.2	0.0	-34.2
-124.0	-28.2	0.0	-28.2
-123.0	-22.4	0.0	-22.4
-122.0	-32.8	0.0	-32.8
-121.0	-30.4	0.0	-30.4
-120.0	-25.8	0.0	-25.8

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.3		
1.0	20.4		
2.0	9.7	21.5	-11.8
3.0	10.2	17.1	-6.9
4.0	7.2	13.9	-6.7
5.0	2.5	11.5	-9.0
6.0	3.7	9.5	-5.9
7.0	1.9	7.9	-6.0
8.0	-12.7	8.0	-20.7
9.0	-5.1	8.0	-13.1
10.0	-5.4	7.0	-12.4
11.0	-9.6	6.0	-15.6
12.0	-12.1	5.0	-17.1
13.0	-6.9	4.2	-11.0
14.0	-12.1	3.3	-15.5
15.0	-10.4	2.6	-13.0
16.0	-10.7	1.9	-12.6
17.0	-12.2	1.2	-13.5
18.0	-9.5	0.6	-10.1
19.0	-16.3	0.0	-16.4
20.0	-24.2	-0.5	-23.6
21.0	-9.4	-1.1	-8.3
22.0	-18.2	-1.6	-16.7
23.0	-13.5	-2.0	-11.4
24.0	-18.1	-2.5	-15.6
25.0	-26.3	-2.9	-23.3
26.0	-10.6	-3.4	-7.2
27.0	-16.6	-3.8	-12.8
28.0	-14.7	-4.2	-10.5
29.0	-7.3	-4.6	-2.7
30.0	-8.4	-4.9	-3.5
31.0	-10.9	-5.3	-5.7
32.0	-10.8	-5.6	-5.2
33.0	-8.2	-6.0	-2.2
34.0	-14.7	-6.3	-8.4
35.0	-17.1	-6.6	-10.5
36.0	-30.9	-6.9	-24.0
37.0	-14.3	-7.2	-7.1
38.0	-23.5	-7.5	-16.0
39.0	-16.7	-7.8	-8.9
40.0	-22.1	-8.1	-14.1
41.0	-24.3	-8.3	-16.0
42.0	-24.1	-8.6	-15.6
43.0	-13.0	-8.8	-4.2
44.0	-15.1	-9.1	-6.0
45.0	-15.3	-9.3	-6.0
46.0	-18.4	-9.6	-8.8
47.0	-14.4	-9.8	-4.6
48.0	-16.8	-10.0	-6.8
49.0	-21.1	-10.0	-11.1
50.0	-19.5	-10.0	-9.5
51.0	-13.8	-10.0	-3.8
52.0	-25.6	-10.0	-15.6
53.0	-29.9	-10.0	-19.9
54.0	-26.5	-10.0	-16.5
55.0	-28.1	-10.0	-18.1
56.0	-26.9	-10.0	-16.9
57.0	-27.2	-10.0	-17.2
58.0	-31.2	-10.0	-21.2
59.0	-19.7	-10.0	-9.7

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-26.5	0.0	-26.5
-118.0	-29.7	0.0	-29.7
-117.0	-26.4	0.0	-26.4
-116.0	-33.7	0.0	-33.7
-115.0	-28.2	0.0	-28.2
-114.0	-30.2	0.0	-30.2
-113.0	-27.0	0.0	-27.0
-112.0	-31.2	0.0	-31.2
-111.0	-26.7	0.0	-26.7
-110.0	-26.8	0.0	-26.8
-109.0	-34.3	0.0	-34.3
-108.0	-24.1	0.0	-24.1
-107.0	-25.4	0.0	-25.4
-106.0	-26.5	0.0	-26.5
-105.0	-29.8	0.0	-29.8
-104.0	-26.8	0.0	-26.8
-103.0	-20.9	0.0	-20.9
-102.0	-17.1	0.0	-17.1
-101.0	-15.3	0.0	-15.3
-100.0	-16.9	0.0	-16.9
-99.0	-15.8	0.0	-15.8
-98.0	-15.2	0.0	-15.2
-97.0	-16.9	0.0	-16.9
-96.0	-16.8	0.0	-16.8
-95.0	-13.2	0.0	-13.2
-94.0	-12.7	0.0	-12.7
-93.0	-16.6	0.0	-16.6
-92.0	-14.5	0.0	-14.5
-91.0	-15.2	0.0	-15.2
-90.0	-28.8	0.0	-28.8
-89.0	-15.0	0.0	-15.0
-88.0	-17.5	0.0	-17.5
-87.0	-19.7	0.0	-19.7
-86.0	-16.1	0.0	-16.1
-85.0	-36.4	-10.0	-26.4
-84.0	-21.0	-10.0	-11.0
-83.0	-43.2	-10.0	-33.2
-82.0	-14.1	-10.0	-4.1
-81.0	-14.4	-10.0	-4.4
-80.0	-22.4	-10.0	-12.4
-79.0	-32.3	-10.0	-22.3
-78.0	-23.5	-10.0	-13.5
-77.0	-22.7	-10.0	-12.7
-76.0	-13.1	-10.0	-3.1
-75.0	-14.3	-10.0	-4.3
-74.0	-18.4	-10.0	-8.4
-73.0	-24.2	-10.0	-14.2
-72.0	-20.0	-10.0	-10.0
-71.0	-21.5	-10.0	-11.5
-70.0	-14.2	-10.0	-4.2
-69.0	-21.1	-10.0	-11.1
-68.0	-16.6	-10.0	-6.6
-67.0	-15.7	-10.0	-5.7
-66.0	-18.1	-10.0	-8.1
-65.0	-19.6	-10.0	-9.6
-64.0	-16.7	-10.0	-6.7
-63.0	-14.8	-10.0	-4.8
-62.0	-21.9	-10.0	-11.9
-61.0	-15.2	-10.0	-5.2
-60.0	-14.3	-10.0	-4.3
-59.0	-15.5	-10.0	-5.5
-58.0	-22.6	-10.0	-12.6
-57.0	-12.3	-10.0	-2.3

60.0	-25.7	-10.0	-15.7
61.0	-17.4	-10.0	-7.4
62.0	-15.7	-10.0	-5.7
63.0	-13.7	-10.0	-3.7
64.0	-18.5	-10.0	-8.5
65.0	-20.7	-10.0	-10.7
66.0	-27.5	-10.0	-17.5
67.0	-14.1	-10.0	-4.1
68.0	-21.9	-10.0	-11.9
69.0	-22.4	-10.0	-12.4
70.0	-19.0	-10.0	-9.0
71.0	-13.0	-10.0	-3.0
72.0	-15.7	-10.0	-5.7
73.0	-18.1	-10.0	-8.1
74.0	-20.4	-10.0	-10.4
75.0	-13.4	-10.0	-3.4
76.0	-24.4	-10.0	-14.4
77.0	-22.0	-10.0	-12.0
78.0	-13.9	-10.0	-3.9
79.0	-16.9	-10.0	-6.9
80.0	-21.6	-10.0	-11.6
81.0	-22.7	-10.0	-12.7
82.0	-23.7	-10.0	-13.7
83.0	-20.0	-10.0	-10.0
84.0	-22.9	-10.0	-12.9
85.0	-26.0	-10.0	-16.0
86.0	-19.9	0.0	-19.9
87.0	-25.6	0.0	-25.6
88.0	-27.9	0.0	-27.9
89.0	-22.8	0.0	-22.8
90.0	-21.8	0.0	-21.8
91.0	-25.1	0.0	-25.1
92.0	-32.2	0.0	-32.2
93.0	-36.0	0.0	-36.0
94.0	-25.7	0.0	-25.7
95.0	-30.3	0.0	-30.3
96.0	-26.5	0.0	-26.5
97.0	-21.7	0.0	-21.7
98.0	-27.3	0.0	-27.3
99.0	-33.0	0.0	-33.0
100.0	-24.9	0.0	-24.9
101.0	-31.6	0.0	-31.6
102.0	-26.0	0.0	-26.0
103.0	-21.5	0.0	-21.5
104.0	-28.5	0.0	-28.5
105.0	-26.0	0.0	-26.0
106.0	-23.2	0.0	-23.2
107.0	-22.2	0.0	-22.2
108.0	-56.3	0.0	-56.3
109.0	-24.4	0.0	-24.4
110.0	-26.7	0.0	-26.7
111.0	-25.1	0.0	-25.1
112.0	-27.8	0.0	-27.8
113.0	-43.3	0.0	-43.3
114.0	-23.1	0.0	-23.1
115.0	-30.2	0.0	-30.2
116.0	-32.7	0.0	-32.7
117.0	-32.3	0.0	-32.3
118.0	-31.0	0.0	-31.0
119.0	-25.7	0.0	-25.7
120.0	-22.7	0.0	-22.7
121.0	-27.0	0.0	-27.0
122.0	-24.7	0.0	-24.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-11.1	-10.0	-1.1
-55.0	-16.7	-10.0	-6.7
-54.0	-23.2	-10.0	-13.2
-53.0	-12.1	-10.0	-2.1
-52.0	-15.3	-10.0	-5.3
-51.0	-20.1	-10.0	-10.1
-50.0	-14.4	-10.0	-4.4
-49.0	-13.6	-10.0	-3.6
-48.0	-9.3	-10.0	0.8
-47.0	-9.8	-9.8	0.0
-46.0	-14.1	-9.6	-4.5
-45.0	-15.8	-9.3	-6.5
-44.0	-10.9	-9.1	-1.9
-43.0	-18.2	-8.8	-9.3
-42.0	-13.6	-8.6	-5.0
-41.0	-13.2	-8.3	-4.9
-40.0	-11.3	-8.1	-3.3
-39.0	-9.4	-7.8	-1.6
-38.0	-10.2	-7.5	-2.7
-37.0	-10.2	-7.2	-2.9
-36.0	-9.9	-6.9	-3.0
-35.0	-11.4	-6.6	-4.8
-34.0	-12.6	-6.3	-6.3
-33.0	-14.0	-6.0	-8.0
-32.0	-11.1	-5.6	-5.4
-31.0	-8.3	-5.3	-3.0
-30.0	-7.6	-4.9	-2.7
-29.0	-9.6	-4.6	-5.1
-28.0	-5.2	-4.2	-1.1
-27.0	-5.4	-3.8	-1.6
-26.0	-8.8	-3.4	-5.5
-25.0	-4.3	-2.9	-1.3
-24.0	-4.5	-2.5	-2.0
-23.0	-3.4	-2.0	-1.3
-22.0	-5.1	-1.6	-3.5
-21.0	-9.4	-1.1	-8.4
-20.0	-8.7	-0.5	-8.1
-19.0	-3.9	0.0	-4.0
-18.0	-7.5	0.6	-8.2
-17.0	-3.9	1.2	-5.1
-16.0	-11.3	1.9	-13.2
-15.0	-5.0	2.6	-7.6
-14.0	-6.0	3.3	-9.4
-13.0	-9.5	4.2	-13.7
-12.0	-0.8	5.0	-5.9
-11.0	-7.4	6.0	-13.4
-10.0	-15.8	7.0	-22.8
-9.0	-0.4	8.0	-8.4
-8.0	-16.1	8.0	-24.1
-7.0	1.7	7.9	-6.2
-6.0	-4.4	9.5	-14.0
-5.0	2.5	11.5	-9.0
-4.0	3.6	13.9	-10.3
-3.0	11.7	17.1	-5.4
-2.0	17.7	21.5	-3.8
-1.0	13.3		
0.0	48.3		

123.0	-35.2	0.0	-35.2
124.0	-28.2	0.0	-28.2
125.0	-25.3	0.0	-25.3
126.0	-26.0	0.0	-26.0
127.0	-37.0	0.0	-37.0
128.0	-35.9	0.0	-35.9
129.0	-28.8	0.0	-28.8
130.0	-40.3	0.0	-40.3
131.0	-25.6	0.0	-25.6
132.0	-33.5	0.0	-33.5
133.0	-22.4	0.0	-22.4
134.0	-19.1	0.0	-19.1
135.0	-29.5	0.0	-29.5
136.0	-27.3	0.0	-27.3
137.0	-31.3	0.0	-31.3
138.0	-26.4	0.0	-26.4
139.0	-20.7	0.0	-20.7
140.0	-20.5	0.0	-20.5
141.0	-18.8	0.0	-18.8
142.0	-28.0	0.0	-28.0
143.0	-24.2	0.0	-24.2
144.0	-25.3	0.0	-25.3
145.0	-25.4	0.0	-25.4
146.0	-18.3	0.0	-18.3
147.0	-20.4	0.0	-20.4
148.0	-31.4	0.0	-31.4
149.0	-23.0	0.0	-23.0
150.0	-28.9	0.0	-28.9
151.0	-23.7	0.0	-23.7
152.0	-22.5	0.0	-22.5
153.0	-19.4	0.0	-19.4
154.0	-22.1	0.0	-22.1
155.0	-31.3	0.0	-31.3
156.0	-19.6	0.0	-19.6
157.0	-19.4	0.0	-19.4
158.0	-31.7	0.0	-31.7
159.0	-18.2	0.0	-18.2
160.0	-18.8	0.0	-18.8
161.0	-18.5	0.0	-18.5
162.0	-22.7	0.0	-22.7
163.0	-33.1	0.0	-33.1
164.0	-28.3	0.0	-28.3
165.0	-26.4	0.0	-26.4
166.0	-19.9	0.0	-19.9
167.0	-22.7	0.0	-22.7
168.0	-18.8	0.0	-18.8
169.0	-32.2	0.0	-32.2
170.0	-16.9	0.0	-16.9
171.0	-21.4	0.0	-21.4
172.0	-22.6	0.0	-22.6
173.0	-29.6	0.0	-29.6
174.0	-22.7	0.0	-22.7
175.0	-27.2	0.0	-27.2
176.0	-24.7	0.0	-24.7
177.0	-27.6	0.0	-27.6
178.0	-25.2	0.0	-25.2
179.0	-35.6	0.0	-35.6

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-15.8	7.0	-22.8
-9.9	-11.3	7.1	-18.4
-9.8	-7.7	7.2	-14.9
-9.7	-6.0	7.3	-13.3
-9.6	-6.9	7.4	-14.3
-9.5	-8.7	7.6	-16.3
-9.4	-6.6	7.7	-14.2
-9.3	-3.4	7.8	-11.2
-9.2	-1.4	8.0	-9.4
-9.1	-0.2	8.0	-8.2
-9.0	-0.4	8.0	-8.4
-8.9	-2.1	8.0	-10.1
-8.8	-6.3	8.0	-14.3
-8.7	-11.2	8.0	-19.2
-8.6	-7.2	8.0	-15.2
-8.5	-3.1	8.0	-11.1
-8.4	-2.0	8.0	-10.0
-8.3	-2.5	8.0	-10.5
-8.2	-5.1	8.0	-13.1
-8.1	-11.1	8.0	-19.1
-8.0	-16.1	8.0	-24.1
-7.9	-10.6	8.0	-18.6
-7.8	-8.1	8.0	-16.1
-7.7	-7.1	8.0	-15.1
-7.6	-8.3	8.0	-16.3
-7.5	-9.1	8.0	-17.1
-7.4	-11.0	8.0	-19.0
-7.3	-7.3	8.0	-15.3
-7.2	-2.7	8.0	-10.7
-7.1	0.2	8.0	-7.8
-7.0	1.7	7.9	-6.2
-6.9	1.6	8.0	-6.4
-6.8	-0.3	8.2	-8.5
-6.7	-4.5	8.3	-12.8
-6.6	-5.5	8.5	-14.0
-6.5	-1.0	8.7	-9.7
-6.4	1.9	8.8	-7.0
-6.3	2.9	9.0	-6.1
-6.2	2.3	9.2	-6.9
-6.1	0.1	9.4	-9.3
-6.0	-4.4	9.5	-14.0
-5.9	-9.0	9.7	-18.7
-5.8	-5.4	9.9	-15.3
-5.7	-3.8	10.1	-13.9
-5.6	-5.1	10.3	-15.4
-5.5	-9.8	10.5	-20.3
-5.4	-7.1	10.7	-17.8
-5.3	-2.1	10.9	-13.0
-5.2	0.5	11.1	-10.6
-5.1	1.7	11.3	-9.6
-5.0	2.5	11.5	-9.0
-4.9	3.3	11.7	-8.4
-4.8	3.8	12.0	-8.1
-4.7	3.2	12.2	-9.0
-4.6	1.0	12.4	-11.4
-4.5	-1.2	12.7	-13.8
-4.4	1.9	12.9	-11.0
-4.3	4.9	13.2	-8.3
-4.2	6.2	13.4	-7.2
-4.1	5.7	13.7	-7.9

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.3		
0.1	48.0		
0.2	47.1		
0.3	45.8		
0.4	43.9		
0.5	41.3		
0.6	38.1		
0.7	34.4		
0.8	30.1		
0.9	25.3		
1.0	20.4		
1.1	16.9		
1.2	18.0		
1.3	19.7		
1.4	20.1		
1.5	19.1	24.6	-5.5
1.6	16.8	23.9	-7.1
1.7	13.4	23.2	-9.8
1.8	10.6	22.6	-12.0
1.9	9.3	22.0	-12.7
2.0	9.7	21.5	-11.8
2.1	11.2	20.9	-9.7
2.2	13.1	20.4	-7.4
2.3	14.7	20.0	-5.3
2.4	15.1	19.5	-4.4
2.5	14.0	19.1	-5.1
2.6	11.8	18.6	-6.8
2.7	9.1	18.2	-9.1
2.8	8.4	17.8	-9.4
2.9	9.5	17.4	-7.9
3.0	10.2	17.1	-6.9
3.1	10.1	16.7	-6.6
3.2	9.0	16.4	-7.4
3.3	8.1	16.0	-7.9
3.4	8.1	15.7	-7.7
3.5	8.7	15.4	-6.7
3.6	9.4	15.1	-5.7
3.7	9.9	14.8	-4.9
3.8	9.8	14.5	-4.7
3.9	9.1	14.2	-5.1
4.0	7.2	13.9	-6.7
4.1	4.0	13.7	-9.6
4.2	0.6	13.4	-12.9
4.3	-1.3	13.2	-14.5
4.4	-0.9	12.9	-13.9
4.5	-2.5	12.7	-15.2
4.6	-6.1	12.4	-18.5
4.7	-3.1	12.2	-15.3
4.8	1.2	12.0	-10.8
4.9	3.1	11.7	-8.6
5.0	2.5	11.5	-9.0
5.1	-1.4	11.3	-12.7
5.2	-8.7	11.1	-19.8
5.3	-3.0	10.9	-13.8
5.4	0.8	10.7	-9.8
5.5	1.8	10.5	-8.7
5.6	-0.1	10.3	-10.4
5.7	-5.3	10.1	-15.4
5.8	-3.7	9.9	-13.6
5.9	1.3	9.7	-8.5

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	3.6	13.9	-10.3
-3.9	1.2	14.2	-13.0
-3.8	3.9	14.5	-10.6
-3.7	7.2	14.8	-7.6
-3.6	9.4	15.1	-5.7
-3.5	10.4	15.4	-5.0
-3.4	11.0	15.7	-4.7
-3.3	11.4	16.0	-4.6
-3.2	11.9	16.4	-4.5
-3.1	11.9	16.7	-4.8
-3.0	11.7	17.1	-5.4
-2.9	12.1	17.4	-5.3
-2.8	13.8	17.8	-4.0
-2.7	15.5	18.2	-2.8
-2.6	16.5	18.6	-2.1
-2.5	16.5	19.1	-2.5
-2.4	15.7	19.5	-3.8
-2.3	15.2	20.0	-4.8
-2.2	16.0	20.4	-4.4
-2.1	17.4	20.9	-3.6
-2.0	17.7	21.5	-3.8
-1.9	16.6	22.0	-5.5
-1.8	13.7	22.6	-8.9
-1.7	13.0	23.2	-10.2
-1.6	16.6	23.9	-7.3
-1.5	19.0	24.6	-5.6
-1.4	19.6		
-1.3	18.2		
-1.2	15.5		
-1.1	12.9		
-1.0	13.3		
-0.9	20.8		
-0.8	28.4		
-0.7	34.1		
-0.6	38.4		
-0.5	41.8		
-0.4	44.3		
-0.3	46.1		
-0.2	47.4		
-0.1	48.1		
0.0	48.3		

6.0	3.7	9.5	-5.9
6.1	3.5	9.4	-5.9
6.2	1.7	9.2	-7.5
6.3	-1.7	9.0	-10.7
6.4	-6.4	8.8	-15.2
6.5	-6.7	8.7	-15.4
6.6	-3.9	8.5	-12.4
6.7	-1.7	8.3	-10.1
6.8	0.3	8.2	-7.9
6.9	1.6	8.0	-6.4
7.0	1.9	7.9	-6.0
7.1	0.1	8.0	-7.9
7.2	-4.4	8.0	-12.4
7.3	-9.6	8.0	-17.6
7.4	-4.4	8.0	-12.4
7.5	-0.9	8.0	-8.9
7.6	0.1	8.0	-7.9
7.7	-0.4	8.0	-8.4
7.8	-2.8	8.0	-10.8
7.9	-6.4	8.0	-14.4
8.0	-12.7	8.0	-20.7
8.1	-16.0	8.0	-24.0
8.2	-8.7	8.0	-16.7
8.3	-4.4	8.0	-12.4
8.4	-1.6	8.0	-9.6
8.5	-0.7	8.0	-8.7
8.6	-1.4	8.0	-9.4
8.7	-4.1	8.0	-12.1
8.8	-8.4	8.0	-16.4
8.9	-8.7	8.0	-16.7
9.0	-5.1	8.0	-13.1
9.1	-3.4	8.0	-11.4
9.2	-3.9	8.0	-11.9
9.3	-7.5	7.8	-15.3
9.4	-12.4	7.7	-20.1
9.5	-11.1	7.6	-18.6
9.6	-9.8	7.4	-17.3
9.7	-13.3	7.3	-20.6
9.8	-32.8	7.2	-40.0
9.9	-10.1	7.1	-17.2
10.0	-5.4	7.0	-12.4

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-16.0	-4.9	-11.1
-29.5	-11.3	-4.7	-6.6
-29.0	-15.1	-4.6	-10.5
-28.5	-13.4	-4.4	-9.0
-28.0	-9.3	-4.2	-5.1
-27.5	-15.8	-4.0	-11.9
-27.0	-17.7	-3.8	-13.9
-26.5	-14.4	-3.6	-10.8
-26.0	-12.1	-3.4	-8.7
-25.5	-14.7	-3.2	-11.5
-25.0	-21.4	-2.9	-18.5
-24.5	-17.8	-2.7	-15.0
-24.0	-22.3	-2.5	-19.8
-23.5	-22.4	-2.3	-20.1
-23.0	-13.6	-2.0	-11.5
-22.5	-13.8	-1.8	-12.0
-22.0	-19.6	-1.6	-18.0
-21.5	-10.7	-1.3	-9.4
-21.0	-11.3	-1.1	-10.3
-20.5	-15.6	-0.8	-14.8
-20.0	-12.3	-0.5	-11.8
-19.5	-12.7	-0.3	-12.4
-19.0	-17.6	0.0	-17.6
-18.5	-22.2	0.3	-22.5
-18.0	-18.8	0.6	-19.4
-17.5	-12.5	0.9	-13.4
-17.0	-9.4	1.2	-10.6
-16.5	-15.3	1.6	-16.8
-16.0	-19.4	1.9	-21.3
-15.5	-11.9	2.2	-14.1
-15.0	-7.8	2.6	-10.4
-14.5	-7.5	3.0	-10.5
-14.0	-11.5	3.3	-14.8
-13.5	-13.1	3.7	-16.8
-13.0	-8.0	4.2	-12.1
-12.5	-5.4	4.6	-9.9
-12.0	-8.0	5.0	-13.0
-11.5	-17.5	5.5	-23.0
-11.0	-15.5	6.0	-21.4
-10.5	-8.9	6.5	-15.4
-10.0	-6.6	7.0	-13.6
-9.5	-12.3	7.6	-19.9
-9.0	-4.8	8.1	-12.9
-8.5	-0.1	8.8	-8.9
-8.0	-11.1	9.4	-20.6
-7.5	-4.0	10.1	-14.2
-7.0	0.3	10.9	-10.5
-6.5	-8.5	11.7	-20.2
-6.0	3.4	12.5	-9.2
-5.5	0.1	13.5	-13.4
-5.0	1.9	14.5	-12.6
-4.5	0.2	15.7	-15.5
-4.0	4.9	16.9	-12.0
-3.5	5.8	18.4	-12.6
-3.0	11.1		
-2.5	12.8		
-2.0	12.0		
-1.5	21.7		
-1.0	20.5		
-0.5	41.9		
0.0	48.3		

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	48.3		
0.5	42.0		
1.0	15.9		
1.5	19.0		
2.0	18.2		
2.5	17.5		
3.0	10.1		
3.5	6.9	18.4	-11.5
4.0	9.8	16.9	-7.2
4.5	-3.0	15.7	-18.7
5.0	-0.5	14.5	-15.1
5.5	2.6	13.5	-10.9
6.0	-8.5	12.5	-21.0
6.5	-3.0	11.7	-14.7
7.0	2.2	10.9	-8.6
7.5	-12.7	10.1	-22.8
8.0	-8.5	9.4	-17.9
8.5	-8.4	8.8	-17.2
9.0	-2.9	8.1	-11.0
9.5	-3.6	7.6	-11.2
10.0	-19.6	7.0	-26.6
10.5	-3.5	6.5	-10.0
11.0	-2.4	6.0	-8.3
11.5	-3.3	5.5	-8.7
12.0	-6.5	5.0	-11.5
12.5	-1.8	4.6	-6.4
13.0	-12.2	4.2	-16.3
13.5	-6.9	3.7	-10.6
14.0	0.8	3.3	-2.5
14.5	-5.2	3.0	-8.2
15.0	-4.7	2.6	-7.3
15.5	-6.4	2.2	-8.6
16.0	-5.7	1.9	-7.6
16.5	-8.6	1.6	-10.2
17.0	-3.7	1.2	-4.9
17.5	-3.1	0.9	-4.0
18.0	-8.3	0.6	-8.9
18.5	-3.6	0.3	-3.9
19.0	-2.1	0.0	-2.2
19.5	-1.8	-0.3	-1.6
20.0	-4.0	-0.5	-3.5
20.5	-4.3	-0.8	-3.5
21.0	-4.6	-1.1	-3.5
21.5	-14.0	-1.3	-12.7
22.0	-8.9	-1.6	-7.4
22.5	-5.6	-1.8	-3.8
23.0	-7.8	-2.0	-5.7
23.5	-7.2	-2.3	-5.0
24.0	-3.8	-2.5	-1.2
24.5	-5.3	-2.7	-2.5
25.0	-7.3	-2.9	-4.4
25.5	-8.1	-3.2	-5.0
26.0	-8.6	-3.4	-5.2
26.5	-10.7	-3.6	-7.2
27.0	-7.4	-3.8	-3.6
27.5	-6.3	-4.0	-2.3
28.0	-9.8	-4.2	-5.7
28.5	-7.1	-4.4	-2.8
29.0	-7.4	-4.6	-2.9
29.5	-8.8	-4.7	-4.1
30.0	-8.3	-4.9	-3.4

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-6.6	7.0	-13.6
-9.9	-11.9	7.1	-19.0
-9.8	-16.1	7.2	-23.3
-9.7	-11.3	7.3	-18.6
-9.6	-8.7	7.4	-16.1
-9.5	-12.3	7.6	-19.9
-9.4	-18.6	7.7	-26.3
-9.3	-12.7	7.8	-20.5
-9.2	-6.5	7.9	-14.5
-9.1	-4.5	8.0	-12.5
-9.0	-4.8	8.1	-12.9
-8.9	-7.5	8.3	-15.8
-8.8	-11.7	8.4	-20.1
-8.7	-6.2	8.5	-14.7
-8.6	-1.9	8.6	-10.6
-8.5	-0.1	8.8	-8.9
-8.4	0.3	8.9	-8.6
-8.3	-0.8	9.0	-9.8
-8.2	-3.9	9.2	-13.1
-8.1	-9.8	9.3	-19.1
-8.0	-11.1	9.4	-20.6
-7.9	-5.3	9.6	-14.8
-7.8	-1.7	9.7	-11.4
-7.7	-0.5	9.8	-10.3
-7.6	-1.4	10.0	-11.3
-7.5	-4.0	10.1	-14.2
-7.4	-12.0	10.3	-22.3
-7.3	-13.7	10.4	-24.1
-7.2	-4.8	10.6	-15.3
-7.1	-1.4	10.7	-12.2
-7.0	0.3	10.9	-10.5
-6.9	1.0	11.0	-10.0
-6.8	0.8	11.2	-10.4
-6.7	0.0	11.3	-11.3
-6.6	-2.6	11.5	-14.1
-6.5	-8.5	11.7	-20.2
-6.4	-9.2	11.8	-21.0
-6.3	-0.9	12.0	-12.9
-6.2	2.7	12.2	-9.5
-6.1	4.1	12.4	-8.3
-6.0	3.4	12.5	-9.2
-5.9	0.6	12.7	-12.1
-5.8	-7.6	12.9	-20.5
-5.7	-11.2	13.1	-24.3
-5.6	-1.8	13.3	-15.1
-5.5	0.1	13.5	-13.4
-5.4	-1.6	13.7	-15.3
-5.3	-7.4	13.9	-21.3
-5.2	-8.3	14.1	-22.4
-5.1	-1.0	14.3	-15.3
-5.0	1.9	14.5	-12.6
-4.9	1.4	14.7	-13.3
-4.8	-2.1	15.0	-17.1
-4.7	-13.5	15.2	-28.7
-4.6	-5.3	15.4	-20.7
-4.5	0.2	15.7	-15.5
-4.4	1.8	15.9	-14.1
-4.3	0.6	16.2	-15.6
-4.2	-1.2	16.4	-17.6
-4.1	1.4	16.7	-15.3

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.3		
0.1	48.1		
0.2	47.4		
0.3	46.2		
0.4	44.4		
0.5	42.0		
0.6	38.7		
0.7	34.5		
0.8	28.8		
0.9	21.5		
1.0	15.9		
1.1	18.0		
1.2	19.9		
1.3	20.6		
1.4	20.5		
1.5	19.0		
1.6	16.1		
1.7	13.3		
1.8	15.0		
1.9	17.3		
2.0	18.2		
2.1	17.9		
2.2	17.0		
2.3	16.6		
2.4	17.1		
2.5	17.5		
2.6	17.3		
2.7	15.9		
2.8	13.6		
2.9	11.1		
3.0	10.1		
3.1	10.6		
3.2	10.9		
3.3	10.3		
3.4	8.9		
3.5	6.9	18.4	-11.5
3.6	4.5	18.1	-13.6
3.7	4.0	17.8	-13.8
3.8	6.0	17.5	-11.5
3.9	8.4	17.2	-8.9
4.0	9.8	16.9	-7.2
4.1	10.0	16.7	-6.6
4.2	9.2	16.4	-7.3
4.3	6.8	16.2	-9.4
4.4	2.7	15.9	-13.3
4.5	-3.0	15.7	-18.7
4.6	-2.2	15.4	-17.6
4.7	0.2	15.2	-15.0
4.8	1.2	15.0	-13.8
4.9	0.5	14.7	-14.2
5.0	-0.5	14.5	-15.1
5.1	-0.1	14.3	-14.4
5.2	0.5	14.1	-13.6
5.3	1.1	13.9	-12.8
5.4	2.0	13.7	-11.7
5.5	2.6	13.5	-10.9
5.6	2.5	13.3	-10.8
5.7	1.3	13.1	-11.8
5.8	-2.1	12.9	-15.1
5.9	-9.1	12.7	-21.9

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	4.9	16.9	-12.0
-3.9	7.1	17.2	-10.2
-3.8	7.8	17.5	-9.7
-3.7	7.6	17.8	-10.2
-3.6	6.9	18.1	-11.2
-3.5	5.8	18.4	-12.6
-3.4	5.7		
-3.3	7.1		
-3.2	9.1		
-3.1	10.6		
-3.0	11.1		
-2.9	10.5		
-2.8	9.3		
-2.7	9.2		
-2.6	11.1		
-2.5	12.8		
-2.4	13.6		
-2.3	13.2		
-2.2	12.0		
-2.1	11.4		
-2.0	12.0		
-1.9	13.4		
-1.8	15.2		
-1.7	17.7		
-1.6	20.1		
-1.5	21.7		
-1.4	22.5		
-1.3	21.9		
-1.2	19.7		
-1.1	17.1		
-1.0	20.5		
-0.9	26.5		
-0.8	31.4		
-0.7	35.5		
-0.6	39.0		
-0.5	41.9		
-0.4	44.1		
-0.3	45.9		
-0.2	47.2		
-0.1	48.0		
0.0	48.3		

6.0	-8.5	12.5	-21.0
6.1	-1.4	12.4	-13.8
6.2	0.9	12.2	-11.3
6.3	1.4	12.0	-10.6
6.4	-0.2	11.8	-12.1
6.5	-3.0	11.7	-14.7
6.6	-4.1	11.5	-15.6
6.7	-1.3	11.3	-12.7
6.8	1.3	11.2	-9.9
6.9	2.3	11.0	-8.8
7.0	2.2	10.9	-8.6
7.1	1.6	10.7	-9.1
7.2	-0.3	10.6	-10.9
7.3	-3.2	10.4	-13.7
7.4	-7.9	10.3	-18.2
7.5	-12.7	10.1	-22.8
7.6	-9.0	10.0	-19.0
7.7	-6.6	9.8	-16.4
7.8	-5.3	9.7	-15.0
7.9	-6.5	9.6	-16.1
8.0	-8.5	9.4	-17.9
8.1	-8.5	9.3	-17.8
8.2	-6.2	9.2	-15.4
8.3	-4.5	9.0	-13.5
8.4	-4.8	8.9	-13.7
8.5	-8.4	8.8	-17.2
8.6	-18.8	8.6	-27.5
8.7	-12.0	8.5	-20.5
8.8	-5.7	8.4	-14.1
8.9	-3.2	8.3	-11.5
9.0	-2.9	8.1	-11.0
9.1	-5.3	8.0	-13.3
9.2	-11.9	7.9	-19.9
9.3	-17.0	7.8	-24.8
9.4	-6.9	7.7	-14.6
9.5	-3.6	7.6	-11.2
9.6	-2.1	7.4	-9.6
9.7	-2.9	7.3	-10.2
9.8	-5.5	7.2	-12.7
9.9	-11.4	7.1	-18.5
10.0	-19.6	7.0	-26.6

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in X-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-12.7	-2.0	-10.7
-9.9	-17.7	-2.0	-15.7
-9.8	-18.5	-2.0	-16.5
-9.7	-16.9	-2.0	-14.9
-9.6	-13.7	-2.0	-11.7
-9.5	-10.0	-2.0	-8.0
-9.4	-7.9	-2.0	-5.9
-9.3	-6.3	-2.0	-4.3
-9.2	-6.7	-2.0	-4.7
-9.1	-7.2	-2.0	-5.2
-9.0	-9.7	-2.0	-7.7
-8.9	-12.8	-2.0	-10.8
-8.8	-19.6	-2.0	-17.6
-8.7	-12.8	-2.0	-10.8
-8.6	-7.9	-2.0	-5.9
-8.5	-6.0	-2.0	-4.0
-8.4	-5.4	-2.0	-3.4
-8.3	-6.6	-2.0	-4.6
-8.2	-9.5	-2.0	-7.5
-8.1	-15.3	-2.0	-13.3
-8.0	-19.4	-2.0	-17.4
-7.9	-15.4	-2.0	-13.4
-7.8	-13.5	-2.0	-11.5
-7.7	-13.8	-2.0	-11.8
-7.6	-15.9	-2.0	-13.9
-7.5	-15.8	-2.0	-13.8
-7.4	-15.1	-2.0	-13.1
-7.3	-13.4	-2.0	-11.4
-7.2	-13.3	-2.0	-11.3
-7.1	-13.0	-2.0	-11.0
-7.0	-11.8	-2.1	-9.6
-6.9	-13.1	-2.0	-11.1
-6.8	-17.4	-1.8	-15.6
-6.7	-21.3	-1.7	-19.7
-6.6	-12.7	-1.5	-11.2
-6.5	-7.1	-1.3	-5.8
-6.4	-5.5	-1.2	-4.3
-6.3	-3.1	-1.0	-2.1
-6.2	-2.7	-0.8	-1.9
-6.1	-2.2	-0.6	-1.6
-6.0	-4.0	-0.5	-3.5
-5.9	-3.8	-0.3	-3.5
-5.8	-5.0	-0.1	-4.9
-5.7	-6.4	0.1	-6.5
-5.6	-6.4	0.3	-6.7
-5.5	-5.7	0.5	-6.1
-5.4	-4.8	0.7	-5.5
-5.3	-3.8	0.9	-4.7
-5.2	-3.1	1.1	-4.2
-5.1	-2.8	1.3	-4.2
-5.0	-2.7	1.5	-4.2
-4.9	-2.8	1.7	-4.6
-4.8	-3.1	2.0	-5.0
-4.7	-3.3	2.2	-5.5
-4.6	-2.5	2.4	-5.0
-4.5	-0.9	2.7	-3.6
-4.4	0.8	2.9	-2.1
-4.3	2.6	3.2	-0.6
-4.2	3.7	3.4	0.3
-4.1	4.4	3.7	0.7

28.30 GHz Antenna Pattern in X-pol Az RHCP

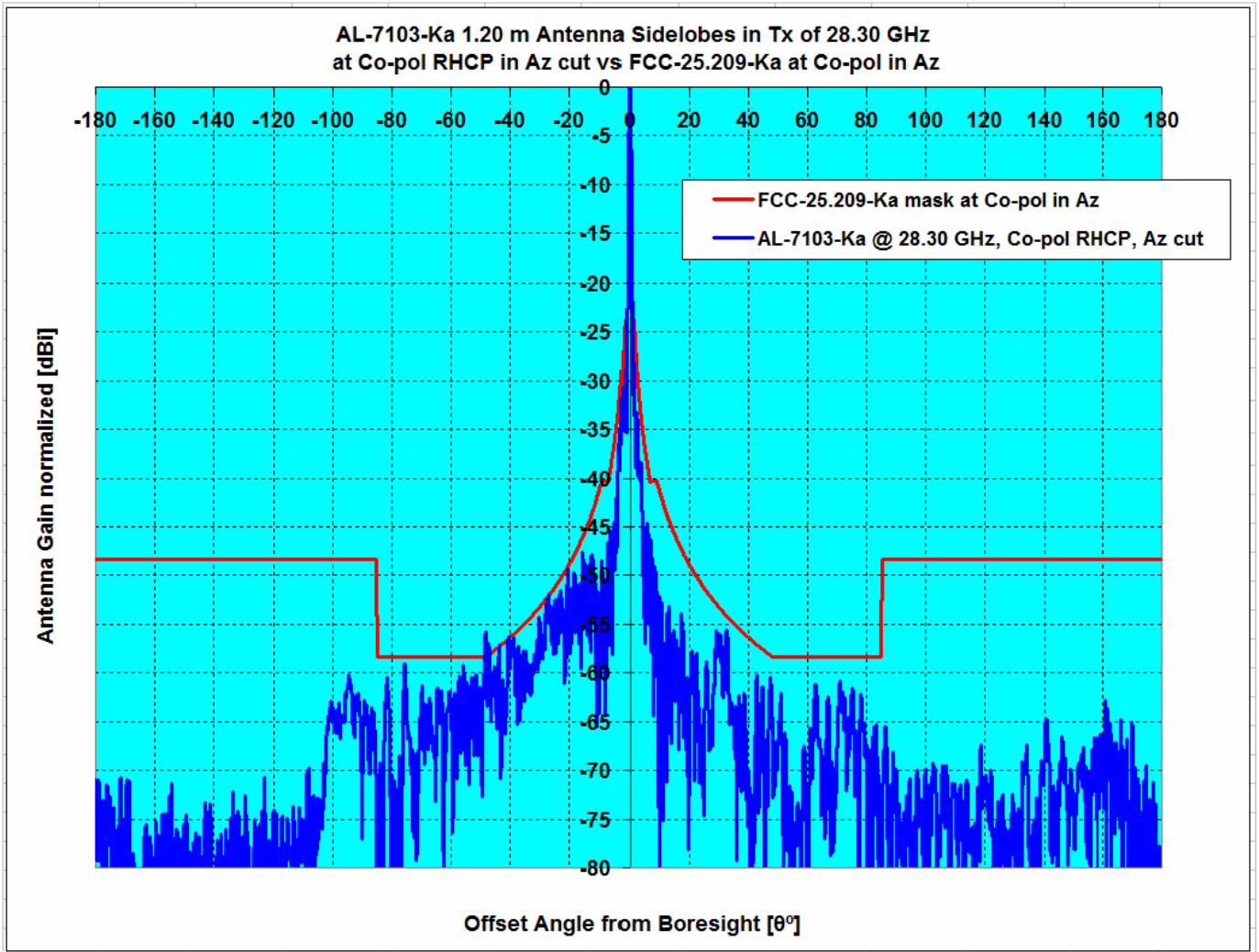
Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	12.9		
0.1	14.4		
0.2	15.1		
0.3	14.9		
0.4	14.0		
0.5	12.3		
0.6	9.7		
0.7	6.1		
0.8	2.3		
0.9	1.4		
1.0	2.1		
1.1	3.0		
1.2	2.6		
1.3	1.7		
1.4	-0.4		
1.5	-1.9		
1.6	-2.1		
1.7	-0.5		
1.8	-1.1	12.6	-13.7
1.9	-2.4	12.0	-14.4
2.0	-5.7	11.5	-17.1
2.1	-19.7	10.9	-30.7
2.2	-7.0	10.4	-17.4
2.3	-1.7	10.0	-11.6
2.4	0.7	9.5	-8.8
2.5	2.2	9.1	-6.8
2.6	2.5	8.6	-6.1
2.7	1.3	8.2	-7.0
2.8	-0.9	7.8	-8.8
2.9	-4.2	7.4	-11.7
3.0	-9.5	7.1	-16.6
3.1	-13.7	6.7	-20.4
3.2	-12.2	6.4	-18.6
3.3	-13.3	6.0	-19.4
3.4	-20.6	5.7	-26.4
3.5	-29.5	5.4	-34.9
3.6	-22.7	5.1	-27.8
3.7	-41.9	4.8	-46.7
3.8	-18.5	4.5	-23.1
3.9	-17.3	4.2	-21.5
4.0	-11.2	3.9	-15.2
4.1	-12.3	3.7	-15.9
4.2	-12.4	3.4	-15.8
4.3	-16.6	3.2	-19.7
4.4	-28.6	2.9	-31.5
4.5	-23.9	2.7	-26.6
4.6	-16.3	2.4	-18.7
4.7	-16.8	2.2	-19.0
4.8	-27.8	2.0	-29.7
4.9	-22.2	1.7	-23.9
5.0	-15.1	1.5	-16.6
5.1	-10.8	1.3	-12.1
5.2	-10.4	1.1	-11.5
5.3	-10.4	0.9	-11.3
5.4	-12.5	0.7	-13.2
5.5	-21.4	0.5	-21.9
5.6	-22.0	0.3	-22.3
5.7	-11.8	0.1	-11.9
5.8	-10.9	-0.1	-10.8
5.9	-9.5	-0.3	-9.2

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	4.9	3.9	0.9
-3.9	4.6	4.2	0.4
-3.8	4.1	4.5	-0.4
-3.7	3.3	4.8	-1.5
-3.6	2.5	5.1	-2.6
-3.5	2.1	5.4	-3.3
-3.4	1.9	5.7	-3.8
-3.3	2.1	6.0	-3.9
-3.2	2.6	6.4	-3.8
-3.1	3.1	6.7	-3.6
-3.0	3.3	7.1	-3.8
-2.9	3.0	7.4	-4.4
-2.8	2.7	7.8	-5.2
-2.7	2.7	8.2	-5.5
-2.6	3.6	8.6	-5.0
-2.5	4.8	9.1	-4.3
-2.4	5.4	9.5	-4.1
-2.3	5.5	10.0	-4.5
-2.2	4.9	10.4	-5.6
-2.1	3.2	10.9	-7.7
-2.0	0.9	11.5	-10.6
-1.9	-1.5	12.0	-13.5
-1.8	-1.9	12.6	-14.6
-1.7	-0.8		
-1.6	1.3		
-1.5	3.1		
-1.4	4.7		
-1.3	5.2		
-1.2	5.0		
-1.1	3.6		
-1.0	0.4		
-0.9	1.1		
-0.8	5.2		
-0.7	7.9		
-0.6	10.1		
-0.5	10.6		
-0.4	9.6		
-0.3	6.3		
-0.2	6.2		
-0.1	10.2		
0.0	12.9		

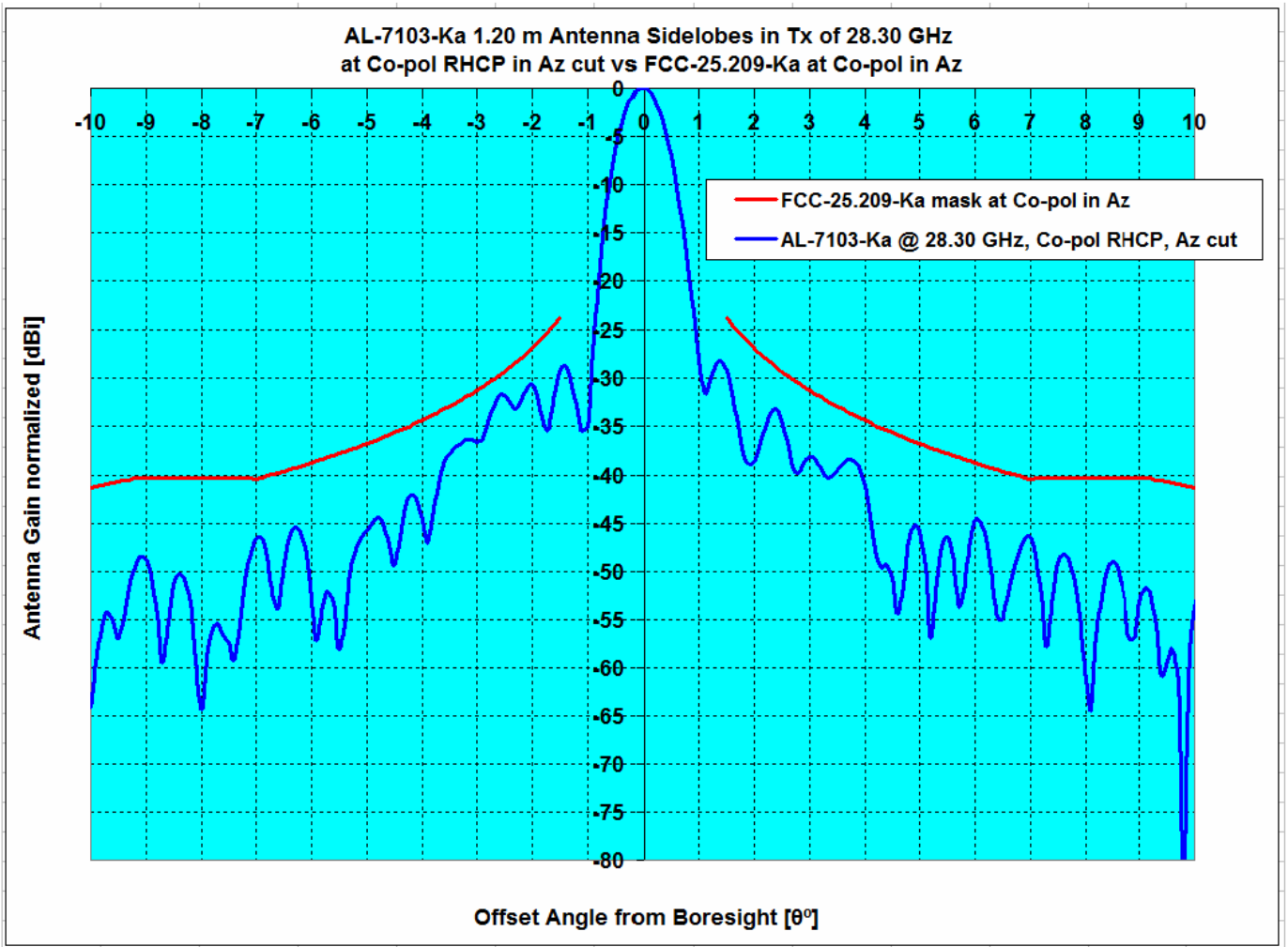
6.0	-10.7	-0.5	-10.3
6.1	-14.2	-0.6	-13.6
6.2	-18.3	-0.8	-17.4
6.3	-27.2	-1.0	-26.2
6.4	-28.9	-1.2	-27.8
6.5	-23.3	-1.3	-22.0
6.6	-16.4	-1.5	-15.0
6.7	-14.7	-1.7	-13.1
6.8	-11.0	-1.8	-9.2
6.9	-9.0	-2.0	-7.0
7.0	-7.5	-2.1	-5.4
7.1	-7.6	-2.0	-5.6
7.2	-7.0	-2.0	-5.0
7.3	-6.8	-2.0	-4.8
7.4	-7.3	-2.0	-5.3
7.5	-7.6	-2.0	-5.6
7.6	-7.4	-2.0	-5.4
7.7	-8.7	-2.0	-6.7
7.8	-9.2	-2.0	-7.2
7.9	-10.2	-2.0	-8.2
8.0	-11.2	-2.0	-9.2
8.1	-15.3	-2.0	-13.3
8.2	-18.7	-2.0	-16.7
8.3	-22.5	-2.0	-20.5
8.4	-32.3	-2.0	-30.3
8.5	-21.1	-2.0	-19.1
8.6	-21.2	-2.0	-19.2
8.7	-16.7	-2.0	-14.7
8.8	-15.4	-2.0	-13.4
8.9	-14.2	-2.0	-12.2
9.0	-13.9	-2.0	-11.9
9.1	-14.4	-2.0	-12.4
9.2	-15.2	-2.0	-13.2
9.3	-14.3	-2.0	-12.3
9.4	-14.2	-2.0	-12.2
9.5	-15.2	-2.0	-13.2
9.6	-14.9	-2.0	-12.9
9.7	-14.5	-2.0	-12.5
9.8	-16.1	-2.0	-14.1
9.9	-14.1	-2.0	-12.1
10.0	-14.2	-2.0	-12.2

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth RHCP

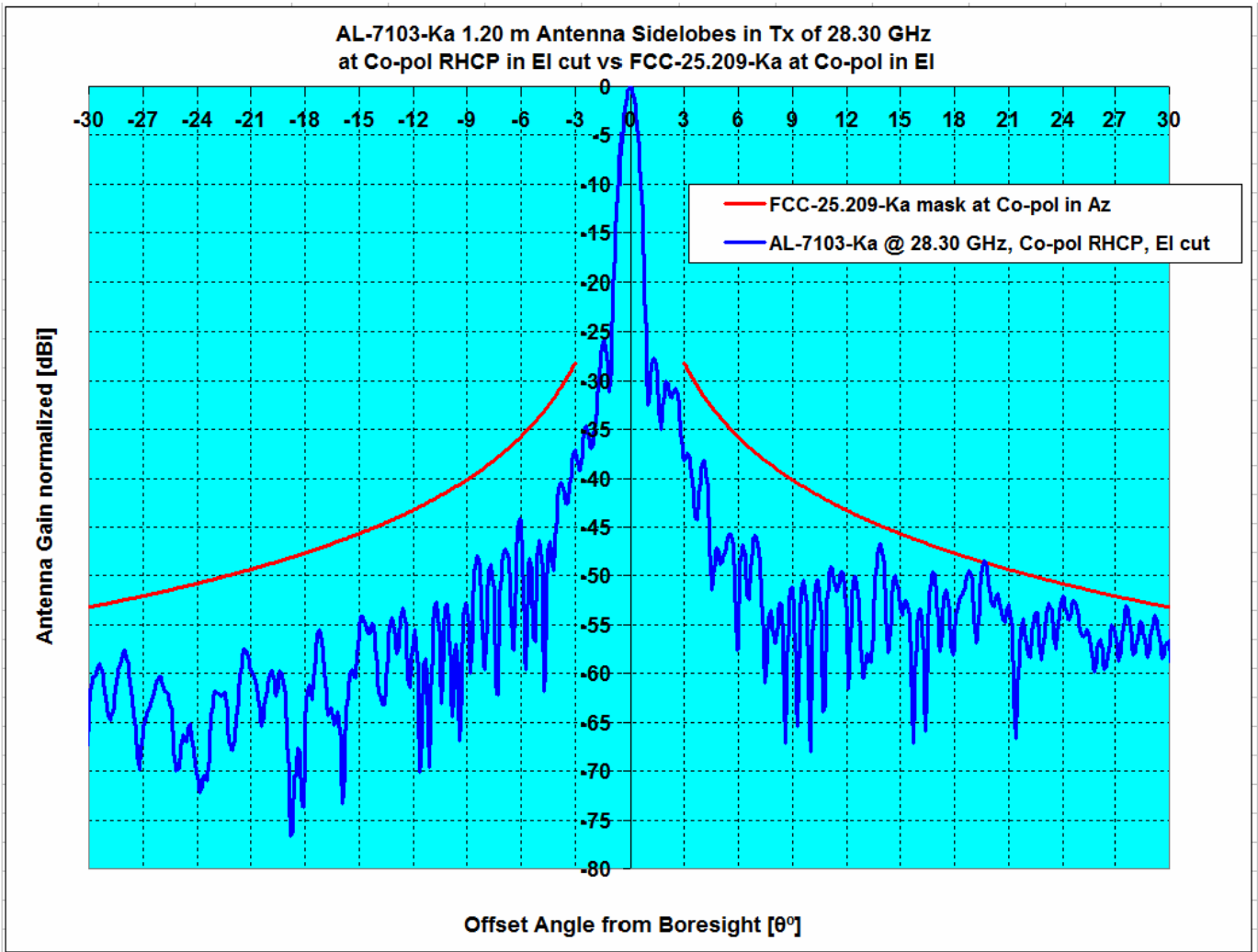


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , RHCP	28.30	48.30	-2.09	2.56	0.00%	0.45%

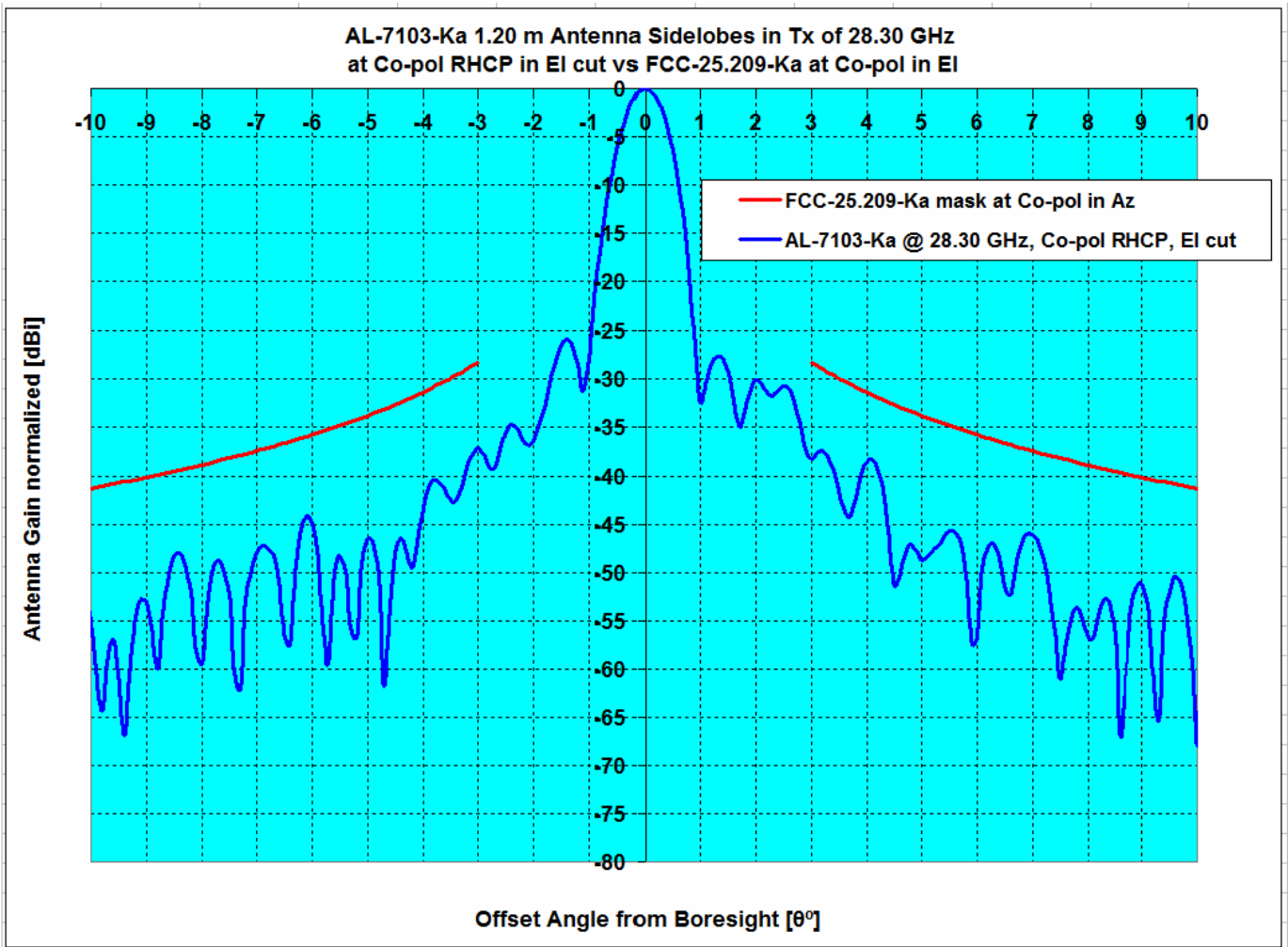
Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , RHCP	28.30	48.30	-2.09	2.56	0.00%	0.45%

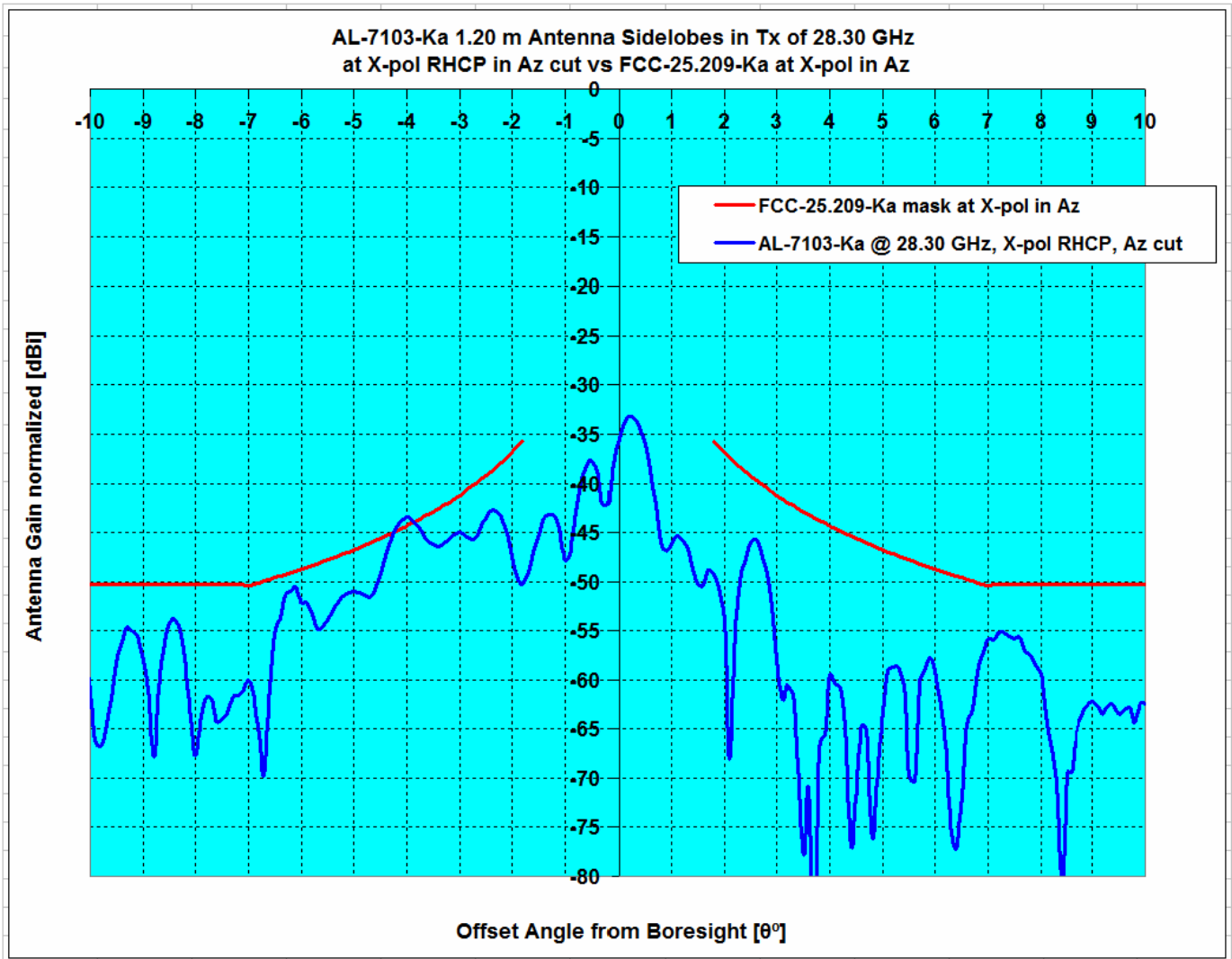


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI, RHCP	28.30	48.30	-6.63	0.22	0.00%	0.18%



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , RHCP	28.30	48.30	-6.63	0.22	0.00%	0.18%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, X-pol, Azimuth RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7103-Ka	Az, RHCP	28.30	48.30	0.92	0.92	3.77%	2.41%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

29.10 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-26.5	0.0	-26.5
-178.0	-34.6	0.0	-34.6
-177.0	-33.1	0.0	-33.1
-176.0	-40.3	0.0	-40.3
-175.0	-35.6	0.0	-35.6
-174.0	-37.1	0.0	-37.1
-173.0	-35.8	0.0	-35.8
-172.0	-46.4	0.0	-46.4
-171.0	-28.2	0.0	-28.2
-170.0	-35.0	0.0	-35.0
-169.0	-27.6	0.0	-27.6
-168.0	-39.6	0.0	-39.6
-167.0	-31.2	0.0	-31.2
-166.0	-33.0	0.0	-33.0
-165.0	-34.4	0.0	-34.4
-164.0	-33.2	0.0	-33.2
-163.0	-28.4	0.0	-28.4
-162.0	-27.7	0.0	-27.7
-161.0	-51.1	0.0	-51.1
-160.0	-30.5	0.0	-30.5
-159.0	-25.9	0.0	-25.9
-158.0	-32.9	0.0	-32.9
-157.0	-34.4	0.0	-34.4
-156.0	-29.0	0.0	-29.0
-155.0	-45.3	0.0	-45.3
-154.0	-35.5	0.0	-35.5
-153.0	-36.5	0.0	-36.5
-152.0	-36.3	0.0	-36.3
-151.0	-31.1	0.0	-31.1
-150.0	-36.3	0.0	-36.3
-149.0	-29.0	0.0	-29.0
-148.0	-47.2	0.0	-47.2
-147.0	-35.5	0.0	-35.5
-146.0	-34.8	0.0	-34.8
-145.0	-34.1	0.0	-34.1
-144.0	-33.9	0.0	-33.9
-143.0	-31.0	0.0	-31.0
-142.0	-34.2	0.0	-34.2
-141.0	-32.8	0.0	-32.8
-140.0	-28.1	0.0	-28.1
-139.0	-26.0	0.0	-26.0
-138.0	-31.3	0.0	-31.3
-137.0	-27.9	0.0	-27.9
-136.0	-27.6	0.0	-27.6
-135.0	-33.9	0.0	-33.9
-134.0	-31.6	0.0	-31.6
-133.0	-32.0	0.0	-32.0
-132.0	-27.3	0.0	-27.3
-131.0	-30.2	0.0	-30.2
-130.0	-28.5	0.0	-28.5
-129.0	-28.7	0.0	-28.7
-128.0	-28.7	0.0	-28.7
-127.0	-26.4	0.0	-26.4
-126.0	-33.2	0.0	-33.2
-125.0	-32.1	0.0	-32.1
-124.0	-35.6	0.0	-35.6
-123.0	-26.3	0.0	-26.3
-122.0	-24.0	0.0	-24.0
-121.0	-38.2	0.0	-38.2
-120.0	-29.9	0.0	-29.9

29.10 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.5		
1.0	22.1		
2.0	9.8	21.5	-11.7
3.0	11.4	17.1	-5.7
4.0	2.8	13.9	-11.1
5.0	2.4	11.5	-9.1
6.0	-1.2	9.5	-10.7
7.0	-18.0	7.9	-25.9
8.0	-12.6	8.0	-20.6
9.0	-14.2	8.0	-22.2
10.0	-8.1	7.0	-15.1
11.0	-8.1	6.0	-14.1
12.0	-23.8	5.0	-28.8
13.0	-10.7	4.2	-14.8
14.0	-10.2	3.3	-13.6
15.0	-7.7	2.6	-10.3
16.0	-15.7	1.9	-17.6
17.0	-8.8	1.2	-10.0
18.0	-29.3	0.6	-29.9
19.0	-6.2	0.0	-6.3
20.0	-18.9	-0.5	-18.4
21.0	-17.5	-1.1	-16.5
22.0	-9.5	-1.6	-8.0
23.0	-11.7	-2.0	-9.6
24.0	-7.2	-2.5	-4.7
25.0	-7.4	-2.9	-4.5
26.0	-7.0	-3.4	-3.7
27.0	-7.6	-3.8	-3.8
28.0	-8.2	-4.2	-4.0
29.0	-9.4	-4.6	-4.9
30.0	-10.5	-4.9	-5.6
31.0	-15.8	-5.3	-10.5
32.0	-18.5	-5.6	-12.9
33.0	-13.6	-6.0	-7.6
34.0	-14.0	-6.3	-7.7
35.0	-13.7	-6.6	-7.1
36.0	-13.2	-6.9	-6.3
37.0	-12.3	-7.2	-5.1
38.0	-9.2	-7.5	-1.7
39.0	-15.3	-7.8	-7.5
40.0	-16.9	-8.1	-8.9
41.0	-27.9	-8.3	-19.6
42.0	-17.7	-8.6	-9.1
43.0	-15.4	-8.8	-6.6
44.0	-14.4	-9.1	-5.3
45.0	-15.8	-9.3	-6.4
46.0	-15.5	-9.6	-6.0
47.0	-10.6	-9.8	-0.8
48.0	-33.1	-10.0	-23.1
49.0	-30.0	-10.0	-20.0
50.0	-18.1	-10.0	-8.1
51.0	-22.4	-10.0	-12.4
52.0	-20.9	-10.0	-10.9
53.0	-29.8	-10.0	-19.8
54.0	-14.7	-10.0	-4.7
55.0	-13.4	-10.0	-3.4
56.0	-17.8	-10.0	-7.8
57.0	-20.2	-10.0	-10.2
58.0	-18.0	-10.0	-8.0
59.0	-16.1	-10.0	-6.1

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-21.9	0.0	-21.9
-118.0	-29.2	0.0	-29.2
-117.0	-29.5	0.0	-29.5
-116.0	-33.5	0.0	-33.5
-115.0	-33.3	0.0	-33.3
-114.0	-26.4	0.0	-26.4
-113.0	-24.7	0.0	-24.7
-112.0	-23.7	0.0	-23.7
-111.0	-20.7	0.0	-20.7
-110.0	-17.0	0.0	-17.0
-109.0	-18.0	0.0	-18.0
-108.0	-16.4	0.0	-16.4
-107.0	-15.2	0.0	-15.2
-106.0	-14.6	0.0	-14.6
-105.0	-12.6	0.0	-12.6
-104.0	-11.8	0.0	-11.8
-103.0	-11.3	0.0	-11.3
-102.0	-11.7	0.0	-11.7
-101.0	-15.5	0.0	-15.5
-100.0	-20.2	0.0	-20.2
-99.0	-15.2	0.0	-15.2
-98.0	-12.0	0.0	-12.0
-97.0	-12.0	0.0	-12.0
-96.0	-13.1	0.0	-13.1
-95.0	-15.0	0.0	-15.0
-94.0	-12.5	0.0	-12.5
-93.0	-14.4	0.0	-14.4
-92.0	-21.3	0.0	-21.3
-91.0	-16.0	0.0	-16.0
-90.0	-15.9	0.0	-15.9
-89.0	-18.6	0.0	-18.6
-88.0	-14.6	0.0	-14.6
-87.0	-21.4	0.0	-21.4
-86.0	-16.4	0.0	-16.4
-85.0	-18.2	-10.0	-8.2
-84.0	-33.6	-10.0	-23.6
-83.0	-22.7	-10.0	-12.7
-82.0	-17.7	-10.0	-7.7
-81.0	-28.2	-10.0	-18.2
-80.0	-20.5	-10.0	-10.5
-79.0	-23.1	-10.0	-13.1
-78.0	-17.6	-10.0	-7.6
-77.0	-18.3	-10.0	-8.3
-76.0	-17.2	-10.0	-7.2
-75.0	-30.5	-10.0	-20.5
-74.0	-18.1	-10.0	-8.1
-73.0	-20.2	-10.0	-10.2
-72.0	-25.3	-10.0	-15.3
-71.0	-17.4	-10.0	-7.4
-70.0	-26.2	-10.0	-16.2
-69.0	-29.2	-10.0	-19.2
-68.0	-20.3	-10.0	-10.3
-67.0	-29.3	-10.0	-19.3
-66.0	-21.6	-10.0	-11.6
-65.0	-16.8	-10.0	-6.8
-64.0	-18.7	-10.0	-8.7
-63.0	-23.5	-10.0	-13.5
-62.0	-24.1	-10.0	-14.1
-61.0	-18.4	-10.0	-8.4
-60.0	-16.8	-10.0	-6.8
-59.0	-15.3	-10.0	-5.3
-58.0	-22.4	-10.0	-12.4
-57.0	-16.6	-10.0	-6.6

60.0	-14.1	-10.0	-4.1
61.0	-27.9	-10.0	-17.9
62.0	-23.0	-10.0	-13.0
63.0	-18.4	-10.0	-8.4
64.0	-15.4	-10.0	-5.4
65.0	-11.4	-10.0	-1.4
66.0	-22.2	-10.0	-12.2
67.0	-22.7	-10.0	-12.7
68.0	-21.2	-10.0	-11.2
69.0	-21.0	-10.0	-11.0
70.0	-12.8	-10.0	-2.8
71.0	-17.3	-10.0	-7.3
72.0	-14.4	-10.0	-4.4
73.0	-15.0	-10.0	-5.0
74.0	-12.8	-10.0	-2.8
75.0	-18.7	-10.0	-8.7
76.0	-19.3	-10.0	-9.3
77.0	-18.5	-10.0	-8.5
78.0	-15.1	-10.0	-5.1
79.0	-25.4	-10.0	-15.4
80.0	-18.5	-10.0	-8.5
81.0	-16.2	-10.0	-6.2
82.0	-23.2	-10.0	-13.2
83.0	-21.9	-10.0	-11.9
84.0	-22.8	-10.0	-12.8
85.0	-32.2	-10.0	-22.2
86.0	-17.4	0.0	-17.4
87.0	-19.8	0.0	-19.8
88.0	-16.0	0.0	-16.0
89.0	-24.1	0.0	-24.1
90.0	-22.2	0.0	-22.2
91.0	-23.5	0.0	-23.5
92.0	-19.0	0.0	-19.0
93.0	-28.5	0.0	-28.5
94.0	-20.8	0.0	-20.8
95.0	-17.1	0.0	-17.1
96.0	-21.5	0.0	-21.5
97.0	-28.0	0.0	-28.0
98.0	-33.9	0.0	-33.9
99.0	-18.0	0.0	-18.0
100.0	-18.9	0.0	-18.9
101.0	-21.5	0.0	-21.5
102.0	-25.1	0.0	-25.1
103.0	-20.5	0.0	-20.5
104.0	-34.7	0.0	-34.7
105.0	-16.5	0.0	-16.5
106.0	-21.5	0.0	-21.5
107.0	-26.9	0.0	-26.9
108.0	-21.8	0.0	-21.8
109.0	-35.2	0.0	-35.2
110.0	-21.5	0.0	-21.5
111.0	-24.7	0.0	-24.7
112.0	-18.9	0.0	-18.9
113.0	-26.8	0.0	-26.8
114.0	-23.8	0.0	-23.8
115.0	-25.0	0.0	-25.0
116.0	-20.3	0.0	-20.3
117.0	-18.5	0.0	-18.5
118.0	-28.1	0.0	-28.1
119.0	-21.8	0.0	-21.8
120.0	-17.6	0.0	-17.6
121.0	-27.4	0.0	-27.4
122.0	-21.8	0.0	-21.8

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-19.0	-10.0	-9.0
-55.0	-13.9	-10.0	-3.9
-54.0	-15.8	-10.0	-5.8
-53.0	-17.4	-10.0	-7.4
-52.0	-16.9	-10.0	-6.9
-51.0	-11.7	-10.0	-1.7
-50.0	-16.7	-10.0	-6.7
-49.0	-15.3	-10.0	-5.3
-48.0	-14.8	-10.0	-4.8
-47.0	-15.2	-9.8	-5.4
-46.0	-12.4	-9.6	-2.8
-45.0	-12.5	-9.3	-3.1
-44.0	-13.8	-9.1	-4.7
-43.0	-14.2	-8.8	-5.4
-42.0	-8.6	-8.6	0.0
-41.0	-11.1	-8.3	-2.7
-40.0	-11.5	-8.1	-3.4
-39.0	-8.4	-7.8	-0.6
-38.0	-10.3	-7.5	-2.9
-37.0	-8.7	-7.2	-1.5
-36.0	-12.6	-6.9	-5.7
-35.0	-12.2	-6.6	-5.6
-34.0	-10.5	-6.3	-4.2
-33.0	-20.8	-6.0	-14.9
-32.0	-9.7	-5.6	-4.0
-31.0	-12.5	-5.3	-7.3
-30.0	-18.5	-4.9	-13.6
-29.0	-10.9	-4.6	-6.4
-28.0	-12.7	-4.2	-8.6
-27.0	-20.0	-3.8	-16.3
-26.0	-14.0	-3.4	-10.6
-25.0	-11.1	-2.9	-8.1
-24.0	-14.9	-2.5	-12.4
-23.0	-6.0	-2.0	-3.9
-22.0	-27.5	-1.6	-25.9
-21.0	-3.6	-1.1	-2.6
-20.0	-10.6	-0.5	-10.0
-19.0	-6.7	0.0	-6.8
-18.0	-4.0	0.6	-4.6
-17.0	-9.9	1.2	-11.1
-16.0	0.1	1.9	-1.8
-15.0	-6.3	2.6	-8.9
-14.0	-9.8	3.3	-13.2
-13.0	-5.3	4.2	-9.5
-12.0	-9.7	5.0	-14.7
-11.0	-8.2	6.0	-14.2
-10.0	0.4	7.0	-6.6
-9.0	-4.6	8.0	-12.6
-8.0	-9.7	8.0	-17.7
-7.0	2.4	7.9	-5.4
-6.0	-11.4	9.5	-21.0
-5.0	4.0	11.5	-7.5
-4.0	4.4	13.9	-9.5
-3.0	9.7	17.1	-7.3
-2.0	18.6	21.5	-2.9
-1.0	14.4		
0.0	48.5		

123.0	-26.8	0.0	-26.8
124.0	-22.6	0.0	-22.6
125.0	-30.8	0.0	-30.8
126.0	-42.8	0.0	-42.8
127.0	-22.4	0.0	-22.4
128.0	-28.6	0.0	-28.6
129.0	-19.7	0.0	-19.7
130.0	-27.5	0.0	-27.5
131.0	-19.4	0.0	-19.4
132.0	-19.0	0.0	-19.0
133.0	-21.1	0.0	-21.1
134.0	-23.1	0.0	-23.1
135.0	-21.0	0.0	-21.0
136.0	-23.1	0.0	-23.1
137.0	-20.0	0.0	-20.0
138.0	-20.8	0.0	-20.8
139.0	-20.8	0.0	-20.8
140.0	-17.8	0.0	-17.8
141.0	-19.8	0.0	-19.8
142.0	-26.9	0.0	-26.9
143.0	-32.7	0.0	-32.7
144.0	-29.2	0.0	-29.2
145.0	-23.3	0.0	-23.3
146.0	-19.9	0.0	-19.9
147.0	-20.6	0.0	-20.6
148.0	-35.3	0.0	-35.3
149.0	-24.5	0.0	-24.5
150.0	-24.6	0.0	-24.6
151.0	-24.4	0.0	-24.4
152.0	-29.8	0.0	-29.8
153.0	-28.4	0.0	-28.4
154.0	-21.7	0.0	-21.7
155.0	-22.7	0.0	-22.7
156.0	-24.9	0.0	-24.9
157.0	-25.7	0.0	-25.7
158.0	-19.2	0.0	-19.2
159.0	-20.1	0.0	-20.1
160.0	-20.2	0.0	-20.2
161.0	-28.7	0.0	-28.7
162.0	-25.2	0.0	-25.2
163.0	-21.4	0.0	-21.4
164.0	-17.7	0.0	-17.7
165.0	-19.7	0.0	-19.7
166.0	-17.8	0.0	-17.8
167.0	-25.6	0.0	-25.6
168.0	-29.5	0.0	-29.5
169.0	-17.7	0.0	-17.7
170.0	-21.0	0.0	-21.0
171.0	-24.3	0.0	-24.3
172.0	-21.5	0.0	-21.5
173.0	-27.9	0.0	-27.9
174.0	-29.5	0.0	-29.5
175.0	-27.9	0.0	-27.9
176.0	-34.4	0.0	-34.4
177.0	-35.2	0.0	-35.2
178.0	-24.6	0.0	-24.6
179.0	-30.0	0.0	-30.0

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.10 GHz Antenna Pattern in Co-pol Az LHCP				29.10 GHz Antenna Pattern in Co-pol Az LHCP			
Angle	Gain	Mask	Over Mask	Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB	Degrees	dBi	dBi	dB
-10.0	0.4	7.0	-6.6	0.0	48.5		
-9.9	1.9	7.1	-5.2	0.1	48.3		
-9.8	2.4	7.2	-4.8	0.2	47.6		
-9.7	1.8	7.3	-5.6	0.3	46.4		
-9.6	-0.1	7.4	-7.5	0.4	44.7		
-9.5	-3.2	7.6	-10.8	0.5	42.4		
-9.4	-6.9	7.7	-14.6	0.6	39.6		
-9.3	-8.1	7.8	-15.9	0.7	36.2		
-9.2	-5.9	8.0	-13.9	0.8	32.2		
-9.1	-4.5	8.0	-12.5	0.9	27.4		
-9.0	-4.6	8.0	-12.6	1.0	22.1		
-8.9	-6.4	8.0	-14.4	1.1	17.6		
-8.8	-9.7	8.0	-17.7	1.2	18.2		
-8.7	-12.5	8.0	-20.5	1.3	19.9		
-8.6	-8.1	8.0	-16.1	1.4	20.4		
-8.5	-4.2	8.0	-12.2	1.5	19.6	24.6	-5.0
-8.4	-2.0	8.0	-10.0	1.6	17.8	23.9	-6.1
-8.3	-1.6	8.0	-9.6	1.7	15.3	23.2	-7.9
-8.2	-2.5	8.0	-10.5	1.8	12.3	22.6	-10.3
-8.1	-6.0	8.0	-14.0	1.9	10.4	22.0	-11.6
-8.0	-9.7	8.0	-17.7	2.0	9.8	21.5	-11.7
-7.9	-5.5	8.0	-13.5	2.1	11.1	20.9	-9.8
-7.8	-1.6	8.0	-9.6	2.2	12.8	20.4	-7.6
-7.7	0.2	8.0	-7.8	2.3	13.8	20.0	-6.2
-7.6	0.1	8.0	-7.9	2.4	14.3	19.5	-5.2
-7.5	-1.8	8.0	-9.8	2.5	14.0	19.1	-5.1
-7.4	-5.6	8.0	-13.6	2.6	13.4	18.6	-5.2
-7.3	-7.7	8.0	-15.7	2.7	12.7	18.2	-5.5
-7.2	-2.3	8.0	-10.3	2.8	12.3	17.8	-5.5
-7.1	1.0	8.0	-7.0	2.9	12.1	17.4	-5.3
-7.0	2.4	7.9	-5.4	3.0	11.4	17.1	-5.7
-6.9	3.1	8.0	-4.9	3.1	10.2	16.7	-6.5
-6.8	2.4	8.2	-5.8	3.2	9.2	16.4	-7.1
-6.7	0.4	8.3	-8.0	3.3	8.8	16.0	-7.3
-6.6	-3.3	8.5	-11.8	3.4	9.3	15.7	-6.4
-6.5	-11.3	8.7	-20.0	3.5	9.7	15.4	-5.7
-6.4	-9.6	8.8	-18.5	3.6	9.7	15.1	-5.4
-6.3	-4.4	9.0	-13.4	3.7	9.0	14.8	-5.8
-6.2	-2.7	9.2	-11.9	3.8	7.6	14.5	-6.9
-6.1	-4.5	9.4	-13.9	3.9	5.0	14.2	-9.2
-6.0	-11.4	9.5	-21.0	4.0	2.8	13.9	-11.1
-5.9	-12.8	9.7	-22.5	4.1	2.6	13.7	-11.1
-5.8	-3.3	9.9	-13.2	4.2	3.1	13.4	-10.3
-5.7	0.4	10.1	-9.7	4.3	2.5	13.2	-10.6
-5.6	1.3	10.3	-9.0	4.4	0.4	12.9	-12.5
-5.5	-0.1	10.5	-10.6	4.5	-1.2	12.7	-13.9
-5.4	-4.3	10.7	-15.0	4.6	1.3	12.4	-11.2
-5.3	-13.6	10.9	-24.5	4.7	4.1	12.2	-8.1
-5.2	-3.4	11.1	-14.5	4.8	5.0	12.0	-7.0
-5.1	1.9	11.3	-9.4	4.9	4.5	11.7	-7.3
-5.0	4.0	11.5	-7.5	5.0	2.4	11.5	-9.1
-4.9	4.9	11.7	-6.8	5.1	-1.2	11.3	-12.6
-4.8	4.9	12.0	-7.0	5.2	-6.2	11.1	-17.3
-4.7	4.4	12.2	-7.8	5.3	-5.5	10.9	-16.4
-4.6	2.8	12.4	-9.6	5.4	-5.5	10.7	-16.1
-4.5	0.0	12.7	-12.7	5.5	-9.5	10.5	-20.0
-4.4	-3.1	12.9	-16.0	5.6	-8.1	10.3	-18.3
-4.3	-1.2	13.2	-14.4	5.7	-3.2	10.1	-13.3
-4.2	2.7	13.4	-10.8	5.8	-0.6	9.9	-10.5
-4.1	4.4	13.7	-9.3	5.9	-0.1	9.7	-9.8
-4.0	4.4	13.9	-9.5	6.0	-1.2	9.5	-10.7
-3.9	3.5	14.2	-10.7	6.1	-4.1	9.4	-13.5

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-3.8	3.9	14.5	-10.6		6.2	-10.2	9.2	-19.4
-3.7	6.5	14.8	-8.2		6.3	-13.1	9.0	-22.1
-3.6	9.4	15.1	-5.7		6.4	-7.5	8.8	-16.3
-3.5	11.3	15.4	-4.1		6.5	-4.5	8.7	-13.2
-3.4	12.1	15.7	-3.6		6.6	-3.2	8.5	-11.7
-3.3	12.2	16.0	-3.9		6.7	-2.7	8.3	-11.1
-3.2	11.7	16.4	-4.6		6.8	-3.7	8.2	-11.9
-3.1	10.9	16.7	-5.8		6.9	-7.6	8.0	-15.6
-3.0	9.7	17.1	-7.3		7.0	-18.0	7.9	-25.9
-2.9	8.7	17.4	-8.7		7.1	-9.9	8.0	-17.9
-2.8	9.4	17.8	-8.5		7.2	-4.9	8.0	-12.9
-2.7	11.6	18.2	-6.6		7.3	-3.4	8.0	-11.4
-2.6	14.0	18.6	-4.6		7.4	-4.2	8.0	-12.2
-2.5	15.9	19.1	-3.1		7.5	-8.6	8.0	-16.6
-2.4	17.3	19.5	-2.2		7.6	-21.5	8.0	-29.5
-2.3	18.2	20.0	-1.8		7.7	-12.4	8.0	-20.4
-2.2	18.8	20.4	-1.6		7.8	-8.5	8.0	-16.5
-2.1	19.1	20.9	-1.9		7.9	-8.6	8.0	-16.6
-2.0	18.6	21.5	-2.9		8.0	-12.6	8.0	-20.6
-1.9	17.1	22.0	-4.9		8.1	-16.4	8.0	-24.4
-1.8	14.0	22.6	-8.6		8.2	-10.6	8.0	-18.6
-1.7	10.3	23.2	-13.0		8.3	-7.9	8.0	-15.9
-1.6	12.1	23.9	-11.8		8.4	-9.6	8.0	-17.6
-1.5	15.4	24.6	-9.2		8.5	-16.8	8.0	-24.8
-1.4	17.0				8.6	-15.4	8.0	-23.4
-1.3	17.2				8.7	-8.5	8.0	-16.5
-1.2	17.0				8.8	-6.9	8.0	-14.9
-1.1	16.4				8.9	-9.4	8.0	-17.4
-1.0	14.4				9.0	-14.2	8.0	-22.2
-0.9	19.2				9.1	-12.2	8.0	-20.2
-0.8	27.6				9.2	-5.5	8.0	-13.5
-0.7	33.6				9.3	-3.0	7.8	-10.8
-0.6	38.2				9.4	-3.1	7.7	-10.8
-0.5	41.6				9.5	-5.5	7.6	-13.0
-0.4	44.2				9.6	-10.7	7.4	-18.1
-0.3	46.0				9.7	-13.9	7.3	-21.2
-0.2	47.4				9.8	-9.1	7.2	-16.3
-0.1	48.2				9.9	-7.0	7.1	-14.1
0.0	48.5				10.0	-8.1	7.0	-15.1

Orbit Communication Systems Ltd.

AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

29.10 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-14.2	-4.9	-9.3
-29.5	-11.7	-4.7	-7.0
-29.0	-13.5	-4.6	-9.0
-28.5	-12.3	-4.4	-7.9
-28.0	-11.3	-4.2	-7.1
-27.5	-11.5	-4.0	-7.5
-27.0	-10.2	-3.8	-6.4
-26.5	-10.1	-3.6	-6.5
-26.0	-12.7	-3.4	-9.3
-25.5	-12.8	-3.2	-9.6
-25.0	-8.7	-2.9	-5.7
-24.5	-9.1	-2.7	-6.4
-24.0	-11.7	-2.5	-9.2
-23.5	-10.2	-2.3	-7.9
-23.0	-11.6	-2.0	-9.6
-22.5	-12.7	-1.8	-10.9
-22.0	-10.9	-1.6	-9.4
-21.5	-15.0	-1.3	-13.6
-21.0	-25.7	-1.1	-24.7
-20.5	-20.9	-0.8	-20.1
-20.0	-11.1	-0.5	-10.5
-19.5	-10.2	-0.3	-10.0
-19.0	-11.0	0.0	-11.0
-18.5	-15.9	0.3	-16.2
-18.0	-11.5	0.6	-12.2
-17.5	-7.3	0.9	-8.3
-17.0	-8.6	1.2	-9.8
-16.5	-18.7	1.6	-20.2
-16.0	-11.1	1.9	-13.0
-15.5	-13.0	2.2	-15.3
-15.0	-13.4	2.6	-16.0
-14.5	-11.2	3.0	-14.2
-14.0	-7.2	3.3	-10.6
-13.5	-8.3	3.7	-12.1
-13.0	-10.7	4.2	-14.9
-12.5	-14.8	4.6	-19.4
-12.0	-8.9	5.0	-14.0
-11.5	-11.5	5.5	-17.0
-11.0	-11.1	6.0	-17.1
-10.5	-11.4	6.5	-17.9
-10.0	-17.0	7.0	-24.0
-9.5	-9.5	7.6	-17.1
-9.0	-10.1	8.1	-18.3
-8.5	-10.0	8.8	-18.8
-8.0	-21.7	9.4	-31.1
-7.5	-20.0	10.1	-30.1
-7.0	-12.2	10.9	-23.1
-6.5	1.0	11.7	-10.6
-6.0	0.6	12.5	-11.9
-5.5	-9.2	13.5	-22.7
-5.0	2.5	14.5	-12.1
-4.5	0.6	15.7	-15.1
-4.0	0.2	16.9	-16.8
-3.5	3.3	18.4	-15.1
-3.0	11.6		
-2.5	12.4		
-2.0	12.7		
-1.5	21.5		
-1.0	23.1		
-0.5	42.5		
0.0	48.5		

29.10 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	48.5		
0.5	41.0		
1.0	16.6		
1.5	15.0		
2.0	17.4		
2.5	16.2		
3.0	6.3		
3.5	7.1	18.4	-11.3
4.0	6.7	16.9	-10.3
4.5	-0.4	15.7	-16.1
5.0	1.7	14.5	-12.8
5.5	2.5	13.5	-11.0
6.0	-14.9	12.5	-27.5
6.5	-5.8	11.7	-17.4
7.0	2.1	10.9	-8.8
7.5	0.6	10.1	-9.5
8.0	-2.7	9.4	-12.1
8.5	-1.8	8.8	-10.6
9.0	-12.4	8.1	-20.5
9.5	0.6	7.6	-6.9
10.0	0.9	7.0	-6.1
10.5	-11.2	6.5	-17.7
11.0	-6.1	6.0	-12.1
11.5	-6.1	5.5	-11.6
12.0	-12.5	5.0	-17.5
12.5	-3.3	4.6	-7.9
13.0	-11.3	4.2	-15.4
13.5	-4.4	3.7	-8.2
14.0	-1.9	3.3	-5.2
14.5	-5.8	3.0	-8.8
15.0	-3.6	2.6	-6.2
15.5	-7.8	2.2	-10.0
16.0	-8.3	1.9	-10.1
16.5	-2.8	1.6	-4.4
17.0	-28.4	1.2	-29.6
17.5	-4.5	0.9	-5.4
18.0	-6.9	0.6	-7.5
18.5	-2.8	0.3	-3.1
19.0	-6.0	0.0	-6.1
19.5	-3.5	-0.3	-3.2
20.0	-7.3	-0.5	-6.7
20.5	-7.3	-0.8	-6.5
21.0	-4.9	-1.1	-3.9
21.5	-5.3	-1.3	-4.0
22.0	-7.3	-1.6	-5.7
22.5	-5.9	-1.8	-4.1
23.0	-8.2	-2.0	-6.1
23.5	-9.9	-2.3	-7.6
24.0	-12.7	-2.5	-10.2
24.5	-16.8	-2.7	-14.1
25.0	-5.5	-2.9	-2.5
25.5	-11.9	-3.2	-8.7
26.0	-14.4	-3.4	-11.1
26.5	-7.5	-3.6	-4.0
27.0	-15.5	-3.8	-11.7
27.5	-12.6	-4.0	-8.6
28.0	-13.2	-4.2	-9.0
28.5	-13.3	-4.4	-8.9
29.0	-21.0	-4.6	-16.5
29.5	-13.9	-4.7	-9.2
30.0	-12.6	-4.9	-7.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

29.10 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-17.0	7.0	-24.0
-9.9	-14.8	7.1	-21.9
-9.8	-17.8	7.2	-25.0
-9.7	-16.9	7.3	-24.3
-9.6	-12.3	7.4	-19.7
-9.5	-9.5	7.6	-17.1
-9.4	-9.3	7.7	-17.0
-9.3	-12.4	7.8	-20.2
-9.2	-21.2	7.9	-29.1
-9.1	-16.6	8.0	-24.6
-9.0	-10.1	8.1	-18.3
-8.9	-8.2	8.3	-16.4
-8.8	-9.4	8.4	-17.8
-8.7	-12.5	8.5	-21.1
-8.6	-14.9	8.6	-23.6
-8.5	-10.0	8.8	-18.8
-8.4	-7.2	8.9	-16.1
-8.3	-7.2	9.0	-16.2
-8.2	-9.1	9.2	-18.3
-8.1	-15.5	9.3	-24.8
-8.0	-21.7	9.4	-31.1
-7.9	-13.6	9.6	-23.2
-7.8	-12.2	9.7	-21.9
-7.7	-12.9	9.8	-22.7
-7.6	-15.8	10.0	-25.7
-7.5	-20.0	10.1	-30.1
-7.4	-16.5	10.3	-26.8
-7.3	-11.4	10.4	-21.8
-7.2	-8.8	10.6	-19.4
-7.1	-8.8	10.7	-19.5
-7.0	-12.2	10.9	-23.1
-6.9	-15.7	11.0	-26.8
-6.8	-7.3	11.2	-18.5
-6.7	-2.0	11.3	-13.4
-6.6	0.5	11.5	-11.0
-6.5	1.0	11.7	-10.6
-6.4	0.4	11.8	-11.4
-6.3	-2.1	12.0	-14.1
-6.2	-3.4	12.2	-15.6
-6.1	-1.3	12.4	-13.7
-6.0	0.6	12.5	-11.9
-5.9	0.9	12.7	-11.8
-5.8	-1.1	12.9	-14.0
-5.7	-6.0	13.1	-19.1
-5.6	-15.0	13.3	-28.3
-5.5	-9.2	13.5	-22.7
-5.4	-5.6	13.7	-19.3
-5.3	-7.1	13.9	-21.0
-5.2	-6.5	14.1	-20.6
-5.1	-1.0	14.3	-15.3
-5.0	2.5	14.5	-12.1
-4.9	4.2	14.7	-10.5
-4.8	4.1	15.0	-10.9
-4.7	2.6	15.2	-12.6
-4.6	0.9	15.4	-14.5
-4.5	0.6	15.7	-15.1
-4.4	1.6	15.9	-14.3
-4.3	2.3	16.2	-13.9
-4.2	2.0	16.4	-14.4
-4.1	1.1	16.7	-15.5

29.10 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.5		
0.1	48.2		
0.2	47.3		
0.3	45.8		
0.4	43.8		
0.5	41.0		
0.6	37.3		
0.7	32.2		
0.8	25.0		
0.9	13.9		
1.0	16.6		
1.1	18.8		
1.2	18.7		
1.3	17.6		
1.4	16.3		
1.5	15.0		
1.6	13.6		
1.7	13.8		
1.8	15.3		
1.9	16.6		
2.0	17.4		
2.1	17.8		
2.2	17.9		
2.3	17.7		
2.4	17.2		
2.5	16.2		
2.6	14.6		
2.7	12.2		
2.8	9.3		
2.9	7.1		
3.0	6.3		
3.1	6.6		
3.2	7.5		
3.3	8.4		
3.4	8.3		
3.5	7.1	18.4	-11.3
3.6	5.4	18.1	-12.7
3.7	4.0	17.8	-13.8
3.8	4.7	17.5	-12.8
3.9	6.2	17.2	-11.0
4.0	6.7	16.9	-10.3
4.1	5.8	16.7	-10.9
4.2	4.7	16.4	-11.7
4.3	2.3	16.2	-13.9
4.4	0.1	15.9	-15.8
4.5	-0.4	15.7	-16.1
4.6	0.6	15.4	-14.8
4.7	2.0	15.2	-13.2
4.8	3.3	15.0	-11.7
4.9	3.7	14.7	-11.0
5.0	1.7	14.5	-12.8
5.1	-2.6	14.3	-16.9
5.2	-14.4	14.1	-28.5
5.3	-5.6	13.9	-19.5
5.4	0.9	13.7	-12.8
5.5	2.5	13.5	-11.0
5.6	3.0	13.3	-10.3
5.7	1.6	13.1	-11.5
5.8	-2.8	12.9	-15.7
5.9	-12.9	12.7	-25.6

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	0.2	16.9	-16.8
-3.9	-0.2	17.2	-17.4
-3.8	-0.1	17.5	-17.6
-3.7	0.8	17.8	-17.0
-3.6	2.1	18.1	-16.0
-3.5	3.3	18.4	-15.1
-3.4	4.7		
-3.3	6.6		
-3.2	8.7		
-3.1	10.6		
-3.0	11.6		
-2.9	11.6		
-2.8	10.8		
-2.7	10.3		
-2.6	10.9		
-2.5	12.4		
-2.4	13.5		
-2.3	13.9		
-2.2	13.6		
-2.1	13.0		
-2.0	12.7		
-1.9	13.3		
-1.8	15.2		
-1.7	17.8		
-1.6	20.2		
-1.5	21.5		
-1.4	21.9		
-1.3	21.1		
-1.2	19.6		
-1.1	19.4		
-1.0	23.1		
-0.9	27.8		
-0.8	32.3		
-0.7	36.3		
-0.6	39.7		
-0.5	42.5		
-0.4	44.7		
-0.3	46.5		
-0.2	47.7		
-0.1	48.3		
0.0	48.5		

6.0	-14.9	12.5	-27.5
6.1	-6.9	12.4	-19.3
6.2	-5.5	12.2	-17.7
6.3	-5.8	12.0	-17.8
6.4	-6.7	11.8	-18.5
6.5	-5.8	11.7	-17.4
6.6	-2.8	11.5	-14.4
6.7	-0.2	11.3	-11.6
6.8	1.7	11.2	-9.5
6.9	2.3	11.0	-8.7
7.0	2.1	10.9	-8.8
7.1	1.0	10.7	-9.7
7.2	-0.7	10.6	-11.3
7.3	-1.0	10.4	-11.4
7.4	-0.1	10.3	-10.3
7.5	0.6	10.1	-9.5
7.6	1.0	10.0	-9.0
7.7	0.3	9.8	-9.6
7.8	-1.3	9.7	-11.0
7.9	-2.9	9.6	-12.5
8.0	-2.7	9.4	-12.1
8.1	-1.2	9.3	-10.5
8.2	-0.1	9.2	-9.3
8.3	0.0	9.0	-9.0
8.4	0.0	8.9	-8.9
8.5	-1.8	8.8	-10.6
8.6	-3.9	8.6	-12.5
8.7	-7.5	8.5	-16.0
8.8	-11.4	8.4	-19.8
8.9	-13.0	8.3	-21.2
9.0	-12.4	8.1	-20.5
9.1	-13.2	8.0	-21.3
9.2	-13.0	7.9	-20.9
9.3	-7.2	7.8	-15.0
9.4	-2.2	7.7	-9.9
9.5	0.6	7.6	-6.9
9.6	2.4	7.4	-5.0
9.7	3.4	7.3	-4.0
9.8	3.4	7.2	-3.8
9.9	2.3	7.1	-4.8
10.0	0.9	7.0	-6.1

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.10 GHz Antenna Pattern in X-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-7.7	-2.0	-5.7
-9.9	-10.2	-2.0	-8.2
-9.8	-14.2	-2.0	-12.2
-9.7	-22.3	-2.0	-20.3
-9.6	-27.5	-2.0	-25.5
-9.5	-17.7	-2.0	-15.7
-9.4	-16.2	-2.0	-14.2
-9.3	-17.0	-2.0	-15.0
-9.2	-15.5	-2.0	-13.5
-9.1	-10.5	-2.0	-8.5
-9.0	-7.6	-2.0	-5.6
-8.9	-5.3	-2.0	-3.3
-8.8	-4.3	-2.0	-2.3
-8.7	-3.7	-2.0	-1.7
-8.6	-4.0	-2.0	-2.0
-8.5	-5.0	-2.0	-3.0
-8.4	-6.9	-2.0	-4.9
-8.3	-9.2	-2.0	-7.2
-8.2	-10.6	-2.0	-8.6
-8.1	-8.2	-2.0	-6.2
-8.0	-6.0	-2.0	-4.0
-7.9	-4.7	-2.0	-2.7
-7.8	-4.9	-2.0	-2.9
-7.7	-7.3	-2.0	-5.3
-7.6	-11.6	-2.0	-9.6
-7.5	-21.7	-2.0	-19.7
-7.4	-12.4	-2.0	-10.4
-7.3	-8.0	-2.0	-6.0
-7.2	-6.4	-2.0	-4.4
-7.1	-7.5	-2.0	-5.5
-7.0	-10.9	-2.1	-8.8
-6.9	-18.2	-2.0	-16.2
-6.8	-16.0	-1.8	-14.2
-6.7	-10.6	-1.7	-9.0
-6.6	-7.2	-1.5	-5.7
-6.5	-6.2	-1.3	-4.9
-6.4	-6.3	-1.2	-5.2
-6.3	-7.2	-1.0	-6.2
-6.2	-10.1	-0.8	-9.3
-6.1	-14.8	-0.6	-14.2
-6.0	-20.9	-0.5	-20.5
-5.9	-11.0	-0.3	-10.8
-5.8	-7.5	-0.1	-7.4
-5.7	-6.5	0.1	-6.6
-5.6	-8.4	0.3	-8.7
-5.5	-11.1	0.5	-11.6
-5.4	-8.2	0.7	-8.9
-5.3	-3.9	0.9	-4.8
-5.2	-1.5	1.1	-2.6
-5.1	-1.0	1.3	-2.3
-5.0	-1.7	1.5	-3.2
-4.9	-4.0	1.7	-5.7
-4.8	-7.3	2.0	-9.2
-4.7	-7.2	2.2	-9.4
-4.6	-5.1	2.4	-7.5
-4.5	-3.2	2.7	-5.9
-4.4	-1.9	2.9	-4.8
-4.3	-1.2	3.2	-4.3
-4.2	-1.0	3.4	-4.4
-4.1	-2.1	3.7	-5.8

29.10 GHz Antenna Pattern in X-pol Az LHCP

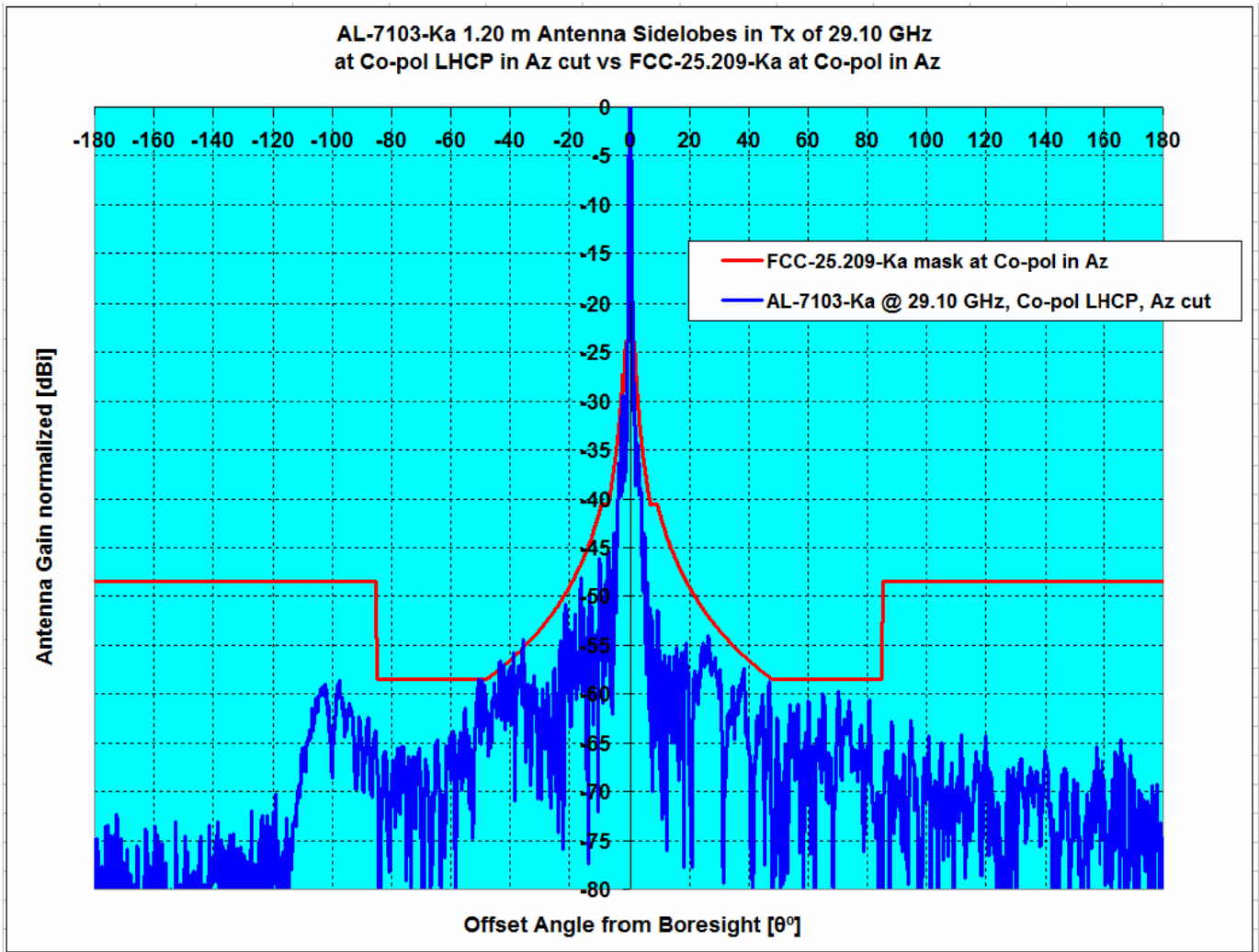
Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	15.5		
0.1	19.8		
0.2	23.9		
0.3	26.3		
0.4	27.7		
0.5	28.0		
0.6	27.4		
0.7	25.8		
0.8	23.2		
0.9	19.3		
1.0	13.7		
1.1	6.8		
1.2	6.4		
1.3	6.2		
1.4	1.6		
1.5	-10.4		
1.6	1.7		
1.7	5.3		
1.8	5.6	12.6	-7.0
1.9	2.7	12.0	-9.3
2.0	-4.8	11.5	-16.3
2.1	-9.3	10.9	-20.3
2.2	-2.6	10.4	-13.0
2.3	-1.5	10.0	-11.5
2.4	-1.8	9.5	-11.3
2.5	-3.5	9.1	-12.6
2.6	-1.6	8.6	-10.2
2.7	-0.1	8.2	-8.3
2.8	-0.7	7.8	-8.5
2.9	-4.6	7.4	-12.0
3.0	-11.7	7.1	-18.8
3.1	-6.8	6.7	-13.6
3.2	-2.7	6.4	-9.1
3.3	-2.2	6.0	-8.2
3.4	-5.1	5.7	-10.8
3.5	-10.0	5.4	-15.4
3.6	-13.9	5.1	-19.0
3.7	-7.2	4.8	-12.0
3.8	-3.9	4.5	-8.4
3.9	-2.9	4.2	-7.1
4.0	-3.3	3.9	-7.3
4.1	-4.2	3.7	-7.9
4.2	-7.3	3.4	-10.7
4.3	-10.9	3.2	-14.1
4.4	-21.0	2.9	-23.9
4.5	-9.5	2.7	-12.2
4.6	-5.7	2.4	-8.1
4.7	-4.4	2.2	-6.6
4.8	-4.7	2.0	-6.7
4.9	-9.9	1.7	-11.7
5.0	-13.3	1.5	-14.8
5.1	-10.1	1.3	-11.5
5.2	-7.0	1.1	-8.1
5.3	-7.9	0.9	-8.8
5.4	-12.2	0.7	-12.9
5.5	-27.4	0.5	-27.9
5.6	-11.3	0.3	-11.6
5.7	-7.7	0.1	-7.8
5.8	-7.9	-0.1	-7.8
5.9	-12.1	-0.3	-11.8

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-6.1	3.9	-10.0
-3.9	-19.3	4.2	-23.5
-3.8	-7.3	4.5	-11.8
-3.7	-2.0	4.8	-6.8
-3.6	0.0	5.1	-5.1
-3.5	-0.6	5.4	-6.0
-3.4	-5.6	5.7	-11.3
-3.3	-12.2	6.0	-18.2
-3.2	-1.9	6.4	-8.3
-3.1	2.0	6.7	-4.7
-3.0	2.8	7.1	-4.2
-2.9	0.8	7.4	-6.6
-2.8	-5.7	7.8	-13.5
-2.7	-11.3	8.2	-19.5
-2.6	0.2	8.6	-8.4
-2.5	3.1	9.1	-5.9
-2.4	2.6	9.5	-6.9
-2.3	-1.6	10.0	-11.5
-2.2	-9.1	10.4	-19.5
-2.1	2.6	10.9	-8.4
-2.0	7.1	11.5	-4.3
-1.9	8.9	12.0	-3.1
-1.8	8.4	12.6	-4.2
-1.7	5.5		
-1.6	-3.0		
-1.5	0.2		
-1.4	7.3		
-1.3	10.7		
-1.2	12.4		
-1.1	13.5		
-1.0	13.8		
-0.9	13.7		
-0.8	13.7		
-0.7	15.0		
-0.6	17.2		
-0.5	19.3		
-0.4	20.7		
-0.3	21.1		
-0.2	20.2		
-0.1	17.7		
0.0	15.5		

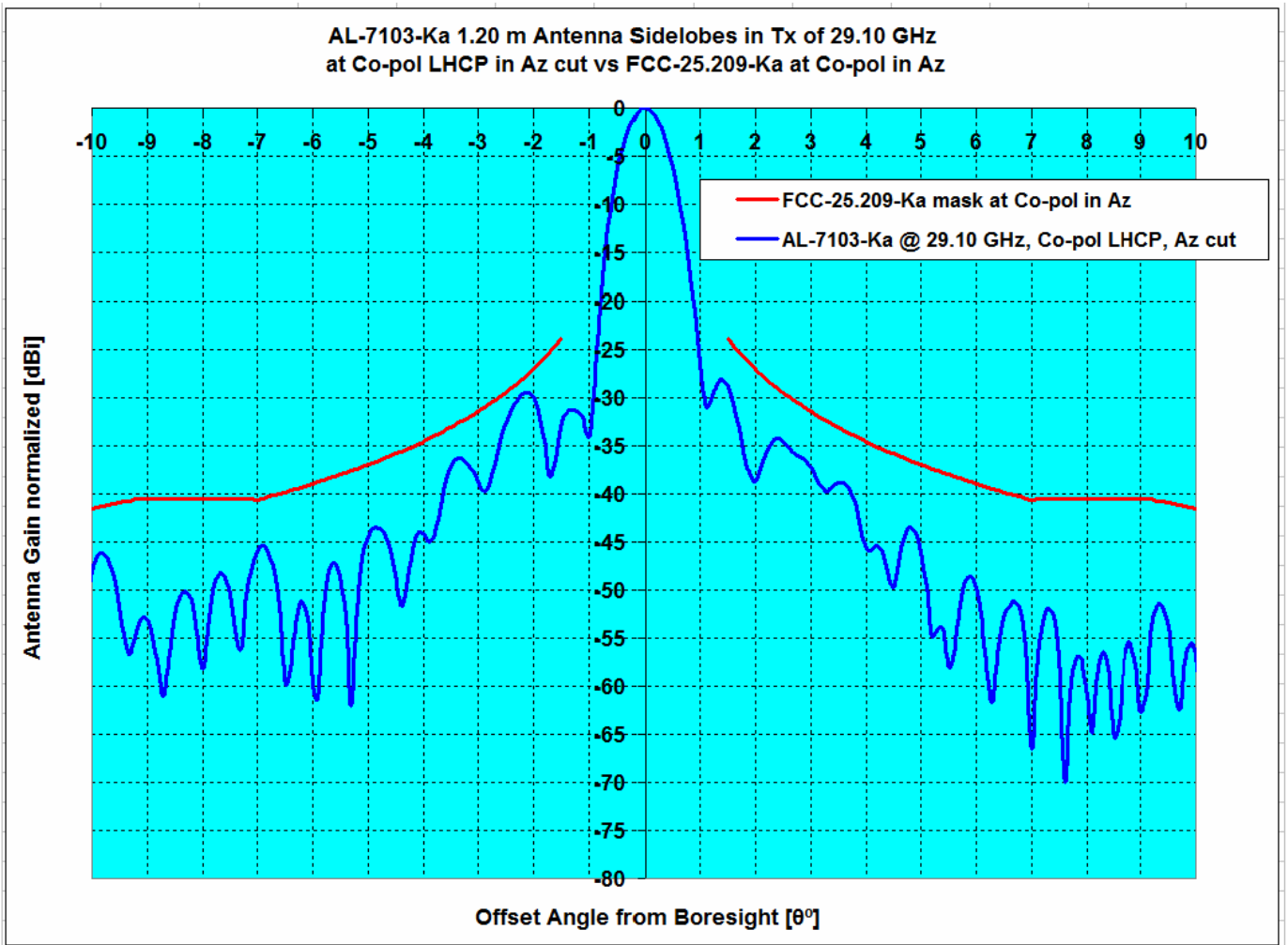
6.0	-21.7	-0.5	-21.2
6.1	-11.2	-0.6	-10.6
6.2	-6.0	-0.8	-5.2
6.3	-5.2	-1.0	-4.2
6.4	-5.9	-1.2	-4.8
6.5	-9.6	-1.3	-8.3
6.6	-15.0	-1.5	-13.5
6.7	-10.9	-1.7	-9.2
6.8	-7.7	-1.8	-5.9
6.9	-8.1	-2.0	-6.2
7.0	-10.0	-2.1	-7.9
7.1	-16.9	-2.0	-14.9
7.2	-24.7	-2.0	-22.7
7.3	-14.0	-2.0	-12.0
7.4	-13.8	-2.0	-11.8
7.5	-15.0	-2.0	-13.0
7.6	-16.2	-2.0	-14.2
7.7	-18.8	-2.0	-16.8
7.8	-18.0	-2.0	-16.0
7.9	-15.2	-2.0	-13.2
8.0	-17.0	-2.0	-15.0
8.1	-18.3	-2.0	-16.3
8.2	-24.0	-2.0	-22.0
8.3	-19.7	-2.0	-17.7
8.4	-17.1	-2.0	-15.1
8.5	-14.0	-2.0	-12.0
8.6	-13.2	-2.0	-11.2
8.7	-17.1	-2.0	-15.1
8.8	-18.8	-2.0	-16.8
8.9	-28.1	-2.0	-26.1
9.0	-18.8	-2.0	-16.8
9.1	-12.8	-2.0	-10.8
9.2	-12.1	-2.0	-10.1
9.3	-11.8	-2.0	-9.8
9.4	-12.8	-2.0	-10.8
9.5	-19.1	-2.0	-17.1
9.6	-16.6	-2.0	-14.6
9.7	-12.9	-2.0	-10.9
9.8	-10.6	-2.0	-8.6
9.9	-10.0	-2.0	-8.0
10.0	-11.6	-2.0	-9.6

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth LHCP

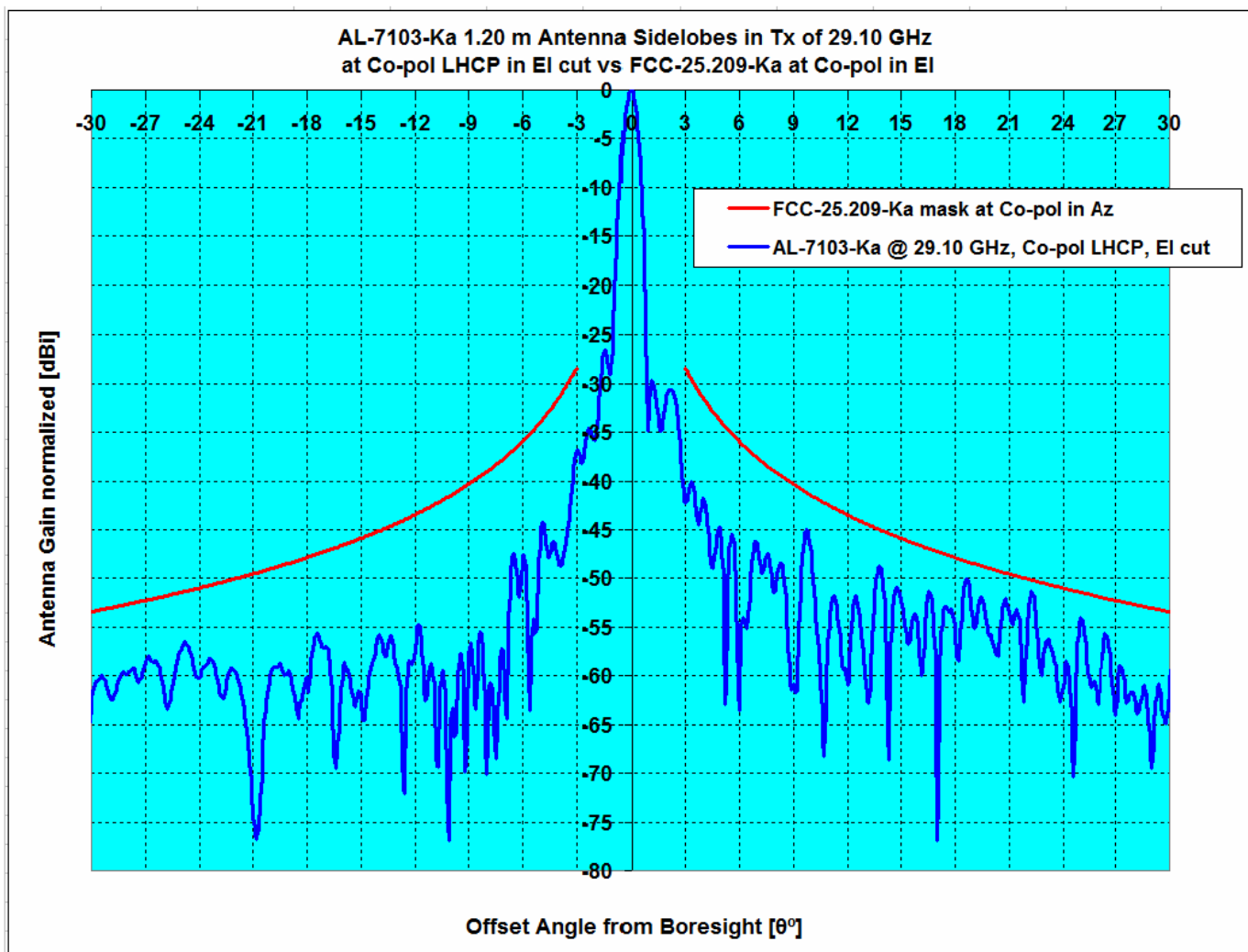


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , LHCP	29.10	48.50	-1.60	0.94	0.00%	0.28%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth LHCP

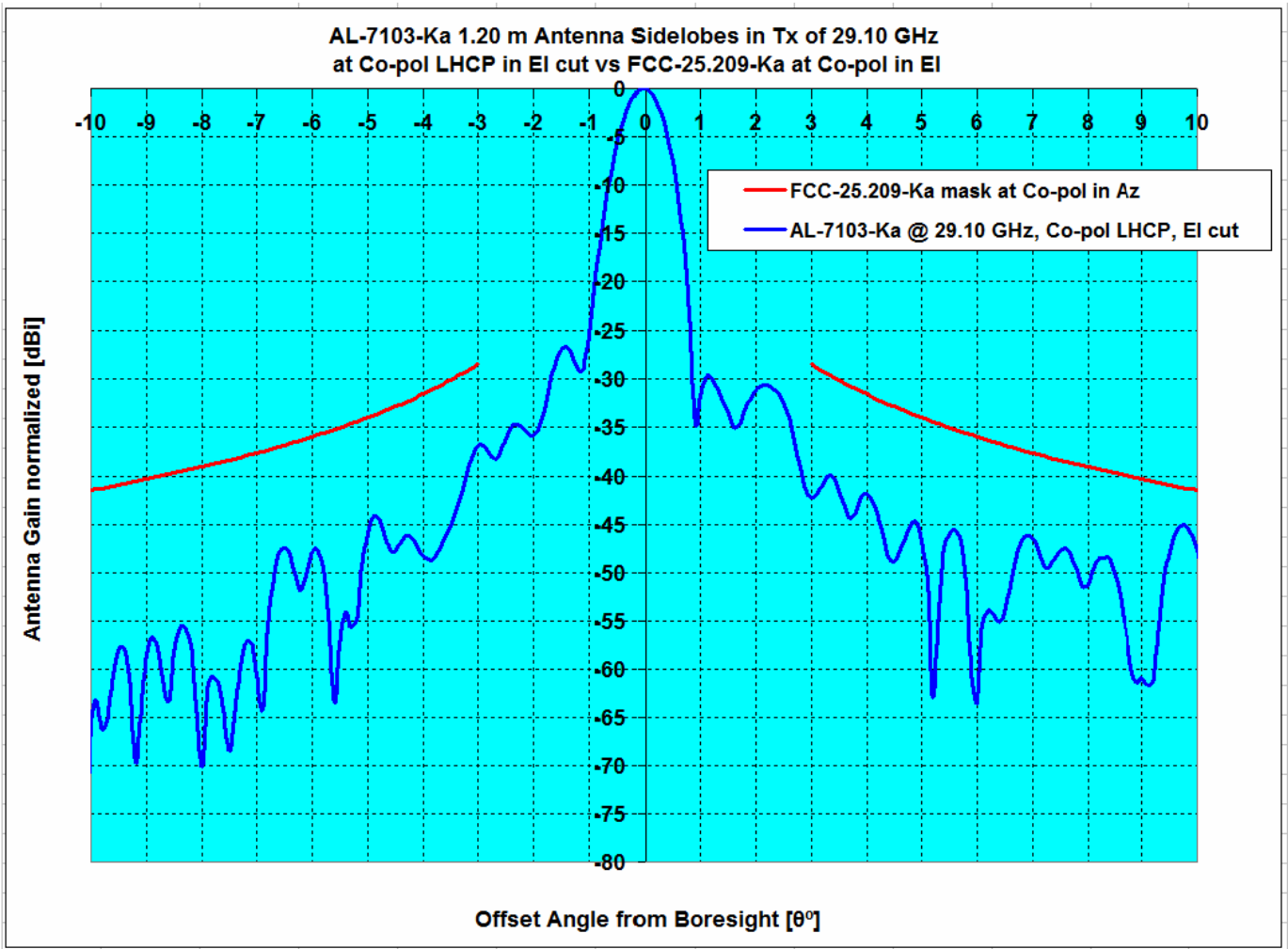


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , LHCP	29.10	48.50	-1.60	0.94	0.00%	0.28%



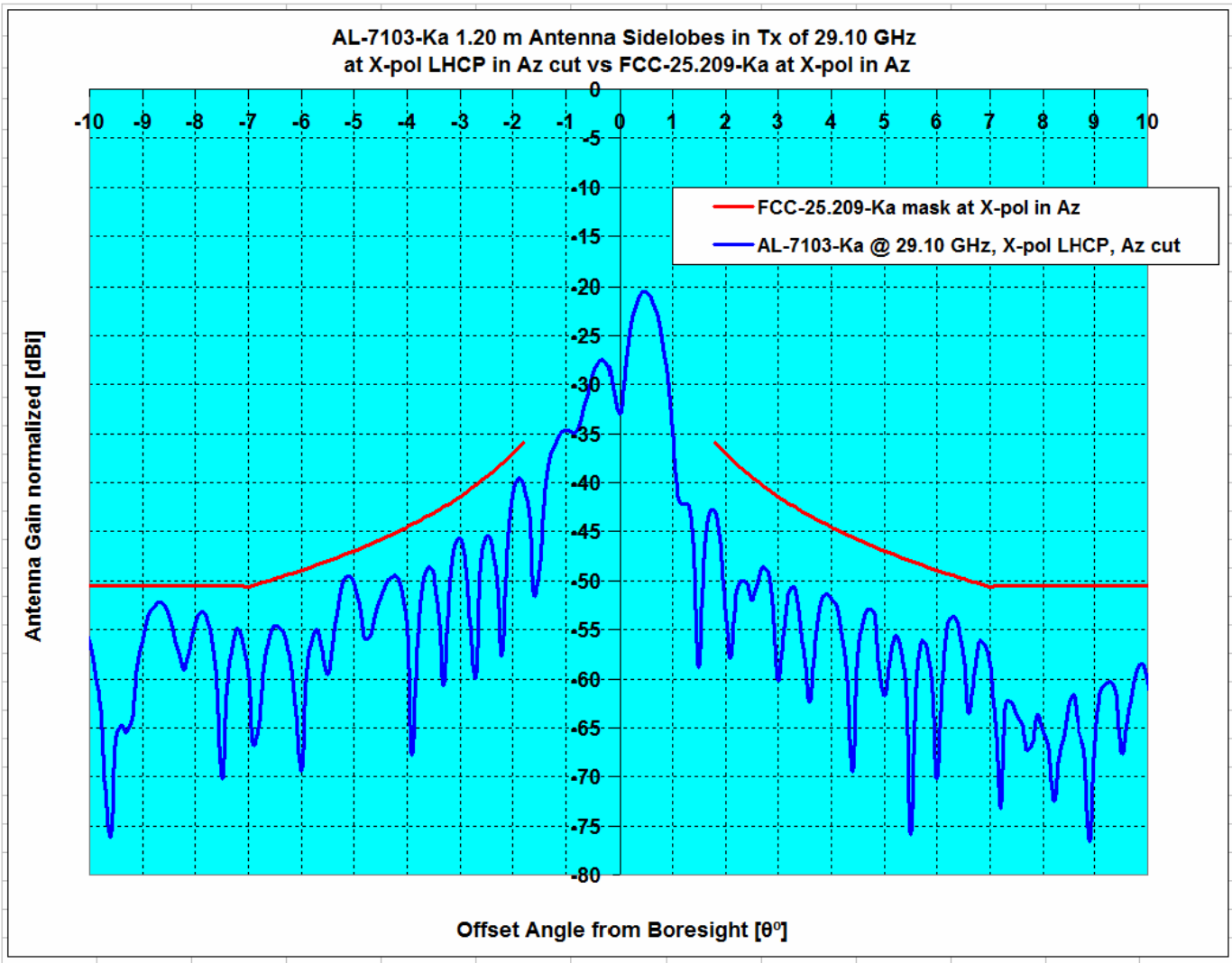
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , LHCP	29.10	48.50	-8.46	-1.17	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Elevation LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , LHCP	29.10	48.50	-8.46	-1.17	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, X-pol, Azimuth LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7103-Ka	Az , LHCP	29.10	48.50	-2.31	-1.68	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

29.10 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-179.0	-31.2	0.0	-31.2
-178.0	-29.8	0.0	-29.8
-177.0	-27.5	0.0	-27.5
-176.0	-23.4	0.0	-23.4
-175.0	-31.3	0.0	-31.3
-174.0	-35.8	0.0	-35.8
-173.0	-31.5	0.0	-31.5
-172.0	-33.8	0.0	-33.8
-171.0	-35.8	0.0	-35.8
-170.0	-33.0	0.0	-33.0
-169.0	-25.5	0.0	-25.5
-168.0	-44.0	0.0	-44.0
-167.0	-25.2	0.0	-25.2
-166.0	-30.0	0.0	-30.0
-165.0	-39.8	0.0	-39.8
-164.0	-36.0	0.0	-36.0
-163.0	-36.9	0.0	-36.9
-162.0	-33.1	0.0	-33.1
-161.0	-33.9	0.0	-33.9
-160.0	-29.9	0.0	-29.9
-159.0	-33.1	0.0	-33.1
-158.0	-31.7	0.0	-31.7
-157.0	-32.8	0.0	-32.8
-156.0	-30.9	0.0	-30.9
-155.0	-35.3	0.0	-35.3
-154.0	-34.2	0.0	-34.2
-153.0	-32.3	0.0	-32.3
-152.0	-36.8	0.0	-36.8
-151.0	-31.1	0.0	-31.1
-150.0	-32.4	0.0	-32.4
-149.0	-28.0	0.0	-28.0
-148.0	-26.2	0.0	-26.2
-147.0	-28.4	0.0	-28.4
-146.0	-34.4	0.0	-34.4
-145.0	-27.0	0.0	-27.0
-144.0	-30.8	0.0	-30.8
-143.0	-33.6	0.0	-33.6
-142.0	-34.3	0.0	-34.3
-141.0	-32.6	0.0	-32.6
-140.0	-33.5	0.0	-33.5
-139.0	-27.6	0.0	-27.6
-138.0	-41.6	0.0	-41.6
-137.0	-34.1	0.0	-34.1
-136.0	-37.0	0.0	-37.0
-135.0	-29.4	0.0	-29.4
-134.0	-27.4	0.0	-27.4
-133.0	-28.1	0.0	-28.1
-132.0	-39.7	0.0	-39.7
-131.0	-30.6	0.0	-30.6
-130.0	-42.3	0.0	-42.3
-129.0	-27.9	0.0	-27.9
-128.0	-31.9	0.0	-31.9
-127.0	-25.7	0.0	-25.7
-126.0	-38.1	0.0	-38.1
-125.0	-27.5	0.0	-27.5
-124.0	-28.7	0.0	-28.7
-123.0	-34.5	0.0	-34.5
-122.0	-35.3	0.0	-35.3
-121.0	-29.9	0.0	-29.9
-120.0	-27.8	0.0	-27.8

29.10 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	48.5		
1.0	22.7		
2.0	11.0	21.5	-10.5
3.0	11.8	17.1	-5.3
4.0	0.6	13.9	-13.3
5.0	2.3	11.5	-9.2
6.0	1.3	9.5	-8.3
7.0	-27.0	7.9	-34.8
8.0	-13.7	8.0	-21.7
9.0	-16.1	8.0	-24.1
10.0	-10.4	7.0	-17.4
11.0	-13.0	6.0	-19.0
12.0	-8.6	5.0	-13.6
13.0	-7.0	4.2	-11.2
14.0	-6.5	3.3	-9.9
15.0	-9.3	2.6	-11.9
16.0	-14.8	1.9	-16.7
17.0	-6.2	1.2	-7.5
18.0	-16.8	0.6	-17.4
19.0	-10.0	0.0	-10.0
20.0	-10.8	-0.5	-10.3
21.0	-20.8	-1.1	-19.8
22.0	-12.2	-1.6	-10.6
23.0	-10.0	-2.0	-7.9
24.0	-8.2	-2.5	-5.7
25.0	-9.2	-2.9	-6.3
26.0	-9.8	-3.4	-6.4
27.0	-13.1	-3.8	-9.3
28.0	-9.9	-4.2	-5.7
29.0	-14.9	-4.6	-10.4
30.0	-14.3	-4.9	-9.4
31.0	-13.2	-5.3	-7.9
32.0	-30.0	-5.6	-24.4
33.0	-17.1	-6.0	-11.2
34.0	-22.0	-6.3	-15.7
35.0	-20.0	-6.6	-13.4
36.0	-22.1	-6.9	-15.2
37.0	-14.6	-7.2	-7.4
38.0	-18.1	-7.5	-10.7
39.0	-17.6	-7.8	-9.8
40.0	-25.4	-8.1	-17.4
41.0	-18.6	-8.3	-10.3
42.0	-18.9	-8.6	-10.4
43.0	-24.8	-8.8	-16.0
44.0	-17.0	-9.1	-7.9
45.0	-36.1	-9.3	-26.7
46.0	-17.4	-9.6	-7.8
47.0	-8.5	-9.8	1.3
48.0	-19.5	-10.0	-9.5
49.0	-15.4	-10.0	-5.4
50.0	-15.7	-10.0	-5.7
51.0	-18.0	-10.0	-8.0
52.0	-21.3	-10.0	-11.3
53.0	-31.1	-10.0	-21.1
54.0	-19.9	-10.0	-9.9
55.0	-17.0	-10.0	-7.0
56.0	-13.4	-10.0	-3.4
57.0	-18.1	-10.0	-8.1
58.0	-23.1	-10.0	-13.1
59.0	-14.2	-10.0	-4.2

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-37.7	0.0	-37.7
-118.0	-39.4	0.0	-39.4
-117.0	-32.2	0.0	-32.2
-116.0	-23.4	0.0	-23.4
-115.0	-25.3	0.0	-25.3
-114.0	-27.7	0.0	-27.7
-113.0	-27.6	0.0	-27.6
-112.0	-23.4	0.0	-23.4
-111.0	-25.8	0.0	-25.8
-110.0	-22.2	0.0	-22.2
-109.0	-20.3	0.0	-20.3
-108.0	-18.2	0.0	-18.2
-107.0	-15.0	0.0	-15.0
-106.0	-14.4	0.0	-14.4
-105.0	-13.1	0.0	-13.1
-104.0	-13.0	0.0	-13.0
-103.0	-13.1	0.0	-13.1
-102.0	-14.6	0.0	-14.6
-101.0	-17.3	0.0	-17.3
-100.0	-25.5	0.0	-25.5
-99.0	-47.2	0.0	-47.2
-98.0	-22.8	0.0	-22.8
-97.0	-17.0	0.0	-17.0
-96.0	-14.5	0.0	-14.5
-95.0	-14.6	0.0	-14.6
-94.0	-20.7	0.0	-20.7
-93.0	-18.3	0.0	-18.3
-92.0	-14.2	0.0	-14.2
-91.0	-18.2	0.0	-18.2
-90.0	-19.8	0.0	-19.8
-89.0	-16.8	0.0	-16.8
-88.0	-14.9	0.0	-14.9
-87.0	-13.1	0.0	-13.1
-86.0	-18.3	0.0	-18.3
-85.0	-12.5	-10.0	-2.5
-84.0	-12.6	-10.0	-2.6
-83.0	-27.9	-10.0	-17.9
-82.0	-14.9	-10.0	-4.9
-81.0	-15.4	-10.0	-5.4
-80.0	-16.5	-10.0	-6.5
-79.0	-16.8	-10.0	-6.8
-78.0	-17.9	-10.0	-7.9
-77.0	-17.5	-10.0	-7.5
-76.0	-23.3	-10.0	-13.3
-75.0	-15.3	-10.0	-5.3
-74.0	-14.4	-10.0	-4.4
-73.0	-16.0	-10.0	-6.0
-72.0	-17.4	-10.0	-7.4
-71.0	-16.4	-10.0	-6.4
-70.0	-20.9	-10.0	-10.9
-69.0	-17.2	-10.0	-7.2
-68.0	-28.3	-10.0	-18.3
-67.0	-20.7	-10.0	-10.7
-66.0	-24.3	-10.0	-14.3
-65.0	-13.2	-10.0	-3.2
-64.0	-14.4	-10.0	-4.4
-63.0	-18.5	-10.0	-8.5
-62.0	-19.2	-10.0	-9.2
-61.0	-22.9	-10.0	-12.9
-60.0	-18.0	-10.0	-8.0
-59.0	-20.4	-10.0	-10.4
-58.0	-16.5	-10.0	-6.5
-57.0	-13.4	-10.0	-3.4

60.0	-15.5	-10.0	-5.5
61.0	-21.9	-10.0	-11.9
62.0	-21.2	-10.0	-11.2
63.0	-28.3	-10.0	-18.3
64.0	-18.8	-10.0	-8.8
65.0	-10.6	-10.0	-0.6
66.0	-14.4	-10.0	-4.4
67.0	-15.8	-10.0	-5.8
68.0	-12.8	-10.0	-2.8
69.0	-14.2	-10.0	-4.2
70.0	-15.4	-10.0	-5.4
71.0	-25.0	-10.0	-15.0
72.0	-15.3	-10.0	-5.3
73.0	-18.2	-10.0	-8.2
74.0	-30.1	-10.0	-20.1
75.0	-18.2	-10.0	-8.2
76.0	-27.6	-10.0	-17.6
77.0	-20.5	-10.0	-10.5
78.0	-23.3	-10.0	-13.3
79.0	-25.1	-10.0	-15.1
80.0	-29.0	-10.0	-19.0
81.0	-13.9	-10.0	-3.9
82.0	-17.7	-10.0	-7.7
83.0	-26.3	-10.0	-16.3
84.0	-24.7	-10.0	-14.7
85.0	-18.2	-10.0	-8.2
86.0	-23.2	0.0	-23.2
87.0	-31.3	0.0	-31.3
88.0	-22.4	0.0	-22.4
89.0	-16.4	0.0	-16.4
90.0	-27.2	0.0	-27.2
91.0	-20.7	0.0	-20.7
92.0	-25.9	0.0	-25.9
93.0	-21.0	0.0	-21.0
94.0	-25.5	0.0	-25.5
95.0	-22.3	0.0	-22.3
96.0	-23.2	0.0	-23.2
97.0	-25.0	0.0	-25.0
98.0	-20.5	0.0	-20.5
99.0	-24.4	0.0	-24.4
100.0	-30.7	0.0	-30.7
101.0	-21.7	0.0	-21.7
102.0	-20.1	0.0	-20.1
103.0	-27.6	0.0	-27.6
104.0	-25.2	0.0	-25.2
105.0	-26.1	0.0	-26.1
106.0	-20.6	0.0	-20.6
107.0	-20.1	0.0	-20.1
108.0	-24.1	0.0	-24.1
109.0	-41.2	0.0	-41.2
110.0	-31.0	0.0	-31.0
111.0	-19.2	0.0	-19.2
112.0	-27.0	0.0	-27.0
113.0	-22.1	0.0	-22.1
114.0	-22.3	0.0	-22.3
115.0	-27.5	0.0	-27.5
116.0	-22.1	0.0	-22.1
117.0	-32.5	0.0	-32.5
118.0	-32.9	0.0	-32.9
119.0	-22.8	0.0	-22.8
120.0	-27.0	0.0	-27.0
121.0	-21.9	0.0	-21.9
122.0	-24.3	0.0	-24.3

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-16.6	-10.0	-6.6	123.0	-27.6	0.0	-27.6
-55.0	-10.9	-10.0	-0.9	124.0	-20.6	0.0	-20.6
-54.0	-12.8	-10.0	-2.8	125.0	-34.2	0.0	-34.2
-53.0	-16.8	-10.0	-6.8	126.0	-24.7	0.0	-24.7
-52.0	-18.8	-10.0	-8.8	127.0	-27.5	0.0	-27.5
-51.0	-10.5	-10.0	-0.5	128.0	-21.5	0.0	-21.5
-50.0	-10.3	-10.0	-0.3	129.0	-27.9	0.0	-27.9
-49.0	-19.5	-10.0	-9.5	130.0	-19.8	0.0	-19.8
-48.0	-12.4	-10.0	-2.4	131.0	-25.2	0.0	-25.2
-47.0	-13.8	-9.8	-4.0	132.0	-26.1	0.0	-26.1
-46.0	-16.5	-9.6	-7.0	133.0	-24.3	0.0	-24.3
-45.0	-11.8	-9.3	-2.4	134.0	-19.4	0.0	-19.4
-44.0	-12.3	-9.1	-3.2	135.0	-24.9	0.0	-24.9
-43.0	-12.4	-8.8	-3.6	136.0	-28.2	0.0	-28.2
-42.0	-5.7	-8.6	2.9	137.0	-26.0	0.0	-26.0
-41.0	-8.6	-8.3	-0.3	138.0	-18.9	0.0	-18.9
-40.0	-13.6	-8.1	-5.6	139.0	-22.5	0.0	-22.5
-39.0	-9.1	-7.8	-1.3	140.0	-28.2	0.0	-28.2
-38.0	-9.6	-7.5	-2.1	141.0	-22.6	0.0	-22.6
-37.0	-9.0	-7.2	-1.8	142.0	-19.8	0.0	-19.8
-36.0	-10.7	-6.9	-3.8	143.0	-24.9	0.0	-24.9
-35.0	-12.2	-6.6	-5.6	144.0	-35.2	0.0	-35.2
-34.0	-9.4	-6.3	-3.1	145.0	-25.6	0.0	-25.6
-33.0	-14.1	-6.0	-8.2	146.0	-32.6	0.0	-32.6
-32.0	-9.9	-5.6	-4.3	147.0	-20.2	0.0	-20.2
-31.0	-7.9	-5.3	-2.7	148.0	-19.1	0.0	-19.1
-30.0	-14.1	-4.9	-9.2	149.0	-24.5	0.0	-24.5
-29.0	-9.1	-4.6	-4.5	150.0	-25.1	0.0	-25.1
-28.0	-14.0	-4.2	-9.8	151.0	-24.3	0.0	-24.3
-27.0	-13.7	-3.8	-9.9	152.0	-23.7	0.0	-23.7
-26.0	-11.8	-3.4	-8.4	153.0	-33.0	0.0	-33.0
-25.0	-4.6	-2.9	-1.6	154.0	-23.4	0.0	-23.4
-24.0	-9.0	-2.5	-6.5	155.0	-23.1	0.0	-23.1
-23.0	-8.9	-2.0	-6.8	156.0	-25.4	0.0	-25.4
-22.0	-12.2	-1.6	-10.6	157.0	-20.2	0.0	-20.2
-21.0	-1.2	-1.1	-0.2	158.0	-29.8	0.0	-29.8
-20.0	-9.3	-0.5	-8.8	159.0	-19.5	0.0	-19.5
-19.0	-6.2	0.0	-6.3	160.0	-17.5	0.0	-17.5
-18.0	-5.5	0.6	-6.1	161.0	-18.5	0.0	-18.5
-17.0	-11.2	1.2	-12.4	162.0	-25.5	0.0	-25.5
-16.0	-2.4	1.9	-4.3	163.0	-37.8	0.0	-37.8
-15.0	-10.7	2.6	-13.3	164.0	-26.5	0.0	-26.5
-14.0	-1.1	3.3	-4.4	165.0	-30.3	0.0	-30.3
-13.0	-6.7	4.2	-10.9	166.0	-28.2	0.0	-28.2
-12.0	-17.3	5.0	-22.4	167.0	-20.9	0.0	-20.9
-11.0	-20.1	6.0	-26.0	168.0	-24.6	0.0	-24.6
-10.0	0.9	7.0	-6.1	169.0	-25.4	0.0	-25.4
-9.0	-12.9	8.0	-20.9	170.0	-41.9	0.0	-41.9
-8.0	-8.2	8.0	-16.2	171.0	-35.7	0.0	-35.7
-7.0	-0.2	7.9	-8.1	172.0	-18.2	0.0	-18.2
-6.0	-22.4	9.5	-31.9	173.0	-25.8	0.0	-25.8
-5.0	4.1	11.5	-7.4	174.0	-23.5	0.0	-23.5
-4.0	1.3	13.9	-12.6	175.0	-28.9	0.0	-28.9
-3.0	8.9	17.1	-8.2	176.0	-27.7	0.0	-27.7
-2.0	16.9	21.5	-4.6	177.0	-37.1	0.0	-37.1
-1.0	13.9			178.0	-33.2	0.0	-33.2
0.0	48.5			179.0	-31.0	0.0	-31.0

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.10 GHz Antenna Pattern in Co-pol Az RHCP				29.10 GHz Antenna Pattern in Co-pol Az RHCP			
Angle	Gain	Mask	Over Mask	Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB	Degrees	dBi	dBi	dB
-10.0	0.9	7.0	-6.1	0.0	48.5		
-9.9	2.4	7.1	-4.7	0.1	48.3		
-9.8	2.7	7.2	-4.5	0.2	47.7		
-9.7	1.8	7.3	-5.5	0.3	46.5		
-9.6	0.0	7.4	-7.4	0.4	44.8		
-9.5	-2.7	7.6	-10.3	0.5	42.4		
-9.4	-6.6	7.7	-14.3	0.6	39.5		
-9.3	-9.5	7.8	-17.3	0.7	36.0		
-9.2	-9.6	8.0	-17.6	0.8	31.9		
-9.1	-10.3	8.0	-18.3	0.9	27.3		
-9.0	-12.9	8.0	-20.9	1.0	22.7		
-8.9	-19.6	8.0	-27.6	1.1	18.6		
-8.8	-14.9	8.0	-22.9	1.2	18.1		
-8.7	-8.4	8.0	-16.4	1.3	19.4		
-8.6	-5.1	8.0	-13.1	1.4	19.9		
-8.5	-3.0	8.0	-11.0	1.5	19.4	24.6	-5.2
-8.4	-2.1	8.0	-10.1	1.6	17.6	23.9	-6.3
-8.3	-2.1	8.0	-10.1	1.7	15.0	23.2	-8.2
-8.2	-3.6	8.0	-11.6	1.8	12.2	22.6	-10.4
-8.1	-6.5	8.0	-14.5	1.9	10.7	22.0	-11.3
-8.0	-8.2	8.0	-16.2	2.0	11.0	21.5	-10.5
-7.9	-5.7	8.0	-13.7	2.1	12.3	20.9	-8.7
-7.8	-2.9	8.0	-10.9	2.2	13.7	20.4	-6.8
-7.7	-2.0	8.0	-10.0	2.3	14.3	20.0	-5.6
-7.6	-2.8	8.0	-10.8	2.4	14.5	19.5	-5.0
-7.5	-5.6	8.0	-13.6	2.5	13.9	19.1	-5.2
-7.4	-8.8	8.0	-16.8	2.6	12.6	18.6	-6.0
-7.3	-7.0	8.0	-15.0	2.7	11.8	18.2	-6.4
-7.2	-2.8	8.0	-10.8	2.8	11.5	17.8	-6.3
-7.1	-1.0	8.0	-9.0	2.9	11.8	17.4	-5.6
-7.0	-0.2	7.9	-8.1	3.0	11.8	17.1	-5.3
-6.9	-0.6	8.0	-8.6	3.1	11.4	16.7	-5.3
-6.8	-1.9	8.2	-10.0	3.2	10.4	16.4	-6.0
-6.7	-4.5	8.3	-12.8	3.3	9.5	16.0	-6.5
-6.6	-8.4	8.5	-16.9	3.4	8.9	15.7	-6.8
-6.5	-14.9	8.7	-23.5	3.5	8.3	15.4	-7.1
-6.4	-9.5	8.8	-18.3	3.6	7.7	15.1	-7.4
-6.3	-5.9	9.0	-14.9	3.7	6.8	14.8	-8.0
-6.2	-5.7	9.2	-14.9	3.8	5.0	14.5	-9.5
-6.1	-8.3	9.4	-17.6	3.9	2.8	14.2	-11.4
-6.0	-22.4	9.5	-31.9	4.0	0.6	13.9	-13.3
-5.9	-6.6	9.7	-16.4	4.1	0.6	13.7	-13.1
-5.8	-0.5	9.9	-10.4	4.2	2.3	13.4	-11.1
-5.7	1.9	10.1	-8.2	4.3	2.7	13.2	-10.5
-5.6	3.0	10.3	-7.3	4.4	3.3	12.9	-9.6
-5.5	1.8	10.5	-8.7	4.5	3.5	12.7	-9.1
-5.4	-1.5	10.7	-12.2	4.6	4.1	12.4	-8.3
-5.3	-7.2	10.9	-18.1	4.7	5.2	12.2	-7.0
-5.2	-2.9	11.1	-14.0	4.8	5.6	12.0	-6.4
-5.1	2.1	11.3	-9.2	4.9	4.5	11.7	-7.3
-5.0	4.1	11.5	-7.4	5.0	2.3	11.5	-9.2
-4.9	4.6	11.7	-7.1	5.1	-3.4	11.3	-14.7
-4.8	4.0	12.0	-8.0	5.2	-22.5	11.1	-33.6
-4.7	2.3	12.2	-9.9	5.3	-8.4	10.9	-19.3
-4.6	0.2	12.4	-12.2	5.4	-5.9	10.7	-16.6
-4.5	-1.9	12.7	-14.6	5.5	-11.6	10.5	-22.1
-4.4	-2.9	12.9	-15.8	5.6	-10.8	10.3	-21.1
-4.3	-1.4	13.2	-14.6	5.7	-3.5	10.1	-13.6
-4.2	0.7	13.4	-12.8	5.8	0.2	9.9	-9.7
-4.1	1.9	13.7	-11.8	5.9	1.7	9.7	-8.0
-4.0	1.3	13.9	-12.6	6.0	1.3	9.5	-8.3
-3.9	0.7	14.2	-13.5	6.1	-0.7	9.4	-10.1

Orbit Communication Systems Ltd.

AL AL-7103-Ka, 1.20 m Antenna, Pattern Data Table

Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-3.8	2.6	14.5	-11.9		6.2	-2.6	9.2	-11.8
-3.7	6.3	14.8	-8.4		6.3	-3.0	9.0	-12.1
-3.6	9.1	15.1	-6.0		6.4	-1.8	8.8	-10.6
-3.5	10.5	15.4	-4.8		6.5	-1.7	8.7	-10.3
-3.4	11.0	15.7	-4.7		6.6	-2.5	8.5	-11.0
-3.3	10.6	16.0	-5.5		6.7	-4.4	8.3	-12.8
-3.2	9.8	16.4	-6.6		6.8	-9.2	8.2	-17.4
-3.1	9.0	16.7	-7.7		6.9	-16.1	8.0	-24.1
-3.0	8.9	17.1	-8.2		7.0	-27.0	7.9	-34.8
-2.9	9.4	17.4	-8.0		7.1	-12.1	8.0	-20.1
-2.8	10.8	17.8	-7.0		7.2	-7.6	8.0	-15.6
-2.7	12.8	18.2	-5.5		7.3	-5.9	8.0	-13.9
-2.6	14.6	18.6	-4.1		7.4	-6.6	8.0	-14.6
-2.5	15.9	19.1	-3.2		7.5	-9.7	8.0	-17.7
-2.4	16.5	19.5	-3.0		7.6	-14.0	8.0	-22.0
-2.3	16.8	20.0	-3.1		7.7	-12.3	8.0	-20.3
-2.2	17.0	20.4	-3.4		7.8	-10.0	8.0	-18.0
-2.1	17.1	20.9	-3.9		7.9	-10.9	8.0	-18.9
-2.0	16.9	21.5	-4.6		8.0	-13.7	8.0	-21.7
-1.9	15.9	22.0	-6.1		8.1	-11.0	8.0	-19.0
-1.8	14.0	22.6	-8.6		8.2	-6.5	8.0	-14.5
-1.7	12.0	23.2	-11.2		8.3	-4.7	8.0	-12.7
-1.6	12.8	23.9	-11.1		8.4	-4.5	8.0	-12.5
-1.5	14.6	24.6	-10.0		8.5	-7.5	8.0	-15.5
-1.4	15.5				8.6	-12.9	8.0	-20.9
-1.3	15.4				8.7	-16.7	8.0	-24.7
-1.2	15.5				8.8	-12.1	8.0	-20.1
-1.1	15.8				8.9	-11.6	8.0	-19.6
-1.0	13.9				9.0	-16.1	8.0	-24.1
-0.9	16.1				9.1	-22.0	8.0	-30.0
-0.8	25.9				9.2	-12.2	8.0	-20.2
-0.7	32.4				9.3	-8.1	7.8	-15.9
-0.6	37.5				9.4	-6.7	7.7	-14.4
-0.5	41.2				9.5	-8.6	7.6	-16.1
-0.4	43.9				9.6	-13.9	7.4	-21.4
-0.3	45.9				9.7	-16.7	7.3	-24.1
-0.2	47.3				9.8	-11.4	7.2	-18.6
-0.1	48.2				9.9	-8.8	7.1	-15.9
0.0	48.5				10.0	-10.4	7.0	-17.4

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

29.10 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-8.5	-4.9	-3.6
-29.5	-6.5	-4.7	-1.7
-29.0	-8.8	-4.6	-4.2
-28.5	-8.2	-4.4	-3.9
-28.0	-7.0	-4.2	-2.8
-27.5	-8.4	-4.0	-4.5
-27.0	-8.5	-3.8	-4.7
-26.5	-7.5	-3.6	-3.9
-26.0	-8.7	-3.4	-5.3
-25.5	-6.9	-3.2	-3.7
-25.0	-5.0	-2.9	-2.0
-24.5	-7.1	-2.7	-4.3
-24.0	-12.6	-2.5	-10.1
-23.5	-11.9	-2.3	-9.6
-23.0	-7.4	-2.0	-5.3
-22.5	-9.1	-1.8	-7.3
-22.0	-13.9	-1.6	-12.3
-21.5	-15.0	-1.3	-13.7
-21.0	-16.7	-1.1	-15.6
-20.5	-19.7	-0.8	-18.9
-20.0	-16.9	-0.5	-16.4
-19.5	-15.0	-0.3	-14.7
-19.0	-9.2	0.0	-9.2
-18.5	-13.5	0.3	-13.8
-18.0	-36.4	0.6	-37.0
-17.5	-15.2	0.9	-16.2
-17.0	-11.2	1.2	-12.4
-16.5	-11.8	1.6	-13.3
-16.0	-18.0	1.9	-19.9
-15.5	-9.9	2.2	-12.1
-15.0	-12.3	2.6	-14.9
-14.5	-10.1	3.0	-13.0
-14.0	-6.4	3.3	-9.7
-13.5	-10.6	3.7	-14.3
-13.0	-12.3	4.2	-16.5
-12.5	-21.2	4.6	-25.8
-12.0	-20.6	5.0	-25.6
-11.5	-9.6	5.5	-15.1
-11.0	-8.6	6.0	-14.5
-10.5	-8.3	6.5	-14.7
-10.0	-11.3	7.0	-18.3
-9.5	-10.5	7.6	-18.0
-9.0	-60.6	8.1	-68.7
-8.5	-15.4	8.8	-24.2
-8.0	-8.7	9.4	-18.1
-7.5	-12.7	10.1	-22.8
-7.0	-3.8	10.9	-14.7
-6.5	-1.1	11.7	-12.7
-6.0	-0.4	12.5	-12.9
-5.5	-9.6	13.5	-23.1
-5.0	1.4	14.5	-13.1
-4.5	-3.5	15.7	-19.1
-4.0	1.1	16.9	-15.8
-3.5	6.0	18.4	-12.4
-3.0	11.4		
-2.5	13.2		
-2.0	11.9		
-1.5	21.4		
-1.0	22.2		
-0.5	42.5		
0.0	48.5		

29.10 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	48.5		
0.5	41.5		
1.0	16.9		
1.5	14.1		
2.0	19.1		
2.5	16.8		
3.0	7.0		
3.5	8.7	18.4	-9.7
4.0	8.1	16.9	-8.9
4.5	-6.8	15.7	-22.4
5.0	0.6	14.5	-13.9
5.5	3.6	13.5	-9.9
6.0	-11.3	12.5	-23.9
6.5	-7.7	11.7	-19.4
7.0	3.3	10.9	-7.6
7.5	2.0	10.1	-8.2
8.0	-9.3	9.4	-18.7
8.5	-5.2	8.8	-14.0
9.0	-4.4	8.1	-12.5
9.5	-2.2	7.6	-9.7
10.0	-3.7	7.0	-10.7
10.5	-4.5	6.5	-11.0
11.0	-4.6	6.0	-10.6
11.5	-19.9	5.5	-25.4
12.0	-5.9	5.0	-10.9
12.5	-7.8	4.6	-12.4
13.0	-3.1	4.2	-7.3
13.5	-8.8	3.7	-12.6
14.0	-12.8	3.3	-16.2
14.5	-6.3	3.0	-9.3
15.0	-4.5	2.6	-7.1
15.5	-9.0	2.2	-11.2
16.0	-1.4	1.9	-3.3
16.5	-7.3	1.6	-8.9
17.0	-8.2	1.2	-9.4
17.5	-6.1	0.9	-7.0
18.0	-3.6	0.6	-4.2
18.5	-6.9	0.3	-7.2
19.0	-4.9	0.0	-5.0
19.5	-7.4	-0.3	-7.1
20.0	-6.0	-0.5	-5.5
20.5	-9.1	-0.8	-8.3
21.0	-7.1	-1.1	-6.1
21.5	-6.6	-1.3	-5.3
22.0	-8.4	-1.6	-6.9
22.5	-8.8	-1.8	-7.0
23.0	-5.5	-2.0	-3.4
23.5	-10.0	-2.3	-7.7
24.0	-17.8	-2.5	-15.3
24.5	-9.4	-2.7	-6.6
25.0	-11.6	-2.9	-8.6
25.5	-20.8	-3.2	-17.6
26.0	-18.5	-3.4	-15.1
26.5	-13.9	-3.6	-10.3
27.0	-17.5	-3.8	-13.7
27.5	-17.2	-4.0	-13.2
28.0	-9.8	-4.2	-5.6
28.5	-16.8	-4.4	-12.5
29.0	-15.7	-4.6	-11.1
29.5	-14.1	-4.7	-9.3
30.0	-14.2	-4.9	-9.3

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

29.10 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-11.3	7.0	-18.3
-9.9	-9.1	7.1	-16.2
-9.8	-9.5	7.2	-16.7
-9.7	-15.3	7.3	-22.7
-9.6	-19.9	7.4	-27.4
-9.5	-10.5	7.6	-18.0
-9.4	-7.0	7.7	-14.7
-9.3	-6.2	7.8	-14.0
-9.2	-8.0	7.9	-15.9
-9.1	-13.9	8.0	-21.9
-9.0	-60.6	8.1	-68.7
-8.9	-13.7	8.3	-22.0
-8.8	-11.5	8.4	-19.9
-8.7	-11.3	8.5	-19.8
-8.6	-13.3	8.6	-21.9
-8.5	-15.4	8.8	-24.2
-8.4	-11.4	8.9	-20.3
-8.3	-9.0	9.0	-18.0
-8.2	-7.8	9.2	-17.0
-8.1	-7.9	9.3	-17.2
-8.0	-8.7	9.4	-18.1
-7.9	-9.9	9.6	-19.5
-7.8	-10.4	9.7	-20.1
-7.7	-12.4	9.8	-22.2
-7.6	-13.6	10.0	-23.6
-7.5	-12.7	10.1	-22.8
-7.4	-10.2	10.3	-20.5
-7.3	-7.3	10.4	-17.7
-7.2	-5.6	10.6	-16.2
-7.1	-4.6	10.7	-15.3
-7.0	-3.8	10.9	-14.7
-6.9	-5.2	11.0	-16.2
-6.8	-6.9	11.2	-18.1
-6.7	-4.9	11.3	-16.2
-6.6	-2.3	11.5	-13.8
-6.5	-1.1	11.7	-12.7
-6.4	-2.0	11.8	-13.8
-6.3	-5.8	12.0	-17.8
-6.2	-9.9	12.2	-22.1
-6.1	-4.4	12.4	-16.7
-6.0	-0.4	12.5	-12.9
-5.9	0.9	12.7	-11.8
-5.8	0.4	12.9	-12.5
-5.7	-2.4	13.1	-15.5
-5.6	-8.5	13.3	-21.8
-5.5	-9.6	13.5	-23.1
-5.4	-6.5	13.7	-20.2
-5.3	-8.3	13.9	-22.2
-5.2	-14.5	14.1	-28.6
-5.1	-3.6	14.3	-17.9
-5.0	1.4	14.5	-13.1
-4.9	3.8	14.7	-10.9
-4.8	3.8	15.0	-11.2
-4.7	1.9	15.2	-13.3
-4.6	-2.9	15.4	-18.4
-4.5	-3.5	15.7	-19.1
-4.4	1.2	15.9	-14.7
-4.3	3.8	16.2	-12.4
-4.2	3.9	16.4	-12.5
-4.1	2.9	16.7	-13.8

29.10 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	48.5		
0.1	48.2		
0.2	47.4		
0.3	46.1		
0.4	44.1		
0.5	41.5		
0.6	38.0		
0.7	33.4		
0.8	27.2		
0.9	19.4		
1.0	16.9		
1.1	18.4		
1.2	18.3		
1.3	17.4		
1.4	16.1		
1.5	14.1		
1.6	11.3		
1.7	11.7		
1.8	15.1		
1.9	17.7		
2.0	19.1		
2.1	19.5		
2.2	19.5		
2.3	19.0		
2.4	18.1		
2.5	16.8		
2.6	14.7		
2.7	11.8		
2.8	8.5		
2.9	6.5		
3.0	7.0		
3.1	8.4		
3.2	9.4		
3.3	9.9		
3.4	9.6		
3.5	8.7	18.4	-9.7
3.6	7.3	18.1	-10.8
3.7	6.2	17.8	-11.6
3.8	6.5	17.5	-11.0
3.9	7.6	17.2	-9.6
4.0	8.1	16.9	-8.9
4.1	7.2	16.7	-9.5
4.2	5.0	16.4	-11.5
4.3	1.5	16.2	-14.7
4.4	-4.1	15.9	-20.1
4.5	-6.8	15.7	-22.4
4.6	-2.2	15.4	-17.6
4.7	0.9	15.2	-14.3
4.8	2.4	15.0	-12.6
4.9	2.0	14.7	-12.7
5.0	0.6	14.5	-13.9
5.1	-2.4	14.3	-16.7
5.2	-4.2	14.1	-18.3
5.3	-0.9	13.9	-14.7
5.4	2.3	13.7	-11.4
5.5	3.6	13.5	-9.9
5.6	3.4	13.3	-9.9
5.7	1.5	13.1	-11.6
5.8	-2.9	12.9	-15.8
5.9	-13.9	12.7	-26.7

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	1.1	16.9	-15.8
-3.9	1.3	17.2	-15.9
-3.8	3.5	17.5	-14.0
-3.7	5.2	17.8	-12.6
-3.6	6.1	18.1	-12.0
-3.5	6.0	18.4	-12.4
-3.4	5.4		
-3.3	5.9		
-3.2	7.8		
-3.1	9.8		
-3.0	11.4		
-2.9	12.1		
-2.8	12.3		
-2.7	12.3		
-2.6	12.6		
-2.5	13.2		
-2.4	13.7		
-2.3	13.5		
-2.2	12.8		
-2.1	11.9		
-2.0	11.9		
-1.9	13.1		
-1.8	15.3		
-1.7	17.8		
-1.6	20.0		
-1.5	21.4		
-1.4	21.9		
-1.3	21.4		
-1.2	19.6		
-1.1	18.4		
-1.0	22.2		
-0.9	27.7		
-0.8	32.4		
-0.7	36.4		
-0.6	39.8		
-0.5	42.5		
-0.4	44.7		
-0.3	46.4		
-0.2	47.6		
-0.1	48.3		
0.0	48.5		

6.0	-11.3	12.5	-23.9
6.1	-5.7	12.4	-18.1
6.2	-4.7	12.2	-16.9
6.3	-7.8	12.0	-19.8
6.4	-14.7	11.8	-26.5
6.5	-7.7	11.7	-19.4
6.6	-1.6	11.5	-13.1
6.7	1.5	11.3	-9.8
6.8	3.3	11.2	-7.9
6.9	3.7	11.0	-7.3
7.0	3.3	10.9	-7.6
7.1	1.5	10.7	-9.2
7.2	-0.7	10.6	-11.3
7.3	-1.5	10.4	-11.9
7.4	0.1	10.3	-10.1
7.5	2.0	10.1	-8.2
7.6	2.3	10.0	-7.7
7.7	1.5	9.8	-8.3
7.8	-1.1	9.7	-10.8
7.9	-6.5	9.6	-16.0
8.0	-9.3	9.4	-18.7
8.1	-4.5	9.3	-13.7
8.2	-1.8	9.2	-10.9
8.3	-1.1	9.0	-10.1
8.4	-2.4	8.9	-11.3
8.5	-5.2	8.8	-14.0
8.6	-10.7	8.6	-19.4
8.7	-27.2	8.5	-35.8
8.8	-11.5	8.4	-19.9
8.9	-6.2	8.3	-14.5
9.0	-4.4	8.1	-12.5
9.1	-5.7	8.0	-13.7
9.2	-8.8	7.9	-16.7
9.3	-13.6	7.8	-21.4
9.4	-7.4	7.7	-15.0
9.5	-2.2	7.6	-9.7
9.6	0.4	7.4	-7.1
9.7	1.5	7.3	-5.9
9.8	1.4	7.2	-5.8
9.9	-0.1	7.1	-7.2
10.0	-3.7	7.0	-10.7

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.10 GHz Antenna Pattern in X-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-3.8	-2.0	-1.8
-9.9	-3.4	-2.0	-1.4
-9.8	-3.2	-2.0	-1.2
-9.7	-3.4	-2.0	-1.4
-9.6	-4.5	-2.0	-2.5
-9.5	-5.4	-2.0	-3.4
-9.4	-6.9	-2.0	-4.9
-9.3	-8.7	-2.0	-6.7
-9.2	-10.5	-2.0	-8.5
-9.1	-11.9	-2.0	-9.9
-9.0	-13.8	-2.0	-11.8
-8.9	-13.3	-2.0	-11.3
-8.8	-14.7	-2.0	-12.7
-8.7	-17.9	-2.0	-15.9
-8.6	-25.4	-2.0	-23.4
-8.5	-18.0	-2.0	-16.0
-8.4	-12.7	-2.0	-10.7
-8.3	-10.5	-2.0	-8.5
-8.2	-9.2	-2.0	-7.2
-8.1	-10.4	-2.0	-8.4
-8.0	-12.9	-2.0	-10.9
-7.9	-14.2	-2.0	-12.2
-7.8	-14.3	-2.0	-12.3
-7.7	-10.8	-2.0	-8.8
-7.6	-10.9	-2.0	-8.9
-7.5	-12.2	-2.0	-10.2
-7.4	-16.8	-2.0	-14.8
-7.3	-21.3	-2.0	-19.3
-7.2	-11.6	-2.0	-9.6
-7.1	-8.1	-2.0	-6.1
-7.0	-6.5	-2.1	-4.4
-6.9	-6.1	-2.0	-4.2
-6.8	-6.9	-1.8	-5.1
-6.7	-9.4	-1.7	-7.8
-6.6	-9.0	-1.5	-7.5
-6.5	-7.1	-1.3	-5.8
-6.4	-3.7	-1.2	-2.5
-6.3	-1.3	-1.0	-0.4
-6.2	0.3	-0.8	1.1
-6.1	0.4	-0.6	1.0
-6.0	-0.6	-0.5	-0.1
-5.9	-3.1	-0.3	-2.8
-5.8	-8.2	-0.1	-8.1
-5.7	-12.7	0.1	-12.8
-5.6	-8.1	0.3	-8.4
-5.5	-4.7	0.5	-5.1
-5.4	-3.3	0.7	-4.0
-5.3	-4.5	0.9	-5.4
-5.2	-5.7	1.1	-6.8
-5.1	-5.7	1.3	-7.0
-5.0	-4.9	1.5	-6.4
-4.9	-3.7	1.7	-5.4
-4.8	-3.1	2.0	-5.1
-4.7	-3.1	2.2	-5.3
-4.6	-3.4	2.4	-5.8
-4.5	-2.1	2.7	-4.8
-4.4	-0.7	2.9	-3.6
-4.3	0.9	3.2	-2.3
-4.2	2.4	3.4	-1.0
-4.1	3.9	3.7	0.2

29.10 GHz Antenna Pattern in X-pol Az RHCP

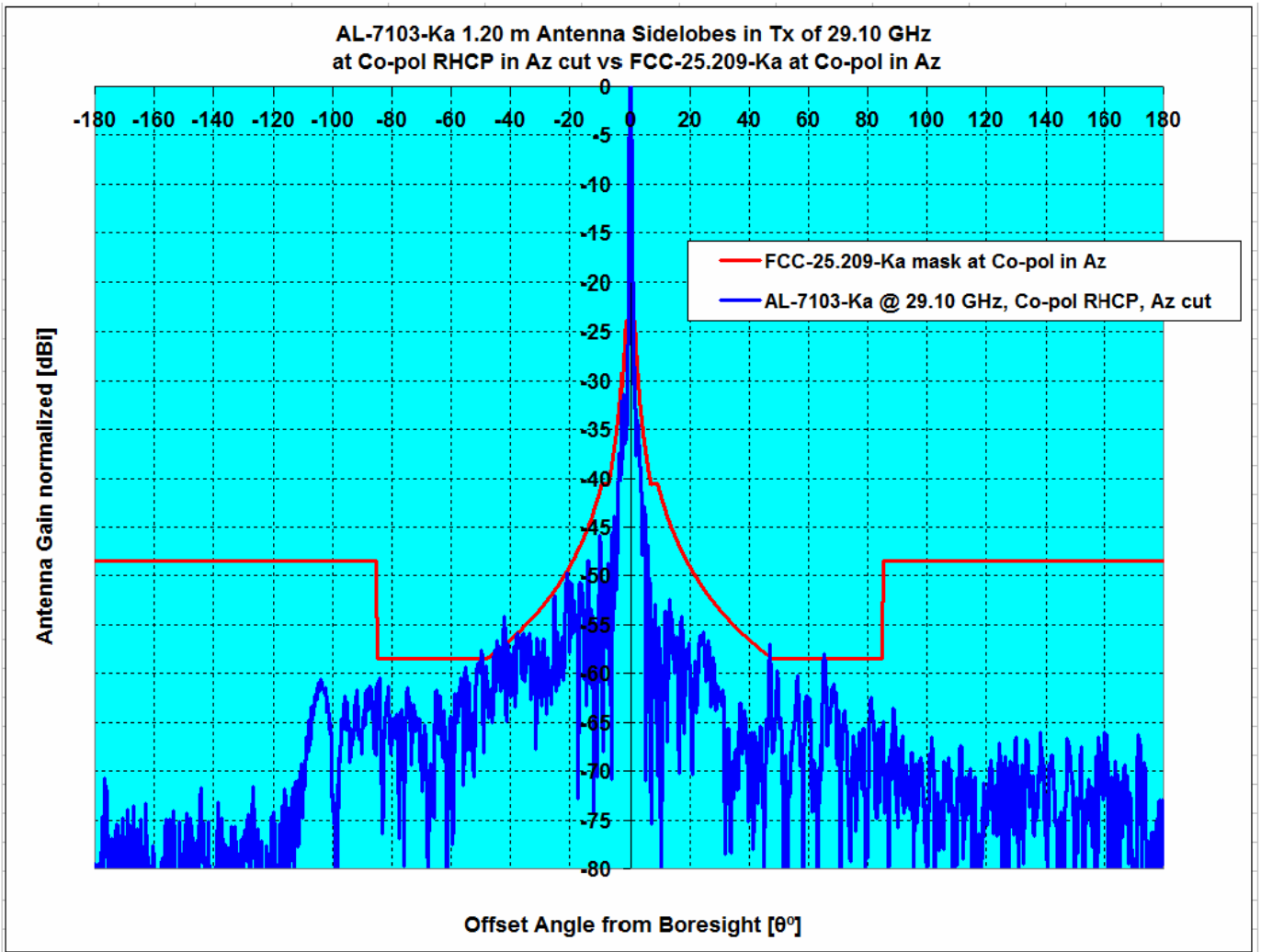
Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	18.5		
0.1	16.9		
0.2	16.5		
0.3	17.2		
0.4	18.3		
0.5	19.3		
0.6	19.6		
0.7	19.3		
0.8	18.2		
0.9	16.0		
1.0	12.3		
1.1	6.4		
1.2	-3.8		
1.3	-1.5		
1.4	0.6		
1.5	-1.3		
1.6	-2.9		
1.7	-0.6		
1.8	1.4	12.6	-11.2
1.9	0.9	12.0	-11.2
2.0	-2.9	11.5	-14.4
2.1	-12.4	10.9	-23.3
2.2	-9.1	10.4	-19.5
2.3	-2.5	10.0	-12.5
2.4	-1.8	9.5	-11.3
2.5	-2.9	9.1	-12.0
2.6	-4.8	8.6	-13.4
2.7	-4.9	8.2	-13.2
2.8	-3.0	7.8	-10.9
2.9	-3.3	7.4	-10.7
3.0	-5.3	7.1	-12.4
3.1	-16.1	6.7	-22.8
3.2	-14.8	6.4	-21.2
3.3	-6.0	6.0	-12.1
3.4	-4.8	5.7	-10.5
3.5	-5.5	5.4	-10.9
3.6	-6.9	5.1	-12.0
3.7	-8.8	4.8	-13.6
3.8	-8.0	4.5	-12.5
3.9	-9.3	4.2	-13.5
4.0	-12.4	3.9	-16.4
4.1	-12.4	3.7	-16.1
4.2	-8.3	3.4	-11.7
4.3	-4.7	3.2	-7.9
4.4	-4.3	2.9	-7.2
4.5	-6.1	2.7	-8.8
4.6	-12.8	2.4	-15.3
4.7	-18.1	2.2	-20.3
4.8	-9.7	2.0	-11.7
4.9	-9.4	1.7	-11.2
5.0	-10.6	1.5	-12.1
5.1	-16.6	1.3	-17.9
5.2	-20.4	1.1	-21.5
5.3	-14.1	0.9	-15.0
5.4	-9.2	0.7	-9.9
5.5	-10.6	0.5	-11.1
5.6	-17.3	0.3	-17.6
5.7	-21.3	0.1	-21.4
5.8	-12.8	-0.1	-12.7
5.9	-10.3	-0.3	-10.0

Orbit Communication Systems Ltd.
AL-7103-Ka, 1.20 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	4.5	3.9	0.5
-3.9	4.6	4.2	0.4
-3.8	4.0	4.5	-0.5
-3.7	2.6	4.8	-2.2
-3.6	0.9	5.1	-4.2
-3.5	-0.7	5.4	-6.1
-3.4	-0.4	5.7	-6.2
-3.3	0.8	6.0	-5.2
-3.2	2.1	6.4	-4.3
-3.1	3.0	6.7	-3.8
-3.0	3.1	7.1	-4.0
-2.9	2.2	7.4	-5.2
-2.8	-0.2	7.8	-8.0
-2.7	-5.0	8.2	-13.2
-2.6	-10.7	8.6	-19.4
-2.5	-4.9	9.1	-13.9
-2.4	-2.3	9.5	-11.8
-2.3	-1.8	10.0	-11.8
-2.2	0.0	10.4	-10.4
-2.1	3.2	10.9	-7.8
-2.0	5.5	11.5	-6.0
-1.9	6.0	12.0	-6.0
-1.8	3.8	12.6	-8.8
-1.7	-0.3		
-1.6	6.8		
-1.5	12.7		
-1.4	16.0		
-1.3	17.5		
-1.2	17.4		
-1.1	15.4		
-1.0	10.3		
-0.9	9.7		
-0.8	16.9		
-0.7	21.0		
-0.6	23.4		
-0.5	24.4		
-0.4	24.4		
-0.3	23.8		
-0.2	22.5		
-0.1	20.6		
0.0	18.5		

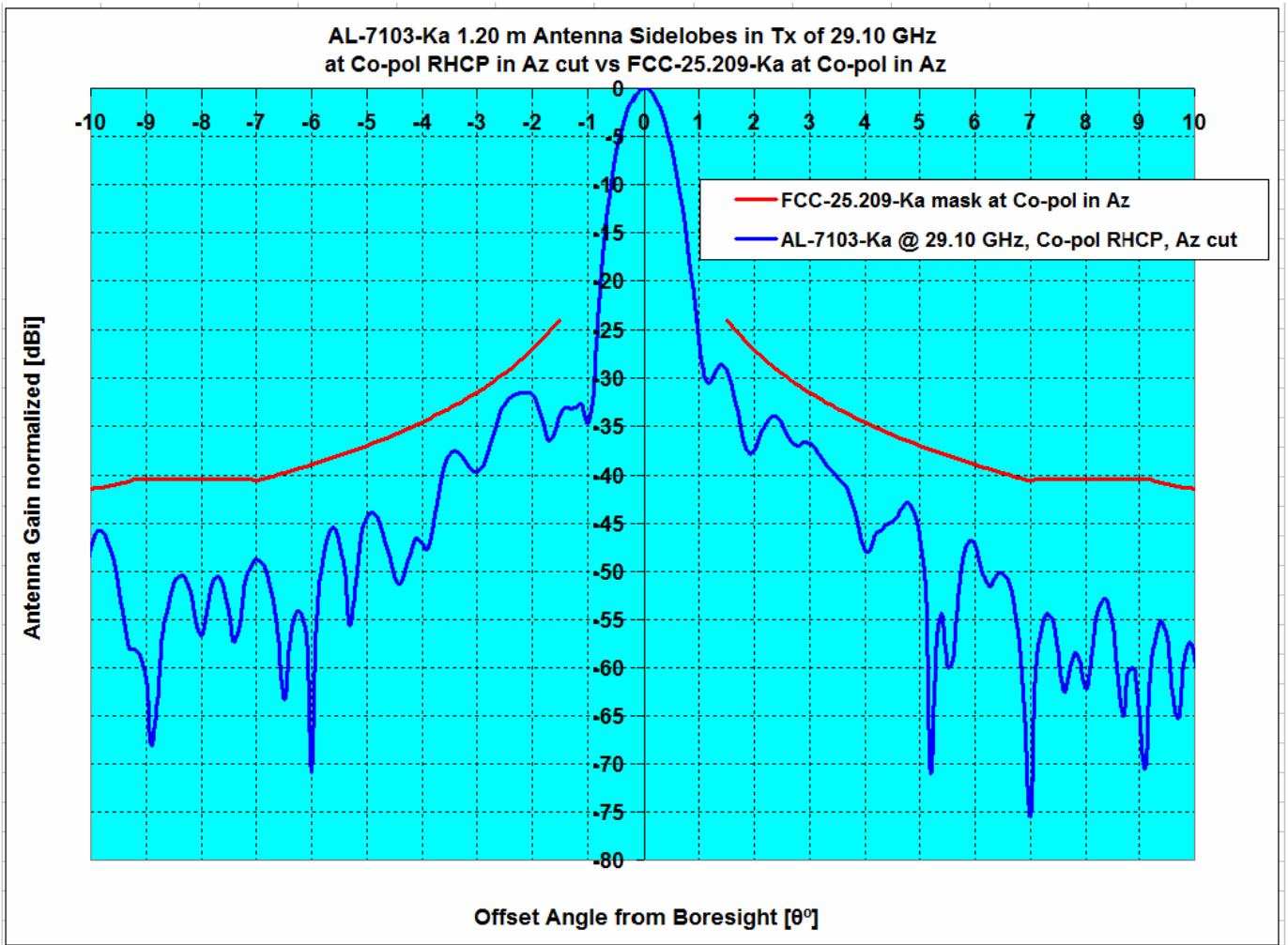
6.0	-11.1	-0.5	-10.6
6.1	-12.8	-0.6	-12.2
6.2	-16.6	-0.8	-15.8
6.3	-14.8	-1.0	-13.8
6.4	-13.7	-1.2	-12.5
6.5	-12.8	-1.3	-11.5
6.6	-16.6	-1.5	-15.1
6.7	-18.3	-1.7	-16.7
6.8	-15.5	-1.8	-13.6
6.9	-13.8	-2.0	-11.8
7.0	-15.5	-2.1	-13.4
7.1	-20.6	-2.0	-18.6
7.2	-24.8	-2.0	-22.8
7.3	-15.3	-2.0	-13.3
7.4	-13.1	-2.0	-11.1
7.5	-13.1	-2.0	-11.1
7.6	-15.3	-2.0	-13.3
7.7	-17.1	-2.0	-15.1
7.8	-15.2	-2.0	-13.2
7.9	-11.8	-2.0	-9.8
8.0	-12.9	-2.0	-10.9
8.1	-15.1	-2.0	-13.1
8.2	-24.8	-2.0	-22.8
8.3	-31.2	-2.0	-29.2
8.4	-24.4	-2.0	-22.4
8.5	-23.1	-2.0	-21.1
8.6	-28.4	-2.0	-26.4
8.7	-21.0	-2.0	-19.0
8.8	-21.8	-2.0	-19.8
8.9	-16.2	-2.0	-14.2
9.0	-17.5	-2.0	-15.5
9.1	-18.4	-2.0	-16.4
9.2	-20.1	-2.0	-18.1
9.3	-20.9	-2.0	-18.9
9.4	-19.0	-2.0	-17.0
9.5	-18.4	-2.0	-16.4
9.6	-19.8	-2.0	-17.8
9.7	-19.9	-2.0	-17.9
9.8	-26.9	-2.0	-24.9
9.9	-26.5	-2.0	-24.5
10.0	-23.8	-2.0	-21.8

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth RHCP

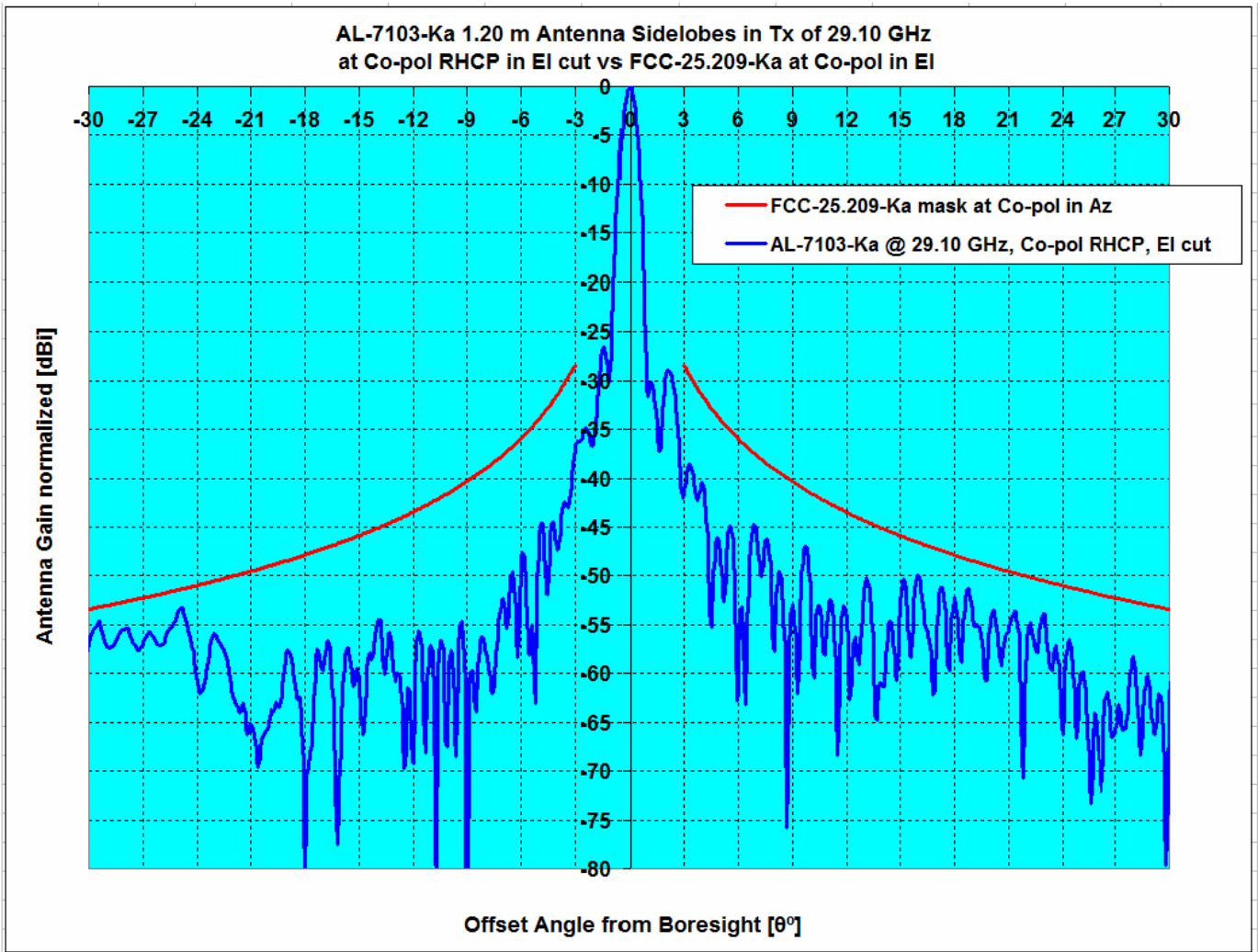


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , RHCP	29.10	48.50	-2.95	2.92	0.00%	0.70%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Azimuth RHCP

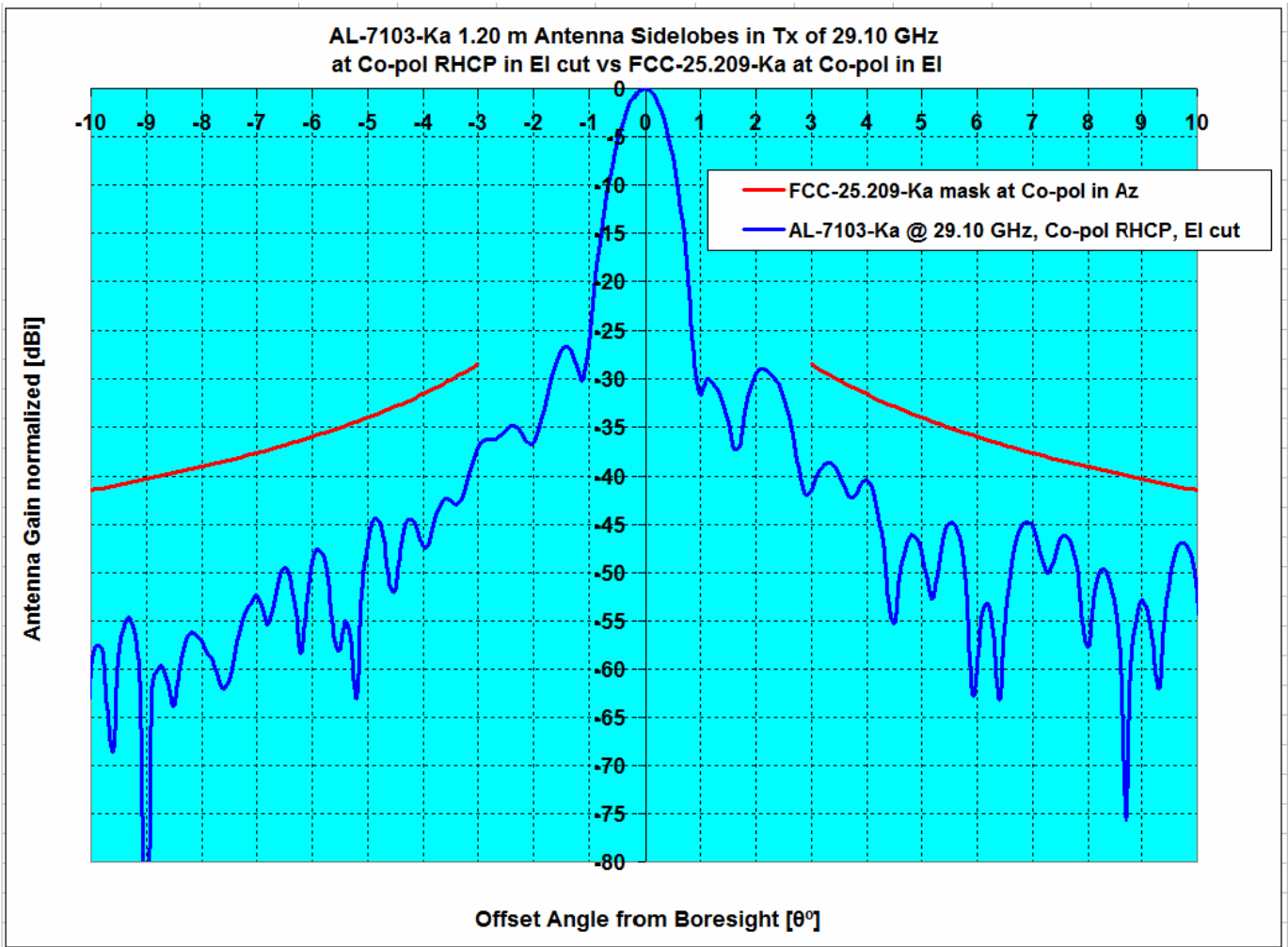


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7103-Ka	Az , RHCP	29.10	48.50	-2.95	2.92	0.00%	0.70%



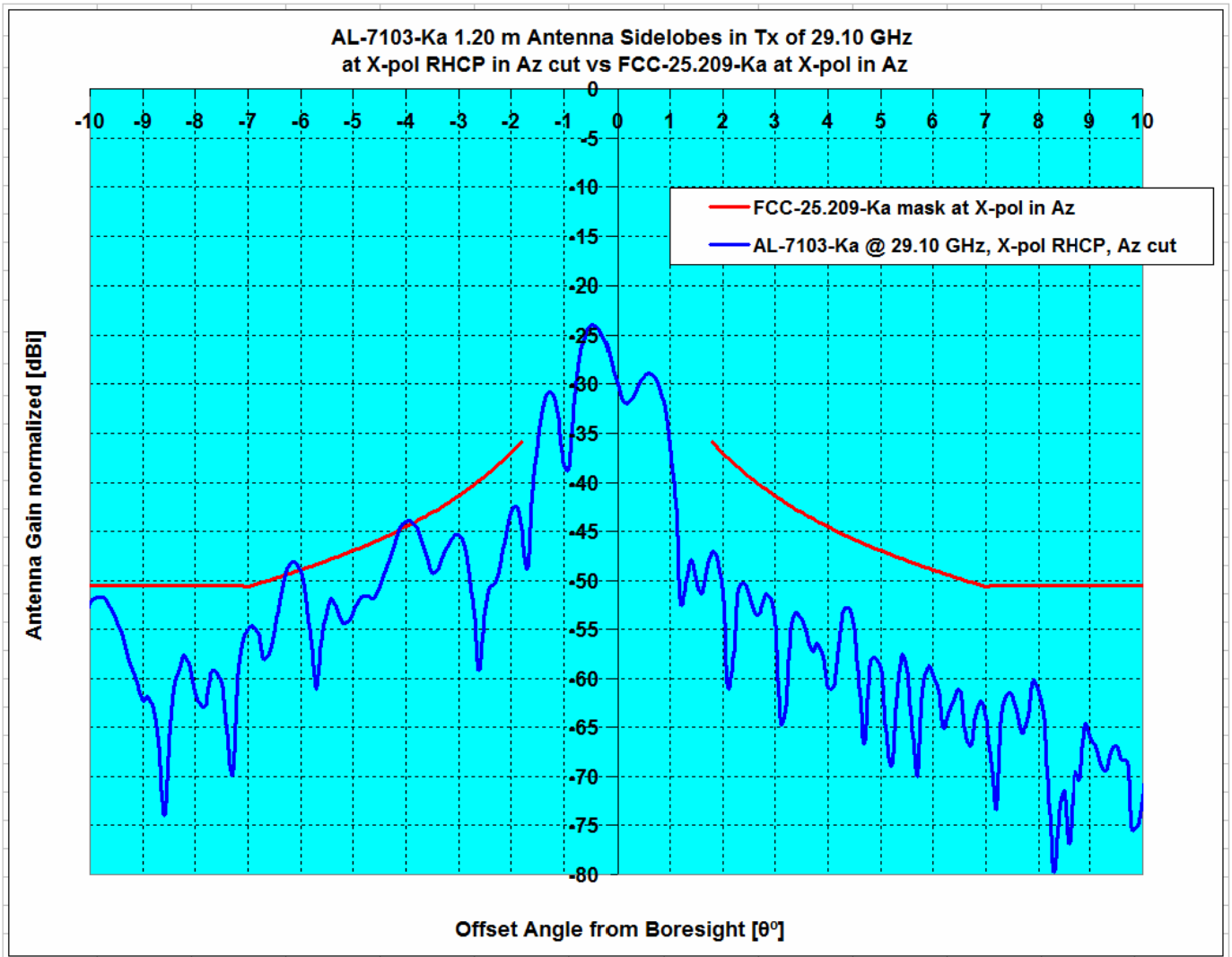
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , RHCP	29.10	48.50	-7.30	-1.44	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, Co-pol, Elevation RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7103-Ka	EI , RHCP	29.10	48.50	-7.30	-1.44	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7103-Ka, 1.20 m Antenna, Pattern, X-pol, Azimuth RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7103-Ka	Az, RHCP	29.10	48.50	1.08	1.08	4.72%	3.01%

**Measured 30 GHz band antenna performance data for the
2.2-meter antennas**

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-179.0	-33.5	-10.5	-23.0
-178.0	-39.2	-10.5	-28.7
-177.0	-39.1	-10.5	-28.6
-176.0	-30.8	-10.5	-20.3
-175.0	-33.5	-10.5	-23.0
-174.0	-33.7	-10.5	-23.2
-173.0	-35.8	-10.5	-25.3
-172.0	-38.3	-10.5	-27.8
-171.0	-35.4	-10.5	-24.9
-170.0	-36.7	-10.5	-26.2
-169.0	-35.0	-10.5	-24.5
-168.0	-34.4	-10.5	-23.9
-167.0	-40.5	-10.5	-30.0
-166.0	-38.8	-10.5	-28.3
-165.0	-32.1	-10.5	-21.6
-164.0	-30.8	-10.5	-20.3
-163.0	-34.2	-10.5	-23.7
-162.0	-40.0	-10.5	-29.5
-161.0	-38.0	-10.5	-27.5
-160.0	-36.8	-10.5	-26.3
-159.0	-30.0	-10.5	-19.5
-158.0	-33.2	-10.5	-22.7
-157.0	-31.3	-10.5	-20.8
-156.0	-30.4	-10.5	-19.9
-155.0	-39.0	-10.5	-28.5
-154.0	-29.7	-10.5	-19.2
-153.0	-35.2	-10.5	-24.7
-152.0	-31.9	-10.5	-21.4
-151.0	-27.4	-10.5	-16.9
-150.0	-30.7	-10.5	-20.2
-149.0	-29.2	-10.5	-18.7
-148.0	-34.7	-10.5	-24.2
-147.0	-36.7	-10.5	-26.2
-146.0	-27.6	-10.5	-17.1
-145.0	-31.5	-10.5	-21.0
-144.0	-29.3	-10.5	-18.8
-143.0	-27.1	-10.5	-16.6
-142.0	-27.3	-10.5	-16.8
-141.0	-26.7	-10.5	-16.2
-140.0	-31.9	-10.5	-21.4
-139.0	-29.2	-10.5	-18.7
-138.0	-26.4	-10.5	-15.9
-137.0	-37.5	-10.5	-27.0
-136.0	-30.2	-10.5	-19.7
-135.0	-28.2	-10.5	-17.7
-134.0	-32.1	-10.5	-21.6
-133.0	-32.0	-10.5	-21.5
-132.0	-29.6	-10.5	-19.1
-131.0	-31.4	-10.5	-20.9
-130.0	-31.1	-10.5	-20.6
-129.0	-27.4	-10.5	-16.9
-128.0	-29.3	-10.5	-18.8
-127.0	-34.3	-10.5	-23.8
-126.0	-29.3	-10.5	-18.8
-125.0	-28.4	-10.5	-17.9
-124.0	-28.2	-10.5	-17.7
-123.0	-32.5	-10.5	-22.0
-122.0	-32.1	-10.5	-21.6
-121.0	-29.9	-10.5	-19.4
-120.0	-34.1	-10.5	-23.6

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	39.5		
1.0	4.6		
2.0	-1.1	11.0	-12.1
3.0	-8.9	6.6	-15.5
4.0	-6.7	3.4	-10.1
5.0	-15.4	1.0	-16.4
6.0	-13.0	-1.0	-12.0
7.0	-9.3	-2.6	-6.6
8.0	-15.1	-2.6	-12.5
9.0	-18.1	-2.6	-15.5
10.0	-26.3	-3.5	-22.8
11.0	-20.0	-4.5	-15.5
12.0	-17.5	-5.5	-12.0
13.0	-27.9	-6.3	-21.6
14.0	-21.8	-7.2	-14.6
15.0	-17.9	-7.9	-10.0
16.0	-19.8	-8.6	-11.2
17.0	-19.7	-9.3	-10.5
18.0	-19.3	-9.9	-9.5
19.0	-18.3	-10.5	-7.8
20.0	-35.7	-11.0	-24.7
21.0	-29.0	-11.6	-17.5
22.0	-18.6	-12.1	-6.6
23.0	-20.4	-12.5	-7.9
24.0	-22.6	-13.0	-9.6
25.0	-24.1	-13.4	-10.7
26.0	-24.7	-13.9	-10.8
27.0	-24.7	-14.3	-10.4
28.0	-24.0	-14.7	-9.3
29.0	-18.9	-15.1	-3.8
30.0	-19.1	-15.4	-3.6
31.0	-17.8	-15.8	-2.0
32.0	-16.8	-16.1	-0.7
33.0	-18.4	-16.5	-1.9
34.0	-15.9	-16.8	0.9
35.0	-17.4	-17.1	-0.3
36.0	-15.5	-17.4	1.9
37.0	-15.6	-17.7	2.1
38.0	-18.7	-18.0	-0.7
39.0	-17.7	-18.3	0.6
40.0	-19.9	-18.6	-1.4
41.0	-21.4	-18.8	-2.6
42.0	-21.9	-19.1	-2.8
43.0	-25.1	-19.3	-5.8
44.0	-23.0	-19.6	-3.4
45.0	-23.6	-19.8	-3.7
46.0	-17.8	-20.1	2.3
47.0	-22.0	-20.3	-1.7
48.0	-21.4	-20.5	-0.9
49.0	-26.2	-10.5	-15.7
50.0	-26.6	-10.5	-16.1
51.0	-22.0	-10.5	-11.5
52.0	-20.0	-10.5	-9.5
53.0	-20.5	-10.5	-10.0
54.0	-21.5	-10.5	-11.0
55.0	-25.9	-10.5	-15.4
56.0	-27.2	-10.5	-16.7
57.0	-23.8	-10.5	-13.3
58.0	-24.2	-10.5	-13.7
59.0	-24.4	-10.5	-13.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-33.0	-10.5	-22.5
-118.0	-39.0	-10.5	-28.5
-117.0	-33.4	-10.5	-22.9
-116.0	-30.8	-10.5	-20.3
-115.0	-31.2	-10.5	-20.7
-114.0	-32.7	-10.5	-22.2
-113.0	-31.9	-10.5	-21.4
-112.0	-33.5	-10.5	-23.0
-111.0	-32.8	-10.5	-22.3
-110.0	-31.6	-10.5	-21.1
-109.0	-27.1	-10.5	-16.6
-108.0	-33.4	-10.5	-22.9
-107.0	-34.0	-10.5	-23.5
-106.0	-31.7	-10.5	-21.2
-105.0	-30.9	-10.5	-20.4
-104.0	-30.5	-10.5	-20.0
-103.0	-33.6	-10.5	-23.1
-102.0	-37.2	-10.5	-26.7
-101.0	-27.6	-10.5	-17.1
-100.0	-31.5	-10.5	-21.0
-99.0	-38.9	-10.5	-28.4
-98.0	-26.6	-10.5	-16.1
-97.0	-26.2	-10.5	-15.7
-96.0	-25.4	-10.5	-14.9
-95.0	-29.1	-10.5	-18.6
-94.0	-30.3	-10.5	-19.8
-93.0	-30.3	-10.5	-19.8
-92.0	-24.5	-10.5	-14.0
-91.0	-27.2	-10.5	-16.7
-90.0	-28.8	-10.5	-18.3
-89.0	-26.4	-10.5	-15.9
-88.0	-30.8	-10.5	-20.3
-87.0	-26.0	-10.5	-15.5
-86.0	-24.8	-10.5	-14.3
-85.0	-24.8	-10.5	-14.3
-84.0	-29.4	-10.5	-18.9
-83.0	-32.1	-10.5	-21.6
-82.0	-27.8	-10.5	-17.3
-81.0	-25.0	-10.5	-14.5
-80.0	-23.2	-10.5	-12.7
-79.0	-23.8	-10.5	-13.3
-78.0	-23.1	-10.5	-12.6
-77.0	-24.1	-10.5	-13.6
-76.0	-25.1	-10.5	-14.6
-75.0	-23.8	-10.5	-13.3
-74.0	-23.3	-10.5	-12.8
-73.0	-20.9	-10.5	-10.4
-72.0	-20.8	-10.5	-10.3
-71.0	-21.3	-10.5	-10.8
-70.0	-20.4	-10.5	-9.9
-69.0	-19.5	-10.5	-9.0
-68.0	-18.4	-10.5	-7.9
-67.0	-18.8	-10.5	-8.3
-66.0	-17.9	-10.5	-7.4
-65.0	-21.4	-10.5	-10.9
-64.0	-20.7	-10.5	-10.2
-63.0	-21.1	-10.5	-10.6
-62.0	-22.1	-10.5	-11.6
-61.0	-19.7	-10.5	-9.2
-60.0	-22.7	-10.5	-12.2
-59.0	-23.4	-10.5	-12.9
-58.0	-22.7	-10.5	-12.2
-57.0	-23.7	-10.5	-13.2

60.0	-29.1	-10.5	-18.6
61.0	-30.4	-10.5	-19.9
62.0	-27.7	-10.5	-17.2
63.0	-25.6	-10.5	-15.1
64.0	-29.8	-10.5	-19.3
65.0	-32.3	-10.5	-21.8
66.0	-23.8	-10.5	-13.3
67.0	-29.9	-10.5	-19.4
68.0	-27.1	-10.5	-16.6
69.0	-27.4	-10.5	-16.9
70.0	-25.8	-10.5	-15.3
71.0	-28.8	-10.5	-18.3
72.0	-31.7	-10.5	-21.2
73.0	-26.0	-10.5	-15.5
74.0	-31.8	-10.5	-21.3
75.0	-38.1	-10.5	-27.6
76.0	-28.9	-10.5	-18.4
77.0	-29.0	-10.5	-18.5
78.0	-33.6	-10.5	-23.1
79.0	-34.6	-10.5	-24.1
80.0	-36.8	-10.5	-26.3
81.0	-33.5	-10.5	-23.0
82.0	-38.6	-10.5	-28.1
83.0	-30.7	-10.5	-20.2
84.0	-36.6	-10.5	-26.1
85.0	-38.3	-10.5	-27.8
86.0	-33.6	-10.5	-23.1
87.0	-35.2	-10.5	-24.7
88.0	-31.6	-10.5	-21.1
89.0	-32.6	-10.5	-22.1
90.0	-35.7	-10.5	-25.2
91.0	-33.3	-10.5	-22.8
92.0	-33.9	-10.5	-23.4
93.0	-32.5	-10.5	-22.0
94.0	-34.8	-10.5	-24.3
95.0	-36.5	-10.5	-26.0
96.0	-38.3	-10.5	-27.8
97.0	-38.6	-10.5	-28.1
98.0	-31.8	-10.5	-21.3
99.0	-37.9	-10.5	-27.4
100.0	-30.2	-10.5	-19.7
101.0	-30.1	-10.5	-19.6
102.0	-37.1	-10.5	-26.6
103.0	-40.2	-10.5	-29.7
104.0	-40.5	-10.5	-30.0
105.0	-32.5	-10.5	-22.0
106.0	-36.5	-10.5	-26.0
107.0	-37.6	-10.5	-27.1
108.0	-33.6	-10.5	-23.1
109.0	-33.8	-10.5	-23.3
110.0	-40.5	-10.5	-30.0
111.0	-33.8	-10.5	-23.3
112.0	-35.4	-10.5	-24.9
113.0	-28.1	-10.5	-17.6
114.0	-34.4	-10.5	-23.9
115.0	-33.0	-10.5	-22.5
116.0	-31.2	-10.5	-20.7
117.0	-30.8	-10.5	-20.3
118.0	-33.9	-10.5	-23.4
119.0	-29.3	-10.5	-18.8
120.0	-40.5	-10.5	-30.0
121.0	-34.0	-10.5	-23.5
122.0	-30.1	-10.5	-19.6

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-21.7	-10.5	-11.2
-55.0	-26.2	-10.5	-15.7
-54.0	-23.9	-10.5	-13.4
-53.0	-26.9	-10.5	-16.4
-52.0	-25.9	-10.5	-15.4
-51.0	-30.9	-10.5	-20.4
-50.0	-25.3	-10.5	-14.8
-49.0	-28.2	-10.5	-17.7
-48.0	-27.9	-20.5	-7.3
-47.0	-31.9	-20.3	-11.6
-46.0	-26.4	-20.1	-6.3
-45.0	-30.0	-19.8	-10.2
-44.0	-35.7	-19.6	-16.1
-43.0	-34.8	-19.3	-15.4
-42.0	-34.8	-19.1	-15.7
-41.0	-33.2	-18.8	-14.3
-40.0	-28.2	-18.6	-9.7
-39.0	-35.2	-18.3	-17.0
-38.0	-29.0	-18.0	-11.0
-37.0	-28.3	-17.7	-10.6
-36.0	-31.8	-17.4	-14.4
-35.0	-31.1	-17.1	-14.0
-34.0	-34.9	-16.8	-18.1
-33.0	-33.2	-16.5	-16.7
-32.0	-36.2	-16.1	-20.1
-31.0	-30.7	-15.8	-14.9
-30.0	-27.6	-15.4	-12.1
-29.0	-30.5	-15.1	-15.5
-28.0	-29.1	-14.7	-14.5
-27.0	-29.9	-14.3	-15.6
-26.0	-29.8	-13.9	-16.0
-25.0	-32.5	-13.4	-19.1
-24.0	-29.8	-13.0	-16.8
-23.0	-28.3	-12.5	-15.7
-22.0	-27.9	-12.1	-15.9
-21.0	-28.8	-11.6	-17.3
-20.0	-31.5	-11.0	-20.5
-19.0	-25.2	-10.5	-14.7
-18.0	-30.6	-9.9	-20.7
-17.0	-26.8	-9.3	-17.6
-16.0	-30.1	-8.6	-21.5
-15.0	-30.3	-7.9	-22.4
-14.0	-38.3	-7.2	-31.2
-13.0	-19.4	-6.3	-13.0
-12.0	-16.7	-5.5	-11.2
-11.0	-20.2	-4.5	-15.6
-10.0	-18.1	-3.5	-14.6
-9.0	-16.0	-2.6	-13.4
-8.0	-16.7	-2.6	-14.0
-7.0	-10.8	-2.6	-8.1
-6.0	-23.2	-1.0	-22.2
-5.0	-9.9	1.0	-10.9
-4.0	-7.3	3.4	-10.7
-3.0	-3.6	6.6	-10.2
-2.0	-0.9	11.0	-11.9
-1.0	8.5		
0.0	39.5		

123.0	-33.0	-10.5	-22.5
124.0	-34.2	-10.5	-23.7
125.0	-38.3	-10.5	-27.8
126.0	-37.5	-10.5	-27.0
127.0	-32.2	-10.5	-21.7
128.0	-40.5	-10.5	-30.0
129.0	-38.3	-10.5	-27.8
130.0	-34.5	-10.5	-24.0
131.0	-33.1	-10.5	-22.6
132.0	-34.3	-10.5	-23.8
133.0	-37.4	-10.5	-26.9
134.0	-36.3	-10.5	-25.8
135.0	-36.0	-10.5	-25.5
136.0	-35.6	-10.5	-25.1
137.0	-34.3	-10.5	-23.8
138.0	-31.6	-10.5	-21.1
139.0	-35.7	-10.5	-25.2
140.0	-36.1	-10.5	-25.6
141.0	-33.7	-10.5	-23.2
142.0	-38.9	-10.5	-28.4
143.0	-31.0	-10.5	-20.5
144.0	-40.5	-10.5	-30.0
145.0	-33.6	-10.5	-23.1
146.0	-36.0	-10.5	-25.5
147.0	-32.3	-10.5	-21.8
148.0	-36.6	-10.5	-26.1
149.0	-35.8	-10.5	-25.3
150.0	-34.5	-10.5	-24.0
151.0	-40.5	-10.5	-30.0
152.0	-35.9	-10.5	-25.4
153.0	-34.5	-10.5	-24.0
154.0	-35.6	-10.5	-25.1
155.0	-30.4	-10.5	-19.9
156.0	-40.5	-10.5	-30.0
157.0	-39.6	-10.5	-29.1
158.0	-35.8	-10.5	-25.3
159.0	-39.8	-10.5	-29.3
160.0	-27.4	-10.5	-16.9
161.0	-35.1	-10.5	-24.6
162.0	-34.9	-10.5	-24.4
163.0	-32.4	-10.5	-21.9
164.0	-29.2	-10.5	-18.7
165.0	-32.6	-10.5	-22.1
166.0	-35.1	-10.5	-24.6
167.0	-33.7	-10.5	-23.2
168.0	-36.9	-10.5	-26.4
169.0	-39.8	-10.5	-29.3
170.0	-33.5	-10.5	-23.0
171.0	-33.8	-10.5	-23.3
172.0	-40.5	-10.5	-30.0
173.0	-32.8	-10.5	-22.3
174.0	-31.7	-10.5	-21.2
175.0	-40.5	-10.5	-30.0
176.0	-36.9	-10.5	-26.4
177.0	-33.4	-10.5	-22.9
178.0	-37.2	-10.5	-26.7
179.0	-31.9	-10.5	-21.4

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP LHCP, -10° to +10° @ 0.1° increment

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-18.1	-3.5	-14.6
-9.9	-15.2	-3.4	-11.8
-9.8	-14.4	-3.3	-11.1
-9.7	-14.8	-3.2	-11.6
-9.6	-16.0	-3.1	-13.0
-9.5	-20.0	-2.9	-17.0
-9.4	-24.6	-2.8	-21.8
-9.3	-19.7	-2.7	-17.0
-9.2	-15.5	-2.6	-12.9
-9.1	-15.2	-2.6	-12.6
-9.0	-16.0	-2.6	-13.4
-8.9	-18.5	-2.6	-15.8
-8.8	-16.8	-2.6	-14.2
-8.7	-15.3	-2.6	-12.7
-8.6	-15.1	-2.6	-12.5
-8.5	-16.6	-2.6	-14.0
-8.4	-19.0	-2.6	-16.3
-8.3	-18.0	-2.6	-15.3
-8.2	-14.8	-2.6	-12.2
-8.1	-13.2	-2.6	-10.6
-8.0	-16.7	-2.6	-14.0
-7.9	-26.1	-2.6	-23.5
-7.8	-24.0	-2.6	-21.3
-7.7	-17.9	-2.6	-15.3
-7.6	-15.9	-2.6	-13.3
-7.5	-15.3	-2.6	-12.7
-7.4	-18.4	-2.6	-15.8
-7.3	-13.0	-2.6	-10.3
-7.2	-10.5	-2.6	-7.9
-7.1	-10.2	-2.6	-7.6
-7.0	-10.8	-2.6	-8.1
-6.9	-9.1	-2.5	-6.6
-6.8	-7.9	-2.3	-5.5
-6.7	-8.6	-2.2	-6.5
-6.6	-9.1	-2.0	-7.1
-6.5	-10.6	-1.8	-8.8
-6.4	-14.8	-1.7	-13.1
-6.3	-20.8	-1.5	-19.3
-6.2	-16.0	-1.3	-14.6
-6.1	-14.9	-1.1	-13.7
-6.0	-23.2	-1.0	-22.2
-5.9	-14.8	-0.8	-14.1
-5.8	-10.6	-0.6	-10.0
-5.7	-12.5	-0.4	-12.1
-5.6	-27.7	-0.2	-27.5
-5.5	-14.7	0.0	-14.7
-5.4	-12.1	0.2	-12.3
-5.3	-15.4	0.4	-15.8
-5.2	-12.9	0.6	-13.5
-5.1	-10.1	0.8	-10.9
-5.0	-9.9	1.0	-10.9
-4.9	-10.5	1.2	-11.8
-4.8	-10.3	1.5	-11.7
-4.7	-9.5	1.7	-11.2
-4.6	-10.5	1.9	-12.4
-4.5	-13.3	2.2	-15.5
-4.4	-16.7	2.4	-19.1
-4.3	-14.9	2.7	-17.5
-4.2	-10.7	2.9	-13.7
-4.1	-8.5	3.2	-11.7

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	39.5		
0.1	39.0		
0.2	36.8		
0.3	32.8		
0.4	27.4		
0.5	21.6		
0.6	15.1		
0.7	13.9		
0.8	15.9		
0.9	14.4		
1.0	4.6		
1.1	5.7		
1.2	8.4		
1.3	4.4		
1.4	-3.1		
1.5	-1.1		
1.6	-0.8		
1.7	3.3		
1.8	5.1		
1.9	3.5		
2.0	-1.1	11.0	-12.1
2.1	-7.6	10.4	-18.0
2.2	-14.9	9.9	-24.9
2.3	-9.5	9.5	-18.9
2.4	-8.0	9.0	-17.0
2.5	-9.1	8.6	-17.6
2.6	-9.6	8.1	-17.7
2.7	-12.6	7.7	-20.3
2.8	-14.0	7.3	-21.4
2.9	-9.4	6.9	-16.3
3.0	-8.9	6.6	-15.5
3.1	-6.4	6.2	-12.7
3.2	-3.9	5.9	-9.7
3.3	-4.4	5.5	-9.9
3.4	-9.9	5.2	-15.1
3.5	-22.4	4.9	-27.3
3.6	-14.3	4.6	-18.9
3.7	-27.7	4.3	-32.0
3.8	-8.7	4.0	-12.7
3.9	-5.1	3.7	-8.8
4.0	-6.7	3.4	-10.1
4.1	-12.1	3.2	-15.3
4.2	-16.4	2.9	-19.3
4.3	-12.9	2.7	-15.6
4.4	-12.0	2.4	-14.4
4.5	-12.8	2.2	-14.9
4.6	-13.7	1.9	-15.6
4.7	-13.0	1.7	-14.7
4.8	-12.2	1.5	-13.7
4.9	-13.1	1.2	-14.3
5.0	-15.4	1.0	-16.4
5.1	-20.0	0.8	-20.8
5.2	-24.9	0.6	-25.5
5.3	-19.9	0.4	-20.3
5.4	-19.0	0.2	-19.2
5.5	-25.3	0.0	-25.2
5.6	-17.5	-0.2	-17.3
5.7	-12.1	-0.4	-11.7
5.8	-11.0	-0.6	-10.4
5.9	-11.3	-0.8	-10.5

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP LHCP, -10° to +10° @ 0.1° increment

-4.0	-7.3	3.4	-10.7
-3.9	-4.2	3.7	-7.9
-3.8	-2.3	4.0	-6.3
-3.7	-4.5	4.3	-8.8
-3.6	-16.3	4.6	-20.9
-3.5	-12.3	4.9	-17.1
-3.4	-11.8	5.2	-17.0
-3.3	-9.4	5.5	-14.9
-3.2	-4.2	5.9	-10.1
-3.1	-4.2	6.2	-10.4
-3.0	-3.6	6.6	-10.2
-2.9	-1.1	6.9	-8.1
-2.8	-0.8	7.3	-8.2
-2.7	-3.9	7.7	-11.6
-2.6	-8.9	8.1	-17.0
-2.5	-12.0	8.6	-20.5
-2.4	-7.1	9.0	-16.1
-2.3	-4.8	9.5	-14.3
-2.2	-7.6	9.9	-17.5
-2.1	-6.6	10.4	-17.0
-2.0	-0.9	11.0	-11.9
-1.9	-1.0		
-1.8	-2.5		
-1.7	-4.5		
-1.6	-13.4		
-1.5	0.3		
-1.4	5.5		
-1.3	7.5		
-1.2	9.5		
-1.1	10.3		
-1.0	8.5		
-0.9	0.7		
-0.8	-0.8		
-0.7	-1.0		
-0.6	10.3		
-0.5	20.5		
-0.4	28.0		
-0.3	33.7		
-0.2	37.1		
-0.1	39.1		
0.0	39.5		

6.0	-13.0	-1.0	-12.0
6.1	-20.9	-1.1	-19.8
6.2	-25.4	-1.3	-24.1
6.3	-17.2	-1.5	-15.7
6.4	-16.3	-1.7	-14.6
6.5	-19.2	-1.8	-17.4
6.6	-16.5	-2.0	-14.5
6.7	-16.0	-2.2	-13.8
6.8	-12.7	-2.3	-10.3
6.9	-10.0	-2.5	-7.5
7.0	-9.3	-2.6	-6.6
7.1	-9.2	-2.6	-6.6
7.2	-9.6	-2.6	-7.0
7.3	-12.6	-2.6	-10.0
7.4	-22.5	-2.6	-19.9
7.5	-16.4	-2.6	-13.8
7.6	-13.3	-2.6	-10.7
7.7	-14.9	-2.6	-12.2
7.8	-19.5	-2.6	-16.9
7.9	-17.3	-2.6	-14.6
8.0	-15.1	-2.6	-12.5
8.1	-12.4	-2.6	-9.8
8.2	-11.5	-2.6	-8.9
8.3	-13.1	-2.6	-10.5
8.4	-14.8	-2.6	-12.2
8.5	-15.9	-2.6	-13.3
8.6	-17.9	-2.6	-15.2
8.7	-20.5	-2.6	-17.9
8.8	-18.1	-2.6	-15.5
8.9	-16.4	-2.6	-13.8
9.0	-18.1	-2.6	-15.5
9.1	-22.0	-2.6	-19.4
9.2	-24.6	-2.6	-22.0
9.3	-21.8	-2.7	-19.1
9.4	-16.6	-2.8	-13.7
9.5	-16.2	-2.9	-13.2
9.6	-17.7	-3.1	-14.7
9.7	-26.9	-3.2	-23.7
9.8	-20.6	-3.3	-17.3
9.9	-21.8	-3.4	-18.4
10.0	-26.3	-3.5	-22.8

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.3	-12.4	-7.9
-29.5	-22.6	-12.2	-10.4
-29.0	-24.2	-12.1	-12.2
-28.5	-24.0	-11.9	-12.2
-28.0	-23.2	-11.7	-11.5
-27.5	-24.9	-11.5	-13.4
-27.0	-20.5	-11.3	-9.2
-26.5	-22.5	-11.1	-11.4
-26.0	-30.7	-10.9	-19.8
-25.5	-26.5	-10.7	-15.9
-25.0	-28.9	-10.4	-18.4
-24.5	-21.4	-10.2	-11.2
-24.0	-23.0	-10.0	-13.0
-23.5	-20.6	-9.8	-10.8
-23.0	-27.1	-9.5	-17.6
-22.5	-19.5	-9.3	-10.2
-22.0	-18.1	-9.1	-9.0
-21.5	-18.8	-8.8	-9.9
-21.0	-28.9	-8.6	-20.3
-20.5	-21.5	-8.3	-13.2
-20.0	-15.9	-8.0	-7.9
-19.5	-12.4	-7.8	-4.6
-19.0	-11.1	-7.5	-3.6
-18.5	-14.5	-7.2	-7.3
-18.0	-15.9	-6.9	-9.0
-17.5	-31.7	-6.6	-25.1
-17.0	-36.0	-6.3	-29.7
-16.5	-26.6	-5.9	-20.7
-16.0	-25.0	-5.6	-19.4
-15.5	-20.5	-5.3	-15.3
-15.0	-33.7	-4.9	-28.8
-14.5	-19.8	-4.5	-15.3
-14.0	-27.5	-4.2	-23.4
-13.5	-23.5	-3.8	-19.7
-13.0	-21.1	-3.3	-17.7
-12.5	-23.6	-2.9	-20.6
-12.0	-19.6	-2.5	-17.1
-11.5	-32.0	-2.0	-29.9
-11.0	-20.3	-1.5	-18.8
-10.5	-23.1	-1.0	-22.0
-10.0	-19.9	-0.5	-19.4
-9.5	-31.1	0.1	-31.1
-9.0	-23.8	0.4	-24.2
-8.5	-15.0	0.4	-15.4
-8.0	-20.8	0.4	-21.1
-7.5	-15.3	0.4	-15.6
-7.0	-17.4	0.4	-17.8
-6.5	-14.3	1.2	-15.4
-6.0	-17.3	2.0	-19.4
-5.5	-23.3	3.0	-26.3
-5.0	-8.0	4.0	-12.1
-4.5	-8.3	5.2	-13.4
-4.0	-19.6	6.4	-26.1
-3.5	-9.3	7.9	-17.2
-3.0	-1.3		
-2.5	0.0		
-2.0	-5.2		
-1.5	2.3		
-1.0	8.0		
-0.5	23.9		
0.0	39.5		

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	39.5		
0.5	25.0		
1.0	5.5		
1.5	-4.5		
2.0	-5.2		
2.5	-2.6		
3.0	-17.6		
3.5	1.4	7.9	-6.5
4.0	-1.3	6.4	-7.7
4.5	-8.3	5.2	-13.5
5.0	-5.6	4.0	-9.6
5.5	-21.6	3.0	-24.6
6.0	-14.5	2.0	-16.6
6.5	-12.2	1.2	-13.4
7.0	-11.2	0.4	-11.6
7.5	-18.9	0.4	-19.2
8.0	-20.7	0.4	-21.1
8.5	-27.0	0.4	-27.3
9.0	-22.4	0.4	-22.8
9.5	-16.4	0.1	-16.4
10.0	-19.7	-0.5	-19.2
10.5	-17.5	-1.0	-16.5
11.0	-15.7	-1.5	-14.1
11.5	-14.6	-2.0	-12.6
12.0	-14.0	-2.5	-11.5
12.5	-14.6	-2.9	-11.7
13.0	-21.5	-3.3	-18.2
13.5	-23.4	-3.8	-19.6
14.0	-26.0	-4.2	-21.9
14.5	-21.9	-4.5	-17.4
15.0	-25.4	-4.9	-20.5
15.5	-24.1	-5.3	-18.9
16.0	-34.6	-5.6	-29.0
16.5	-26.9	-5.9	-21.0
17.0	-32.4	-6.3	-26.1
17.5	-32.5	-6.6	-25.9
18.0	-34.0	-6.9	-27.1
18.5	-23.2	-7.2	-16.1
19.0	-23.2	-7.5	-15.8
19.5	-30.2	-7.8	-22.5
20.0	-39.9	-8.0	-31.9
20.5	-31.9	-8.3	-23.6
21.0	-28.0	-8.6	-19.4
21.5	-28.1	-8.8	-19.2
22.0	-25.7	-9.1	-16.6
22.5	-30.1	-9.3	-20.8
23.0	-40.0	-9.5	-30.5
23.5	-34.6	-9.8	-24.8
24.0	-34.6	-10.0	-24.6
24.5	-37.7	-10.2	-27.5
25.0	-26.1	-10.4	-15.6
25.5	-30.0	-10.7	-19.4
26.0	-28.6	-10.9	-17.7
26.5	-30.7	-11.1	-19.6
27.0	-26.6	-11.3	-15.3
27.5	-35.7	-11.5	-24.2
28.0	-33.2	-11.7	-21.6
28.5	-34.8	-11.9	-23.0
29.0	-38.5	-12.1	-26.5
29.5	-30.9	-12.2	-18.7
30.0	-28.4	-12.4	-16.0

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-19.9	-0.5	-19.4
-9.9	-17.7	-0.4	-17.3
-9.8	-15.7	-0.3	-15.5
-9.7	-16.5	-0.2	-16.3
-9.6	-28.6	-0.1	-28.5
-9.5	-31.1	0.1	-31.1
-9.4	-22.1	0.2	-22.3
-9.3	-18.7	0.3	-19.0
-9.2	-18.7	0.4	-19.1
-9.1	-20.6	0.4	-21.0
-9.0	-23.8	0.4	-24.2
-8.9	-21.1	0.4	-21.5
-8.8	-20.9	0.4	-21.3
-8.7	-28.8	0.4	-29.2
-8.6	-21.2	0.4	-21.5
-8.5	-15.0	0.4	-15.4
-8.4	-13.5	0.4	-13.9
-8.3	-12.7	0.4	-13.0
-8.2	-12.8	0.4	-13.2
-8.1	-14.2	0.4	-14.6
-8.0	-20.8	0.4	-21.1
-7.9	-33.4	0.4	-33.7
-7.8	-24.3	0.4	-24.7
-7.7	-19.8	0.4	-20.2
-7.6	-17.4	0.4	-17.8
-7.5	-15.3	0.4	-15.6
-7.4	-13.5	0.4	-13.8
-7.3	-12.5	0.4	-12.9
-7.2	-14.1	0.4	-14.4
-7.1	-20.7	0.4	-21.1
-7.0	-17.4	0.4	-17.8
-6.9	-18.7	0.5	-19.2
-6.8	-22.5	0.7	-23.2
-6.7	-17.8	0.8	-18.7
-6.6	-14.6	1.0	-15.6
-6.5	-14.3	1.2	-15.4
-6.4	-13.3	1.3	-14.6
-6.3	-11.9	1.5	-13.5
-6.2	-13.3	1.7	-15.0
-6.1	-16.3	1.9	-18.2
-6.0	-17.3	2.0	-19.4
-5.9	-20.1	2.2	-22.4
-5.8	-22.7	2.4	-25.1
-5.7	-21.9	2.6	-24.5
-5.6	-23.0	2.8	-25.8
-5.5	-23.3	3.0	-26.3
-5.4	-15.7	3.2	-18.9
-5.3	-11.1	3.4	-14.5
-5.2	-9.5	3.6	-13.1
-5.1	-8.3	3.8	-12.1
-5.0	-8.0	4.0	-12.1
-4.9	-7.5	4.2	-11.7
-4.8	-7.9	4.5	-12.4
-4.7	-11.5	4.7	-16.2
-4.6	-18.4	4.9	-23.4
-4.5	-8.3	5.2	-13.4
-4.4	-4.4	5.4	-9.8
-4.3	-3.1	5.7	-8.8
-4.2	-4.2	5.9	-10.1
-4.1	-8.0	6.2	-14.2

27.55 GHz @ -12.56 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	39.5		
0.1	38.8		
0.2	36.6		
0.3	32.7		
0.4	28.3		
0.5	25.0		
0.6	20.8		
0.7	12.5		
0.8	-4.3		
0.9	2.9		
1.0	5.5		
1.1	7.8		
1.2	6.3		
1.3	-1.1		
1.4	-2.9		
1.5	-4.5		
1.6	0.3		
1.7	2.9		
1.8	2.3		
1.9	-2.1		
2.0	-5.2		
2.1	-4.1		
2.2	-0.4		
2.3	1.1		
2.4	0.4		
2.5	-2.6		
2.6	-6.6		
2.7	-19.3		
2.8	-10.2		
2.9	-8.6		
3.0	-17.6		
3.1	-12.5		
3.2	-11.7		
3.3	-7.0		
3.4	-1.2		
3.5	1.4	7.9	-6.5
3.6	0.7	7.6	-6.9
3.7	-2.9	7.3	-10.2
3.8	-4.7	7.0	-11.7
3.9	-2.2	6.7	-9.0
4.0	-1.3	6.4	-7.7
4.1	-2.6	6.2	-8.8
4.2	-4.2	5.9	-10.1
4.3	-4.2	5.7	-9.9
4.4	-4.7	5.4	-10.1
4.5	-8.3	5.2	-13.5
4.6	-11.3	4.9	-16.2
4.7	-11.3	4.7	-16.0
4.8	-9.6	4.5	-14.1
4.9	-7.7	4.2	-11.9
5.0	-5.6	4.0	-9.6
5.1	-4.0	3.8	-7.8
5.2	-3.3	3.6	-6.9
5.3	-5.2	3.4	-8.6
5.4	-10.7	3.2	-13.8
5.5	-21.6	3.0	-24.6
5.6	-14.4	2.8	-17.2
5.7	-15.8	2.6	-18.4
5.8	-14.7	2.4	-17.1
5.9	-13.4	2.2	-15.6

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	-19.6	6.4	-26.1
-3.9	-6.1	6.7	-12.8
-3.8	-3.0	7.0	-10.0
-3.7	-3.0	7.3	-10.3
-3.6	-5.4	7.6	-13.0
-3.5	-9.3	7.9	-17.2
-3.4	-19.0		
-3.3	-18.0		
-3.2	-21.8		
-3.1	-8.4		
-3.0	-1.3		
-2.9	0.6		
-2.8	-0.3		
-2.7	-2.9		
-2.6	-2.2		
-2.5	0.0		
-2.4	1.4		
-2.3	1.8		
-2.2	0.7		
-2.1	-2.0		
-2.0	-5.2		
-1.9	-9.9		
-1.8	-8.1		
-1.7	-0.9		
-1.6	2.0		
-1.5	2.3		
-1.4	0.2		
-1.3	6.7		
-1.2	10.3		
-1.1	10.4		
-1.0	8.0		
-0.9	9.2		
-0.8	12.6		
-0.7	17.1		
-0.6	20.8		
-0.5	23.9		
-0.4	28.6		
-0.3	33.8		
-0.2	37.3		
-0.1	39.2		
0.0	39.5		

6.0	-14.5	2.0	-16.6
6.1	-22.1	1.9	-24.0
6.2	-16.4	1.7	-18.1
6.3	-11.7	1.5	-13.3
6.4	-11.6	1.3	-13.0
6.5	-12.2	1.2	-13.4
6.6	-12.7	1.0	-13.7
6.7	-10.9	0.8	-11.7
6.8	-8.7	0.7	-9.3
6.9	-8.6	0.5	-9.1
7.0	-11.2	0.4	-11.6
7.1	-20.3	0.4	-20.7
7.2	-25.8	0.4	-26.2
7.3	-20.1	0.4	-20.5
7.4	-22.8	0.4	-23.1
7.5	-18.9	0.4	-19.2
7.6	-19.9	0.4	-20.3
7.7	-17.9	0.4	-18.3
7.8	-17.7	0.4	-18.1
7.9	-19.8	0.4	-20.2
8.0	-20.7	0.4	-21.1
8.1	-26.6	0.4	-27.0
8.2	-34.4	0.4	-34.7
8.3	-24.4	0.4	-24.8
8.4	-23.1	0.4	-23.5
8.5	-27.0	0.4	-27.3
8.6	-18.3	0.4	-18.6
8.7	-17.8	0.4	-18.2
8.8	-17.1	0.4	-17.5
8.9	-20.1	0.4	-20.5
9.0	-22.4	0.4	-22.8
9.1	-19.4	0.4	-19.8
9.2	-20.4	0.4	-20.8
9.3	-27.4	0.3	-27.6
9.4	-21.7	0.2	-21.9
9.5	-16.4	0.1	-16.4
9.6	-14.2	-0.1	-14.2
9.7	-13.3	-0.2	-13.1
9.8	-13.7	-0.3	-13.4
9.9	-15.7	-0.4	-15.3
10.0	-19.7	-0.5	-19.2

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

27.55 GHz @ -12.56 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-18.1	-12.6	-5.4
-9.9	-18.7	-12.6	-6.1
-9.8	-23.5	-12.6	-10.8
-9.7	-19.9	-12.6	-7.3
-9.6	-18.5	-12.6	-5.9
-9.5	-18.7	-12.6	-6.1
-9.4	-20.1	-12.6	-7.5
-9.3	-21.5	-12.6	-8.9
-9.2	-21.7	-12.6	-9.0
-9.1	-24.0	-12.6	-11.4
-9.0	-25.3	-12.6	-12.7
-8.9	-29.1	-12.6	-16.5
-8.8	-21.8	-12.6	-9.1
-8.7	-19.6	-12.6	-6.9
-8.6	-19.0	-12.6	-6.4
-8.5	-18.1	-12.6	-5.5
-8.4	-17.8	-12.6	-5.2
-8.3	-19.9	-12.6	-7.3
-8.2	-19.7	-12.6	-7.1
-8.1	-18.3	-12.6	-5.7
-8.0	-14.8	-12.6	-2.2
-7.9	-15.6	-12.6	-3.0
-7.8	-16.4	-12.6	-3.8
-7.7	-19.6	-12.6	-6.9
-7.6	-25.1	-12.6	-12.4
-7.5	-18.0	-12.6	-5.3
-7.4	-15.1	-12.6	-2.4
-7.3	-13.3	-12.6	-0.7
-7.2	-15.5	-12.6	-2.9
-7.1	-19.1	-12.6	-6.4
-7.0	-30.4	-12.6	-17.7
-6.9	-27.3	-12.5	-14.9
-6.8	-21.4	-12.3	-9.1
-6.7	-16.8	-12.2	-4.7
-6.6	-14.8	-12.0	-2.8
-6.5	-15.9	-11.8	-4.1
-6.4	-16.0	-11.7	-4.4
-6.3	-15.3	-11.5	-3.8
-6.2	-13.8	-11.3	-2.5
-6.1	-14.1	-11.1	-3.0
-6.0	-15.6	-11.0	-4.7
-5.9	-20.4	-10.8	-9.7
-5.8	-16.5	-10.6	-5.9
-5.7	-14.4	-10.4	-4.0
-5.6	-13.0	-10.2	-2.8
-5.5	-12.8	-10.0	-2.8
-5.4	-17.1	-9.8	-7.3
-5.3	-22.3	-9.6	-12.7
-5.2	-30.6	-9.4	-21.2
-5.1	-23.5	-9.2	-14.3
-5.0	-17.5	-9.0	-8.5
-4.9	-17.6	-8.8	-8.8
-4.8	-21.8	-8.5	-13.3
-4.7	-27.0	-8.3	-18.7
-4.6	-20.6	-8.1	-12.5
-4.5	-20.5	-7.8	-12.7
-4.4	-22.2	-7.6	-14.6
-4.3	-16.3	-7.3	-8.9
-4.2	-13.0	-7.1	-5.9
-4.1	-13.6	-6.8	-6.7

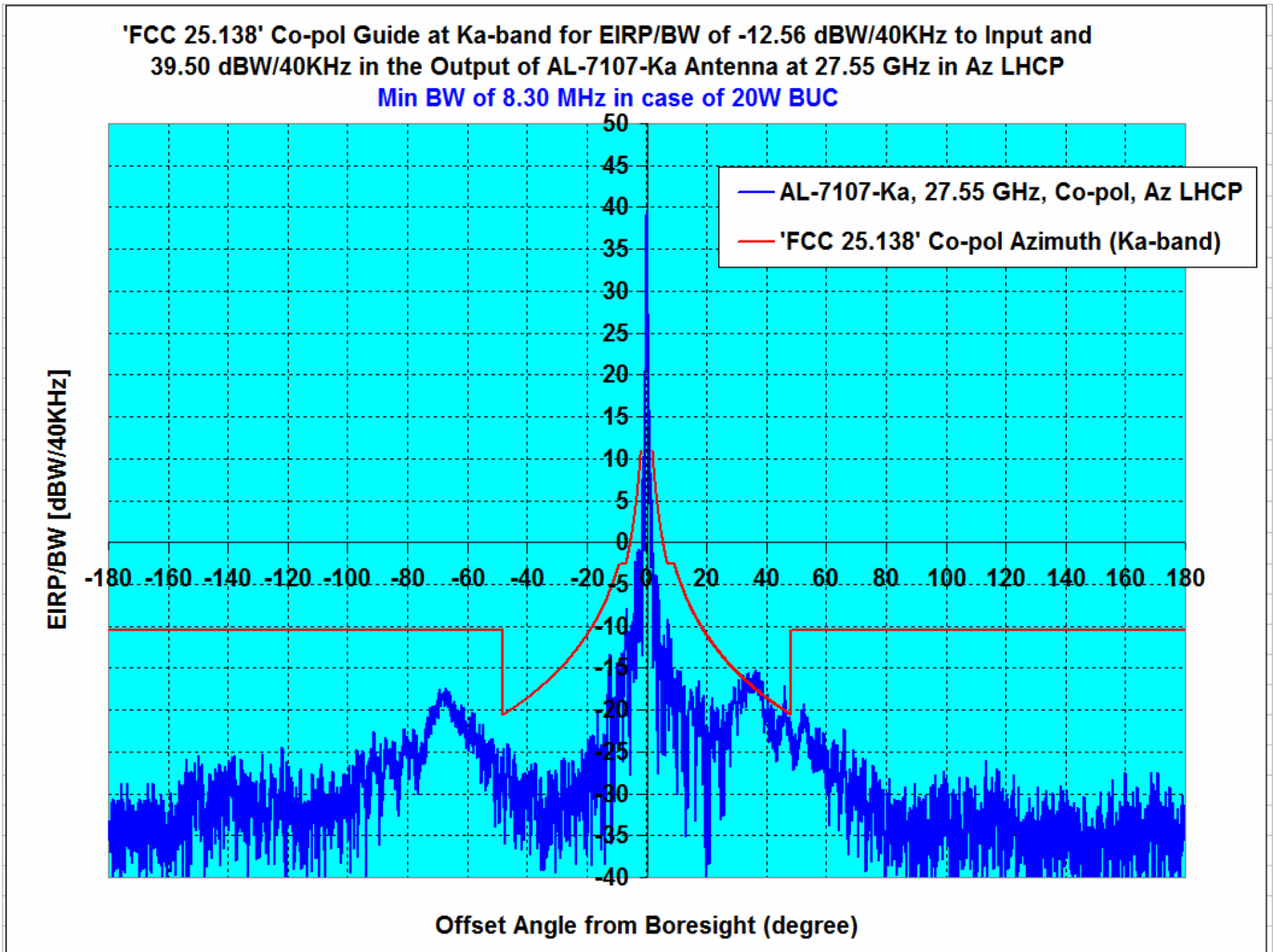
27.55 GHz @ -12.56 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	10.0		
0.1	10.9		
0.2	12.6		
0.3	13.3		
0.4	12.6		
0.5	10.3		
0.6	4.1		
0.7	-11.9		
0.8	-4.0		
0.9	0.9		
1.0	1.9		
1.1	-1.1		
1.2	-15.1		
1.3	-6.5		
1.4	-3.4		
1.5	-6.1		
1.6	-10.9		
1.7	-8.3		
1.8	-8.1		
1.9	-13.7		
2.0	-18.8	1.0	-19.7
2.1	-22.6	0.4	-23.1
2.2	-19.1	-0.1	-19.0
2.3	-14.0	-0.5	-13.5
2.4	-14.3	-1.0	-13.3
2.5	-18.3	-1.4	-16.8
2.6	-25.2	-1.9	-23.3
2.7	-25.1	-2.3	-22.8
2.8	-22.9	-2.7	-20.3
2.9	-25.1	-3.1	-22.1
3.0	-32.5	-3.4	-29.1
3.1	-26.3	-3.8	-22.5
3.2	-28.4	-4.1	-24.2
3.3	-27.0	-4.5	-22.5
3.4	-20.6	-4.8	-15.8
3.5	-24.4	-5.1	-19.3
3.6	-31.0	-5.4	-25.6
3.7	-23.2	-5.7	-17.5
3.8	-17.5	-6.0	-11.5
3.9	-20.9	-6.3	-14.6
4.0	-40.5	-6.6	-33.9
4.1	-22.2	-6.8	-15.4
4.2	-20.2	-7.1	-13.1
4.3	-22.8	-7.3	-15.5
4.4	-27.8	-7.6	-20.2
4.5	-29.3	-7.8	-21.4
4.6	-33.1	-8.1	-25.0
4.7	-24.5	-8.3	-16.2
4.8	-29.3	-8.5	-20.8
4.9	-27.2	-8.8	-18.4
5.0	-24.5	-9.0	-15.5
5.1	-23.9	-9.2	-14.7
5.2	-28.8	-9.4	-19.4
5.3	-23.3	-9.6	-13.7
5.4	-21.6	-9.8	-11.8
5.5	-24.6	-10.0	-14.6
5.6	-25.5	-10.2	-15.3
5.7	-20.2	-10.4	-9.8
5.8	-20.2	-10.6	-9.6
5.9	-21.8	-10.8	-11.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

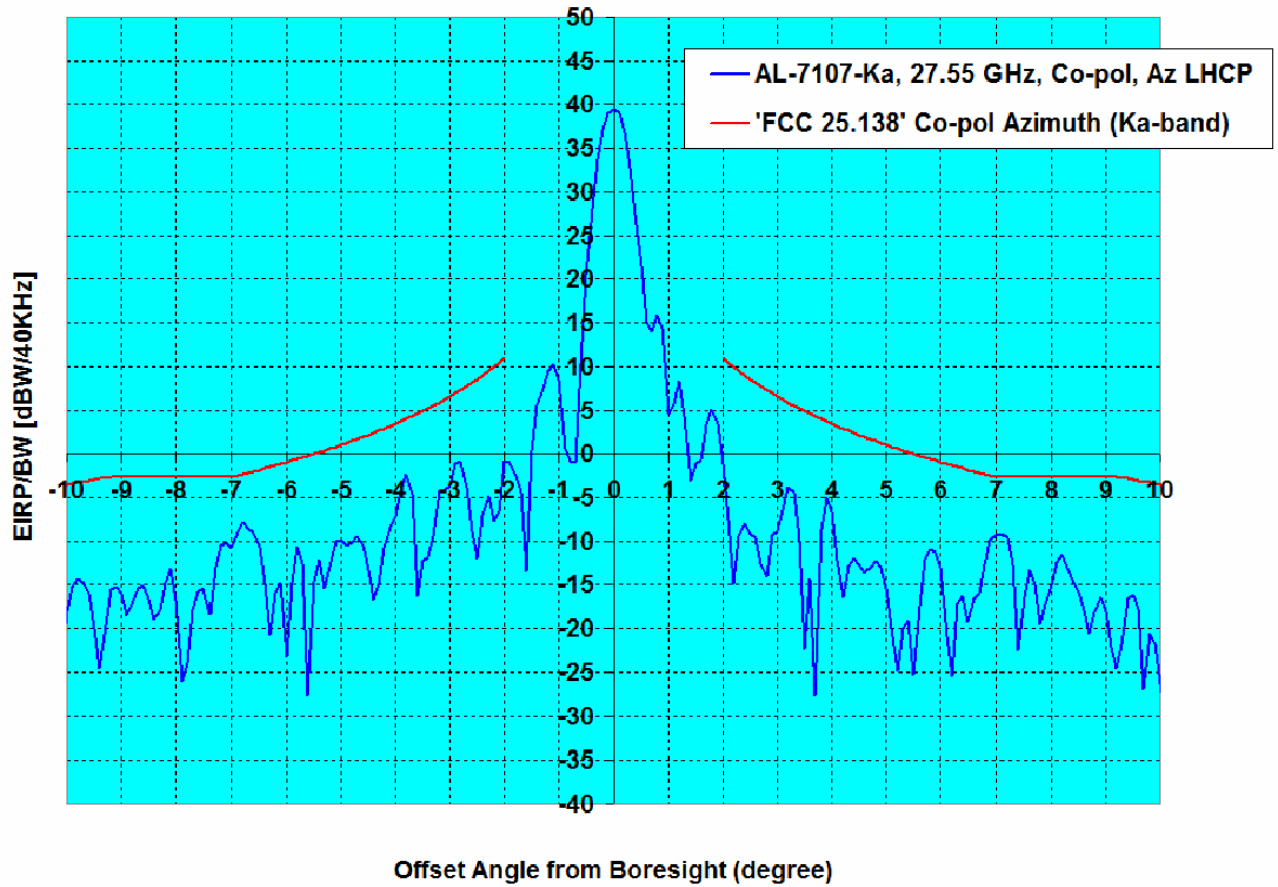
-4.0	-14.9	-6.6	-8.3
-3.9	-17.1	-6.3	-10.9
-3.8	-11.9	-6.0	-5.9
-3.7	-10.6	-5.7	-4.9
-3.6	-11.4	-5.4	-5.9
-3.5	-13.3	-5.1	-8.2
-3.4	-15.8	-4.8	-11.0
-3.3	-17.1	-4.5	-12.6
-3.2	-19.4	-4.1	-15.3
-3.1	-25.4	-3.8	-21.6
-3.0	-22.2	-3.4	-18.8
-2.9	-15.5	-3.1	-12.4
-2.8	-15.1	-2.7	-12.4
-2.7	-18.5	-2.3	-16.2
-2.6	-18.1	-1.9	-16.2
-2.5	-18.0	-1.4	-16.6
-2.4	-19.8	-1.0	-18.8
-2.3	-13.9	-0.5	-13.4
-2.2	-13.0	-0.1	-12.9
-2.1	-17.7	0.4	-18.2
-2.0	-16.6	1.0	-17.6
-1.9	-16.9		
-1.8	-17.1		
-1.7	-13.7		
-1.6	-12.4		
-1.5	-9.7		
-1.4	-8.6		
-1.3	-11.3		
-1.2	-7.8		
-1.1	-3.3		
-1.0	-2.0		
-0.9	-1.9		
-0.8	-8.1		
-0.7	1.5		
-0.6	10.4		
-0.5	14.6		
-0.4	16.1		
-0.3	15.8		
-0.2	14.2		
-0.1	11.5		
0.0	10.0		

6.0	-29.8	-11.0	-18.9
6.1	-36.5	-11.1	-25.4
6.2	-23.9	-11.3	-12.6
6.3	-19.4	-11.5	-7.9
6.4	-21.5	-11.7	-9.8
6.5	-20.7	-11.8	-8.9
6.6	-19.7	-12.0	-7.7
6.7	-17.9	-12.2	-5.8
6.8	-18.0	-12.3	-5.7
6.9	-18.6	-12.5	-6.1
7.0	-21.4	-12.6	-8.8
7.1	-19.8	-12.6	-7.2
7.2	-21.9	-12.6	-9.3
7.3	-24.6	-12.6	-12.0
7.4	-24.7	-12.6	-12.1
7.5	-24.3	-12.6	-11.7
7.6	-21.3	-12.6	-8.7
7.7	-18.2	-12.6	-5.6
7.8	-18.3	-12.6	-5.6
7.9	-19.8	-12.6	-7.1
8.0	-19.0	-12.6	-6.4
8.1	-17.9	-12.6	-5.3
8.2	-19.0	-12.6	-6.4
8.3	-20.9	-12.6	-8.2
8.4	-20.8	-12.6	-8.1
8.5	-20.8	-12.6	-8.2
8.6	-22.2	-12.6	-9.6
8.7	-24.6	-12.6	-12.0
8.8	-24.3	-12.6	-11.7
8.9	-26.4	-12.6	-13.8
9.0	-31.6	-12.6	-19.0
9.1	-34.3	-12.6	-21.7
9.2	-29.8	-12.6	-17.1
9.3	-25.9	-12.6	-13.3
9.4	-25.7	-12.6	-13.1
9.5	-20.9	-12.6	-8.3
9.6	-20.2	-12.6	-7.5
9.7	-19.2	-12.6	-6.6
9.8	-22.4	-12.6	-9.8
9.9	-27.6	-12.6	-15.0
10.0	-23.9	-12.6	-11.3



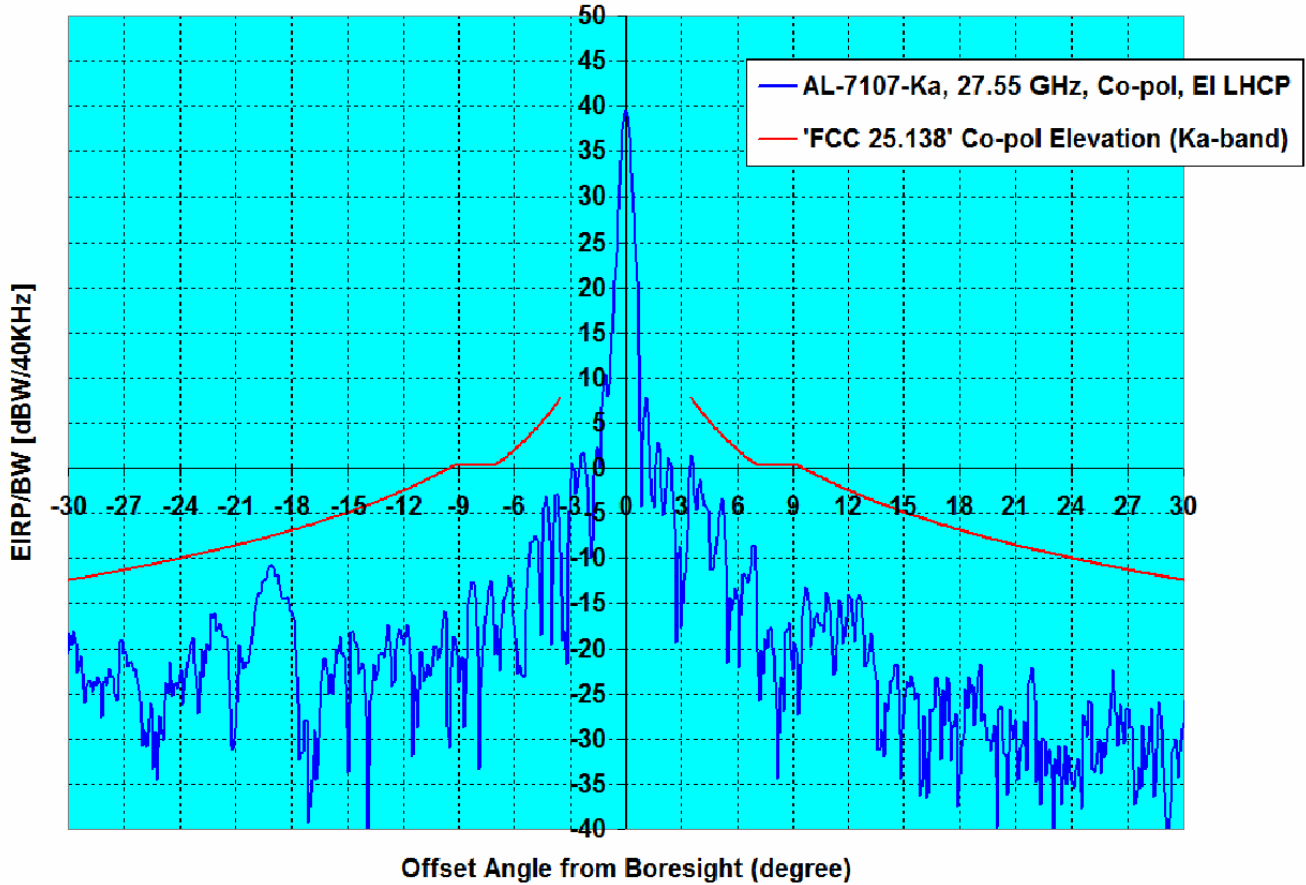
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7107-Ka, 27.55 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.06	-12.56	-5.55	3.00	1.38

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.56 dBW/40KHz to Input and
 39.50 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in Az LHCP
 Min BW of 8.30 MHz in case of 20W BUC**



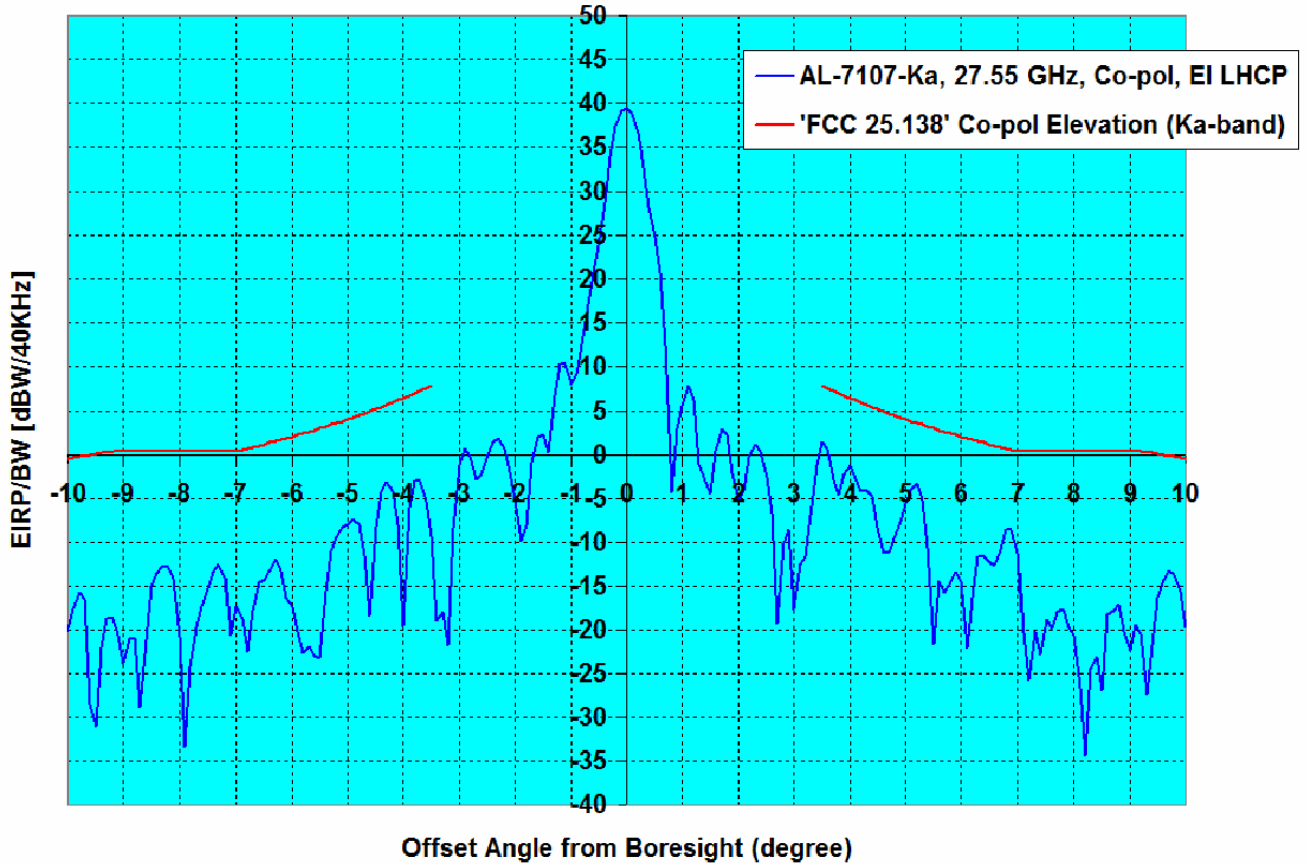
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Freq., Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (2° to 10°)	± (10° to 180°)	%
AL-7107-Ka, 27.55 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.06	-12.56	-5.55	3.00	1.38

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.56 dBW/40KHz to Input and
 39.50 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in EI LHCP
 Min BW of 8.30 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 27.55 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.06	-12.56	-6.53	-3.23	0.00

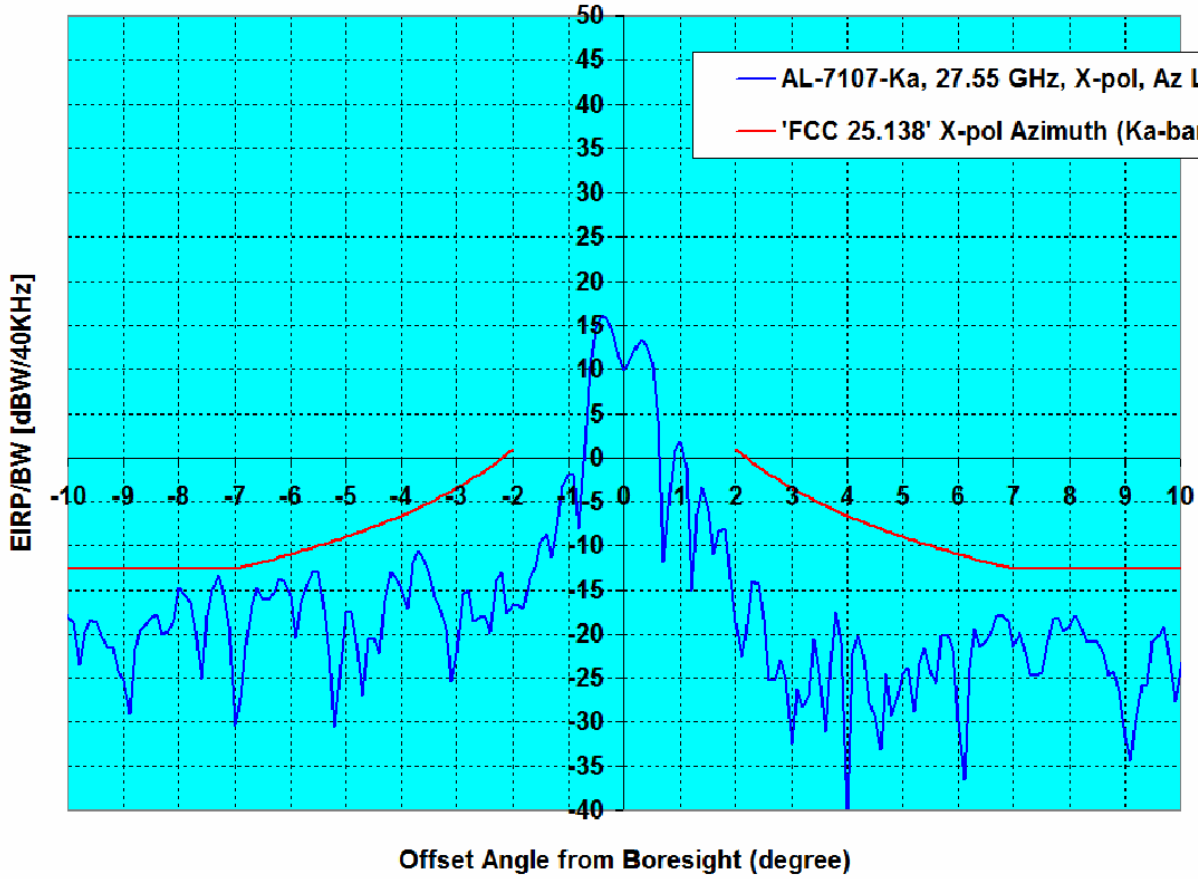
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.56 dBW/40KHz to Input and
 39.50 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in EI LHCP
 Min BW of 8.30 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (3.5° to 10°)	± (10° to 30°)	
AL-7107-Ka, 27.55 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.06	-12.56	-6.53	-3.23	0.00

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd, X-pol, Azimuth LHCP

'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -12.56 dBW/40KHz to Input and
 39.50 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in Az LHCP
 Min BW of 8.30 MHz in case of 20W BUC



Configuration	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7107-Ka, 27.55 GHz, X-pol, Az LHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	52.06	-12.56	-2.50	-0.72	0.00

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-179.0	-33.5	-10.5	-23.0
-178.0	-39.2	-10.5	-28.7
-177.0	-39.1	-10.5	-28.6
-176.0	-30.8	-10.5	-20.3
-175.0	-33.5	-10.5	-23.0
-174.0	-33.7	-10.5	-23.2
-173.0	-35.8	-10.5	-25.3
-172.0	-38.3	-10.5	-27.8
-171.0	-35.4	-10.5	-24.9
-170.0	-36.7	-10.5	-26.2
-169.0	-35.0	-10.5	-24.5
-168.0	-34.4	-10.5	-23.9
-167.0	-40.5	-10.5	-30.0
-166.0	-38.8	-10.5	-28.3
-165.0	-32.1	-10.5	-21.6
-164.0	-30.8	-10.5	-20.3
-163.0	-34.2	-10.5	-23.7
-162.0	-40.0	-10.5	-29.5
-161.0	-38.0	-10.5	-27.5
-160.0	-36.8	-10.5	-26.3
-159.0	-30.0	-10.5	-19.5
-158.0	-33.2	-10.5	-22.7
-157.0	-31.3	-10.5	-20.8
-156.0	-30.4	-10.5	-19.9
-155.0	-39.0	-10.5	-28.5
-154.0	-29.7	-10.5	-19.2
-153.0	-35.2	-10.5	-24.7
-152.0	-31.9	-10.5	-21.4
-151.0	-27.4	-10.5	-16.9
-150.0	-30.7	-10.5	-20.2
-149.0	-29.2	-10.5	-18.7
-148.0	-34.7	-10.5	-24.2
-147.0	-36.7	-10.5	-26.2
-146.0	-27.6	-10.5	-17.1
-145.0	-31.5	-10.5	-21.0
-144.0	-29.3	-10.5	-18.8
-143.0	-27.1	-10.5	-16.6
-142.0	-27.3	-10.5	-16.8
-141.0	-26.7	-10.5	-16.2
-140.0	-31.9	-10.5	-21.4
-139.0	-29.2	-10.5	-18.7
-138.0	-26.4	-10.5	-15.9
-137.0	-37.5	-10.5	-27.0
-136.0	-30.2	-10.5	-19.7
-135.0	-28.2	-10.5	-17.7
-134.0	-32.1	-10.5	-21.6
-133.0	-32.0	-10.5	-21.5
-132.0	-29.6	-10.5	-19.1
-131.0	-31.4	-10.5	-20.9
-130.0	-31.1	-10.5	-20.6
-129.0	-27.4	-10.5	-16.9
-128.0	-29.3	-10.5	-18.8
-127.0	-34.3	-10.5	-23.8
-126.0	-29.3	-10.5	-18.8
-125.0	-28.4	-10.5	-17.9
-124.0	-28.2	-10.5	-17.7
-123.0	-32.5	-10.5	-22.0
-122.0	-32.1	-10.5	-21.6
-121.0	-29.9	-10.5	-19.4
-120.0	-34.1	-10.5	-23.6

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	39.5		
1.0	4.6		
2.0	-1.1	11.0	-12.1
3.0	-8.9	6.6	-15.5
4.0	-6.7	3.4	-10.1
5.0	-15.4	1.0	-16.4
6.0	-13.0	-1.0	-12.0
7.0	-9.3	-2.6	-6.6
8.0	-15.1	-2.6	-12.5
9.0	-18.1	-2.6	-15.5
10.0	-26.3	-3.5	-22.8
11.0	-20.0	-4.5	-15.5
12.0	-17.5	-5.5	-12.0
13.0	-27.9	-6.3	-21.6
14.0	-21.8	-7.2	-14.6
15.0	-17.9	-7.9	-10.0
16.0	-19.8	-8.6	-11.2
17.0	-19.7	-9.3	-10.5
18.0	-19.3	-9.9	-9.5
19.0	-18.3	-10.5	-7.8
20.0	-35.7	-11.0	-24.7
21.0	-29.0	-11.6	-17.5
22.0	-18.6	-12.1	-6.6
23.0	-20.4	-12.5	-7.9
24.0	-22.6	-13.0	-9.6
25.0	-24.1	-13.4	-10.7
26.0	-24.7	-13.9	-10.8
27.0	-24.7	-14.3	-10.4
28.0	-24.0	-14.7	-9.3
29.0	-18.9	-15.1	-3.8
30.0	-19.1	-15.4	-3.6
31.0	-17.8	-15.8	-2.0
32.0	-16.8	-16.1	-0.7
33.0	-18.4	-16.5	-1.9
34.0	-15.9	-16.8	0.9
35.0	-17.4	-17.1	-0.3
36.0	-15.5	-17.4	1.9
37.0	-15.6	-17.7	2.1
38.0	-18.7	-18.0	-0.7
39.0	-17.7	-18.3	0.6
40.0	-19.9	-18.6	-1.4
41.0	-21.4	-18.8	-2.6
42.0	-21.9	-19.1	-2.8
43.0	-25.1	-19.3	-5.8
44.0	-23.0	-19.6	-3.4
45.0	-23.6	-19.8	-3.7
46.0	-17.8	-20.1	2.3
47.0	-22.0	-20.3	-1.7
48.0	-21.4	-20.5	-0.9
49.0	-26.2	-10.5	-15.7
50.0	-26.6	-10.5	-16.1
51.0	-22.0	-10.5	-11.5
52.0	-20.0	-10.5	-9.5
53.0	-20.5	-10.5	-10.0
54.0	-21.5	-10.5	-11.0
55.0	-25.9	-10.5	-15.4
56.0	-27.2	-10.5	-16.7
57.0	-23.8	-10.5	-13.3
58.0	-24.2	-10.5	-13.7
59.0	-24.4	-10.5	-13.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-33.0	-10.5	-22.5
-118.0	-39.0	-10.5	-28.5
-117.0	-33.4	-10.5	-22.9
-116.0	-30.8	-10.5	-20.3
-115.0	-31.2	-10.5	-20.7
-114.0	-32.7	-10.5	-22.2
-113.0	-31.9	-10.5	-21.4
-112.0	-33.5	-10.5	-23.0
-111.0	-32.8	-10.5	-22.3
-110.0	-31.6	-10.5	-21.1
-109.0	-27.1	-10.5	-16.6
-108.0	-33.4	-10.5	-22.9
-107.0	-34.0	-10.5	-23.5
-106.0	-31.7	-10.5	-21.2
-105.0	-30.9	-10.5	-20.4
-104.0	-30.5	-10.5	-20.0
-103.0	-33.6	-10.5	-23.1
-102.0	-37.2	-10.5	-26.7
-101.0	-27.6	-10.5	-17.1
-100.0	-31.5	-10.5	-21.0
-99.0	-38.9	-10.5	-28.4
-98.0	-26.6	-10.5	-16.1
-97.0	-26.2	-10.5	-15.7
-96.0	-25.4	-10.5	-14.9
-95.0	-29.1	-10.5	-18.6
-94.0	-30.3	-10.5	-19.8
-93.0	-30.3	-10.5	-19.8
-92.0	-24.5	-10.5	-14.0
-91.0	-27.2	-10.5	-16.7
-90.0	-28.8	-10.5	-18.3
-89.0	-26.4	-10.5	-15.9
-88.0	-30.8	-10.5	-20.3
-87.0	-26.0	-10.5	-15.5
-86.0	-24.8	-10.5	-14.3
-85.0	-24.8	-10.5	-14.3
-84.0	-29.4	-10.5	-18.9
-83.0	-32.1	-10.5	-21.6
-82.0	-27.8	-10.5	-17.3
-81.0	-25.0	-10.5	-14.5
-80.0	-23.2	-10.5	-12.7
-79.0	-23.8	-10.5	-13.3
-78.0	-23.1	-10.5	-12.6
-77.0	-24.1	-10.5	-13.6
-76.0	-25.1	-10.5	-14.6
-75.0	-23.8	-10.5	-13.3
-74.0	-23.3	-10.5	-12.8
-73.0	-20.9	-10.5	-10.4
-72.0	-20.8	-10.5	-10.3
-71.0	-21.3	-10.5	-10.8
-70.0	-20.4	-10.5	-9.9
-69.0	-19.5	-10.5	-9.0
-68.0	-18.4	-10.5	-7.9
-67.0	-18.8	-10.5	-8.3
-66.0	-17.9	-10.5	-7.4
-65.0	-21.4	-10.5	-10.9
-64.0	-20.7	-10.5	-10.2
-63.0	-21.1	-10.5	-10.6
-62.0	-22.1	-10.5	-11.6
-61.0	-19.7	-10.5	-9.2
-60.0	-22.7	-10.5	-12.2
-59.0	-23.4	-10.5	-12.9
-58.0	-22.7	-10.5	-12.2
-57.0	-23.7	-10.5	-13.2

60.0	-29.1	-10.5	-18.6
61.0	-30.4	-10.5	-19.9
62.0	-27.7	-10.5	-17.2
63.0	-25.6	-10.5	-15.1
64.0	-29.8	-10.5	-19.3
65.0	-32.3	-10.5	-21.8
66.0	-23.8	-10.5	-13.3
67.0	-29.9	-10.5	-19.4
68.0	-27.1	-10.5	-16.6
69.0	-27.4	-10.5	-16.9
70.0	-25.8	-10.5	-15.3
71.0	-28.8	-10.5	-18.3
72.0	-31.7	-10.5	-21.2
73.0	-26.0	-10.5	-15.5
74.0	-31.8	-10.5	-21.3
75.0	-38.1	-10.5	-27.6
76.0	-28.9	-10.5	-18.4
77.0	-29.0	-10.5	-18.5
78.0	-33.6	-10.5	-23.1
79.0	-34.6	-10.5	-24.1
80.0	-36.8	-10.5	-26.3
81.0	-33.5	-10.5	-23.0
82.0	-38.6	-10.5	-28.1
83.0	-30.7	-10.5	-20.2
84.0	-36.6	-10.5	-26.1
85.0	-38.3	-10.5	-27.8
86.0	-33.6	-10.5	-23.1
87.0	-35.2	-10.5	-24.7
88.0	-31.6	-10.5	-21.1
89.0	-32.6	-10.5	-22.1
90.0	-35.7	-10.5	-25.2
91.0	-33.3	-10.5	-22.8
92.0	-33.9	-10.5	-23.4
93.0	-32.5	-10.5	-22.0
94.0	-34.8	-10.5	-24.3
95.0	-36.5	-10.5	-26.0
96.0	-38.3	-10.5	-27.8
97.0	-38.6	-10.5	-28.1
98.0	-31.8	-10.5	-21.3
99.0	-37.9	-10.5	-27.4
100.0	-30.2	-10.5	-19.7
101.0	-30.1	-10.5	-19.6
102.0	-37.1	-10.5	-26.6
103.0	-40.2	-10.5	-29.7
104.0	-40.5	-10.5	-30.0
105.0	-32.5	-10.5	-22.0
106.0	-36.5	-10.5	-26.0
107.0	-37.6	-10.5	-27.1
108.0	-33.6	-10.5	-23.1
109.0	-33.8	-10.5	-23.3
110.0	-40.5	-10.5	-30.0
111.0	-33.8	-10.5	-23.3
112.0	-35.4	-10.5	-24.9
113.0	-28.1	-10.5	-17.6
114.0	-34.4	-10.5	-23.9
115.0	-33.0	-10.5	-22.5
116.0	-31.2	-10.5	-20.7
117.0	-30.8	-10.5	-20.3
118.0	-33.9	-10.5	-23.4
119.0	-29.3	-10.5	-18.8
120.0	-40.5	-10.5	-30.0
121.0	-34.0	-10.5	-23.5
122.0	-30.1	-10.5	-19.6

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-21.7	-10.5	-11.2
-55.0	-26.2	-10.5	-15.7
-54.0	-23.9	-10.5	-13.4
-53.0	-26.9	-10.5	-16.4
-52.0	-25.9	-10.5	-15.4
-51.0	-30.9	-10.5	-20.4
-50.0	-25.3	-10.5	-14.8
-49.0	-28.2	-10.5	-17.7
-48.0	-27.9	-20.5	-7.3
-47.0	-31.9	-20.3	-11.6
-46.0	-26.4	-20.1	-6.3
-45.0	-30.0	-19.8	-10.2
-44.0	-35.7	-19.6	-16.1
-43.0	-34.8	-19.3	-15.4
-42.0	-34.8	-19.1	-15.7
-41.0	-33.2	-18.8	-14.3
-40.0	-28.2	-18.6	-9.7
-39.0	-35.2	-18.3	-17.0
-38.0	-29.0	-18.0	-11.0
-37.0	-28.3	-17.7	-10.6
-36.0	-31.8	-17.4	-14.4
-35.0	-31.1	-17.1	-14.0
-34.0	-34.9	-16.8	-18.1
-33.0	-33.2	-16.5	-16.7
-32.0	-36.2	-16.1	-20.1
-31.0	-30.7	-15.8	-14.9
-30.0	-27.6	-15.4	-12.1
-29.0	-30.5	-15.1	-15.5
-28.0	-29.1	-14.7	-14.5
-27.0	-29.9	-14.3	-15.6
-26.0	-29.8	-13.9	-16.0
-25.0	-32.5	-13.4	-19.1
-24.0	-29.8	-13.0	-16.8
-23.0	-28.3	-12.5	-15.7
-22.0	-27.9	-12.1	-15.9
-21.0	-28.8	-11.6	-17.3
-20.0	-31.5	-11.0	-20.5
-19.0	-25.2	-10.5	-14.7
-18.0	-30.6	-9.9	-20.7
-17.0	-26.8	-9.3	-17.6
-16.0	-30.1	-8.6	-21.5
-15.0	-30.3	-7.9	-22.4
-14.0	-38.3	-7.2	-31.2
-13.0	-19.4	-6.3	-13.0
-12.0	-16.7	-5.5	-11.2
-11.0	-20.2	-4.5	-15.6
-10.0	-18.1	-3.5	-14.6
-9.0	-16.0	-2.6	-13.4
-8.0	-16.7	-2.6	-14.0
-7.0	-10.8	-2.6	-8.1
-6.0	-23.2	-1.0	-22.2
-5.0	-9.9	1.0	-10.9
-4.0	-7.3	3.4	-10.7
-3.0	-3.6	6.6	-10.2
-2.0	-0.9	11.0	-11.9
-1.0	8.5		
0.0	39.5		

123.0	-33.0	-10.5	-22.5
124.0	-34.2	-10.5	-23.7
125.0	-38.3	-10.5	-27.8
126.0	-37.5	-10.5	-27.0
127.0	-32.2	-10.5	-21.7
128.0	-40.5	-10.5	-30.0
129.0	-38.3	-10.5	-27.8
130.0	-34.5	-10.5	-24.0
131.0	-33.1	-10.5	-22.6
132.0	-34.3	-10.5	-23.8
133.0	-37.4	-10.5	-26.9
134.0	-36.3	-10.5	-25.8
135.0	-36.0	-10.5	-25.5
136.0	-35.6	-10.5	-25.1
137.0	-34.3	-10.5	-23.8
138.0	-31.6	-10.5	-21.1
139.0	-35.7	-10.5	-25.2
140.0	-36.1	-10.5	-25.6
141.0	-33.7	-10.5	-23.2
142.0	-38.9	-10.5	-28.4
143.0	-31.0	-10.5	-20.5
144.0	-40.5	-10.5	-30.0
145.0	-33.6	-10.5	-23.1
146.0	-36.0	-10.5	-25.5
147.0	-32.3	-10.5	-21.8
148.0	-36.6	-10.5	-26.1
149.0	-35.8	-10.5	-25.3
150.0	-34.5	-10.5	-24.0
151.0	-40.5	-10.5	-30.0
152.0	-35.9	-10.5	-25.4
153.0	-34.5	-10.5	-24.0
154.0	-35.6	-10.5	-25.1
155.0	-30.4	-10.5	-19.9
156.0	-40.5	-10.5	-30.0
157.0	-39.6	-10.5	-29.1
158.0	-35.8	-10.5	-25.3
159.0	-39.8	-10.5	-29.3
160.0	-27.4	-10.5	-16.9
161.0	-35.1	-10.5	-24.6
162.0	-34.9	-10.5	-24.4
163.0	-32.4	-10.5	-21.9
164.0	-29.2	-10.5	-18.7
165.0	-32.6	-10.5	-22.1
166.0	-35.1	-10.5	-24.6
167.0	-33.7	-10.5	-23.2
168.0	-36.9	-10.5	-26.4
169.0	-39.8	-10.5	-29.3
170.0	-33.5	-10.5	-23.0
171.0	-33.8	-10.5	-23.3
172.0	-40.5	-10.5	-30.0
173.0	-32.8	-10.5	-22.3
174.0	-31.7	-10.5	-21.2
175.0	-40.5	-10.5	-30.0
176.0	-36.9	-10.5	-26.4
177.0	-33.4	-10.5	-22.9
178.0	-37.2	-10.5	-26.7
179.0	-31.9	-10.5	-21.4

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-14.8	-3.5	-11.3
-9.9	-14.6	-3.4	-11.2
-9.8	-14.0	-3.3	-10.7
-9.7	-17.8	-3.2	-14.6
-9.6	-20.1	-3.1	-17.1
-9.5	-18.6	-2.9	-15.7
-9.4	-26.5	-2.8	-23.7
-9.3	-17.8	-2.7	-15.1
-9.2	-15.6	-2.6	-13.0
-9.1	-16.7	-2.6	-14.0
-9.0	-22.5	-2.6	-19.9
-8.9	-35.9	-2.6	-33.2
-8.8	-31.7	-2.6	-29.1
-8.7	-24.9	-2.6	-22.3
-8.6	-25.0	-2.6	-22.4
-8.5	-28.1	-2.6	-25.5
-8.4	-23.1	-2.6	-20.4
-8.3	-18.0	-2.6	-15.4
-8.2	-14.0	-2.6	-11.3
-8.1	-12.9	-2.6	-10.3
-8.0	-15.4	-2.6	-12.8
-7.9	-19.3	-2.6	-16.7
-7.8	-14.2	-2.6	-11.6
-7.7	-11.8	-2.6	-9.1
-7.6	-10.5	-2.6	-7.8
-7.5	-12.1	-2.6	-9.5
-7.4	-19.2	-2.6	-16.6
-7.3	-18.3	-2.6	-15.7
-7.2	-12.6	-2.6	-10.0
-7.1	-11.8	-2.6	-9.1
-7.0	-11.6	-2.6	-9.0
-6.9	-9.0	-2.5	-6.5
-6.8	-8.0	-2.3	-5.7
-6.7	-8.5	-2.2	-6.4
-6.6	-10.3	-2.0	-8.3
-6.5	-12.1	-1.8	-10.3
-6.4	-12.3	-1.7	-10.6
-6.3	-15.7	-1.5	-14.2
-6.2	-23.1	-1.3	-21.8
-6.1	-24.4	-1.1	-23.3
-6.0	-15.0	-1.0	-14.0
-5.9	-10.7	-0.8	-9.9
-5.8	-10.0	-0.6	-9.4
-5.7	-15.0	-0.4	-14.6
-5.6	-16.0	-0.2	-15.8
-5.5	-10.0	0.0	-10.0
-5.4	-9.4	0.2	-9.5
-5.3	-16.0	0.4	-16.4
-5.2	-16.3	0.6	-16.9
-5.1	-10.8	0.8	-11.6
-5.0	-9.7	1.0	-10.7
-4.9	-9.4	1.2	-10.7
-4.8	-9.0	1.5	-10.5
-4.7	-8.1	1.7	-9.8
-4.6	-8.0	1.9	-9.9
-4.5	-9.1	2.2	-11.3
-4.4	-10.7	2.4	-13.1
-4.3	-11.4	2.7	-14.0
-4.2	-9.2	2.9	-12.1
-4.1	-7.9	3.2	-11.1

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.2		
0.1	39.5		
0.2	37.1		
0.3	32.8		
0.4	27.0		
0.5	20.3		
0.6	14.2		
0.7	15.2		
0.8	16.7		
0.9	13.9		
1.0	5.8		
1.1	5.0		
1.2	7.8		
1.3	3.0		
1.4	-6.2		
1.5	-1.9		
1.6	-1.4		
1.7	3.9		
1.8	4.6		
1.9	2.4		
2.0	-4.4	11.0	-15.4
2.1	-8.0	10.4	-18.4
2.2	-11.8	9.9	-21.7
2.3	-15.7	9.5	-25.2
2.4	-10.1	9.0	-19.1
2.5	-8.7	8.6	-17.2
2.6	-8.2	8.1	-16.3
2.7	-9.5	7.7	-17.2
2.8	-10.8	7.3	-18.1
2.9	-9.4	6.9	-16.4
3.0	-8.1	6.6	-14.7
3.1	-4.7	6.2	-10.9
3.2	-2.9	5.9	-8.7
3.3	-3.4	5.5	-8.9
3.4	-9.0	5.2	-14.3
3.5	-21.0	4.9	-25.9
3.6	-15.8	4.6	-20.4
3.7	-16.1	4.3	-20.4
3.8	-7.6	4.0	-11.6
3.9	-4.5	3.7	-8.2
4.0	-5.9	3.4	-9.4
4.1	-12.2	3.2	-15.4
4.2	-14.5	2.9	-17.4
4.3	-10.6	2.7	-13.3
4.4	-11.7	2.4	-14.1
4.5	-13.6	2.2	-15.8
4.6	-14.1	1.9	-16.0
4.7	-11.6	1.7	-13.3
4.8	-10.7	1.5	-12.1
4.9	-11.1	1.2	-12.4
5.0	-13.6	1.0	-14.6
5.1	-22.3	0.8	-23.1
5.2	-26.4	0.6	-27.0
5.3	-18.8	0.4	-19.2
5.4	-21.5	0.2	-21.7
5.5	-23.0	0.0	-23.0
5.6	-16.4	-0.2	-16.2
5.7	-13.2	-0.4	-12.8
5.8	-11.0	-0.6	-10.4
5.9	-11.4	-0.8	-10.6

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-5.9	3.4	-9.4
-3.9	-3.2	3.7	-6.9
-3.8	-2.5	4.0	-6.5
-3.7	-5.4	4.3	-9.6
-3.6	-14.1	4.6	-18.7
-3.5	-11.1	4.9	-16.0
-3.4	-9.3	5.2	-14.5
-3.3	-8.0	5.5	-13.5
-3.2	-3.7	5.9	-9.6
-3.1	-2.9	6.2	-9.2
-3.0	-2.7	6.6	-9.3
-2.9	-0.2	6.9	-7.2
-2.8	-0.3	7.3	-7.6
-2.7	-2.7	7.7	-10.4
-2.6	-10.1	8.1	-18.2
-2.5	-21.8	8.6	-30.3
-2.4	-9.4	9.0	-18.4
-2.3	-5.9	9.5	-15.4
-2.2	-8.6	9.9	-18.5
-2.1	-10.6	10.4	-21.1
-2.0	-1.7	11.0	-12.7
-1.9	-0.9		
-1.8	-1.2		
-1.7	-2.1		
-1.6	-7.1		
-1.5	-0.9		
-1.4	5.1		
-1.3	7.1		
-1.2	8.7		
-1.1	8.9		
-1.0	5.8		
-0.9	4.6		
-0.8	8.1		
-0.7	8.3		
-0.6	14.2		
-0.5	23.0		
-0.4	30.0		
-0.3	35.0		
-0.2	38.2		
-0.1	39.9		
0.0	40.2		

6.0	-14.1	-1.0	-13.2
6.1	-24.4	-1.1	-23.3
6.2	-19.9	-1.3	-18.6
6.3	-16.9	-1.5	-15.4
6.4	-15.0	-1.7	-13.4
6.5	-13.5	-1.8	-11.7
6.6	-15.8	-2.0	-13.8
6.7	-14.2	-2.2	-12.1
6.8	-11.5	-2.3	-9.1
6.9	-8.6	-2.5	-6.1
7.0	-8.0	-2.6	-5.3
7.1	-7.9	-2.6	-5.3
7.2	-9.3	-2.6	-6.7
7.3	-13.9	-2.6	-11.2
7.4	-20.2	-2.6	-17.6
7.5	-14.7	-2.6	-12.1
7.6	-13.1	-2.6	-10.4
7.7	-15.1	-2.6	-12.5
7.8	-24.8	-2.6	-22.1
7.9	-15.9	-2.6	-13.2
8.0	-11.9	-2.6	-9.2
8.1	-10.7	-2.6	-8.1
8.2	-11.5	-2.6	-8.9
8.3	-14.0	-2.6	-11.4
8.4	-17.6	-2.6	-15.0
8.5	-19.0	-2.6	-16.4
8.6	-16.6	-2.6	-13.9
8.7	-18.5	-2.6	-15.9
8.8	-16.7	-2.6	-14.1
8.9	-14.6	-2.6	-12.0
9.0	-14.7	-2.6	-12.0
9.1	-17.9	-2.6	-15.3
9.2	-25.8	-2.6	-23.1
9.3	-22.7	-2.7	-20.0
9.4	-17.1	-2.8	-14.2
9.5	-16.4	-2.9	-13.4
9.6	-22.7	-3.1	-19.6
9.7	-28.0	-3.2	-24.9
9.8	-19.1	-3.3	-15.8
9.9	-17.3	-3.4	-13.9
10.0	-20.2	-3.5	-16.7

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.3	-12.4	-7.9
-29.5	-22.6	-12.2	-10.4
-29.0	-24.2	-12.1	-12.2
-28.5	-24.0	-11.9	-12.2
-28.0	-23.2	-11.7	-11.5
-27.5	-24.9	-11.5	-13.4
-27.0	-20.5	-11.3	-9.2
-26.5	-22.5	-11.1	-11.4
-26.0	-30.7	-10.9	-19.8
-25.5	-26.5	-10.7	-15.9
-25.0	-28.9	-10.4	-18.4
-24.5	-21.4	-10.2	-11.2
-24.0	-23.0	-10.0	-13.0
-23.5	-20.6	-9.8	-10.8
-23.0	-27.1	-9.5	-17.6
-22.5	-19.5	-9.3	-10.2
-22.0	-18.1	-9.1	-9.0
-21.5	-18.8	-8.8	-9.9
-21.0	-28.9	-8.6	-20.3
-20.5	-21.5	-8.3	-13.2
-20.0	-15.9	-8.0	-7.9
-19.5	-12.4	-7.8	-4.6
-19.0	-11.1	-7.5	-3.6
-18.5	-14.5	-7.2	-7.3
-18.0	-15.9	-6.9	-9.0
-17.5	-31.7	-6.6	-25.1
-17.0	-36.0	-6.3	-29.7
-16.5	-26.6	-5.9	-20.7
-16.0	-25.0	-5.6	-19.4
-15.5	-20.5	-5.3	-15.3
-15.0	-33.7	-4.9	-28.8
-14.5	-19.8	-4.5	-15.3
-14.0	-27.5	-4.2	-23.4
-13.5	-23.5	-3.8	-19.7
-13.0	-21.1	-3.3	-17.7
-12.5	-23.6	-2.9	-20.6
-12.0	-19.6	-2.5	-17.1
-11.5	-32.0	-2.0	-29.9
-11.0	-20.3	-1.5	-18.8
-10.5	-23.1	-1.0	-22.0
-10.0	-19.9	-0.5	-19.4
-9.5	-31.1	0.1	-31.1
-9.0	-23.8	0.4	-24.2
-8.5	-15.0	0.4	-15.4
-8.0	-20.8	0.4	-21.1
-7.5	-15.3	0.4	-15.6
-7.0	-17.4	0.4	-17.8
-6.5	-14.3	1.2	-15.4
-6.0	-17.3	2.0	-19.4
-5.5	-23.3	3.0	-26.3
-5.0	-8.0	4.0	-12.1
-4.5	-8.3	5.2	-13.4
-4.0	-19.6	6.4	-26.1
-3.5	-9.3	7.9	-17.2
-3.0	-1.3		
-2.5	0.0		
-2.0	-5.2		
-1.5	2.3		
-1.0	8.0		
-0.5	23.9		
0.0	39.5		

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	39.5		
0.5	25.0		
1.0	5.5		
1.5	-4.5		
2.0	-5.2		
2.5	-2.6		
3.0	-17.6		
3.5	1.4	7.9	-6.5
4.0	-1.3	6.4	-7.7
4.5	-8.3	5.2	-13.5
5.0	-5.6	4.0	-9.6
5.5	-21.6	3.0	-24.6
6.0	-14.5	2.0	-16.6
6.5	-12.2	1.2	-13.4
7.0	-11.2	0.4	-11.6
7.5	-18.9	0.4	-19.2
8.0	-20.7	0.4	-21.1
8.5	-27.0	0.4	-27.3
9.0	-22.4	0.4	-22.8
9.5	-16.4	0.1	-16.4
10.0	-19.7	-0.5	-19.2
10.5	-17.5	-1.0	-16.5
11.0	-15.7	-1.5	-14.1
11.5	-14.6	-2.0	-12.6
12.0	-14.0	-2.5	-11.5
12.5	-14.6	-2.9	-11.7
13.0	-21.5	-3.3	-18.2
13.5	-23.4	-3.8	-19.6
14.0	-26.0	-4.2	-21.9
14.5	-21.9	-4.5	-17.4
15.0	-25.4	-4.9	-20.5
15.5	-24.1	-5.3	-18.9
16.0	-34.6	-5.6	-29.0
16.5	-26.9	-5.9	-21.0
17.0	-32.4	-6.3	-26.1
17.5	-32.5	-6.6	-25.9
18.0	-34.0	-6.9	-27.1
18.5	-23.2	-7.2	-16.1
19.0	-23.2	-7.5	-15.8
19.5	-30.2	-7.8	-22.5
20.0	-39.9	-8.0	-31.9
20.5	-31.9	-8.3	-23.6
21.0	-28.0	-8.6	-19.4
21.5	-28.1	-8.8	-19.2
22.0	-25.7	-9.1	-16.6
22.5	-30.1	-9.3	-20.8
23.0	-40.0	-9.5	-30.5
23.5	-34.6	-9.8	-24.8
24.0	-34.6	-10.0	-24.6
24.5	-37.7	-10.2	-27.5
25.0	-26.1	-10.4	-15.6
25.5	-30.0	-10.7	-19.4
26.0	-28.6	-10.9	-17.7
26.5	-30.7	-11.1	-19.6
27.0	-26.6	-11.3	-15.3
27.5	-35.7	-11.5	-24.2
28.0	-33.2	-11.7	-21.6
28.5	-34.8	-11.9	-23.0
29.0	-38.5	-12.1	-26.5
29.5	-30.9	-12.2	-18.7
30.0	-28.4	-12.4	-16.0

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-15.2	-0.5	-14.7
-9.9	-13.3	-0.4	-12.9
-9.8	-12.3	-0.3	-12.0
-9.7	-14.8	-0.2	-14.6
-9.6	-18.3	-0.1	-18.2
-9.5	-25.4	0.1	-25.4
-9.4	-23.7	0.2	-23.8
-9.3	-21.2	0.3	-21.5
-9.2	-21.6	0.4	-22.0
-9.1	-23.2	0.4	-23.6
-9.0	-17.7	0.4	-18.0
-8.9	-14.9	0.4	-15.2
-8.8	-16.1	0.4	-16.5
-8.7	-18.4	0.4	-18.7
-8.6	-21.5	0.4	-21.9
-8.5	-17.3	0.4	-17.7
-8.4	-15.8	0.4	-16.1
-8.3	-15.5	0.4	-15.8
-8.2	-16.6	0.4	-17.0
-8.1	-18.8	0.4	-19.1
-8.0	-22.1	0.4	-22.5
-7.9	-21.5	0.4	-21.9
-7.8	-25.2	0.4	-25.6
-7.7	-24.8	0.4	-25.2
-7.6	-20.1	0.4	-20.5
-7.5	-16.0	0.4	-16.4
-7.4	-12.9	0.4	-13.3
-7.3	-13.0	0.4	-13.3
-7.2	-15.4	0.4	-15.8
-7.1	-22.3	0.4	-22.7
-7.0	-15.6	0.4	-16.0
-6.9	-13.0	0.5	-13.5
-6.8	-18.4	0.7	-19.1
-6.7	-15.7	0.8	-16.5
-6.6	-14.7	1.0	-15.7
-6.5	-13.8	1.2	-15.0
-6.4	-12.0	1.3	-13.4
-6.3	-10.3	1.5	-11.8
-6.2	-11.6	1.7	-13.3
-6.1	-13.6	1.9	-15.4
-6.0	-15.6	2.0	-17.6
-5.9	-16.2	2.2	-18.4
-5.8	-17.6	2.4	-20.0
-5.7	-16.2	2.6	-18.8
-5.6	-18.9	2.8	-21.7
-5.5	-19.4	3.0	-22.3
-5.4	-16.4	3.2	-19.6
-5.3	-11.7	3.4	-15.1
-5.2	-9.4	3.6	-13.0
-5.1	-8.2	3.8	-12.0
-5.0	-7.9	4.0	-11.9
-4.9	-7.0	4.2	-11.2
-4.8	-7.2	4.5	-11.6
-4.7	-10.8	4.7	-15.5
-4.6	-20.9	4.9	-25.8
-4.5	-7.7	5.2	-12.9
-4.4	-3.6	5.4	-9.0
-4.3	-2.8	5.7	-8.4
-4.2	-3.2	5.9	-9.2
-4.1	-7.8	6.2	-13.9

27.55 GHz @ -11.84 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.2		
0.1	39.4		
0.2	37.2		
0.3	33.6		
0.4	29.5		
0.5	26.1		
0.6	21.9		
0.7	12.8		
0.8	0.0		
0.9	7.4		
1.0	9.3		
1.1	10.8		
1.2	9.0		
1.3	0.8		
1.4	-3.5		
1.5	-2.8		
1.6	0.9		
1.7	4.9		
1.8	4.6		
1.9	0.3		
2.0	-2.3		
2.1	-2.5		
2.2	-0.6		
2.3	1.7		
2.4	1.2		
2.5	-1.2		
2.6	-3.2		
2.7	-7.6		
2.8	-14.8		
2.9	-7.2		
3.0	-9.2		
3.1	-17.4		
3.2	-8.0		
3.3	-8.4		
3.4	-2.6		
3.5	1.4	7.9	-6.5
3.6	1.7	7.6	-5.9
3.7	-0.1	7.3	-7.4
3.8	-4.5	7.0	-11.5
3.9	-2.4	6.7	-9.1
4.0	0.4	6.4	-6.0
4.1	0.2	6.2	-6.0
4.2	-1.5	5.9	-7.5
4.3	-3.3	5.7	-8.9
4.4	-3.9	5.4	-9.3
4.5	-5.9	5.2	-11.1
4.6	-8.4	4.9	-13.3
4.7	-8.8	4.7	-13.5
4.8	-7.0	4.5	-11.5
4.9	-7.1	4.2	-11.3
5.0	-6.2	4.0	-10.2
5.1	-4.8	3.8	-8.6
5.2	-3.9	3.6	-7.5
5.3	-4.0	3.4	-7.4
5.4	-7.8	3.2	-11.0
5.5	-18.1	3.0	-21.1
5.6	-18.6	2.8	-21.4
5.7	-16.5	2.6	-19.1
5.8	-15.6	2.4	-18.0
5.9	-13.0	2.2	-15.2

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	-14.4	6.4	-20.9
-3.9	-4.1	6.7	-10.8
-3.8	-1.9	7.0	-8.9
-3.7	-2.1	7.3	-9.4
-3.6	-3.9	7.6	-11.5
-3.5	-6.9	7.9	-14.8
-3.4	-18.3		
-3.3	-12.6		
-3.2	-15.0		
-3.1	-8.7		
-3.0	-0.6		
-2.9	1.5		
-2.8	1.2		
-2.7	-1.5		
-2.6	-1.5		
-2.5	1.1		
-2.4	2.1		
-2.3	2.2		
-2.2	0.1		
-2.1	-2.5		
-2.0	-4.4		
-1.9	-5.8		
-1.8	-5.6		
-1.7	0.5		
-1.6	4.0		
-1.5	4.5		
-1.4	2.7		
-1.3	7.1		
-1.2	11.4		
-1.1	11.9		
-1.0	9.3		
-0.9	8.5		
-0.8	13.0		
-0.7	17.0		
-0.6	21.0		
-0.5	24.0		
-0.4	28.5		
-0.3	34.1		
-0.2	38.0		
-0.1	39.9		
0.0	40.2		

6.0	-14.1	2.0	-16.2
6.1	-15.8	1.9	-17.6
6.2	-13.2	1.7	-14.9
6.3	-10.5	1.5	-12.0
6.4	-10.3	1.3	-11.6
6.5	-9.6	1.2	-10.8
6.6	-10.1	1.0	-11.1
6.7	-9.4	0.8	-10.2
6.8	-7.5	0.7	-8.2
6.9	-7.0	0.5	-7.5
7.0	-8.5	0.4	-8.8
7.1	-14.6	0.4	-15.0
7.2	-23.7	0.4	-24.0
7.3	-23.8	0.4	-24.2
7.4	-20.2	0.4	-20.6
7.5	-16.8	0.4	-17.2
7.6	-15.7	0.4	-16.1
7.7	-16.4	0.4	-16.8
7.8	-17.0	0.4	-17.4
7.9	-19.4	0.4	-19.7
8.0	-16.1	0.4	-16.5
8.1	-14.7	0.4	-15.1
8.2	-19.3	0.4	-19.6
8.3	-23.9	0.4	-24.2
8.4	-18.7	0.4	-19.0
8.5	-17.3	0.4	-17.7
8.6	-18.8	0.4	-19.2
8.7	-20.8	0.4	-21.2
8.8	-24.1	0.4	-24.5
8.9	-25.7	0.4	-26.1
9.0	-26.0	0.4	-26.3
9.1	-25.6	0.4	-26.0
9.2	-20.5	0.4	-20.9
9.3	-21.9	0.3	-22.1
9.4	-36.2	0.2	-36.4
9.5	-22.3	0.1	-22.4
9.6	-16.9	-0.1	-16.9
9.7	-13.5	-0.2	-13.3
9.8	-12.9	-0.3	-12.7
9.9	-13.6	-0.4	-13.2
10.0	-15.2	-0.5	-14.7

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.55 GHz @ -11.84 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-19.3	-12.6	-6.7
-9.9	-22.7	-12.6	-10.0
-9.8	-24.4	-12.6	-11.7
-9.7	-28.9	-12.6	-16.3
-9.6	-26.9	-12.6	-14.3
-9.5	-28.7	-12.6	-16.1
-9.4	-26.2	-12.6	-13.6
-9.3	-23.2	-12.6	-10.5
-9.2	-21.9	-12.6	-9.2
-9.1	-18.7	-12.6	-6.0
-9.0	-18.1	-12.6	-5.5
-8.9	-18.8	-12.6	-6.2
-8.8	-20.4	-12.6	-7.8
-8.7	-24.6	-12.6	-12.0
-8.6	-30.2	-12.6	-17.5
-8.5	-28.6	-12.6	-15.9
-8.4	-35.5	-12.6	-22.8
-8.3	-28.9	-12.6	-16.3
-8.2	-24.1	-12.6	-11.5
-8.1	-20.6	-12.6	-8.0
-8.0	-18.5	-12.6	-5.9
-7.9	-19.8	-12.6	-7.1
-7.8	-19.4	-12.6	-6.8
-7.7	-19.0	-12.6	-6.4
-7.6	-18.4	-12.6	-5.8
-7.5	-18.6	-12.6	-5.9
-7.4	-18.2	-12.6	-5.5
-7.3	-16.2	-12.6	-3.5
-7.2	-16.8	-12.6	-4.1
-7.1	-17.9	-12.6	-5.2
-7.0	-19.4	-12.6	-6.8
-6.9	-18.5	-12.5	-6.0
-6.8	-18.0	-12.3	-5.6
-6.7	-19.4	-12.2	-7.2
-6.6	-20.6	-12.0	-8.6
-6.5	-19.1	-11.8	-7.3
-6.4	-17.2	-11.7	-5.5
-6.3	-15.5	-11.5	-4.0
-6.2	-17.2	-11.3	-5.9
-6.1	-19.5	-11.1	-8.4
-6.0	-23.7	-11.0	-12.7
-5.9	-17.0	-10.8	-6.2
-5.8	-15.3	-10.6	-4.7
-5.7	-17.1	-10.4	-6.7
-5.6	-23.2	-10.2	-13.0
-5.5	-20.0	-10.0	-10.0
-5.4	-18.7	-9.8	-8.9
-5.3	-20.4	-9.6	-10.8
-5.2	-28.5	-9.4	-19.1
-5.1	-27.7	-9.2	-18.6
-5.0	-20.0	-9.0	-11.0
-4.9	-20.0	-8.8	-11.3
-4.8	-24.0	-8.5	-15.5
-4.7	-23.6	-8.3	-15.3
-4.6	-20.0	-8.1	-12.0
-4.5	-20.0	-7.8	-12.2
-4.4	-21.4	-7.6	-13.8
-4.3	-26.4	-7.3	-19.1
-4.2	-27.1	-7.1	-20.0
-4.1	-17.5	-6.8	-10.6

27.55 GHz @ -11.84 dBW / 40 kHz in X-pol Az RHCP

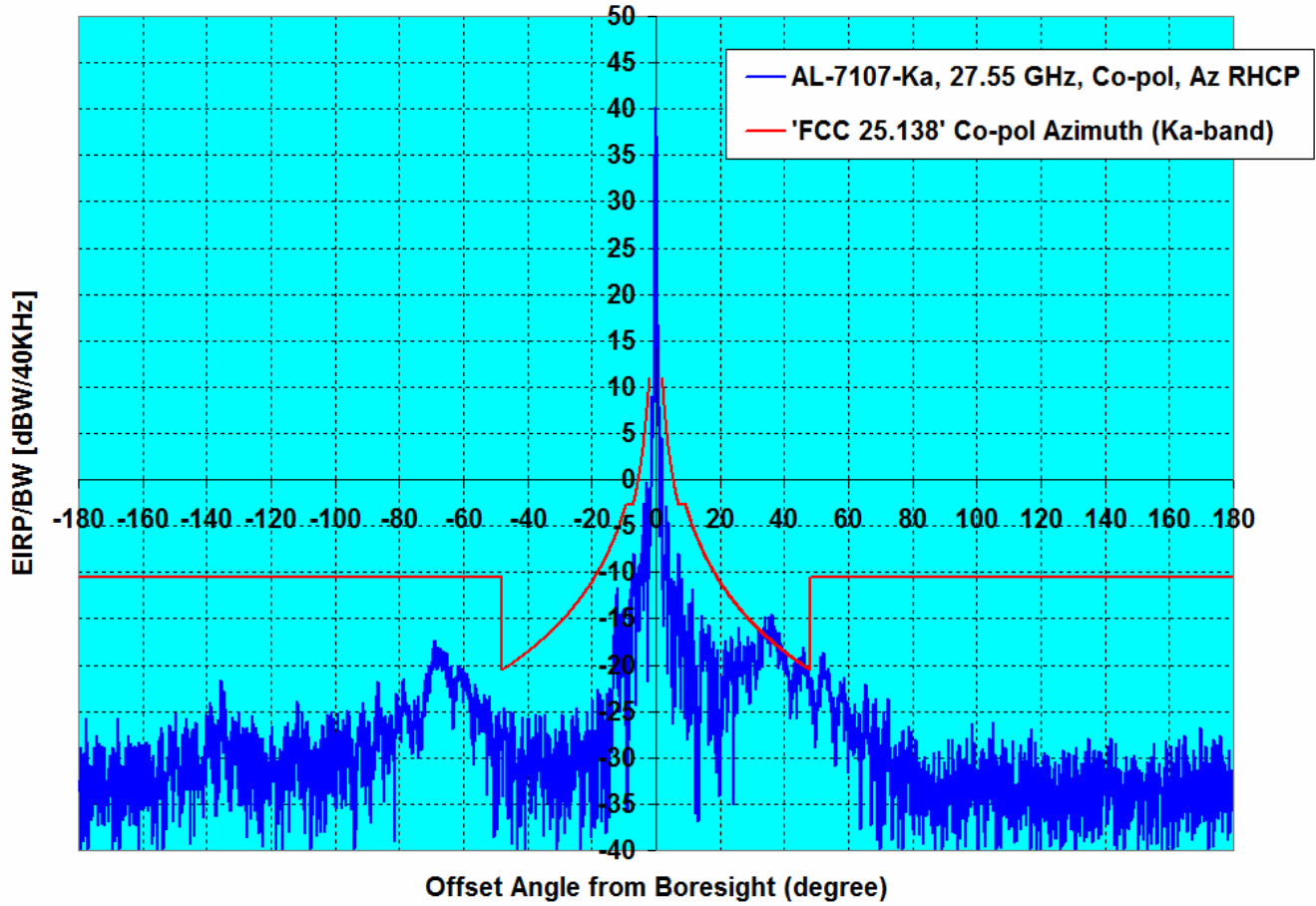
Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	8.4		
0.1	7.0		
0.2	-1.9		
0.3	10.4		
0.4	13.3		
0.5	13.4		
0.6	10.4		
0.7	3.1		
0.8	-9.9		
0.9	-10.0		
1.0	-5.0		
1.1	-1.1		
1.2	-0.9		
1.3	-5.0		
1.4	-10.2		
1.5	-7.9		
1.6	-10.0		
1.7	-15.4		
1.8	-15.0		
1.9	-12.0		
2.0	-11.3	1.0	-12.3
2.1	-11.8	0.4	-12.3
2.2	-18.9	-0.1	-18.9
2.3	-23.9	-0.5	-23.3
2.4	-16.1	-1.0	-15.1
2.5	-15.2	-1.4	-13.7
2.6	-17.3	-1.9	-15.4
2.7	-25.0	-2.3	-22.8
2.8	-15.0	-2.7	-12.3
2.9	-12.3	-3.1	-9.2
3.0	-14.1	-3.4	-10.7
3.1	-20.5	-3.8	-16.7
3.2	-21.7	-4.1	-17.6
3.3	-19.7	-4.5	-15.2
3.4	-26.6	-4.8	-21.8
3.5	-20.8	-5.1	-15.7
3.6	-16.6	-5.4	-11.2
3.7	-20.8	-5.7	-15.1
3.8	-28.0	-6.0	-22.0
3.9	-21.2	-6.3	-15.0
4.0	-19.5	-6.6	-12.9
4.1	-21.5	-6.8	-14.7
4.2	-21.8	-7.1	-14.7
4.3	-21.5	-7.3	-14.2
4.4	-20.5	-7.6	-12.9
4.5	-20.2	-7.8	-12.4
4.6	-19.6	-8.1	-11.6
4.7	-17.4	-8.3	-9.1
4.8	-16.6	-8.5	-8.1
4.9	-20.6	-8.8	-11.9
5.0	-30.4	-9.0	-21.4
5.1	-35.6	-9.2	-26.4
5.2	-29.3	-9.4	-19.9
5.3	-22.9	-9.6	-13.3
5.4	-19.7	-9.8	-9.9
5.5	-19.2	-10.0	-9.2
5.6	-19.1	-10.2	-8.9
5.7	-16.5	-10.4	-6.1
5.8	-15.3	-10.6	-4.7
5.9	-19.2	-10.8	-8.5

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-15.6	-6.6	-9.0
-3.9	-17.2	-6.3	-10.9
-3.8	-20.1	-6.0	-14.2
-3.7	-13.9	-5.7	-8.2
-3.6	-12.9	-5.4	-7.5
-3.5	-13.7	-5.1	-8.6
-3.4	-18.8	-4.8	-14.0
-3.3	-16.2	-4.5	-11.8
-3.2	-13.1	-4.1	-9.0
-3.1	-16.5	-3.8	-12.7
-3.0	-26.8	-3.4	-23.4
-2.9	-18.7	-3.1	-15.7
-2.8	-22.3	-2.7	-19.7
-2.7	-20.4	-2.3	-18.1
-2.6	-15.3	-1.9	-13.4
-2.5	-15.5	-1.4	-14.1
-2.4	-15.4	-1.0	-14.4
-2.3	-10.9	-0.5	-10.4
-2.2	-9.9	-0.1	-9.8
-2.1	-10.2	0.4	-10.6
-2.0	-10.3	1.0	-11.2
-1.9	-17.4		
-1.8	-14.4		
-1.7	-7.2		
-1.6	-6.1		
-1.5	-4.6		
-1.4	-1.3		
-1.3	-2.1		
-1.2	-6.0		
-1.1	-0.5		
-1.0	3.5		
-0.9	4.3		
-0.8	4.6		
-0.7	7.9		
-0.6	11.9		
-0.5	14.7		
-0.4	15.4		
-0.3	14.3		
-0.2	9.6		
-0.1	4.0		
0.0	8.4		

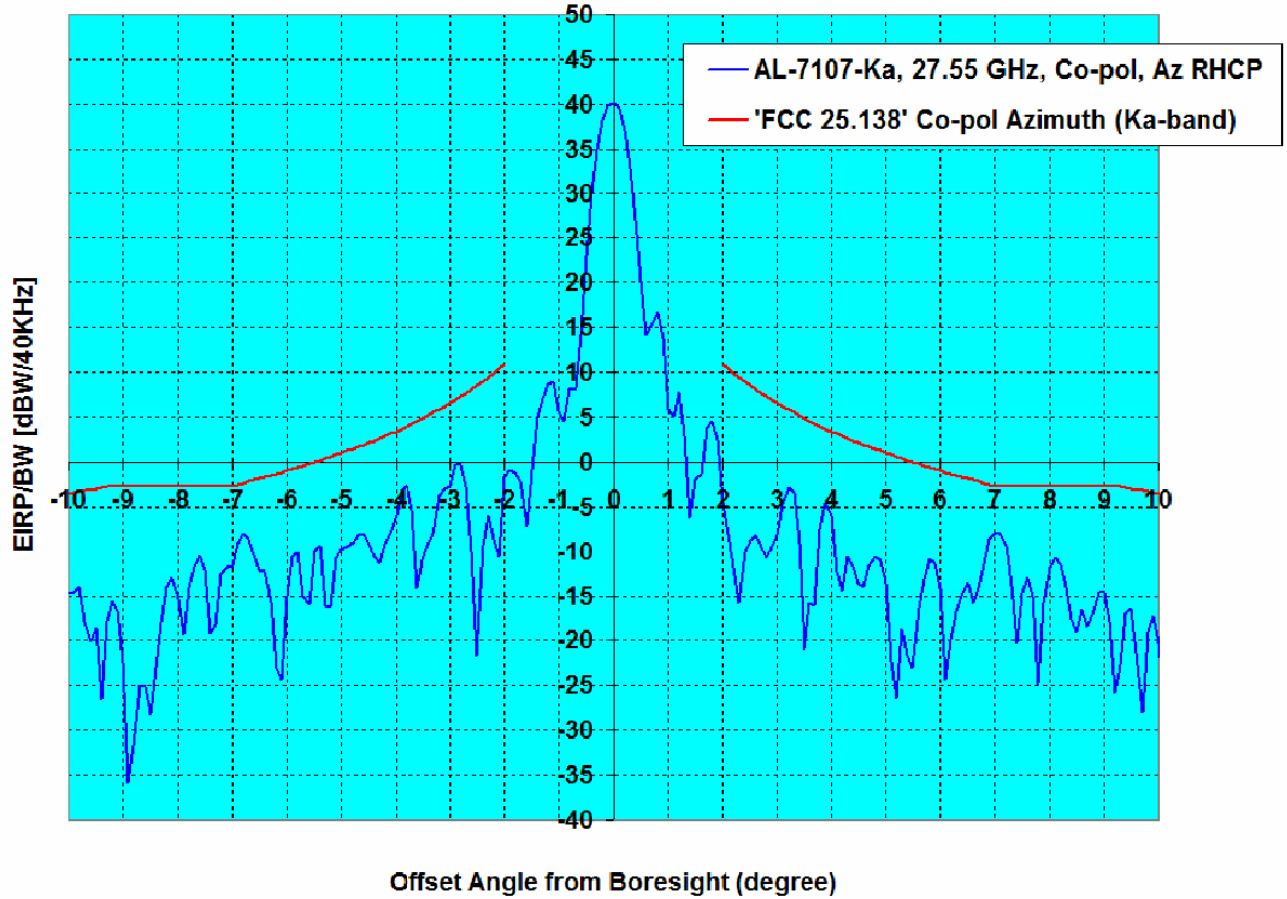
6.0	-20.7	-11.0	-9.8
6.1	-23.2	-11.1	-12.1
6.2	-27.8	-11.3	-16.5
6.3	-30.2	-11.5	-18.7
6.4	-26.8	-11.7	-15.1
6.5	-26.1	-11.8	-14.3
6.6	-21.4	-12.0	-9.4
6.7	-19.3	-12.2	-7.1
6.8	-19.7	-12.3	-7.4
6.9	-22.5	-12.5	-10.0
7.0	-23.4	-12.6	-10.8
7.1	-24.9	-12.6	-12.3
7.2	-32.6	-12.6	-20.0
7.3	-29.2	-12.6	-16.5
7.4	-28.4	-12.6	-15.8
7.5	-29.0	-12.6	-16.4
7.6	-21.9	-12.6	-9.2
7.7	-20.4	-12.6	-7.8
7.8	-22.8	-12.6	-10.1
7.9	-26.1	-12.6	-13.4
8.0	-27.6	-12.6	-15.0
8.1	-29.3	-12.6	-16.7
8.2	-31.0	-12.6	-18.4
8.3	-29.5	-12.6	-16.8
8.4	-25.5	-12.6	-12.9
8.5	-30.2	-12.6	-17.6
8.6	-37.1	-12.6	-24.4
8.7	-25.7	-12.6	-13.0
8.8	-26.8	-12.6	-14.2
8.9	-20.5	-12.6	-7.9
9.0	-18.1	-12.6	-5.5
9.1	-17.2	-12.6	-4.5
9.2	-18.8	-12.6	-6.1
9.3	-18.8	-12.6	-6.2
9.4	-22.4	-12.6	-9.8
9.5	-18.6	-12.6	-6.0
9.6	-17.4	-12.6	-4.8
9.7	-16.3	-12.6	-3.7
9.8	-17.7	-12.6	-5.1
9.9	-23.4	-12.6	-10.8
10.0	-24.5	-12.6	-11.8

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.84 dBW/40KHz to Input and
 40.16 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in Az RHCP
 Min BW of 7.02 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Freq., Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (2° to 10°)	± (10° to 180°)	%
AL-7107-Ka, 27.55 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.00	-11.84	-5.28	3.00	1.63

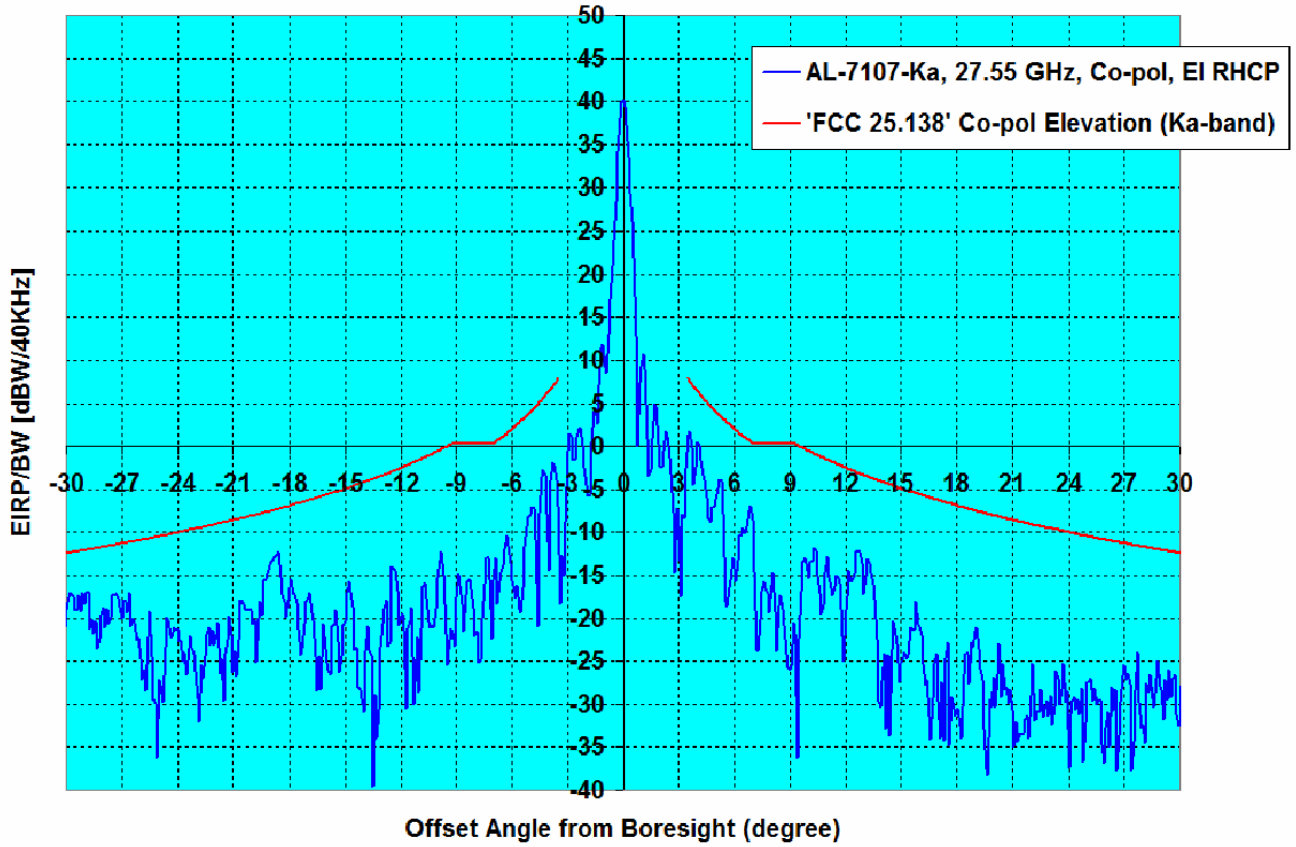
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.84 dBW/40KHz to Input and
 40.16 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in Az RHCP
 Min BW of 7.02 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Freq., Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (2° to 10°)	± (10° to 180°)	%
AL-7107-Ka, 27.55 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.00	-11.84	-5.28	3.00	1.63

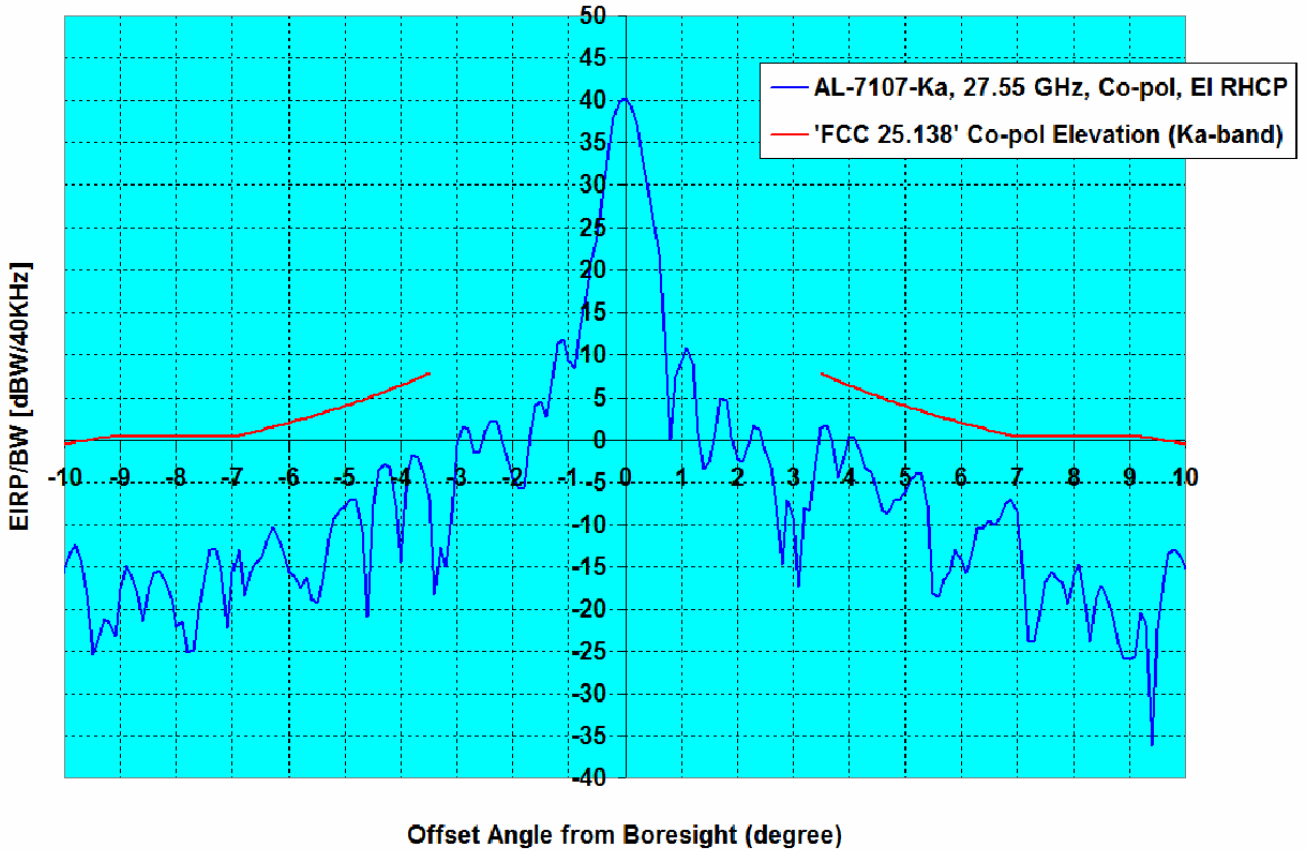
Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd, Co-pol, Elevation RHCP

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.84 dBW/40KHz to Input and
 40.16 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in EI RHCP
 Min BW of 7.02 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 27.55 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.00	-11.84	-5.86	-4.67	0.00

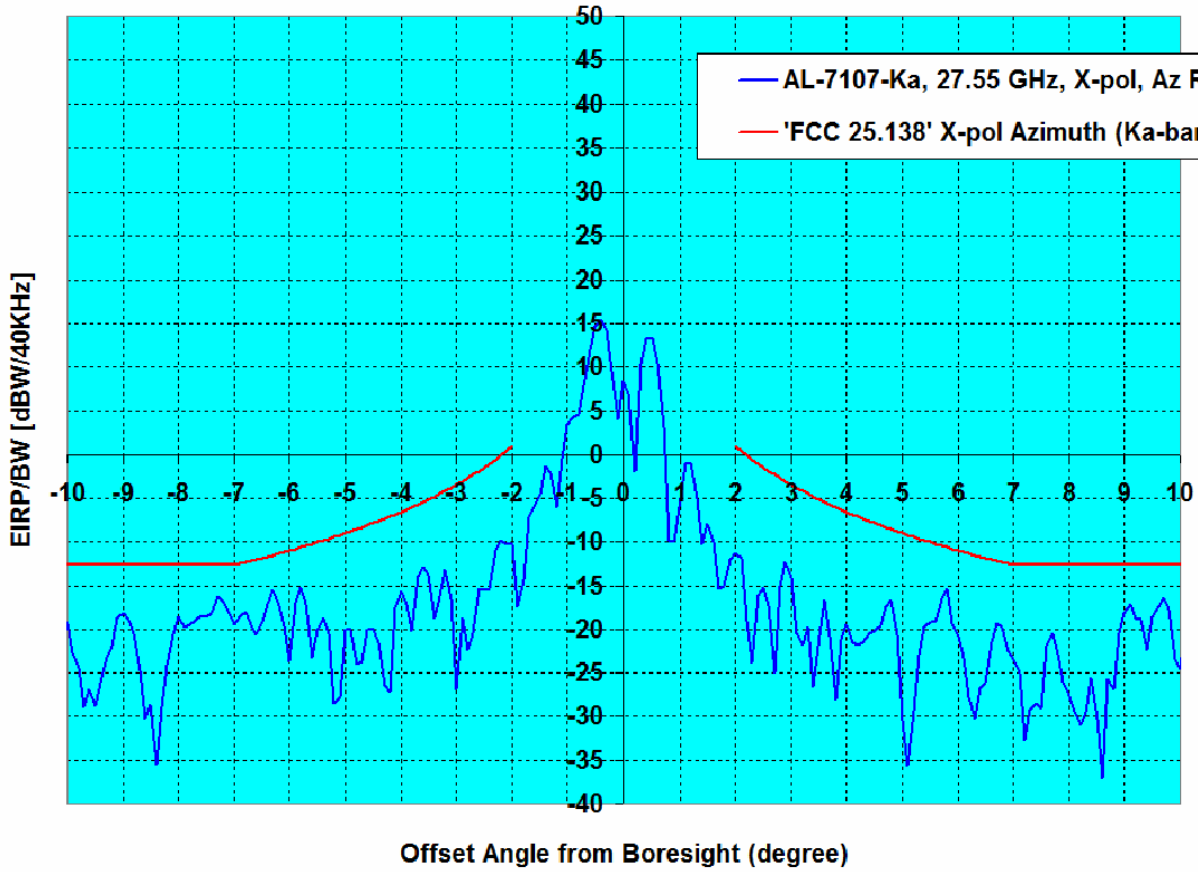
**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.84 dBW/40KHz to Input and
40.16 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in EI RHCP
Min BW of 7.02 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 27.55 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.00	-11.84	-5.86	-4.67	0.00

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd, X-pol, Azimuth RHCP

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -11.84 dBW/40KHz to Input and
 40.16 dBW/40KHz in the Output of AL-7107-Ka Antenna at 27.55 GHz in Az RHCP
 Min BW of 7.02 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation		Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]				± (2° to 7°)	± (2° to 9.2°)	
AL-7107-Ka, 27.55 GHz, X-pol, Az RHCP	'FCC 25.138' X-pol Azimuth (Ka-band)		52.00	-11.84	-4.04	-3.52	0.00

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-179.0	-34.9	-10.5	-24.4
-178.0	-36.9	-10.5	-26.4
-177.0	-30.3	-10.5	-19.8
-176.0	-39.1	-10.5	-28.6
-175.0	-30.1	-10.5	-19.6
-174.0	-39.1	-10.5	-28.6
-173.0	-33.4	-10.5	-22.9
-172.0	-35.9	-10.5	-25.4
-171.0	-30.3	-10.5	-19.8
-170.0	-39.1	-10.5	-28.6
-169.0	-37.1	-10.5	-26.6
-168.0	-31.1	-10.5	-20.6
-167.0	-32.1	-10.5	-21.6
-166.0	-31.7	-10.5	-21.2
-165.0	-37.3	-10.5	-26.8
-164.0	-39.1	-10.5	-28.6
-163.0	-38.3	-10.5	-27.8
-162.0	-34.0	-10.5	-23.5
-161.0	-34.3	-10.5	-23.8
-160.0	-34.3	-10.5	-23.8
-159.0	-37.1	-10.5	-26.6
-158.0	-34.5	-10.5	-24.0
-157.0	-39.1	-10.5	-28.6
-156.0	-35.5	-10.5	-25.0
-155.0	-28.4	-10.5	-17.9
-154.0	-35.5	-10.5	-25.0
-153.0	-38.2	-10.5	-27.7
-152.0	-30.2	-10.5	-19.7
-151.0	-26.3	-10.5	-15.8
-150.0	-25.4	-10.5	-14.9
-149.0	-27.4	-10.5	-16.9
-148.0	-39.1	-10.5	-28.6
-147.0	-30.2	-10.5	-19.7
-146.0	-29.0	-10.5	-18.5
-145.0	-33.2	-10.5	-22.7
-144.0	-28.8	-10.5	-18.3
-143.0	-30.4	-10.5	-19.9
-142.0	-28.1	-10.5	-17.6
-141.0	-23.8	-10.5	-13.3
-140.0	-27.3	-10.5	-16.8
-139.0	-33.7	-10.5	-23.2
-138.0	-35.7	-10.5	-25.2
-137.0	-29.1	-10.5	-18.6
-136.0	-32.4	-10.5	-21.9
-135.0	-32.4	-10.5	-21.9
-134.0	-36.9	-10.5	-26.4
-133.0	-37.1	-10.5	-26.6
-132.0	-39.1	-10.5	-28.6
-131.0	-39.1	-10.5	-28.6
-130.0	-35.0	-10.5	-24.5
-129.0	-30.6	-10.5	-20.1
-128.0	-39.1	-10.5	-28.6
-127.0	-35.1	-10.5	-24.6
-126.0	-30.1	-10.5	-19.6
-125.0	-39.1	-10.5	-28.6
-124.0	-30.5	-10.5	-20.0
-123.0	-38.6	-10.5	-28.1
-122.0	-28.1	-10.5	-17.6
-121.0	-31.9	-10.5	-21.4
-120.0	-34.8	-10.5	-24.3

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.9		
1.0	5.5		
2.0	-1.0	11.0	-12.0
3.0	-11.1	6.6	-17.7
4.0	-19.4	3.4	-22.9
5.0	-12.8	1.0	-13.8
6.0	-21.7	-1.0	-20.7
7.0	-11.6	-2.6	-9.0
8.0	-14.4	-2.6	-11.8
9.0	-21.6	-2.6	-19.0
10.0	-15.1	-3.5	-11.6
11.0	-13.1	-4.5	-8.6
12.0	-15.0	-5.5	-9.5
13.0	-17.1	-6.3	-10.7
14.0	-25.2	-7.2	-18.0
15.0	-19.6	-7.9	-11.7
16.0	-28.0	-8.6	-19.4
17.0	-38.0	-9.3	-28.7
18.0	-25.8	-9.9	-16.0
19.0	-19.8	-10.5	-9.4
20.0	-28.5	-11.0	-17.4
21.0	-29.7	-11.6	-18.1
22.0	-17.5	-12.1	-5.4
23.0	-19.6	-12.5	-7.0
24.0	-21.8	-13.0	-8.8
25.0	-26.5	-13.4	-13.0
26.0	-20.5	-13.9	-6.6
27.0	-18.9	-14.3	-4.6
28.0	-20.2	-14.7	-5.5
29.0	-19.1	-15.1	-4.0
30.0	-19.9	-15.4	-4.5
31.0	-18.0	-15.8	-2.2
32.0	-17.0	-16.1	-0.8
33.0	-15.5	-16.5	1.0
34.0	-17.1	-16.8	-0.3
35.0	-19.7	-17.1	-2.6
36.0	-16.1	-17.4	1.3
37.0	-19.2	-17.7	-1.5
38.0	-16.6	-18.0	1.4
39.0	-18.6	-18.3	-0.3
40.0	-19.6	-18.6	-1.0
41.0	-22.1	-18.8	-3.2
42.0	-21.0	-19.1	-1.9
43.0	-22.7	-19.3	-3.4
44.0	-21.8	-19.6	-2.2
45.0	-20.5	-19.8	-0.6
46.0	-18.3	-20.1	1.8
47.0	-20.8	-20.3	-0.5
48.0	-26.7	-20.5	-6.2
49.0	-25.4	-10.5	-14.9
50.0	-24.1	-10.5	-13.6
51.0	-22.4	-10.5	-11.9
52.0	-21.9	-10.5	-11.4
53.0	-25.2	-10.5	-14.7
54.0	-25.7	-10.5	-15.2
55.0	-33.7	-10.5	-23.2
56.0	-28.9	-10.5	-18.4
57.0	-27.0	-10.5	-16.5
58.0	-27.2	-10.5	-16.7
59.0	-31.0	-10.5	-20.5

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-31.8	-10.5	-21.3
-118.0	-34.0	-10.5	-23.5
-117.0	-32.8	-10.5	-22.3
-116.0	-33.8	-10.5	-23.3
-115.0	-31.7	-10.5	-21.2
-114.0	-30.9	-10.5	-20.4
-113.0	-38.9	-10.5	-28.4
-112.0	-37.4	-10.5	-26.9
-111.0	-28.3	-10.5	-17.8
-110.0	-30.8	-10.5	-20.3
-109.0	-29.6	-10.5	-19.1
-108.0	-26.0	-10.5	-15.5
-107.0	-34.1	-10.5	-23.6
-106.0	-38.0	-10.5	-27.5
-105.0	-33.9	-10.5	-23.4
-104.0	-33.8	-10.5	-23.3
-103.0	-35.4	-10.5	-24.9
-102.0	-34.0	-10.5	-23.5
-101.0	-38.9	-10.5	-28.4
-100.0	-27.7	-10.5	-17.2
-99.0	-26.6	-10.5	-16.1
-98.0	-29.4	-10.5	-18.9
-97.0	-31.1	-10.5	-20.6
-96.0	-22.7	-10.5	-12.2
-95.0	-25.6	-10.5	-15.1
-94.0	-29.4	-10.5	-18.9
-93.0	-30.7	-10.5	-20.2
-92.0	-27.5	-10.5	-17.0
-91.0	-26.4	-10.5	-15.9
-90.0	-26.5	-10.5	-16.0
-89.0	-26.9	-10.5	-16.4
-88.0	-32.0	-10.5	-21.5
-87.0	-24.9	-10.5	-14.4
-86.0	-25.9	-10.5	-15.4
-85.0	-26.0	-10.5	-15.5
-84.0	-26.7	-10.5	-16.2
-83.0	-26.2	-10.5	-15.7
-82.0	-24.7	-10.5	-14.2
-81.0	-28.1	-10.5	-17.6
-80.0	-21.9	-10.5	-11.4
-79.0	-21.6	-10.5	-11.1
-78.0	-21.5	-10.5	-11.0
-77.0	-24.5	-10.5	-14.0
-76.0	-24.5	-10.5	-14.0
-75.0	-23.0	-10.5	-12.5
-74.0	-23.3	-10.5	-12.8
-73.0	-22.6	-10.5	-12.1
-72.0	-20.5	-10.5	-10.0
-71.0	-19.8	-10.5	-9.3
-70.0	-17.9	-10.5	-7.4
-69.0	-18.0	-10.5	-7.5
-68.0	-15.9	-10.5	-5.4
-67.0	-18.2	-10.5	-7.7
-66.0	-17.7	-10.5	-7.2
-65.0	-18.6	-10.5	-8.1
-64.0	-18.9	-10.5	-8.4
-63.0	-19.9	-10.5	-9.4
-62.0	-20.7	-10.5	-10.2
-61.0	-21.3	-10.5	-10.8
-60.0	-20.4	-10.5	-9.9
-59.0	-21.8	-10.5	-11.3
-58.0	-22.6	-10.5	-12.1
-57.0	-26.3	-10.5	-15.8

60.0	-29.3	-10.5	-18.8
61.0	-38.0	-10.5	-27.5
62.0	-32.0	-10.5	-21.5
63.0	-24.3	-10.5	-13.8
64.0	-31.0	-10.5	-20.5
65.0	-23.7	-10.5	-13.2
66.0	-31.6	-10.5	-21.1
67.0	-30.4	-10.5	-19.9
68.0	-37.4	-10.5	-26.9
69.0	-27.6	-10.5	-17.1
70.0	-36.1	-10.5	-25.6
71.0	-36.6	-10.5	-26.1
72.0	-34.6	-10.5	-24.1
73.0	-27.5	-10.5	-17.0
74.0	-31.6	-10.5	-21.1
75.0	-31.0	-10.5	-20.5
76.0	-33.2	-10.5	-22.7
77.0	-32.5	-10.5	-22.0
78.0	-39.1	-10.5	-28.6
79.0	-34.7	-10.5	-24.2
80.0	-38.6	-10.5	-28.1
81.0	-38.0	-10.5	-27.5
82.0	-33.9	-10.5	-23.4
83.0	-39.1	-10.5	-28.6
84.0	-34.1	-10.5	-23.6
85.0	-39.1	-10.5	-28.6
86.0	-29.9	-10.5	-19.4
87.0	-36.8	-10.5	-26.3
88.0	-35.4	-10.5	-24.9
89.0	-39.1	-10.5	-28.6
90.0	-34.7	-10.5	-24.2
91.0	-34.2	-10.5	-23.7
92.0	-37.1	-10.5	-26.6
93.0	-39.1	-10.5	-28.6
94.0	-39.1	-10.5	-28.6
95.0	-33.4	-10.5	-22.9
96.0	-31.7	-10.5	-21.2
97.0	-33.2	-10.5	-22.7
98.0	-30.6	-10.5	-20.1
99.0	-35.4	-10.5	-24.9
100.0	-38.7	-10.5	-28.2
101.0	-33.6	-10.5	-23.1
102.0	-30.3	-10.5	-19.8
103.0	-34.8	-10.5	-24.3
104.0	-39.1	-10.5	-28.6
105.0	-39.1	-10.5	-28.6
106.0	-39.1	-10.5	-28.6
107.0	-33.4	-10.5	-22.9
108.0	-32.5	-10.5	-22.0
109.0	-35.0	-10.5	-24.5
110.0	-39.1	-10.5	-28.6
111.0	-31.7	-10.5	-21.2
112.0	-39.1	-10.5	-28.6
113.0	-39.1	-10.5	-28.6
114.0	-33.3	-10.5	-22.8
115.0	-32.8	-10.5	-22.3
116.0	-36.1	-10.5	-25.6
117.0	-37.4	-10.5	-26.9
118.0	-35.4	-10.5	-24.9
119.0	-33.9	-10.5	-23.4
120.0	-35.0	-10.5	-24.5
121.0	-32.0	-10.5	-21.5
122.0	-38.4	-10.5	-27.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-26.9	-10.5	-16.4
-55.0	-26.3	-10.5	-15.8
-54.0	-27.8	-10.5	-17.3
-53.0	-25.8	-10.5	-15.3
-52.0	-29.8	-10.5	-19.3
-51.0	-27.3	-10.5	-16.8
-50.0	-29.7	-10.5	-19.2
-49.0	-25.9	-10.5	-15.4
-48.0	-26.2	-20.5	-5.7
-47.0	-32.3	-20.3	-12.0
-46.0	-29.4	-20.1	-9.4
-45.0	-30.7	-19.8	-10.9
-44.0	-28.1	-19.6	-8.5
-43.0	-28.7	-19.3	-9.4
-42.0	-28.3	-19.1	-9.2
-41.0	-22.3	-18.8	-3.5
-40.0	-39.1	-18.6	-20.6
-39.0	-28.8	-18.3	-10.5
-38.0	-27.9	-18.0	-9.9
-37.0	-31.8	-17.7	-14.1
-36.0	-27.2	-17.4	-9.8
-35.0	-34.4	-17.1	-17.3
-34.0	-30.0	-16.8	-13.2
-33.0	-36.8	-16.5	-20.4
-32.0	-27.7	-16.1	-11.6
-31.0	-27.6	-15.8	-11.8
-30.0	-31.7	-15.4	-16.3
-29.0	-31.8	-15.1	-16.7
-28.0	-30.8	-14.7	-16.1
-27.0	-33.3	-14.3	-19.0
-26.0	-23.4	-13.9	-9.5
-25.0	-30.4	-13.4	-16.9
-24.0	-29.2	-13.0	-16.2
-23.0	-31.3	-12.5	-18.8
-22.0	-29.0	-12.1	-17.0
-21.0	-34.2	-11.6	-22.7
-20.0	-35.8	-11.0	-24.8
-19.0	-29.5	-10.5	-19.0
-18.0	-28.5	-9.9	-18.6
-17.0	-26.2	-9.3	-16.9
-16.0	-35.7	-8.6	-27.1
-15.0	-39.1	-7.9	-31.2
-14.0	-21.8	-7.2	-14.7
-13.0	-26.4	-6.3	-20.0
-12.0	-18.9	-5.5	-13.4
-11.0	-22.5	-4.5	-18.0
-10.0	-19.5	-3.5	-16.0
-9.0	-28.5	-2.6	-25.9
-8.0	-22.9	-2.6	-20.3
-7.0	-12.4	-2.6	-9.7
-6.0	-12.7	-1.0	-11.7
-5.0	-6.6	1.0	-7.6
-4.0	-2.1	3.4	-5.6
-3.0	-6.6	6.6	-13.2
-2.0	0.9	11.0	-10.1
-1.0	9.2		
0.0	40.9		

123.0	-33.0	-10.5	-22.5
124.0	-39.1	-10.5	-28.6
125.0	-32.6	-10.5	-22.1
126.0	-39.1	-10.5	-28.6
127.0	-39.1	-10.5	-28.6
128.0	-39.1	-10.5	-28.6
129.0	-34.7	-10.5	-24.2
130.0	-34.6	-10.5	-24.1
131.0	-30.8	-10.5	-20.3
132.0	-39.1	-10.5	-28.6
133.0	-37.4	-10.5	-26.9
134.0	-37.8	-10.5	-27.3
135.0	-34.0	-10.5	-23.5
136.0	-33.6	-10.5	-23.1
137.0	-36.7	-10.5	-26.2
138.0	-33.8	-10.5	-23.3
139.0	-39.1	-10.5	-28.6
140.0	-36.3	-10.5	-25.8
141.0	-35.5	-10.5	-25.0
142.0	-38.8	-10.5	-28.3
143.0	-37.9	-10.5	-27.4
144.0	-35.1	-10.5	-24.6
145.0	-37.7	-10.5	-27.2
146.0	-39.1	-10.5	-28.6
147.0	-39.1	-10.5	-28.6
148.0	-37.9	-10.5	-27.4
149.0	-35.0	-10.5	-24.5
150.0	-37.0	-10.5	-26.5
151.0	-39.1	-10.5	-28.6
152.0	-39.1	-10.5	-28.6
153.0	-33.7	-10.5	-23.2
154.0	-39.1	-10.5	-28.6
155.0	-39.1	-10.5	-28.6
156.0	-38.0	-10.5	-27.5
157.0	-39.1	-10.5	-28.6
158.0	-39.1	-10.5	-28.6
159.0	-35.5	-10.5	-25.0
160.0	-33.7	-10.5	-23.2
161.0	-31.0	-10.5	-20.5
162.0	-30.0	-10.5	-19.5
163.0	-37.2	-10.5	-26.7
164.0	-31.6	-10.5	-21.1
165.0	-35.0	-10.5	-24.5
166.0	-32.6	-10.5	-22.1
167.0	-39.1	-10.5	-28.6
168.0	-34.3	-10.5	-23.8
169.0	-35.5	-10.5	-25.0
170.0	-30.0	-10.5	-19.5
171.0	-34.1	-10.5	-23.6
172.0	-35.1	-10.5	-24.6
173.0	-34.1	-10.5	-23.6
174.0	-39.1	-10.5	-28.6
175.0	-39.1	-10.5	-28.6
176.0	-38.7	-10.5	-28.2
177.0	-38.8	-10.5	-28.3
178.0	-35.2	-10.5	-24.7
179.0	-35.5	-10.5	-25.0

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-19.5	-3.5	-16.0
-9.9	-19.0	-3.4	-15.6
-9.8	-18.8	-3.3	-15.6
-9.7	-17.8	-3.2	-14.6
-9.6	-21.8	-3.1	-18.7
-9.5	-19.3	-2.9	-16.3
-9.4	-15.4	-2.8	-12.6
-9.3	-13.5	-2.7	-10.8
-9.2	-14.1	-2.6	-11.5
-9.1	-18.3	-2.6	-15.6
-9.0	-28.5	-2.6	-25.9
-8.9	-23.2	-2.6	-20.6
-8.8	-25.2	-2.6	-22.6
-8.7	-27.2	-2.6	-24.6
-8.6	-26.2	-2.6	-23.6
-8.5	-26.7	-2.6	-24.1
-8.4	-26.1	-2.6	-23.4
-8.3	-39.1	-2.6	-36.5
-8.2	-27.1	-2.6	-24.4
-8.1	-24.8	-2.6	-22.2
-8.0	-22.9	-2.6	-20.3
-7.9	-17.2	-2.6	-14.6
-7.8	-16.1	-2.6	-13.4
-7.7	-16.3	-2.6	-13.7
-7.6	-15.9	-2.6	-13.3
-7.5	-16.9	-2.6	-14.3
-7.4	-15.6	-2.6	-13.0
-7.3	-13.4	-2.6	-10.8
-7.2	-16.7	-2.6	-14.0
-7.1	-22.3	-2.6	-19.7
-7.0	-12.4	-2.6	-9.7
-6.9	-10.1	-2.5	-7.7
-6.8	-8.8	-2.3	-6.5
-6.7	-7.5	-2.2	-5.3
-6.6	-7.3	-2.0	-5.3
-6.5	-9.0	-1.8	-7.2
-6.4	-11.7	-1.7	-10.0
-6.3	-13.2	-1.5	-11.8
-6.2	-11.1	-1.3	-9.8
-6.1	-10.2	-1.1	-9.1
-6.0	-12.7	-1.0	-11.7
-5.9	-12.4	-0.8	-11.6
-5.8	-10.6	-0.6	-10.1
-5.7	-11.3	-0.4	-10.9
-5.6	-16.7	-0.2	-16.5
-5.5	-17.0	0.0	-17.0
-5.4	-9.4	0.2	-9.6
-5.3	-9.2	0.4	-9.6
-5.2	-16.7	0.6	-17.3
-5.1	-11.8	0.8	-12.6
-5.0	-6.6	1.0	-7.6
-4.9	-6.3	1.2	-7.5
-4.8	-9.9	1.5	-11.4
-4.7	-14.3	1.7	-16.0
-4.6	-7.3	1.9	-9.2
-4.5	-5.2	2.2	-7.4
-4.4	-6.9	2.4	-9.3
-4.3	-11.3	2.7	-14.0
-4.2	-17.4	2.9	-20.3
-4.1	-10.6	3.2	-13.8

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	40.9		
0.1	40.3		
0.2	38.0		
0.3	34.0		
0.4	28.4		
0.5	22.7		
0.6	16.8		
0.7	17.5		
0.8	18.9		
0.9	16.2		
1.0	5.5		
1.1	7.5		
1.2	8.1		
1.3	2.5		
1.4	-1.0		
1.5	-1.1		
1.6	0.9		
1.7	5.0		
1.8	4.8		
1.9	1.9		
2.0	-1.0	11.0	-12.0
2.1	-6.3	10.4	-16.7
2.2	-15.3	9.9	-25.3
2.3	-4.4	9.5	-13.9
2.4	-3.0	9.0	-12.0
2.5	-4.2	8.6	-12.8
2.6	-6.8	8.1	-14.9
2.7	-13.1	7.7	-20.8
2.8	-21.3	7.3	-28.6
2.9	-14.0	6.9	-20.9
3.0	-11.1	6.6	-17.7
3.1	-6.8	6.2	-13.0
3.2	-6.4	5.9	-12.2
3.3	-8.9	5.5	-14.4
3.4	-11.2	5.2	-16.4
3.5	-16.1	4.9	-21.0
3.6	-13.4	4.6	-18.0
3.7	-6.5	4.3	-10.8
3.8	-6.5	4.0	-10.5
3.9	-11.4	3.7	-15.1
4.0	-19.4	3.4	-22.9
4.1	-14.4	3.2	-17.6
4.2	-16.8	2.9	-19.7
4.3	-11.1	2.7	-13.7
4.4	-8.8	2.4	-11.2
4.5	-7.6	2.2	-9.8
4.6	-7.1	1.9	-9.0
4.7	-8.4	1.7	-10.1
4.8	-17.9	1.5	-19.4
4.9	-15.6	1.2	-16.8
5.0	-12.8	1.0	-13.8
5.1	-18.1	0.8	-19.0
5.2	-14.2	0.6	-14.8
5.3	-12.2	0.4	-12.6
5.4	-16.1	0.2	-16.3
5.5	-16.7	0.0	-16.7
5.6	-11.4	-0.2	-11.2
5.7	-10.5	-0.4	-10.1
5.8	-10.2	-0.6	-9.6
5.9	-12.7	-0.8	-11.9

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-2.1	3.4	-5.6
-3.9	0.4	3.7	-3.3
-3.8	-1.1	4.0	-5.1
-3.7	-10.6	4.3	-14.9
-3.6	-4.6	4.6	-9.2
-3.5	-1.4	4.9	-6.3
-3.4	-2.6	5.2	-7.9
-3.3	-6.7	5.5	-12.2
-3.2	-3.8	5.9	-9.7
-3.1	-2.8	6.2	-9.0
-3.0	-6.6	6.6	-13.2
-2.9	-5.0	6.9	-11.9
-2.8	-2.0	7.3	-9.3
-2.7	-3.1	7.7	-10.8
-2.6	-9.9	8.1	-18.1
-2.5	-16.2	8.6	-24.7
-2.4	-12.5	9.0	-21.5
-2.3	-5.1	9.5	-14.5
-2.2	-4.5	9.9	-14.4
-2.1	-4.2	10.4	-14.6
-2.0	0.9	11.0	-10.1
-1.9	1.3		
-1.8	-4.4		
-1.7	-2.7		
-1.6	-1.9		
-1.5	-6.9		
-1.4	5.7		
-1.3	8.4		
-1.2	8.9		
-1.1	9.7		
-1.0	9.2		
-0.9	4.5		
-0.8	0.3		
-0.7	-1.1		
-0.6	7.0		
-0.5	19.2		
-0.4	28.1		
-0.3	34.2		
-0.2	38.3		
-0.1	40.4		
0.0	40.9		

6.0	-21.7	-1.0	-20.7
6.1	-14.7	-1.1	-13.6
6.2	-11.7	-1.3	-10.4
6.3	-11.2	-1.5	-9.8
6.4	-9.5	-1.7	-7.9
6.5	-9.6	-1.8	-7.7
6.6	-10.9	-2.0	-8.9
6.7	-11.9	-2.2	-9.8
6.8	-10.9	-2.3	-8.6
6.9	-10.2	-2.5	-7.8
7.0	-11.6	-2.6	-9.0
7.1	-14.0	-2.6	-11.4
7.2	-21.7	-2.6	-19.1
7.3	-18.3	-2.6	-15.7
7.4	-13.3	-2.6	-10.7
7.5	-13.4	-2.6	-10.8
7.6	-16.0	-2.6	-13.4
7.7	-17.6	-2.6	-15.0
7.8	-17.6	-2.6	-15.0
7.9	-15.2	-2.6	-12.6
8.0	-14.4	-2.6	-11.8
8.1	-16.7	-2.6	-14.1
8.2	-21.2	-2.6	-18.6
8.3	-16.0	-2.6	-13.4
8.4	-17.8	-2.6	-15.2
8.5	-17.8	-2.6	-15.2
8.6	-17.9	-2.6	-15.3
8.7	-16.1	-2.6	-13.5
8.8	-17.0	-2.6	-14.4
8.9	-19.4	-2.6	-16.8
9.0	-21.6	-2.6	-19.0
9.1	-19.0	-2.6	-16.3
9.2	-17.3	-2.6	-14.7
9.3	-16.2	-2.7	-13.4
9.4	-18.1	-2.8	-15.3
9.5	-23.6	-2.9	-20.6
9.6	-20.9	-3.1	-17.8
9.7	-16.5	-3.2	-13.3
9.8	-15.3	-3.3	-12.0
9.9	-14.8	-3.4	-11.4
10.0	-15.1	-3.5	-11.6

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.5	-12.4	-8.0
-29.5	-19.8	-12.2	-7.5
-29.0	-22.7	-12.1	-10.7
-28.5	-21.0	-11.9	-9.1
-28.0	-22.1	-11.7	-10.4
-27.5	-22.9	-11.5	-11.4
-27.0	-26.2	-11.3	-14.9
-26.5	-23.3	-11.1	-12.2
-26.0	-24.7	-10.9	-13.8
-25.5	-22.7	-10.7	-12.0
-25.0	-18.6	-10.4	-8.2
-24.5	-18.5	-10.2	-8.3
-24.0	-17.8	-10.0	-7.8
-23.5	-28.0	-9.8	-18.2
-23.0	-30.6	-9.5	-21.1
-22.5	-20.6	-9.3	-11.3
-22.0	-17.2	-9.1	-8.2
-21.5	-16.5	-8.8	-7.7
-21.0	-25.4	-8.6	-16.8
-20.5	-17.3	-8.3	-9.0
-20.0	-17.6	-8.0	-9.6
-19.5	-13.1	-7.8	-5.4
-19.0	-13.1	-7.5	-5.7
-18.5	-14.4	-7.2	-7.2
-18.0	-26.0	-6.9	-19.1
-17.5	-35.1	-6.6	-28.5
-17.0	-26.7	-6.3	-20.4
-16.5	-25.9	-5.9	-20.0
-16.0	-29.9	-5.6	-24.3
-15.5	-25.1	-5.3	-19.8
-15.0	-20.7	-4.9	-15.8
-14.5	-28.5	-4.5	-24.0
-14.0	-13.6	-4.2	-9.5
-13.5	-18.3	-3.8	-14.5
-13.0	-21.3	-3.3	-17.9
-12.5	-23.4	-2.9	-20.5
-12.0	-18.1	-2.5	-15.6
-11.5	-17.6	-2.0	-15.6
-11.0	-24.6	-1.5	-23.0
-10.5	-21.9	-1.0	-20.8
-10.0	-18.1	-0.5	-17.6
-9.5	-18.2	0.1	-18.2
-9.0	-14.3	0.4	-14.7
-8.5	-20.0	0.4	-20.4
-8.0	-13.9	0.4	-14.3
-7.5	-21.6	0.4	-22.0
-7.0	-13.6	0.4	-13.9
-6.5	-17.3	1.2	-18.5
-6.0	-12.7	2.0	-14.7
-5.5	-13.2	3.0	-16.2
-5.0	-10.1	4.0	-14.1
-4.5	-10.1	5.2	-15.2
-4.0	-8.7	6.4	-15.1
-3.5	-6.9	7.9	-14.8
-3.0	-1.0		
-2.5	-2.2		
-2.0	-3.5		
-1.5	6.3		
-1.0	9.6		
-0.5	24.1		
0.0	40.9		

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.9		
0.5	26.4		
1.0	5.2		
1.5	-1.9		
2.0	-6.2		
2.5	-1.5		
3.0	-4.1		
3.5	-3.1	7.9	-11.0
4.0	1.4	6.4	-5.1
4.5	-12.5	5.2	-17.7
5.0	-4.3	4.0	-8.3
5.5	-24.0	3.0	-27.0
6.0	-13.4	2.0	-15.4
6.5	-10.7	1.2	-11.9
7.0	-13.4	0.4	-13.8
7.5	-23.6	0.4	-23.9
8.0	-26.1	0.4	-26.5
8.5	-13.1	0.4	-13.4
9.0	-14.4	0.4	-14.8
9.5	-21.3	0.1	-21.4
10.0	-11.7	-0.5	-11.2
10.5	-16.2	-1.0	-15.2
11.0	-19.7	-1.5	-18.2
11.5	-24.7	-2.0	-22.7
12.0	-24.7	-2.5	-22.2
12.5	-17.5	-2.9	-14.6
13.0	-15.9	-3.3	-12.5
13.5	-20.5	-3.8	-16.7
14.0	-29.0	-4.2	-24.9
14.5	-24.3	-4.5	-19.7
15.0	-23.6	-4.9	-18.7
15.5	-26.7	-5.3	-21.5
16.0	-30.0	-5.6	-24.4
16.5	-28.2	-5.9	-22.3
17.0	-27.0	-6.3	-20.7
17.5	-34.1	-6.6	-27.5
18.0	-25.1	-6.9	-18.2
18.5	-28.5	-7.2	-21.3
19.0	-23.7	-7.5	-16.2
19.5	-24.4	-7.8	-16.7
20.0	-29.7	-8.0	-21.7
20.5	-23.6	-8.3	-15.3
21.0	-37.9	-8.6	-29.4
21.5	-38.4	-8.8	-29.6
22.0	-30.2	-9.1	-21.1
22.5	-24.4	-9.3	-15.1
23.0	-27.6	-9.5	-18.0
23.5	-26.5	-9.8	-16.7
24.0	-33.1	-10.0	-23.1
24.5	-31.5	-10.2	-21.2
25.0	-26.9	-10.4	-16.5
25.5	-30.8	-10.7	-20.1
26.0	-39.1	-10.9	-28.3
26.5	-31.4	-11.1	-20.3
27.0	-32.1	-11.3	-20.8
27.5	-27.3	-11.5	-15.8
28.0	-25.8	-11.7	-14.2
28.5	-29.1	-11.9	-17.3
29.0	-29.1	-12.1	-17.0
29.5	-26.9	-12.2	-14.6
30.0	-36.1	-12.4	-23.7

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol EI LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-18.1	-0.5	-17.6
-9.9	-16.9	-0.4	-16.5
-9.8	-18.8	-0.3	-18.5
-9.7	-23.6	-0.2	-23.4
-9.6	-19.1	-0.1	-19.0
-9.5	-18.2	0.1	-18.2
-9.4	-21.9	0.2	-22.0
-9.3	-24.0	0.3	-24.3
-9.2	-16.7	0.4	-17.0
-9.1	-14.4	0.4	-14.7
-9.0	-14.3	0.4	-14.7
-8.9	-16.9	0.4	-17.2
-8.8	-25.6	0.4	-26.0
-8.7	-21.0	0.4	-21.4
-8.6	-17.2	0.4	-17.6
-8.5	-20.0	0.4	-20.4
-8.4	-17.7	0.4	-18.1
-8.3	-14.9	0.4	-15.3
-8.2	-13.4	0.4	-13.7
-8.1	-12.9	0.4	-13.3
-8.0	-13.9	0.4	-14.3
-7.9	-16.0	0.4	-16.3
-7.8	-22.2	0.4	-22.6
-7.7	-23.8	0.4	-24.1
-7.6	-23.7	0.4	-24.0
-7.5	-21.6	0.4	-22.0
-7.4	-15.7	0.4	-16.1
-7.3	-12.3	0.4	-12.6
-7.2	-9.8	0.4	-10.2
-7.1	-9.7	0.4	-10.1
-7.0	-13.6	0.4	-13.9
-6.9	-25.7	0.5	-26.2
-6.8	-12.4	0.7	-13.1
-6.7	-12.0	0.8	-12.8
-6.6	-16.4	1.0	-17.4
-6.5	-17.3	1.2	-18.5
-6.4	-13.6	1.3	-14.9
-6.3	-12.6	1.5	-14.1
-6.2	-11.5	1.7	-13.2
-6.1	-12.2	1.9	-14.0
-6.0	-12.7	2.0	-14.7
-5.9	-11.2	2.2	-13.5
-5.8	-10.1	2.4	-12.5
-5.7	-11.3	2.6	-13.9
-5.6	-12.4	2.8	-15.2
-5.5	-13.2	3.0	-16.2
-5.4	-15.6	3.2	-18.8
-5.3	-11.4	3.4	-14.8
-5.2	-7.9	3.6	-11.5
-5.1	-8.1	3.8	-11.9
-5.0	-10.1	4.0	-14.1
-4.9	-12.2	4.2	-16.5
-4.8	-12.0	4.5	-16.4
-4.7	-10.4	4.7	-15.1
-4.6	-9.6	4.9	-14.5
-4.5	-10.1	5.2	-15.2
-4.4	-8.4	5.4	-13.8
-4.3	-5.8	5.7	-11.5
-4.2	-4.6	5.9	-10.5
-4.1	-5.2	6.2	-11.4

28.30 GHz @ -11.56 dBW / 40 kHz in Co-pol EI LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	40.9		
0.1	40.2		
0.2	37.7		
0.3	33.7		
0.4	29.3		
0.5	26.4		
0.6	22.0		
0.7	12.9		
0.8	4.9		
0.9	5.8		
1.0	5.2		
1.1	7.4		
1.2	5.0		
1.3	-4.4		
1.4	-2.4		
1.5	-1.9		
1.6	2.4		
1.7	3.1		
1.8	-0.9		
1.9	-5.3		
2.0	-6.2		
2.1	-5.1		
2.2	-0.7		
2.3	0.0		
2.4	-0.6		
2.5	-1.5		
2.6	-4.6		
2.7	-14.9		
2.8	-20.8		
2.9	-13.8		
3.0	-4.1		
3.1	-1.9		
3.2	-4.1		
3.3	-10.1		
3.4	-7.0		
3.5	-3.1	7.9	-11.0
3.6	-1.9	7.6	-9.5
3.7	-2.6	7.3	-9.8
3.8	-2.3	7.0	-9.3
3.9	0.7	6.7	-6.0
4.0	1.4	6.4	-5.1
4.1	1.1	6.2	-5.0
4.2	1.3	5.9	-4.6
4.3	1.0	5.7	-4.7
4.4	-2.5	5.4	-7.9
4.5	-12.5	5.2	-17.7
4.6	-18.5	4.9	-23.5
4.7	-13.4	4.7	-18.1
4.8	-7.4	4.5	-11.9
4.9	-4.8	4.2	-9.0
5.0	-4.3	4.0	-8.3
5.1	-4.9	3.8	-8.7
5.2	-6.8	3.6	-10.4
5.3	-10.3	3.4	-13.7
5.4	-13.5	3.2	-16.6
5.5	-24.0	3.0	-27.0
5.6	-16.6	2.8	-19.4
5.7	-11.5	2.6	-14.1
5.8	-12.9	2.4	-15.3
5.9	-17.5	2.2	-19.8

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	-8.7	6.4	-15.1
-3.9	-13.4	6.7	-20.1
-3.8	-5.7	7.0	-12.8
-3.7	-3.9	7.3	-11.2
-3.6	-4.5	7.6	-12.1
-3.5	-6.9	7.9	-14.8
-3.4	-10.7		
-3.3	-11.0		
-3.2	-11.1		
-3.1	-10.0		
-3.0	-1.0		
-2.9	2.5		
-2.8	2.5		
-2.7	0.5		
-2.6	-3.6		
-2.5	-2.2		
-2.4	-0.8		
-2.3	0.7		
-2.2	1.2		
-2.1	-0.4		
-2.0	-3.5		
-1.9	-4.5		
-1.8	-6.2		
-1.7	-2.9		
-1.6	3.5		
-1.5	6.3		
-1.4	5.1		
-1.3	4.3		
-1.2	9.7		
-1.1	11.0		
-1.0	9.6		
-0.9	10.5		
-0.8	13.5		
-0.7	17.7		
-0.6	21.6		
-0.5	24.1		
-0.4	28.8		
-0.3	34.4		
-0.2	38.3		
-0.1	40.4		
0.0	40.9		

6.0	-13.4	2.0	-15.4
6.1	-12.6	1.9	-14.5
6.2	-13.2	1.7	-14.8
6.3	-14.2	1.5	-15.7
6.4	-13.5	1.3	-14.9
6.5	-10.7	1.2	-11.9
6.6	-7.8	1.0	-8.8
6.7	-8.1	0.8	-8.9
6.8	-9.4	0.7	-10.1
6.9	-12.0	0.5	-12.6
7.0	-13.4	0.4	-13.8
7.1	-17.8	0.4	-18.2
7.2	-13.7	0.4	-14.0
7.3	-10.4	0.4	-10.8
7.4	-11.9	0.4	-12.3
7.5	-23.6	0.4	-23.9
7.6	-18.8	0.4	-19.2
7.7	-16.8	0.4	-17.2
7.8	-21.7	0.4	-22.1
7.9	-34.0	0.4	-34.3
8.0	-26.1	0.4	-26.5
8.1	-24.1	0.4	-24.5
8.2	-19.9	0.4	-20.2
8.3	-17.6	0.4	-17.9
8.4	-14.1	0.4	-14.5
8.5	-13.1	0.4	-13.4
8.6	-16.3	0.4	-16.7
8.7	-16.3	0.4	-16.7
8.8	-16.1	0.4	-16.5
8.9	-14.1	0.4	-14.4
9.0	-14.4	0.4	-14.8
9.1	-19.2	0.4	-19.5
9.2	-23.1	0.4	-23.5
9.3	-20.5	0.3	-20.8
9.4	-20.4	0.2	-20.6
9.5	-21.3	0.1	-21.4
9.6	-30.1	-0.1	-30.0
9.7	-16.8	-0.2	-16.6
9.8	-13.5	-0.3	-13.2
9.9	-11.5	-0.4	-11.1
10.0	-11.7	-0.5	-11.2

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -11.56 dBW / 40 kHz in X-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-27.4	-12.6	-14.8
-9.9	-27.5	-12.6	-14.9
-9.8	-25.8	-12.6	-13.2
-9.7	-26.8	-12.6	-14.2
-9.6	-27.5	-12.6	-14.9
-9.5	-25.8	-12.6	-13.1
-9.4	-25.2	-12.6	-12.6
-9.3	-23.6	-12.6	-10.9
-9.2	-21.5	-12.6	-8.9
-9.1	-18.5	-12.6	-5.9
-9.0	-16.7	-12.6	-4.1
-8.9	-16.0	-12.6	-3.4
-8.8	-17.3	-12.6	-4.6
-8.7	-18.7	-12.6	-6.1
-8.6	-20.9	-12.6	-8.3
-8.5	-20.4	-12.6	-7.8
-8.4	-19.3	-12.6	-6.7
-8.3	-18.7	-12.6	-6.1
-8.2	-21.0	-12.6	-8.4
-8.1	-23.5	-12.6	-10.8
-8.0	-23.2	-12.6	-10.5
-7.9	-21.3	-12.6	-8.7
-7.8	-20.0	-12.6	-7.4
-7.7	-21.0	-12.6	-8.4
-7.6	-24.4	-12.6	-11.8
-7.5	-21.8	-12.6	-9.2
-7.4	-17.6	-12.6	-5.0
-7.3	-15.7	-12.6	-3.1
-7.2	-16.7	-12.6	-4.1
-7.1	-16.6	-12.6	-4.0
-7.0	-14.8	-12.6	-2.2
-6.9	-12.5	-12.5	0.0
-6.8	-12.3	-12.3	0.0
-6.7	-14.3	-12.2	-2.2
-6.6	-21.1	-12.0	-9.1
-6.5	-18.6	-11.8	-6.8
-6.4	-18.4	-11.7	-6.8
-6.3	-22.6	-11.5	-11.2
-6.2	-27.1	-11.3	-15.8
-6.1	-23.2	-11.1	-12.1
-6.0	-23.8	-11.0	-12.9
-5.9	-23.4	-10.8	-12.7
-5.8	-20.7	-10.6	-10.1
-5.7	-19.7	-10.4	-9.3
-5.6	-25.1	-10.2	-14.9
-5.5	-33.0	-10.0	-23.0
-5.4	-21.7	-9.8	-11.9
-5.3	-15.7	-9.6	-6.1
-5.2	-13.8	-9.4	-4.4
-5.1	-13.8	-9.2	-4.6
-5.0	-19.6	-9.0	-10.7
-4.9	-19.1	-8.8	-10.3
-4.8	-14.5	-8.5	-6.0
-4.7	-15.2	-8.3	-6.9
-4.6	-21.9	-8.1	-13.8
-4.5	-23.3	-7.8	-15.5
-4.4	-25.5	-7.6	-17.9
-4.3	-15.4	-7.3	-8.1
-4.2	-11.8	-7.1	-4.7
-4.1	-12.4	-6.8	-5.6

28.30 GHz @ -11.56 dBW / 40 kHz in X-pol Az LHCP

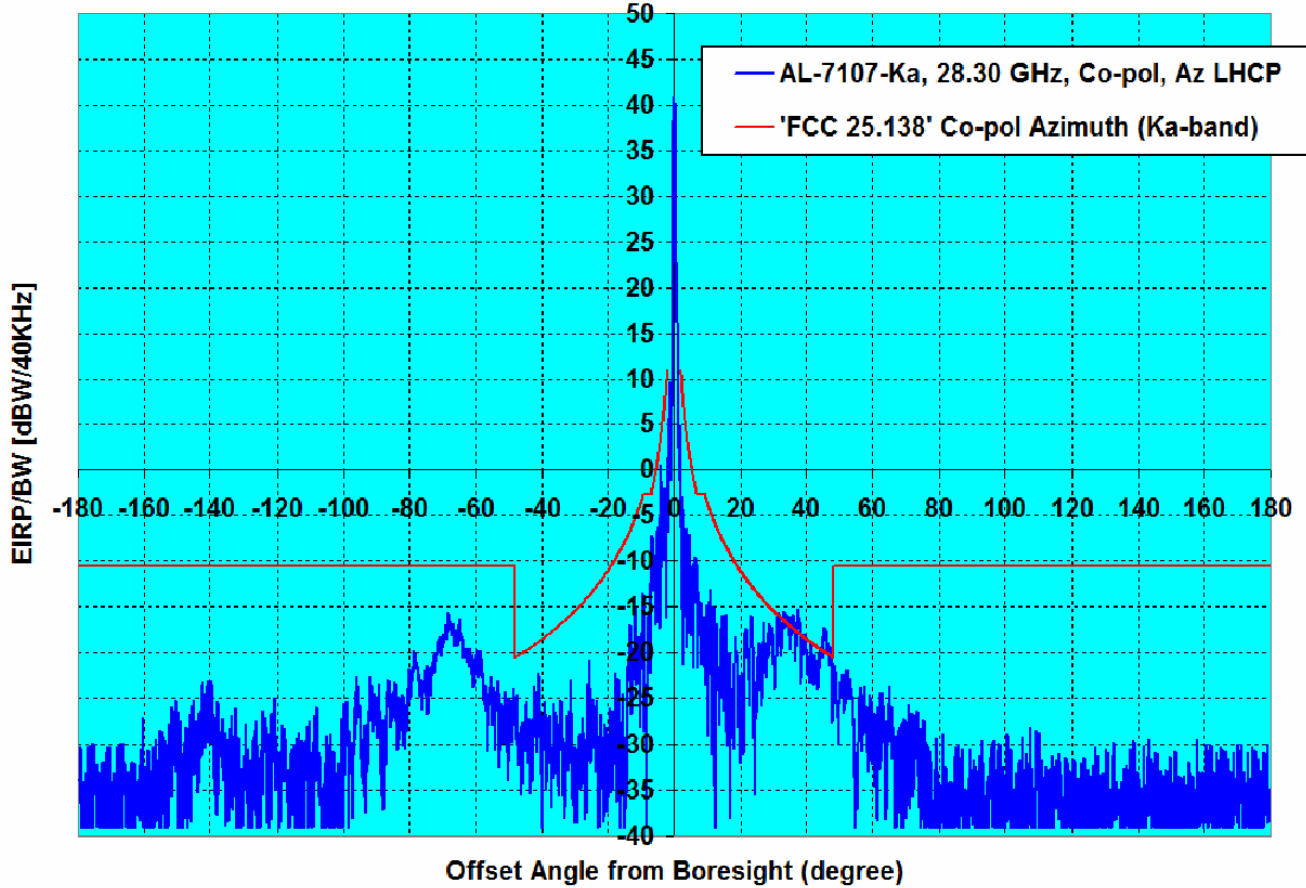
Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	6.1		
0.1	5.0		
0.2	10.7		
0.3	14.3		
0.4	14.9		
0.5	13.1		
0.6	9.4		
0.7	0.0		
0.8	-2.4		
0.9	2.8		
1.0	4.3		
1.1	2.9		
1.2	-2.7		
1.3	-6.3		
1.4	-5.2		
1.5	-6.6		
1.6	-5.8		
1.7	-5.0		
1.8	-6.9		
1.9	-12.6		
2.0	-17.9	1.0	-18.9
2.1	-15.5	0.4	-16.0
2.2	-12.2	-0.1	-12.1
2.3	-12.7	-0.5	-12.2
2.4	-16.9	-1.0	-15.9
2.5	-17.4	-1.4	-16.0
2.6	-17.2	-1.9	-15.3
2.7	-18.3	-2.3	-16.0
2.8	-16.1	-2.7	-13.4
2.9	-16.9	-3.1	-13.8
3.0	-20.5	-3.4	-17.1
3.1	-17.2	-3.8	-13.5
3.2	-17.6	-4.1	-13.5
3.3	-20.2	-4.5	-15.8
3.4	-18.6	-4.8	-13.9
3.5	-19.6	-5.1	-14.5
3.6	-21.1	-5.4	-15.7
3.7	-14.6	-5.7	-8.9
3.8	-15.8	-6.0	-9.8
3.9	-24.2	-6.3	-17.9
4.0	-25.3	-6.6	-18.7
4.1	-19.1	-6.8	-12.2
4.2	-21.9	-7.1	-14.8
4.3	-26.1	-7.3	-18.8
4.4	-21.1	-7.6	-13.5
4.5	-21.3	-7.8	-13.5
4.6	-20.7	-8.1	-12.7
4.7	-19.2	-8.3	-10.9
4.8	-19.4	-8.5	-10.9
4.9	-19.8	-8.8	-11.0
5.0	-18.8	-9.0	-9.9
5.1	-21.7	-9.2	-12.5
5.2	-24.2	-9.4	-14.8
5.3	-24.7	-9.6	-15.1
5.4	-25.7	-9.8	-15.9
5.5	-23.5	-10.0	-13.5
5.6	-22.2	-10.2	-12.0
5.7	-22.2	-10.4	-11.8
5.8	-21.5	-10.6	-10.9
5.9	-21.2	-10.8	-10.5

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-18.7	-6.6	-12.2
-3.9	-22.4	-6.3	-16.1
-3.8	-16.7	-6.0	-10.7
-3.7	-16.3	-5.7	-10.6
-3.6	-15.2	-5.4	-9.8
-3.5	-13.7	-5.1	-8.6
-3.4	-14.2	-4.8	-9.4
-3.3	-17.7	-4.5	-13.2
-3.2	-17.8	-4.1	-13.7
-3.1	-12.3	-3.8	-8.5
-3.0	-13.6	-3.4	-10.2
-2.9	-23.5	-3.1	-20.4
-2.8	-19.4	-2.7	-16.7
-2.7	-17.4	-2.3	-15.1
-2.6	-19.5	-1.9	-17.7
-2.5	-19.3	-1.4	-17.9
-2.4	-23.6	-1.0	-22.6
-2.3	-20.8	-0.5	-20.3
-2.2	-15.2	-0.1	-15.2
-2.1	-19.3	0.4	-19.8
-2.0	-17.8	1.0	-18.7
-1.9	-15.2		
-1.8	-21.4		
-1.7	-9.2		
-1.6	-5.5		
-1.5	-5.2		
-1.4	-6.0		
-1.3	-6.1		
-1.2	-2.5		
-1.1	1.1		
-1.0	3.6		
-0.9	3.3		
-0.8	-3.1		
-0.7	4.2		
-0.6	13.3		
-0.5	17.8		
-0.4	19.4		
-0.3	19.0		
-0.2	17.0		
-0.1	12.3		
0.0	6.1		

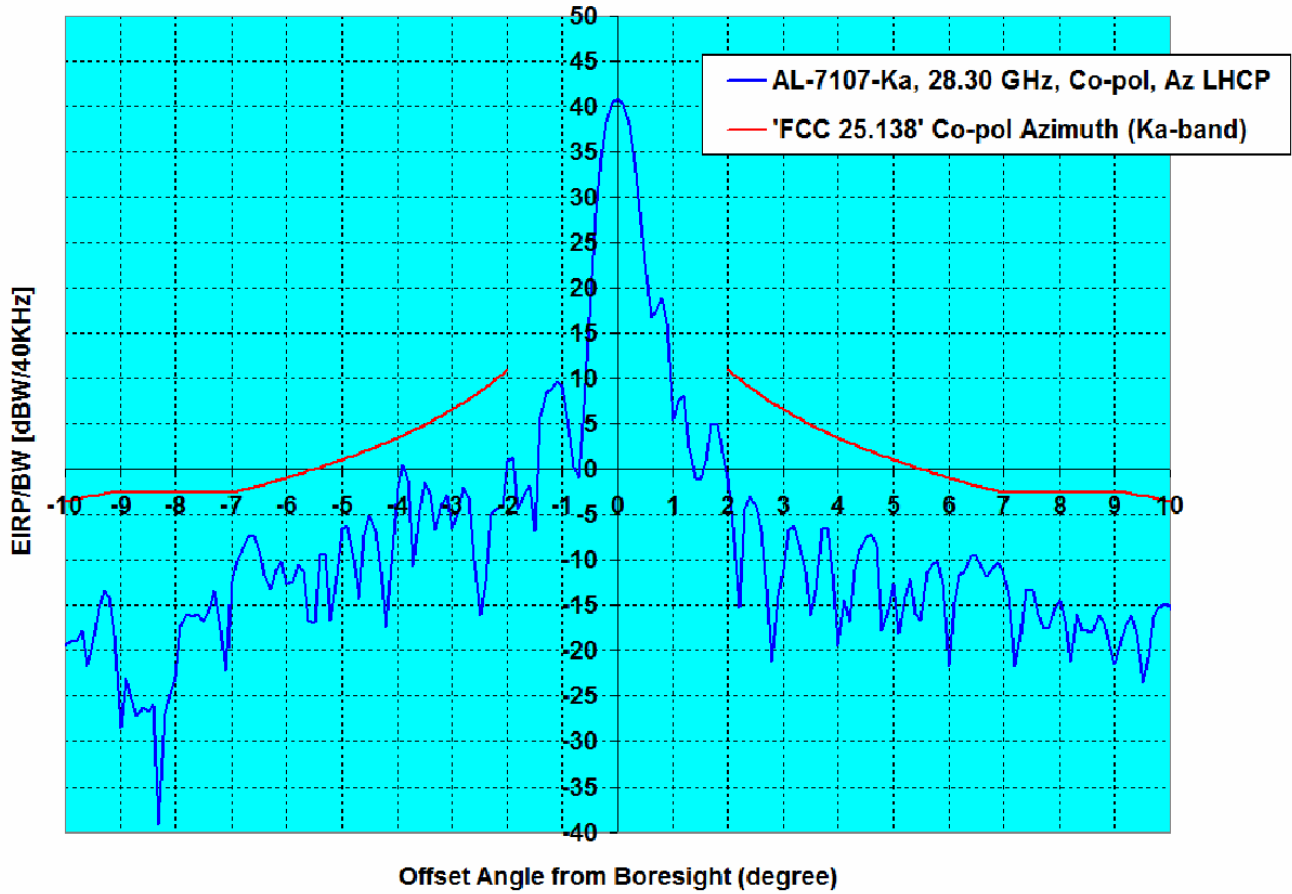
6.0	-23.0	-11.0	-12.1
6.1	-25.2	-11.1	-14.1
6.2	-22.7	-11.3	-11.3
6.3	-20.4	-11.5	-8.9
6.4	-20.7	-11.7	-9.1
6.5	-25.1	-11.8	-13.3
6.6	-29.4	-12.0	-17.4
6.7	-31.8	-12.2	-19.6
6.8	-29.8	-12.3	-17.5
6.9	-29.9	-12.5	-17.4
7.0	-23.5	-12.6	-10.9
7.1	-20.0	-12.6	-7.4
7.2	-19.9	-12.6	-7.2
7.3	-19.7	-12.6	-7.1
7.4	-23.8	-12.6	-11.2
7.5	-24.5	-12.6	-11.9
7.6	-25.1	-12.6	-12.5
7.7	-28.9	-12.6	-16.3
7.8	-30.3	-12.6	-17.7
7.9	-20.3	-12.6	-7.7
8.0	-17.8	-12.6	-5.1
8.1	-18.7	-12.6	-6.0
8.2	-22.0	-12.6	-9.4
8.3	-23.4	-12.6	-10.8
8.4	-24.2	-12.6	-11.5
8.5	-24.3	-12.6	-11.7
8.6	-23.2	-12.6	-10.6
8.7	-27.8	-12.6	-15.2
8.8	-22.6	-12.6	-9.9
8.9	-18.9	-12.6	-6.3
9.0	-19.2	-12.6	-6.5
9.1	-21.3	-12.6	-8.6
9.2	-25.6	-12.6	-13.0
9.3	-30.1	-12.6	-17.5
9.4	-28.6	-12.6	-16.0
9.5	-26.9	-12.6	-14.3
9.6	-26.2	-12.6	-13.6
9.7	-25.9	-12.6	-13.2
9.8	-25.3	-12.6	-12.7
9.9	-29.1	-12.6	-16.5
10.0	-37.7	-12.6	-25.1

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.56 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in Az LHCP
 Min BW of 6.60 MHz in case of 20W BUC**



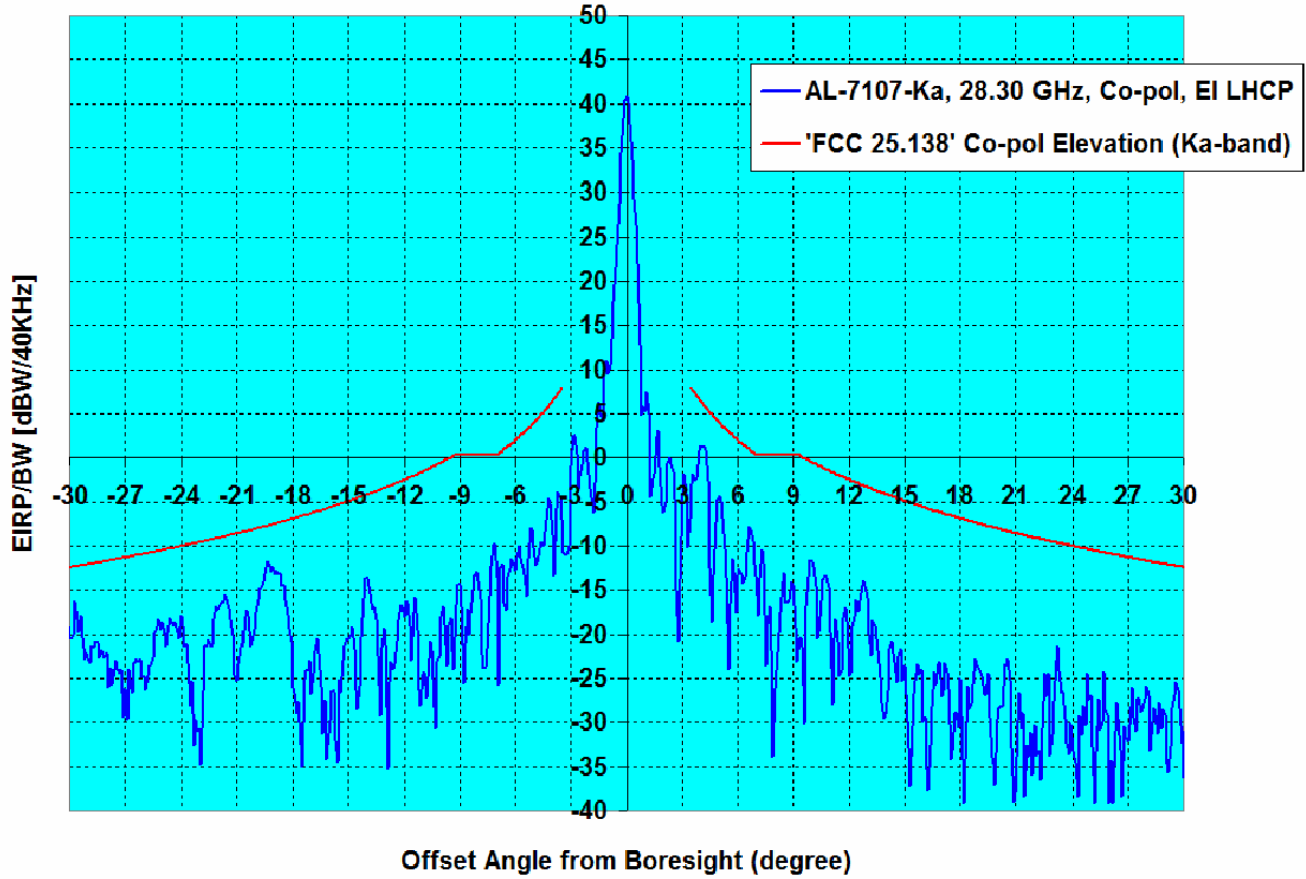
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7107-Ka, 28.30 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.42	-11.56	-3.29	2.67	1.72

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.56 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in Az LHCP
 Min BW of 6.60 MHz in case of 20W BUC**



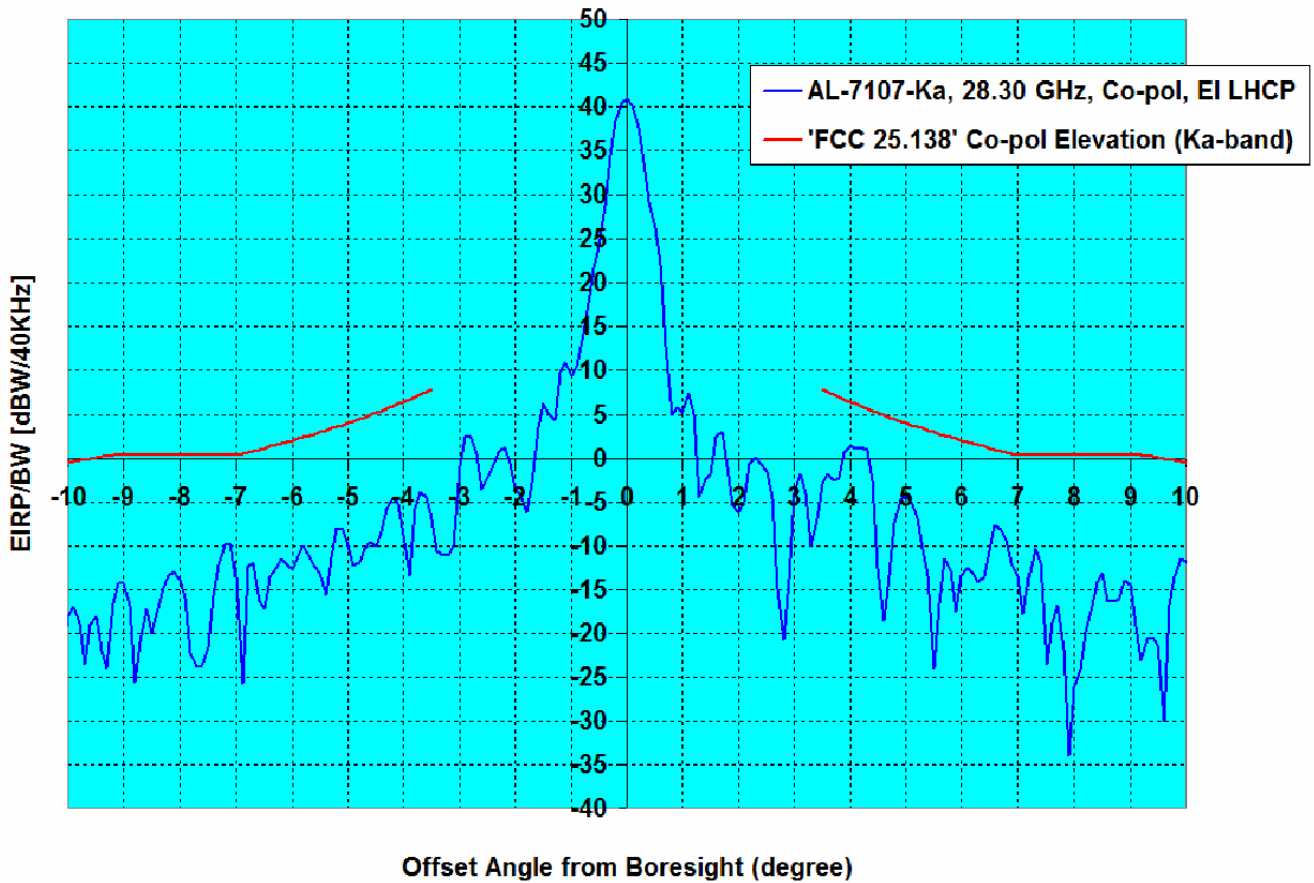
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7107-Ka, 28.30 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.42	-11.56	-3.29	2.67	1.72

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.56 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in EI LHCP
 Min BW of 6.60 MHz in case of 20W BUC**



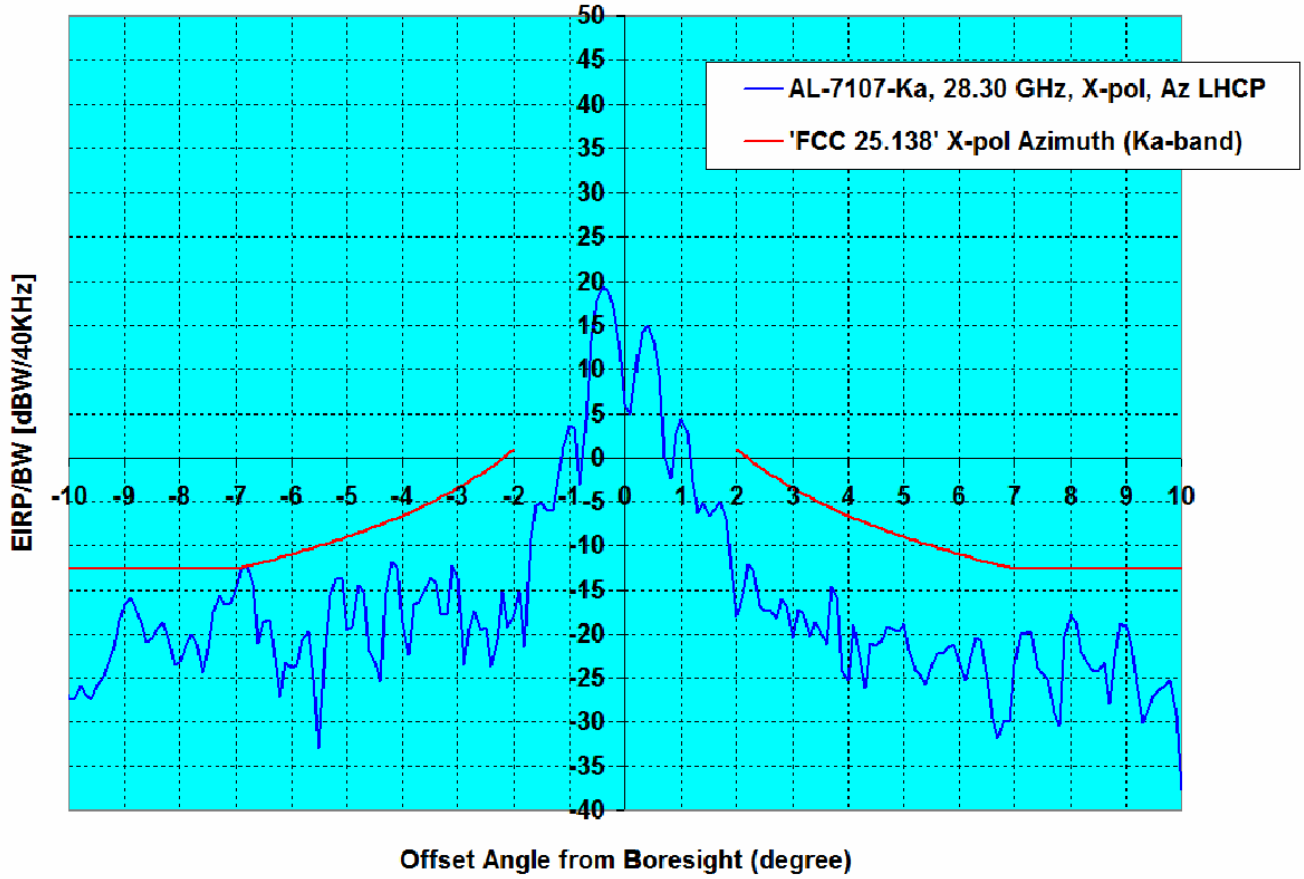
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 28.30 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.42	-11.56	-4.59	-4.00	0.00

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.56 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in EI LHCP
 Min BW of 6.60 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (3.5° to 10°)	± (10° to 30°)	
AL-7107-Ka, 28.30 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.42	-11.56	-4.59	-4.00	0.00

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -11.56 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in Az LHCP
 Min BW of 6.60 MHz in case of 20W BUC**



Configuration	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7107-Ka, 28.30 GHz, X-pol, Az LHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	52.42	-11.56	0.00	0.00	0.00

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-179.0	-34.9	-10.5	-24.4
-178.0	-36.9	-10.5	-26.4
-177.0	-30.3	-10.5	-19.8
-176.0	-39.1	-10.5	-28.6
-175.0	-30.1	-10.5	-19.6
-174.0	-39.1	-10.5	-28.6
-173.0	-33.4	-10.5	-22.9
-172.0	-35.9	-10.5	-25.4
-171.0	-30.3	-10.5	-19.8
-170.0	-39.1	-10.5	-28.6
-169.0	-37.1	-10.5	-26.6
-168.0	-31.1	-10.5	-20.6
-167.0	-32.1	-10.5	-21.6
-166.0	-31.7	-10.5	-21.2
-165.0	-37.3	-10.5	-26.8
-164.0	-39.1	-10.5	-28.6
-163.0	-38.3	-10.5	-27.8
-162.0	-34.0	-10.5	-23.5
-161.0	-34.3	-10.5	-23.8
-160.0	-34.3	-10.5	-23.8
-159.0	-37.1	-10.5	-26.6
-158.0	-34.5	-10.5	-24.0
-157.0	-39.1	-10.5	-28.6
-156.0	-35.5	-10.5	-25.0
-155.0	-28.4	-10.5	-17.9
-154.0	-35.5	-10.5	-25.0
-153.0	-38.2	-10.5	-27.7
-152.0	-30.2	-10.5	-19.7
-151.0	-26.3	-10.5	-15.8
-150.0	-25.4	-10.5	-14.9
-149.0	-27.4	-10.5	-16.9
-148.0	-39.1	-10.5	-28.6
-147.0	-30.2	-10.5	-19.7
-146.0	-29.0	-10.5	-18.5
-145.0	-33.2	-10.5	-22.7
-144.0	-28.8	-10.5	-18.3
-143.0	-30.4	-10.5	-19.9
-142.0	-28.1	-10.5	-17.6
-141.0	-23.8	-10.5	-13.3
-140.0	-27.3	-10.5	-16.8
-139.0	-33.7	-10.5	-23.2
-138.0	-35.7	-10.5	-25.2
-137.0	-29.1	-10.5	-18.6
-136.0	-32.4	-10.5	-21.9
-135.0	-32.4	-10.5	-21.9
-134.0	-36.9	-10.5	-26.4
-133.0	-37.1	-10.5	-26.6
-132.0	-39.1	-10.5	-28.6
-131.0	-39.1	-10.5	-28.6
-130.0	-35.0	-10.5	-24.5
-129.0	-30.6	-10.5	-20.1
-128.0	-39.1	-10.5	-28.6
-127.0	-35.1	-10.5	-24.6
-126.0	-30.1	-10.5	-19.6
-125.0	-39.1	-10.5	-28.6
-124.0	-30.5	-10.5	-20.0
-123.0	-38.6	-10.5	-28.1
-122.0	-28.1	-10.5	-17.6
-121.0	-31.9	-10.5	-21.4
-120.0	-34.8	-10.5	-24.3

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	40.9		
1.0	5.5		
2.0	-1.0	11.0	-12.0
3.0	-11.1	6.6	-17.7
4.0	-19.4	3.4	-22.9
5.0	-12.8	1.0	-13.8
6.0	-21.7	-1.0	-20.7
7.0	-11.6	-2.6	-9.0
8.0	-14.4	-2.6	-11.8
9.0	-21.6	-2.6	-19.0
10.0	-15.1	-3.5	-11.6
11.0	-13.1	-4.5	-8.6
12.0	-15.0	-5.5	-9.5
13.0	-17.1	-6.3	-10.7
14.0	-25.2	-7.2	-18.0
15.0	-19.6	-7.9	-11.7
16.0	-28.0	-8.6	-19.4
17.0	-38.0	-9.3	-28.7
18.0	-25.8	-9.9	-16.0
19.0	-19.8	-10.5	-9.4
20.0	-28.5	-11.0	-17.4
21.0	-29.7	-11.6	-18.1
22.0	-17.5	-12.1	-5.4
23.0	-19.6	-12.5	-7.0
24.0	-21.8	-13.0	-8.8
25.0	-26.5	-13.4	-13.0
26.0	-20.5	-13.9	-6.6
27.0	-18.9	-14.3	-4.6
28.0	-20.2	-14.7	-5.5
29.0	-19.1	-15.1	-4.0
30.0	-19.9	-15.4	-4.5
31.0	-18.0	-15.8	-2.2
32.0	-17.0	-16.1	-0.8
33.0	-15.5	-16.5	1.0
34.0	-17.1	-16.8	-0.3
35.0	-19.7	-17.1	-2.6
36.0	-16.1	-17.4	1.3
37.0	-19.2	-17.7	-1.5
38.0	-16.6	-18.0	1.4
39.0	-18.6	-18.3	-0.3
40.0	-19.6	-18.6	-1.0
41.0	-22.1	-18.8	-3.2
42.0	-21.0	-19.1	-1.9
43.0	-22.7	-19.3	-3.4
44.0	-21.8	-19.6	-2.2
45.0	-20.5	-19.8	-0.6
46.0	-18.3	-20.1	1.8
47.0	-20.8	-20.3	-0.5
48.0	-26.7	-20.5	-6.2
49.0	-25.4	-10.5	-14.9
50.0	-24.1	-10.5	-13.6
51.0	-22.4	-10.5	-11.9
52.0	-21.9	-10.5	-11.4
53.0	-25.2	-10.5	-14.7
54.0	-25.7	-10.5	-15.2
55.0	-33.7	-10.5	-23.2
56.0	-28.9	-10.5	-18.4
57.0	-27.0	-10.5	-16.5
58.0	-27.2	-10.5	-16.7
59.0	-31.0	-10.5	-20.5

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-31.8	-10.5	-21.3
-118.0	-34.0	-10.5	-23.5
-117.0	-32.8	-10.5	-22.3
-116.0	-33.8	-10.5	-23.3
-115.0	-31.7	-10.5	-21.2
-114.0	-30.9	-10.5	-20.4
-113.0	-38.9	-10.5	-28.4
-112.0	-37.4	-10.5	-26.9
-111.0	-28.3	-10.5	-17.8
-110.0	-30.8	-10.5	-20.3
-109.0	-29.6	-10.5	-19.1
-108.0	-26.0	-10.5	-15.5
-107.0	-34.1	-10.5	-23.6
-106.0	-38.0	-10.5	-27.5
-105.0	-33.9	-10.5	-23.4
-104.0	-33.8	-10.5	-23.3
-103.0	-35.4	-10.5	-24.9
-102.0	-34.0	-10.5	-23.5
-101.0	-38.9	-10.5	-28.4
-100.0	-27.7	-10.5	-17.2
-99.0	-26.6	-10.5	-16.1
-98.0	-29.4	-10.5	-18.9
-97.0	-31.1	-10.5	-20.6
-96.0	-22.7	-10.5	-12.2
-95.0	-25.6	-10.5	-15.1
-94.0	-29.4	-10.5	-18.9
-93.0	-30.7	-10.5	-20.2
-92.0	-27.5	-10.5	-17.0
-91.0	-26.4	-10.5	-15.9
-90.0	-26.5	-10.5	-16.0
-89.0	-26.9	-10.5	-16.4
-88.0	-32.0	-10.5	-21.5
-87.0	-24.9	-10.5	-14.4
-86.0	-25.9	-10.5	-15.4
-85.0	-26.0	-10.5	-15.5
-84.0	-26.7	-10.5	-16.2
-83.0	-26.2	-10.5	-15.7
-82.0	-24.7	-10.5	-14.2
-81.0	-28.1	-10.5	-17.6
-80.0	-21.9	-10.5	-11.4
-79.0	-21.6	-10.5	-11.1
-78.0	-21.5	-10.5	-11.0
-77.0	-24.5	-10.5	-14.0
-76.0	-24.5	-10.5	-14.0
-75.0	-23.0	-10.5	-12.5
-74.0	-23.3	-10.5	-12.8
-73.0	-22.6	-10.5	-12.1
-72.0	-20.5	-10.5	-10.0
-71.0	-19.8	-10.5	-9.3
-70.0	-17.9	-10.5	-7.4
-69.0	-18.0	-10.5	-7.5
-68.0	-15.9	-10.5	-5.4
-67.0	-18.2	-10.5	-7.7
-66.0	-17.7	-10.5	-7.2
-65.0	-18.6	-10.5	-8.1
-64.0	-18.9	-10.5	-8.4
-63.0	-19.9	-10.5	-9.4
-62.0	-20.7	-10.5	-10.2
-61.0	-21.3	-10.5	-10.8
-60.0	-20.4	-10.5	-9.9
-59.0	-21.8	-10.5	-11.3
-58.0	-22.6	-10.5	-12.1
-57.0	-26.3	-10.5	-15.8

60.0	-29.3	-10.5	-18.8
61.0	-38.0	-10.5	-27.5
62.0	-32.0	-10.5	-21.5
63.0	-24.3	-10.5	-13.8
64.0	-31.0	-10.5	-20.5
65.0	-23.7	-10.5	-13.2
66.0	-31.6	-10.5	-21.1
67.0	-30.4	-10.5	-19.9
68.0	-37.4	-10.5	-26.9
69.0	-27.6	-10.5	-17.1
70.0	-36.1	-10.5	-25.6
71.0	-36.6	-10.5	-26.1
72.0	-34.6	-10.5	-24.1
73.0	-27.5	-10.5	-17.0
74.0	-31.6	-10.5	-21.1
75.0	-31.0	-10.5	-20.5
76.0	-33.2	-10.5	-22.7
77.0	-32.5	-10.5	-22.0
78.0	-39.1	-10.5	-28.6
79.0	-34.7	-10.5	-24.2
80.0	-38.6	-10.5	-28.1
81.0	-38.0	-10.5	-27.5
82.0	-33.9	-10.5	-23.4
83.0	-39.1	-10.5	-28.6
84.0	-34.1	-10.5	-23.6
85.0	-39.1	-10.5	-28.6
86.0	-29.9	-10.5	-19.4
87.0	-36.8	-10.5	-26.3
88.0	-35.4	-10.5	-24.9
89.0	-39.1	-10.5	-28.6
90.0	-34.7	-10.5	-24.2
91.0	-34.2	-10.5	-23.7
92.0	-37.1	-10.5	-26.6
93.0	-39.1	-10.5	-28.6
94.0	-39.1	-10.5	-28.6
95.0	-33.4	-10.5	-22.9
96.0	-31.7	-10.5	-21.2
97.0	-33.2	-10.5	-22.7
98.0	-30.6	-10.5	-20.1
99.0	-35.4	-10.5	-24.9
100.0	-38.7	-10.5	-28.2
101.0	-33.6	-10.5	-23.1
102.0	-30.3	-10.5	-19.8
103.0	-34.8	-10.5	-24.3
104.0	-39.1	-10.5	-28.6
105.0	-39.1	-10.5	-28.6
106.0	-39.1	-10.5	-28.6
107.0	-33.4	-10.5	-22.9
108.0	-32.5	-10.5	-22.0
109.0	-35.0	-10.5	-24.5
110.0	-39.1	-10.5	-28.6
111.0	-31.7	-10.5	-21.2
112.0	-39.1	-10.5	-28.6
113.0	-39.1	-10.5	-28.6
114.0	-33.3	-10.5	-22.8
115.0	-32.8	-10.5	-22.3
116.0	-36.1	-10.5	-25.6
117.0	-37.4	-10.5	-26.9
118.0	-35.4	-10.5	-24.9
119.0	-33.9	-10.5	-23.4
120.0	-35.0	-10.5	-24.5
121.0	-32.0	-10.5	-21.5
122.0	-38.4	-10.5	-27.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-26.9	-10.5	-16.4
-55.0	-26.3	-10.5	-15.8
-54.0	-27.8	-10.5	-17.3
-53.0	-25.8	-10.5	-15.3
-52.0	-29.8	-10.5	-19.3
-51.0	-27.3	-10.5	-16.8
-50.0	-29.7	-10.5	-19.2
-49.0	-25.9	-10.5	-15.4
-48.0	-26.2	-20.5	-5.7
-47.0	-32.3	-20.3	-12.0
-46.0	-29.4	-20.1	-9.4
-45.0	-30.7	-19.8	-10.9
-44.0	-28.1	-19.6	-8.5
-43.0	-28.7	-19.3	-9.4
-42.0	-28.3	-19.1	-9.2
-41.0	-22.3	-18.8	-3.5
-40.0	-39.1	-18.6	-20.6
-39.0	-28.8	-18.3	-10.5
-38.0	-27.9	-18.0	-9.9
-37.0	-31.8	-17.7	-14.1
-36.0	-27.2	-17.4	-9.8
-35.0	-34.4	-17.1	-17.3
-34.0	-30.0	-16.8	-13.2
-33.0	-36.8	-16.5	-20.4
-32.0	-27.7	-16.1	-11.6
-31.0	-27.6	-15.8	-11.8
-30.0	-31.7	-15.4	-16.3
-29.0	-31.8	-15.1	-16.7
-28.0	-30.8	-14.7	-16.1
-27.0	-33.3	-14.3	-19.0
-26.0	-23.4	-13.9	-9.5
-25.0	-30.4	-13.4	-16.9
-24.0	-29.2	-13.0	-16.2
-23.0	-31.3	-12.5	-18.8
-22.0	-29.0	-12.1	-17.0
-21.0	-34.2	-11.6	-22.7
-20.0	-35.8	-11.0	-24.8
-19.0	-29.5	-10.5	-19.0
-18.0	-28.5	-9.9	-18.6
-17.0	-26.2	-9.3	-16.9
-16.0	-35.7	-8.6	-27.1
-15.0	-39.1	-7.9	-31.2
-14.0	-21.8	-7.2	-14.7
-13.0	-26.4	-6.3	-20.0
-12.0	-18.9	-5.5	-13.4
-11.0	-22.5	-4.5	-18.0
-10.0	-19.5	-3.5	-16.0
-9.0	-28.5	-2.6	-25.9
-8.0	-22.9	-2.6	-20.3
-7.0	-12.4	-2.6	-9.7
-6.0	-12.7	-1.0	-11.7
-5.0	-6.6	1.0	-7.6
-4.0	-2.1	3.4	-5.6
-3.0	-6.6	6.6	-13.2
-2.0	0.9	11.0	-10.1
-1.0	9.2		
0.0	40.9		

123.0	-33.0	-10.5	-22.5
124.0	-39.1	-10.5	-28.6
125.0	-32.6	-10.5	-22.1
126.0	-39.1	-10.5	-28.6
127.0	-39.1	-10.5	-28.6
128.0	-39.1	-10.5	-28.6
129.0	-34.7	-10.5	-24.2
130.0	-34.6	-10.5	-24.1
131.0	-30.8	-10.5	-20.3
132.0	-39.1	-10.5	-28.6
133.0	-37.4	-10.5	-26.9
134.0	-37.8	-10.5	-27.3
135.0	-34.0	-10.5	-23.5
136.0	-33.6	-10.5	-23.1
137.0	-36.7	-10.5	-26.2
138.0	-33.8	-10.5	-23.3
139.0	-39.1	-10.5	-28.6
140.0	-36.3	-10.5	-25.8
141.0	-35.5	-10.5	-25.0
142.0	-38.8	-10.5	-28.3
143.0	-37.9	-10.5	-27.4
144.0	-35.1	-10.5	-24.6
145.0	-37.7	-10.5	-27.2
146.0	-39.1	-10.5	-28.6
147.0	-39.1	-10.5	-28.6
148.0	-37.9	-10.5	-27.4
149.0	-35.0	-10.5	-24.5
150.0	-37.0	-10.5	-26.5
151.0	-39.1	-10.5	-28.6
152.0	-39.1	-10.5	-28.6
153.0	-33.7	-10.5	-23.2
154.0	-39.1	-10.5	-28.6
155.0	-39.1	-10.5	-28.6
156.0	-38.0	-10.5	-27.5
157.0	-39.1	-10.5	-28.6
158.0	-39.1	-10.5	-28.6
159.0	-35.5	-10.5	-25.0
160.0	-33.7	-10.5	-23.2
161.0	-31.0	-10.5	-20.5
162.0	-30.0	-10.5	-19.5
163.0	-37.2	-10.5	-26.7
164.0	-31.6	-10.5	-21.1
165.0	-35.0	-10.5	-24.5
166.0	-32.6	-10.5	-22.1
167.0	-39.1	-10.5	-28.6
168.0	-34.3	-10.5	-23.8
169.0	-35.5	-10.5	-25.0
170.0	-30.0	-10.5	-19.5
171.0	-34.1	-10.5	-23.6
172.0	-35.1	-10.5	-24.6
173.0	-34.1	-10.5	-23.6
174.0	-39.1	-10.5	-28.6
175.0	-39.1	-10.5	-28.6
176.0	-38.7	-10.5	-28.2
177.0	-38.8	-10.5	-28.3
178.0	-35.2	-10.5	-24.7
179.0	-35.5	-10.5	-25.0

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-20.0	-3.5	-16.5
-9.9	-18.2	-3.4	-14.8
-9.8	-17.8	-3.3	-14.6
-9.7	-18.0	-3.2	-14.8
-9.6	-20.3	-3.1	-17.3
-9.5	-19.9	-2.9	-16.9
-9.4	-17.1	-2.8	-14.3
-9.3	-15.6	-2.7	-12.9
-9.2	-16.1	-2.6	-13.5
-9.1	-23.7	-2.6	-21.1
-9.0	-20.3	-2.6	-17.7
-8.9	-17.2	-2.6	-14.6
-8.8	-17.2	-2.6	-14.6
-8.7	-19.5	-2.6	-16.9
-8.6	-19.5	-2.6	-16.9
-8.5	-16.3	-2.6	-13.7
-8.4	-15.7	-2.6	-13.1
-8.3	-16.1	-2.6	-13.5
-8.2	-15.5	-2.6	-12.9
-8.1	-16.5	-2.6	-13.9
-8.0	-16.9	-2.6	-14.3
-7.9	-18.7	-2.6	-16.1
-7.8	-18.6	-2.6	-16.0
-7.7	-17.1	-2.6	-14.4
-7.6	-15.8	-2.6	-13.2
-7.5	-18.8	-2.6	-16.2
-7.4	-21.4	-2.6	-18.8
-7.3	-16.4	-2.6	-13.8
-7.2	-21.4	-2.6	-18.8
-7.1	-17.5	-2.6	-14.9
-7.0	-10.5	-2.6	-7.8
-6.9	-7.8	-2.5	-5.3
-6.8	-6.7	-2.3	-4.4
-6.7	-6.2	-2.2	-4.1
-6.6	-7.3	-2.0	-5.3
-6.5	-9.1	-1.8	-7.3
-6.4	-12.9	-1.7	-11.3
-6.3	-15.7	-1.5	-14.2
-6.2	-13.4	-1.3	-12.0
-6.1	-13.4	-1.1	-12.3
-6.0	-16.7	-1.0	-15.7
-5.9	-16.2	-0.8	-15.4
-5.8	-13.7	-0.6	-13.2
-5.7	-13.4	-0.4	-13.0
-5.6	-17.9	-0.2	-17.7
-5.5	-19.7	0.0	-19.7
-5.4	-13.5	0.2	-13.7
-5.3	-13.6	0.4	-14.0
-5.2	-16.6	0.6	-17.2
-5.1	-10.0	0.8	-10.8
-5.0	-8.7	1.0	-9.7
-4.9	-11.5	1.2	-12.7
-4.8	-17.5	1.5	-19.0
-4.7	-14.0	1.7	-15.7
-4.6	-7.9	1.9	-9.9
-4.5	-5.9	2.2	-8.1
-4.4	-7.8	2.4	-10.2
-4.3	-16.4	2.7	-19.0
-4.2	-18.4	2.9	-21.3
-4.1	-7.1	3.2	-10.3

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.0		
0.1	39.2		
0.2	36.6		
0.3	32.0		
0.4	26.0		
0.5	20.5		
0.6	15.4		
0.7	16.1		
0.8	16.8		
0.9	12.8		
1.0	-2.9		
1.1	7.1		
1.2	6.8		
1.3	-3.1		
1.4	-3.2		
1.5	-5.3		
1.6	0.0		
1.7	3.8		
1.8	2.6		
1.9	-1.5		
2.0	-1.5	11.0	-12.5
2.1	-3.0	10.4	-13.5
2.2	-9.9	9.9	-19.8
2.3	-6.4	9.5	-15.9
2.4	-4.8	9.0	-13.8
2.5	-4.5	8.6	-13.0
2.6	-5.5	8.1	-13.6
2.7	-11.1	7.7	-18.8
2.8	-15.2	7.3	-22.5
2.9	-13.2	6.9	-20.1
3.0	-10.4	6.6	-17.0
3.1	-6.8	6.2	-13.0
3.2	-6.4	5.9	-12.3
3.3	-9.7	5.5	-15.2
3.4	-12.8	5.2	-18.0
3.5	-19.9	4.9	-24.8
3.6	-11.5	4.6	-16.1
3.7	-7.6	4.3	-11.9
3.8	-8.4	4.0	-12.4
3.9	-17.8	3.7	-21.5
4.0	-20.2	3.4	-23.7
4.1	-16.3	3.2	-19.5
4.2	-18.4	2.9	-21.3
4.3	-11.1	2.7	-13.8
4.4	-8.7	2.4	-11.1
4.5	-7.7	2.2	-9.8
4.6	-7.1	1.9	-9.0
4.7	-9.7	1.7	-11.4
4.8	-18.6	1.5	-20.0
4.9	-17.9	1.2	-19.2
5.0	-17.2	1.0	-18.2
5.1	-18.4	0.8	-19.2
5.2	-14.0	0.6	-14.6
5.3	-14.9	0.4	-15.3
5.4	-21.5	0.2	-21.7
5.5	-16.7	0.0	-16.7
5.6	-11.6	-0.2	-11.4
5.7	-10.9	-0.4	-10.5
5.8	-11.6	-0.6	-11.1
5.9	-14.4	-0.8	-13.6

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-2.0	3.4	-5.5
-3.9	-0.9	3.7	-4.6
-3.8	-2.9	4.0	-6.9
-3.7	-11.9	4.3	-16.2
-3.6	-4.7	4.6	-9.3
-3.5	-2.5	4.9	-7.4
-3.4	-4.8	5.2	-10.0
-3.3	-10.1	5.5	-15.6
-3.2	-5.4	5.9	-11.3
-3.1	-4.5	6.2	-10.7
-3.0	-5.7	6.6	-12.2
-2.9	-3.3	6.9	-10.2
-2.8	-2.0	7.3	-9.3
-2.7	-4.4	7.7	-12.1
-2.6	-14.4	8.1	-22.6
-2.5	-16.7	8.6	-25.2
-2.4	-15.0	9.0	-24.0
-2.3	-7.8	9.5	-17.2
-2.2	-6.7	9.9	-16.7
-2.1	-3.7	10.4	-14.2
-2.0	-0.1	11.0	-11.1
-1.9	-0.3		
-1.8	-6.1		
-1.7	-2.6		
-1.6	-2.1		
-1.5	-8.2		
-1.4	3.5		
-1.3	5.8		
-1.2	6.2		
-1.1	6.9		
-1.0	5.7		
-0.9	5.2		
-0.8	8.8		
-0.7	7.8		
-0.6	9.5		
-0.5	21.5		
-0.4	29.0		
-0.3	34.5		
-0.2	38.0		
-0.1	39.8		
0.0	40.0		

6.0	-21.6	-1.0	-20.6
6.1	-15.9	-1.1	-14.8
6.2	-11.5	-1.3	-10.2
6.3	-11.0	-1.5	-9.6
6.4	-10.6	-1.7	-8.9
6.5	-11.6	-1.8	-9.8
6.6	-13.1	-2.0	-11.1
6.7	-13.2	-2.2	-11.0
6.8	-12.3	-2.3	-10.0
6.9	-11.9	-2.5	-9.5
7.0	-12.8	-2.6	-10.2
7.1	-15.4	-2.6	-12.8
7.2	-25.7	-2.6	-23.1
7.3	-20.7	-2.6	-18.1
7.4	-16.4	-2.6	-13.7
7.5	-17.0	-2.6	-14.4
7.6	-18.9	-2.6	-16.3
7.7	-17.0	-2.6	-14.3
7.8	-14.6	-2.6	-12.0
7.9	-13.9	-2.6	-11.3
8.0	-14.2	-2.6	-11.6
8.1	-16.2	-2.6	-13.6
8.2	-23.6	-2.6	-20.9
8.3	-19.6	-2.6	-17.0
8.4	-16.8	-2.6	-14.2
8.5	-16.6	-2.6	-14.0
8.6	-17.4	-2.6	-14.8
8.7	-17.4	-2.6	-14.8
8.8	-18.8	-2.6	-16.2
8.9	-20.3	-2.6	-17.7
9.0	-21.6	-2.6	-18.9
9.1	-22.3	-2.6	-19.6
9.2	-23.1	-2.6	-20.5
9.3	-29.8	-2.7	-27.1
9.4	-27.1	-2.8	-24.2
9.5	-19.1	-2.9	-16.1
9.6	-17.5	-3.1	-14.5
9.7	-17.2	-3.2	-14.0
9.8	-17.4	-3.3	-14.2
9.9	-17.8	-3.4	-14.4
10.0	-18.2	-3.5	-14.7

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.5	-12.4	-8.0
-29.5	-19.8	-12.2	-7.5
-29.0	-22.7	-12.1	-10.7
-28.5	-21.0	-11.9	-9.1
-28.0	-22.1	-11.7	-10.4
-27.5	-22.9	-11.5	-11.4
-27.0	-26.2	-11.3	-14.9
-26.5	-23.3	-11.1	-12.2
-26.0	-24.7	-10.9	-13.8
-25.5	-22.7	-10.7	-12.0
-25.0	-18.6	-10.4	-8.2
-24.5	-18.5	-10.2	-8.3
-24.0	-17.8	-10.0	-7.8
-23.5	-28.0	-9.8	-18.2
-23.0	-30.6	-9.5	-21.1
-22.5	-20.6	-9.3	-11.3
-22.0	-17.2	-9.1	-8.2
-21.5	-16.5	-8.8	-7.7
-21.0	-25.4	-8.6	-16.8
-20.5	-17.3	-8.3	-9.0
-20.0	-17.6	-8.0	-9.6
-19.5	-13.1	-7.8	-5.4
-19.0	-13.1	-7.5	-5.7
-18.5	-14.4	-7.2	-7.2
-18.0	-26.0	-6.9	-19.1
-17.5	-35.1	-6.6	-28.5
-17.0	-26.7	-6.3	-20.4
-16.5	-25.9	-5.9	-20.0
-16.0	-29.9	-5.6	-24.3
-15.5	-25.1	-5.3	-19.8
-15.0	-20.7	-4.9	-15.8
-14.5	-28.5	-4.5	-24.0
-14.0	-13.6	-4.2	-9.5
-13.5	-18.3	-3.8	-14.5
-13.0	-21.3	-3.3	-17.9
-12.5	-23.4	-2.9	-20.5
-12.0	-18.1	-2.5	-15.6
-11.5	-17.6	-2.0	-15.6
-11.0	-24.6	-1.5	-23.0
-10.5	-21.9	-1.0	-20.8
-10.0	-18.1	-0.5	-17.6
-9.5	-18.2	0.1	-18.2
-9.0	-14.3	0.4	-14.7
-8.5	-20.0	0.4	-20.4
-8.0	-13.9	0.4	-14.3
-7.5	-21.6	0.4	-22.0
-7.0	-13.6	0.4	-13.9
-6.5	-17.3	1.2	-18.5
-6.0	-12.7	2.0	-14.7
-5.5	-13.2	3.0	-16.2
-5.0	-10.1	4.0	-14.1
-4.5	-10.1	5.2	-15.2
-4.0	-8.7	6.4	-15.1
-3.5	-6.9	7.9	-14.8
-3.0	-1.0		
-2.5	-2.2		
-2.0	-3.5		
-1.5	6.3		
-1.0	9.6		
-0.5	24.1		
0.0	40.9		

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.9		
0.5	26.4		
1.0	5.2		
1.5	-1.9		
2.0	-6.2		
2.5	-1.5		
3.0	-4.1		
3.5	-3.1	7.9	-11.0
4.0	1.4	6.4	-5.1
4.5	-12.5	5.2	-17.7
5.0	-4.3	4.0	-8.3
5.5	-24.0	3.0	-27.0
6.0	-13.4	2.0	-15.4
6.5	-10.7	1.2	-11.9
7.0	-13.4	0.4	-13.8
7.5	-23.6	0.4	-23.9
8.0	-26.1	0.4	-26.5
8.5	-13.1	0.4	-13.4
9.0	-14.4	0.4	-14.8
9.5	-21.3	0.1	-21.4
10.0	-11.7	-0.5	-11.2
10.5	-16.2	-1.0	-15.2
11.0	-19.7	-1.5	-18.2
11.5	-24.7	-2.0	-22.7
12.0	-24.7	-2.5	-22.2
12.5	-17.5	-2.9	-14.6
13.0	-15.9	-3.3	-12.5
13.5	-20.5	-3.8	-16.7
14.0	-29.0	-4.2	-24.9
14.5	-24.3	-4.5	-19.7
15.0	-23.6	-4.9	-18.7
15.5	-26.7	-5.3	-21.5
16.0	-30.0	-5.6	-24.4
16.5	-28.2	-5.9	-22.3
17.0	-27.0	-6.3	-20.7
17.5	-34.1	-6.6	-27.5
18.0	-25.1	-6.9	-18.2
18.5	-28.5	-7.2	-21.3
19.0	-23.7	-7.5	-16.2
19.5	-24.4	-7.8	-16.7
20.0	-29.7	-8.0	-21.7
20.5	-23.6	-8.3	-15.3
21.0	-37.9	-8.6	-29.4
21.5	-38.4	-8.8	-29.6
22.0	-30.2	-9.1	-21.1
22.5	-24.4	-9.3	-15.1
23.0	-27.6	-9.5	-18.0
23.5	-26.5	-9.8	-16.7
24.0	-33.1	-10.0	-23.1
24.5	-31.5	-10.2	-21.2
25.0	-26.9	-10.4	-16.5
25.5	-30.8	-10.7	-20.1
26.0	-39.1	-10.9	-28.3
26.5	-31.4	-11.1	-20.3
27.0	-32.1	-11.3	-20.8
27.5	-27.3	-11.5	-15.8
28.0	-25.8	-11.7	-14.2
28.5	-29.1	-11.9	-17.3
29.0	-29.1	-12.1	-17.0
29.5	-26.9	-12.2	-14.6
30.0	-36.1	-12.4	-23.7

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPs Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol EI RHCP

Angle Degrees	EIRPs dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-25.6	-0.5	-25.1
-9.9	-22.2	-0.4	-21.8
-9.8	-19.4	-0.3	-19.2
-9.7	-18.3	-0.2	-18.1
-9.6	-17.4	-0.1	-17.4
-9.5	-16.6	0.1	-16.7
-9.4	-17.0	0.2	-17.2
-9.3	-21.7	0.3	-22.0
-9.2	-25.2	0.4	-25.6
-9.1	-19.8	0.4	-20.2
-9.0	-15.4	0.4	-15.8
-8.9	-15.5	0.4	-15.8
-8.8	-18.3	0.4	-18.7
-8.7	-24.1	0.4	-24.5
-8.6	-20.6	0.4	-21.0
-8.5	-24.7	0.4	-25.1
-8.4	-29.6	0.4	-29.9
-8.3	-22.5	0.4	-22.8
-8.2	-17.2	0.4	-17.6
-8.1	-14.9	0.4	-15.3
-8.0	-15.5	0.4	-15.9
-7.9	-18.5	0.4	-18.8
-7.8	-27.9	0.4	-28.3
-7.7	-20.1	0.4	-20.4
-7.6	-18.1	0.4	-18.4
-7.5	-21.5	0.4	-21.8
-7.4	-29.9	0.4	-30.3
-7.3	-18.0	0.4	-18.4
-7.2	-13.6	0.4	-14.0
-7.1	-11.6	0.4	-11.9
-7.0	-12.5	0.4	-12.8
-6.9	-23.5	0.5	-24.0
-6.8	-14.1	0.7	-14.8
-6.7	-10.6	0.8	-11.4
-6.6	-13.3	1.0	-14.3
-6.5	-19.7	1.2	-20.9
-6.4	-17.2	1.3	-18.5
-6.3	-15.4	1.5	-16.9
-6.2	-13.5	1.7	-15.2
-6.1	-12.9	1.9	-14.8
-6.0	-13.1	2.0	-15.1
-5.9	-12.9	2.2	-15.1
-5.8	-11.6	2.4	-14.0
-5.7	-13.6	2.6	-16.2
-5.6	-14.9	2.8	-17.7
-5.5	-12.7	3.0	-15.7
-5.4	-15.0	3.2	-18.2
-5.3	-13.1	3.4	-16.5
-5.2	-9.3	3.6	-12.9
-5.1	-8.3	3.8	-12.1
-5.0	-10.4	4.0	-14.4
-4.9	-13.5	4.2	-17.8
-4.8	-15.2	4.5	-19.7
-4.7	-12.6	4.7	-17.3
-4.6	-11.5	4.9	-16.4
-4.5	-11.2	5.2	-16.4
-4.4	-11.2	5.4	-16.6
-4.3	-9.8	5.7	-15.4
-4.2	-7.7	5.9	-13.7
-4.1	-7.7	6.2	-13.9

28.30 GHz @ -12.42 dBW / 40 kHz in Co-pol EI RHCP

Angle Degrees	EIRPs dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	40.1		
0.1	39.2		
0.2	36.6		
0.3	32.1		
0.4	28.4		
0.5	24.9		
0.6	19.6		
0.7	2.8		
0.8	9.1		
0.9	8.3		
1.0	7.4		
1.1	7.5		
1.2	3.1		
1.3	-7.7		
1.4	-2.3		
1.5	-3.2		
1.6	1.6		
1.7	2.1		
1.8	-0.4		
1.9	-4.2		
2.0	-5.9		
2.1	-4.2		
2.2	-2.4		
2.3	-2.8		
2.4	-2.4		
2.5	-2.3		
2.6	-5.5		
2.7	-12.3		
2.8	-24.2		
2.9	-10.6		
3.0	-5.7		
3.1	-6.2		
3.2	-8.7		
3.3	-5.5		
3.4	-4.7		
3.5	-2.9	7.9	-10.8
3.6	-2.8	7.6	-10.4
3.7	-3.6	7.3	-10.9
3.8	-1.1	7.0	-8.1
3.9	1.0	6.7	-5.7
4.0	0.9	6.4	-5.6
4.1	-0.1	6.2	-6.3
4.2	0.0	5.9	-5.9
4.3	-1.9	5.7	-7.5
4.4	-9.5	5.4	-14.9
4.5	-21.4	5.2	-26.6
4.6	-10.8	4.9	-15.7
4.7	-7.3	4.7	-12.0
4.8	-5.5	4.5	-10.0
4.9	-6.1	4.2	-10.3
5.0	-7.5	4.0	-11.5
5.1	-8.8	3.8	-12.6
5.2	-11.5	3.6	-15.1
5.3	-20.2	3.4	-23.6
5.4	-22.7	3.2	-25.9
5.5	-16.0	3.0	-19.0
5.6	-15.5	2.8	-18.3
5.7	-17.5	2.6	-20.1
5.8	-17.6	2.4	-20.0
5.9	-14.7	2.2	-16.9

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	-10.2	6.4	-16.6
-3.9	-14.0	6.7	-20.7
-3.8	-8.3	7.0	-15.3
-3.7	-6.4	7.3	-13.7
-3.6	-7.4	7.6	-15.0
-3.5	-9.4	7.9	-17.3
-3.4	-13.7		
-3.3	-15.2		
-3.2	-15.5		
-3.1	-16.4		
-3.0	-3.1		
-2.9	1.2		
-2.8	1.3		
-2.7	-1.1		
-2.6	-4.7		
-2.5	-2.4		
-2.4	0.0		
-2.3	1.3		
-2.2	1.4		
-2.1	-0.9		
-2.0	-4.6		
-1.9	-5.9		
-1.8	-7.2		
-1.7	-3.8		
-1.6	3.0		
-1.5	5.5		
-1.4	4.3		
-1.3	3.8		
-1.2	9.4		
-1.1	10.5		
-1.0	7.7		
-0.9	9.1		
-0.8	12.9		
-0.7	17.1		
-0.6	20.4		
-0.5	22.7		
-0.4	27.8		
-0.3	34.0		
-0.2	37.8		
-0.1	39.7		
0.0	40.1		

6.0	-14.7	2.0	-16.8
6.1	-15.8	1.9	-17.7
6.2	-14.3	1.7	-16.0
6.3	-13.7	1.5	-15.2
6.4	-13.0	1.3	-14.4
6.5	-11.9	1.2	-13.0
6.6	-9.6	1.0	-10.6
6.7	-9.9	0.8	-10.7
6.8	-12.0	0.7	-12.7
6.9	-15.6	0.5	-16.1
7.0	-25.8	0.4	-26.2
7.1	-17.2	0.4	-17.5
7.2	-14.7	0.4	-15.0
7.3	-17.0	0.4	-17.4
7.4	-21.5	0.4	-21.9
7.5	-16.2	0.4	-16.5
7.6	-15.2	0.4	-15.6
7.7	-19.5	0.4	-19.9
7.8	-16.3	0.4	-16.7
7.9	-15.9	0.4	-16.2
8.0	-17.4	0.4	-17.8
8.1	-18.1	0.4	-18.4
8.2	-16.7	0.4	-17.0
8.3	-15.4	0.4	-15.8
8.4	-15.1	0.4	-15.5
8.5	-20.4	0.4	-20.8
8.6	-21.3	0.4	-21.7
8.7	-24.1	0.4	-24.5
8.8	-39.9	0.4	-40.3
8.9	-26.5	0.4	-26.9
9.0	-19.9	0.4	-20.3
9.1	-14.6	0.4	-15.0
9.2	-13.6	0.4	-14.0
9.3	-14.5	0.3	-14.8
9.4	-16.5	0.2	-16.7
9.5	-15.9	0.1	-16.0
9.6	-12.9	-0.1	-12.8
9.7	-10.8	-0.2	-10.6
9.8	-10.5	-0.3	-10.2
9.9	-11.3	-0.4	-10.9
10.0	-12.7	-0.5	-12.2

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz @ -12.42 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-21.7	-12.6	-9.1
-9.9	-21.2	-12.6	-8.5
-9.8	-21.0	-12.6	-8.3
-9.7	-18.6	-12.6	-5.9
-9.6	-18.9	-12.6	-6.3
-9.5	-17.5	-12.6	-4.9
-9.4	-17.9	-12.6	-5.3
-9.3	-18.3	-12.6	-5.7
-9.2	-18.1	-12.6	-5.4
-9.1	-16.9	-12.6	-4.2
-9.0	-18.5	-12.6	-5.9
-8.9	-19.0	-12.6	-6.4
-8.8	-20.5	-12.6	-7.8
-8.7	-17.5	-12.6	-4.9
-8.6	-15.9	-12.6	-3.3
-8.5	-15.5	-12.6	-2.9
-8.4	-16.2	-12.6	-3.6
-8.3	-17.3	-12.6	-4.6
-8.2	-16.4	-12.6	-3.7
-8.1	-16.7	-12.6	-4.1
-8.0	-19.1	-12.6	-6.4
-7.9	-22.4	-12.6	-9.8
-7.8	-20.8	-12.6	-8.1
-7.7	-18.3	-12.6	-5.7
-7.6	-17.8	-12.6	-5.2
-7.5	-17.1	-12.6	-4.5
-7.4	-14.5	-12.6	-1.9
-7.3	-13.6	-12.6	-1.0
-7.2	-14.2	-12.6	-1.6
-7.1	-16.5	-12.6	-3.8
-7.0	-17.5	-12.6	-4.9
-6.9	-17.1	-12.5	-4.6
-6.8	-16.2	-12.3	-3.9
-6.7	-15.7	-12.2	-3.5
-6.6	-16.7	-12.0	-4.7
-6.5	-20.5	-11.8	-8.7
-6.4	-27.5	-11.7	-15.8
-6.3	-25.8	-11.5	-14.3
-6.2	-29.6	-11.3	-18.3
-6.1	-25.5	-11.1	-14.4
-6.0	-18.8	-11.0	-7.9
-5.9	-16.9	-10.8	-6.1
-5.8	-19.1	-10.6	-8.5
-5.7	-30.2	-10.4	-19.8
-5.6	-19.4	-10.2	-9.2
-5.5	-17.4	-10.0	-7.4
-5.4	-18.5	-9.8	-8.6
-5.3	-23.4	-9.6	-13.8
-5.2	-17.1	-9.4	-7.7
-5.1	-14.1	-9.2	-4.9
-5.0	-14.1	-9.0	-5.1
-4.9	-16.3	-8.8	-7.6
-4.8	-36.2	-8.5	-27.7
-4.7	-17.3	-8.3	-9.0
-4.6	-14.9	-8.1	-6.8
-4.5	-16.8	-7.8	-8.9
-4.4	-15.2	-7.6	-7.6
-4.3	-14.2	-7.3	-6.9
-4.2	-19.0	-7.1	-11.9
-4.1	-17.6	-6.8	-10.8

28.30 GHz @ -12.42 dBW / 40 kHz in X-pol Az RHCP

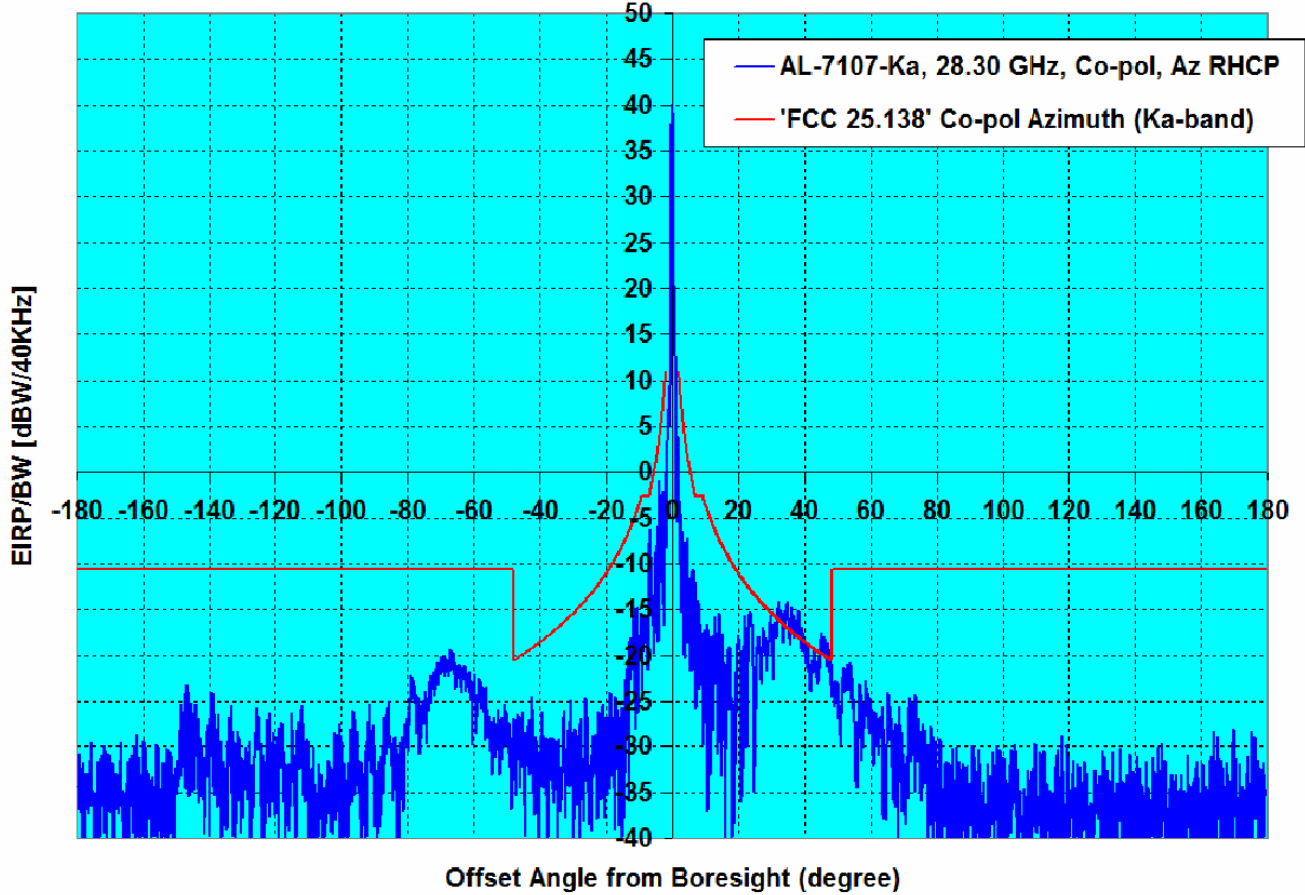
Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	15.2		
0.1	14.4		
0.2	16.2		
0.3	17.7		
0.4	17.2		
0.5	14.9		
0.6	9.5		
0.7	1.3		
0.8	-8.3		
0.9	-2.9		
1.0	2.4		
1.1	1.7		
1.2	-4.9		
1.3	-10.1		
1.4	-5.1		
1.5	-6.4		
1.6	-10.4		
1.7	-12.1		
1.8	-17.4		
1.9	-26.5		
2.0	-19.0	1.0	-20.0
2.1	-18.0	0.4	-18.4
2.2	-23.1	-0.1	-23.0
2.3	-22.9	-0.5	-22.4
2.4	-16.0	-1.0	-15.0
2.5	-15.9	-1.4	-14.4
2.6	-19.8	-1.9	-17.9
2.7	-13.0	-2.3	-10.7
2.8	-11.7	-2.7	-9.0
2.9	-13.0	-3.1	-10.0
3.0	-19.8	-3.4	-16.4
3.1	-23.1	-3.8	-19.4
3.2	-23.3	-4.1	-19.2
3.3	-28.9	-4.5	-24.4
3.4	-20.7	-4.8	-15.9
3.5	-22.4	-5.1	-17.3
3.6	-23.4	-5.4	-18.0
3.7	-21.9	-5.7	-16.2
3.8	-24.6	-6.0	-18.6
3.9	-22.2	-6.3	-15.9
4.0	-19.2	-6.6	-12.6
4.1	-19.7	-6.8	-12.9
4.2	-22.7	-7.1	-15.7
4.3	-23.2	-7.3	-15.8
4.4	-23.7	-7.6	-16.1
4.5	-22.2	-7.8	-14.4
4.6	-18.3	-8.1	-10.3
4.7	-19.4	-8.3	-11.1
4.8	-23.9	-8.5	-15.4
4.9	-26.5	-8.8	-17.7
5.0	-25.1	-9.0	-16.1
5.1	-22.5	-9.2	-13.3
5.2	-23.8	-9.4	-14.4
5.3	-24.4	-9.6	-14.8
5.4	-18.5	-9.8	-8.7
5.5	-17.7	-10.0	-7.7
5.6	-18.5	-10.2	-8.3
5.7	-23.9	-10.4	-13.5
5.8	-25.3	-10.6	-14.7
5.9	-26.5	-10.8	-15.7

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-11.3	-6.6	-4.7
-3.9	-11.3	-6.3	-5.0
-3.8	-15.5	-6.0	-9.5
-3.7	-15.5	-5.7	-9.8
-3.6	-14.4	-5.4	-9.0
-3.5	-18.1	-5.1	-13.0
-3.4	-20.2	-4.8	-15.5
-3.3	-18.1	-4.5	-13.6
-3.2	-22.2	-4.1	-18.1
-3.1	-21.8	-3.8	-18.0
-3.0	-15.4	-3.4	-12.0
-2.9	-15.3	-3.1	-12.3
-2.8	-17.7	-2.7	-15.1
-2.7	-18.3	-2.3	-16.0
-2.6	-16.8	-1.9	-15.0
-2.5	-19.4	-1.4	-18.0
-2.4	-15.4	-1.0	-14.4
-2.3	-10.9	-0.5	-10.4
-2.2	-10.0	-0.1	-9.9
-2.1	-8.5	0.4	-8.9
-2.0	-9.5	1.0	-10.5
-1.9	-21.3		
-1.8	-8.1		
-1.7	-4.3		
-1.6	-3.5		
-1.5	-2.6		
-1.4	-2.5		
-1.3	-7.0		
-1.2	-4.4		
-1.1	1.4		
-1.0	2.4		
-0.9	2.3		
-0.8	6.8		
-0.7	11.7		
-0.6	14.4		
-0.5	15.9		
-0.4	15.0		
-0.3	9.9		
-0.2	9.4		
-0.1	14.5		
0.0	15.2		

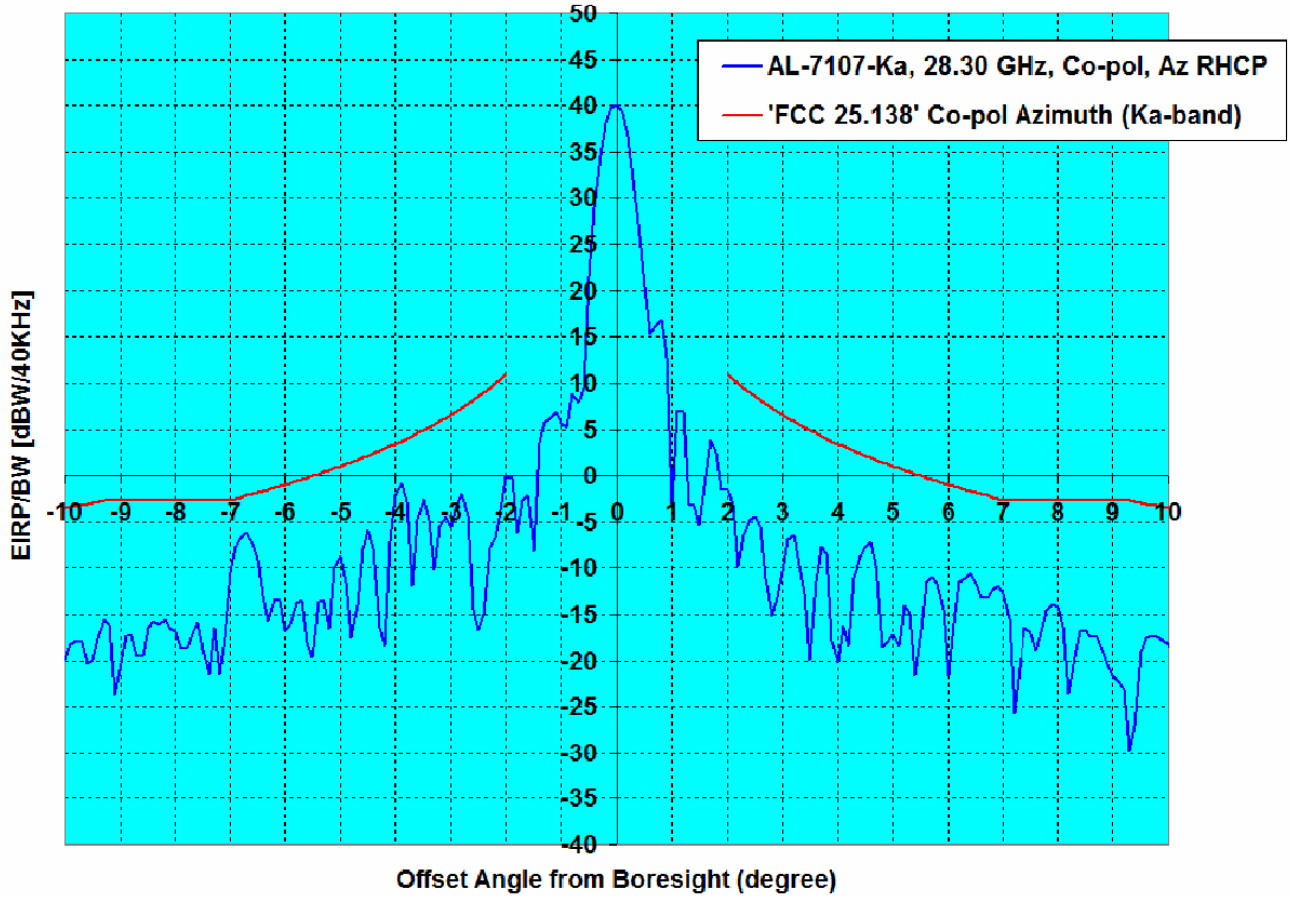
6.0	-30.7	-11.0	-19.8
6.1	-29.5	-11.1	-18.3
6.2	-30.5	-11.3	-19.2
6.3	-26.3	-11.5	-14.8
6.4	-21.2	-11.7	-9.5
6.5	-20.7	-11.8	-8.8
6.6	-21.7	-12.0	-9.7
6.7	-21.2	-12.2	-9.1
6.8	-19.9	-12.3	-7.6
6.9	-18.6	-12.5	-6.2
7.0	-19.7	-12.6	-7.1
7.1	-21.6	-12.6	-9.0
7.2	-22.8	-12.6	-10.2
7.3	-25.3	-12.6	-12.6
7.4	-26.9	-12.6	-14.3
7.5	-23.8	-12.6	-11.1
7.6	-21.1	-12.6	-8.5
7.7	-19.0	-12.6	-6.4
7.8	-17.4	-12.6	-4.7
7.9	-17.7	-12.6	-5.1
8.0	-18.5	-12.6	-5.9
8.1	-19.2	-12.6	-6.6
8.2	-20.7	-12.6	-8.1
8.3	-23.7	-12.6	-11.1
8.4	-25.3	-12.6	-12.7
8.5	-24.7	-12.6	-12.1
8.6	-22.4	-12.6	-9.8
8.7	-19.2	-12.6	-6.5
8.8	-18.0	-12.6	-5.4
8.9	-21.9	-12.6	-9.2
9.0	-22.1	-12.6	-9.4
9.1	-21.2	-12.6	-8.5
9.2	-22.1	-12.6	-9.4
9.3	-23.0	-12.6	-10.4
9.4	-24.3	-12.6	-11.7
9.5	-26.8	-12.6	-14.1
9.6	-25.5	-12.6	-12.9
9.7	-20.6	-12.6	-8.0
9.8	-22.0	-12.6	-9.4
9.9	-34.5	-12.6	-21.9
10.0	-23.2	-12.6	-10.6

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.42 dBW/40KHz to Input and
 40.05 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in Az RHCP
 Min BW of 8.04 MHz in case of 20W BUC**



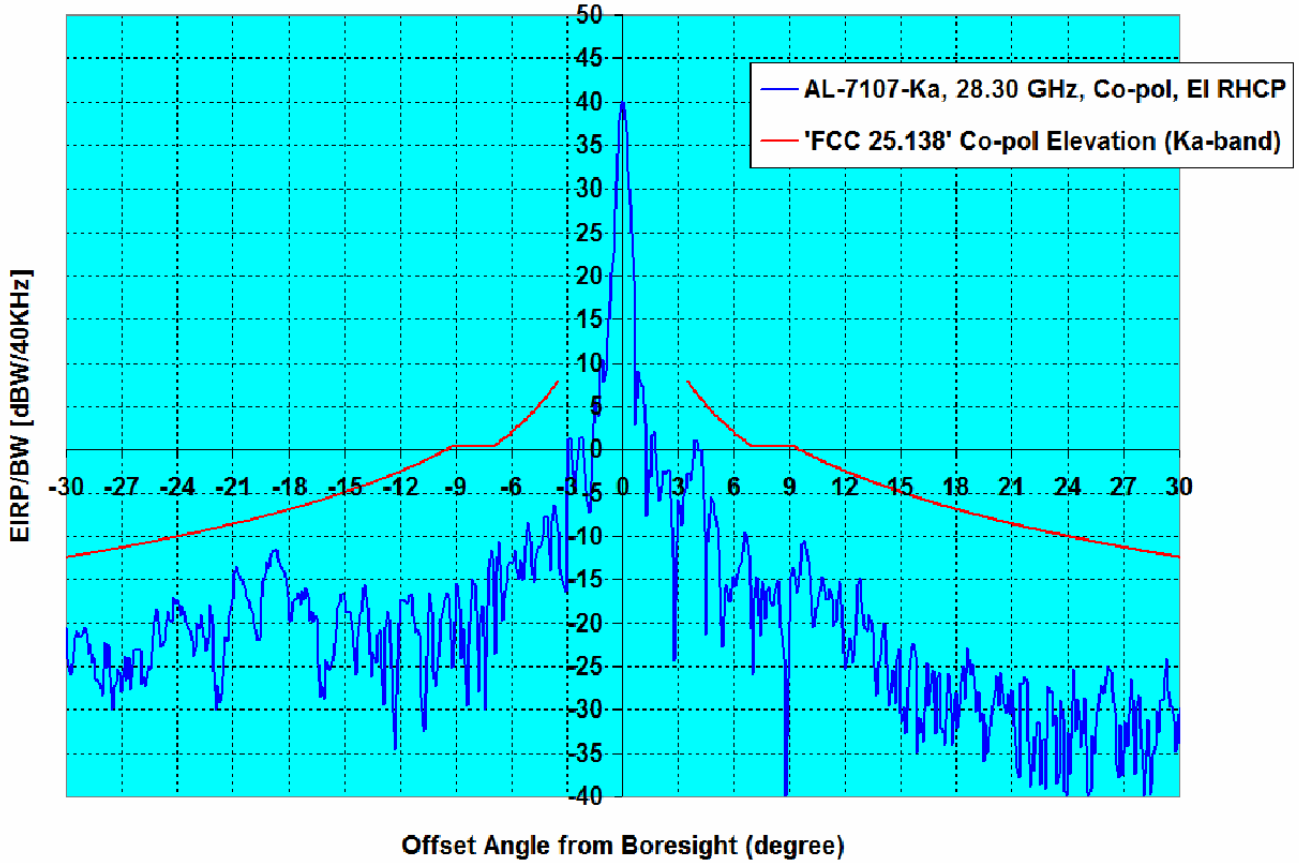
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7107-Ka, 28.30 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.47	-12.42	-4.06	3.00	2.56

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.42 dBW/40KHz to Input and
 40.05 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in Az RHCP
 Min BW of 8.04 MHz in case of 20W BUC**



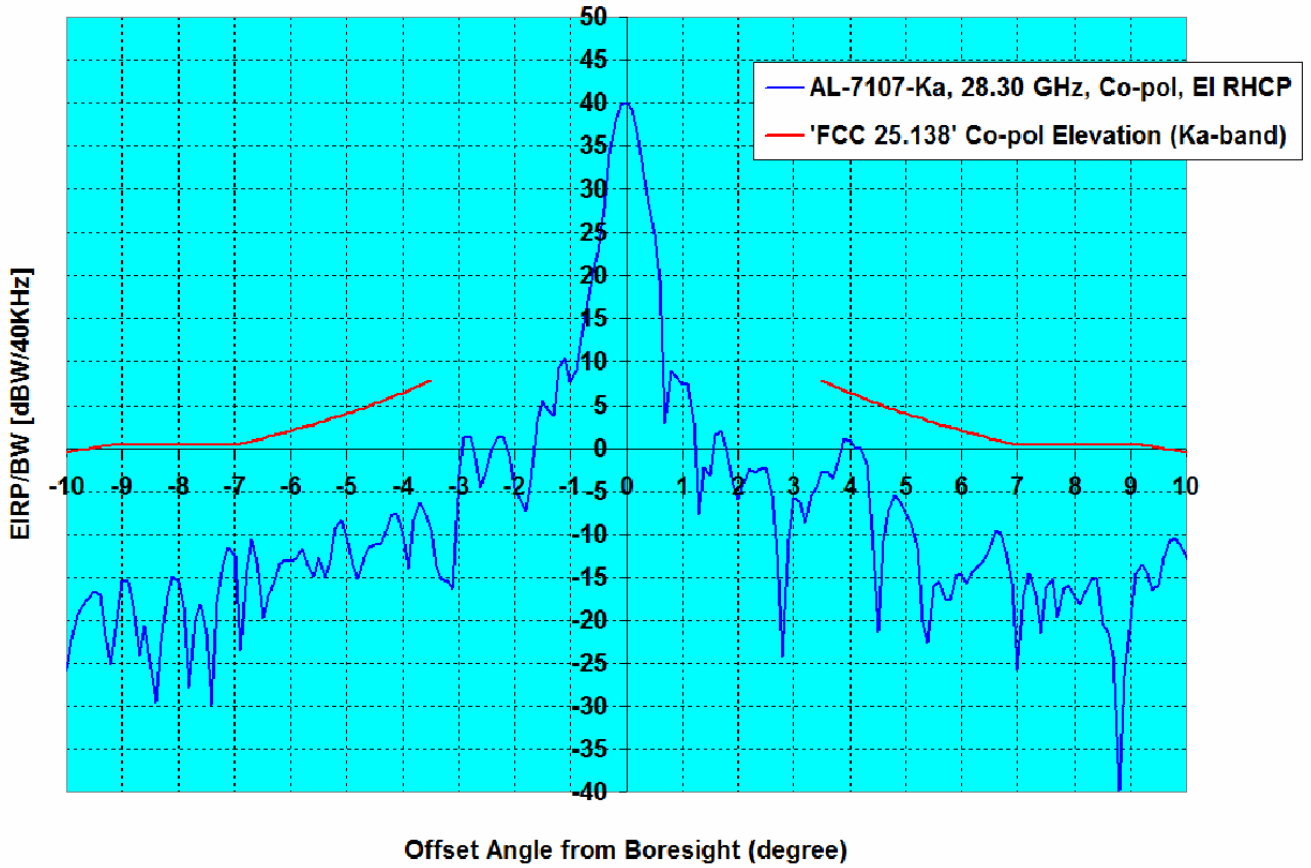
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Freq., Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (2° to 10°)	± (10° to 180°)	%
AL-7107-Ka, 28.30 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.47	-12.42	-4.06	3.00	2.56

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.42 dBW/40KHz to Input and
 40.05 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in EI RHCP
 Min BW of 8.04 MHz in case of 20W BUC**



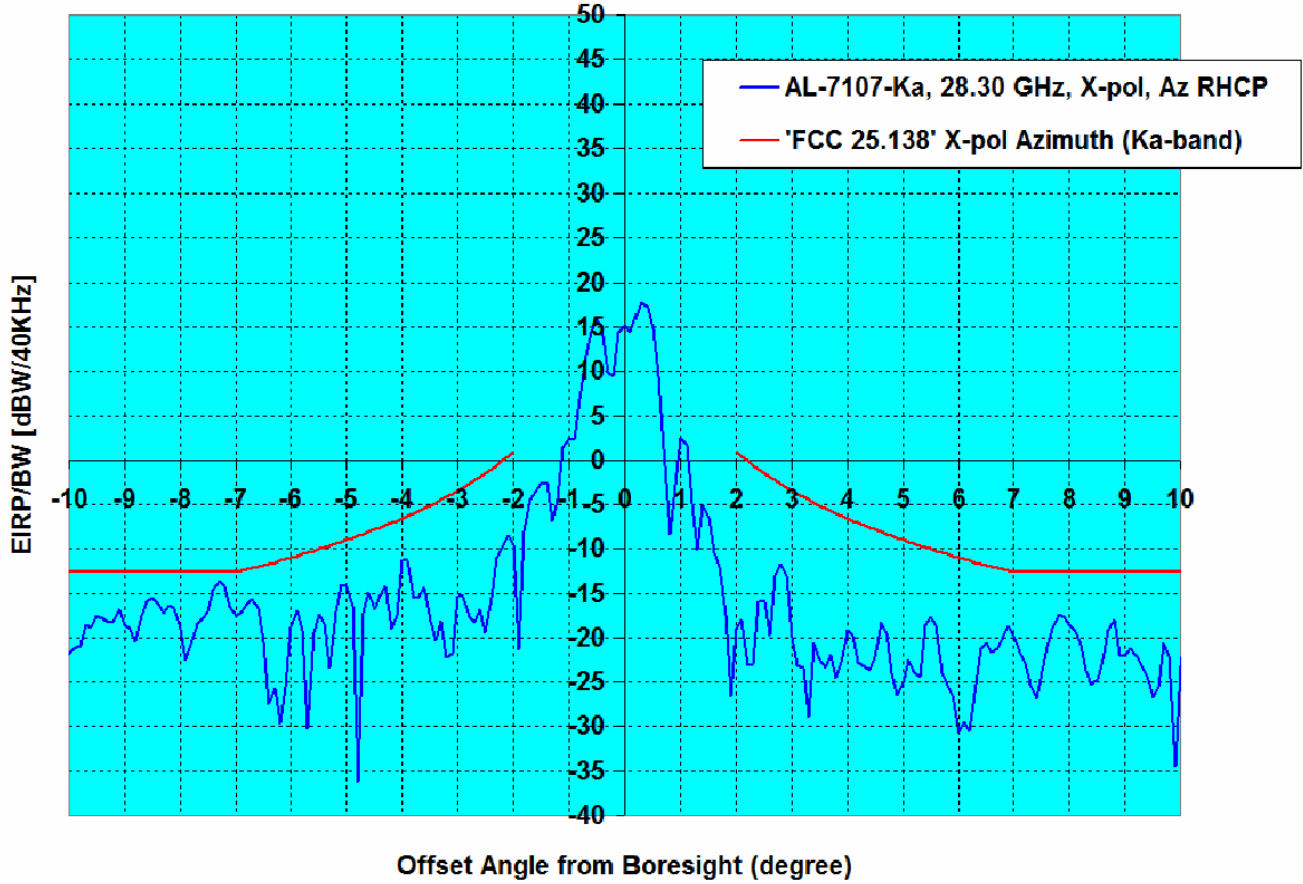
Configuration System, Frequency, Polarization, Plane	Regulation	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
	EIRP/BW [dBW/40KHz]			± (3.5° to 10°)	± (10° to 30°)	
AL-7107-Ka, 28.30 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.47	-12.42	-5.60	-4.15	0.00

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.42 dBW/40KHz to Input and
 40.05 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in EI RHCP
 Min BW of 8.04 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (3.5° to 10°)	± (10° to 30°)	
AL-7107-Ka, 28.30 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.47	-12.42	-5.60	-4.15	0.00

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -12.42 dBW/40KHz to Input and
 40.05 dBW/40KHz in the Output of AL-7107-Ka Antenna at 28.30 GHz in Az RHCP
 Min BW of 8.04 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7107-Ka, 28.30 GHz, X-pol, Az RHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	52.47	-12.42	-3.50	-0.98	0.00

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-179.0	-38.3	-10.5	-27.8
-178.0	-30.5	-10.5	-20.0
-177.0	-32.9	-10.5	-22.4
-176.0	-37.4	-10.5	-26.9
-175.0	-39.8	-10.5	-29.3
-174.0	-39.8	-10.5	-29.3
-173.0	-39.3	-10.5	-28.8
-172.0	-39.8	-10.5	-29.3
-171.0	-36.3	-10.5	-25.8
-170.0	-38.3	-10.5	-27.8
-169.0	-30.5	-10.5	-20.0
-168.0	-32.9	-10.5	-22.4
-167.0	-37.4	-10.5	-26.9
-166.0	-39.8	-10.5	-29.3
-165.0	-39.8	-10.5	-29.3
-164.0	-39.3	-10.5	-28.8
-163.0	-39.8	-10.5	-29.3
-162.0	-31.8	-10.5	-21.3
-161.0	-33.2	-10.5	-22.7
-160.0	-39.4	-10.5	-28.9
-159.0	-38.3	-10.5	-27.8
-158.0	-39.8	-10.5	-29.3
-157.0	-32.2	-10.5	-21.7
-156.0	-39.8	-10.5	-29.3
-155.0	-39.7	-10.5	-29.2
-154.0	-33.1	-10.5	-22.6
-153.0	-35.0	-10.5	-24.5
-152.0	-27.6	-10.5	-17.1
-151.0	-31.7	-10.5	-21.2
-150.0	-30.1	-10.5	-19.6
-149.0	-39.8	-10.5	-29.3
-148.0	-38.2	-10.5	-27.7
-147.0	-36.9	-10.5	-26.4
-146.0	-28.2	-10.5	-17.7
-145.0	-27.9	-10.5	-17.4
-144.0	-32.6	-10.5	-22.1
-143.0	-32.6	-10.5	-22.1
-142.0	-34.0	-10.5	-23.5
-141.0	-32.6	-10.5	-22.1
-140.0	-28.4	-10.5	-17.9
-139.0	-32.6	-10.5	-22.1
-138.0	-33.0	-10.5	-22.5
-137.0	-32.9	-10.5	-22.4
-136.0	-36.1	-10.5	-25.6
-135.0	-27.4	-10.5	-16.9
-134.0	-28.2	-10.5	-17.7
-133.0	-39.8	-10.5	-29.3
-132.0	-37.6	-10.5	-27.1
-131.0	-34.5	-10.5	-24.0
-130.0	-28.4	-10.5	-17.9
-129.0	-28.5	-10.5	-18.0
-128.0	-31.3	-10.5	-20.8
-127.0	-28.3	-10.5	-17.8
-126.0	-27.4	-10.5	-16.9
-125.0	-34.9	-10.5	-24.4
-124.0	-31.9	-10.5	-21.4
-123.0	-33.2	-10.5	-22.7
-122.0	-37.6	-10.5	-27.1
-121.0	-33.0	-10.5	-22.5
-120.0	-38.4	-10.5	-27.9

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.2		
1.0	3.3		
2.0	-2.4	11.0	-13.4
3.0	-3.3	6.6	-9.9
4.0	-16.5	3.4	-20.0
5.0	-22.8	1.0	-23.8
6.0	-12.1	-1.0	-11.1
7.0	-26.5	-2.6	-23.8
8.0	-17.8	-2.6	-15.2
9.0	-15.6	-2.6	-13.0
10.0	-17.7	-3.5	-14.2
11.0	-27.9	-4.5	-23.4
12.0	-15.5	-5.5	-10.0
13.0	-19.1	-6.3	-12.7
14.0	-25.1	-7.2	-17.9
15.0	-29.8	-7.9	-21.9
16.0	-35.8	-8.6	-27.2
17.0	-29.0	-9.3	-19.8
18.0	-26.8	-9.9	-16.9
19.0	-31.9	-10.5	-21.5
20.0	-23.2	-11.0	-12.2
21.0	-27.7	-11.6	-16.2
22.0	-16.9	-12.1	-4.9
23.0	-16.1	-12.5	-3.6
24.0	-18.3	-13.0	-5.3
25.0	-23.6	-13.4	-10.2
26.0	-20.0	-13.9	-6.2
27.0	-19.9	-14.3	-5.6
28.0	-25.9	-14.7	-11.2
29.0	-21.2	-15.1	-6.2
30.0	-19.6	-15.4	-4.2
31.0	-18.2	-15.8	-2.4
32.0	-22.2	-16.1	-6.1
33.0	-17.4	-16.5	-1.0
34.0	-23.3	-16.8	-6.5
35.0	-21.7	-17.1	-4.6
36.0	-17.4	-17.4	0.0
37.0	-18.8	-17.7	-1.1
38.0	-22.0	-18.0	-4.0
39.0	-21.7	-18.3	-3.5
40.0	-22.0	-18.6	-3.4
41.0	-24.7	-18.8	-5.9
42.0	-23.5	-19.1	-4.4
43.0	-24.1	-19.3	-4.8
44.0	-21.4	-19.6	-1.8
45.0	-21.6	-19.8	-1.8
46.0	-21.8	-20.1	-1.8
47.0	-20.0	-20.3	0.3
48.0	-26.5	-20.5	-6.0
49.0	-23.0	-10.5	-12.5
50.0	-25.7	-10.5	-15.2
51.0	-34.0	-10.5	-23.5
52.0	-29.1	-10.5	-18.6
53.0	-26.5	-10.5	-16.0
54.0	-28.7	-10.5	-18.2
55.0	-31.9	-10.5	-21.4
56.0	-38.9	-10.5	-28.4
57.0	-35.6	-10.5	-25.1
58.0	-32.0	-10.5	-21.5
59.0	-37.4	-10.5	-26.9

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-38.6	-10.5	-28.1
-118.0	-36.4	-10.5	-25.9
-117.0	-38.7	-10.5	-28.2
-116.0	-34.5	-10.5	-24.0
-115.0	-39.8	-10.5	-29.3
-114.0	-34.8	-10.5	-24.3
-113.0	-30.0	-10.5	-19.5
-112.0	-32.2	-10.5	-21.7
-111.0	-29.7	-10.5	-19.2
-110.0	-29.7	-10.5	-19.2
-109.0	-39.8	-10.5	-29.3
-108.0	-37.1	-10.5	-26.6
-107.0	-37.6	-10.5	-27.1
-106.0	-32.6	-10.5	-22.1
-105.0	-32.9	-10.5	-22.4
-104.0	-32.3	-10.5	-21.8
-103.0	-32.4	-10.5	-21.9
-102.0	-28.6	-10.5	-18.1
-101.0	-35.7	-10.5	-25.2
-100.0	-29.4	-10.5	-18.9
-99.0	-32.4	-10.5	-21.9
-98.0	-39.8	-10.5	-29.3
-97.0	-36.1	-10.5	-25.6
-96.0	-39.8	-10.5	-29.3
-95.0	-32.1	-10.5	-21.6
-94.0	-32.0	-10.5	-21.5
-93.0	-35.0	-10.5	-24.5
-92.0	-32.4	-10.5	-21.9
-91.0	-31.1	-10.5	-20.6
-90.0	-34.1	-10.5	-23.6
-89.0	-39.6	-10.5	-29.1
-88.0	-31.1	-10.5	-20.6
-87.0	-28.3	-10.5	-17.8
-86.0	-25.7	-10.5	-15.2
-85.0	-25.7	-10.5	-15.2
-84.0	-27.7	-10.5	-17.2
-83.0	-32.6	-10.5	-22.1
-82.0	-32.6	-10.5	-22.1
-81.0	-25.1	-10.5	-14.6
-80.0	-25.2	-10.5	-14.7
-79.0	-22.7	-10.5	-12.2
-78.0	-21.7	-10.5	-11.2
-77.0	-29.1	-10.5	-18.6
-76.0	-26.6	-10.5	-16.1
-75.0	-27.0	-10.5	-16.5
-74.0	-23.3	-10.5	-12.8
-73.0	-22.6	-10.5	-12.1
-72.0	-19.3	-10.5	-8.8
-71.0	-19.1	-10.5	-8.6
-70.0	-18.2	-10.5	-7.7
-69.0	-19.1	-10.5	-8.6
-68.0	-17.1	-10.5	-6.6
-67.0	-17.0	-10.5	-6.5
-66.0	-17.5	-10.5	-7.0
-65.0	-18.8	-10.5	-8.3
-64.0	-17.2	-10.5	-6.7
-63.0	-19.3	-10.5	-8.8
-62.0	-19.8	-10.5	-9.3
-61.0	-21.8	-10.5	-11.3
-60.0	-22.8	-10.5	-12.3
-59.0	-23.5	-10.5	-13.0
-58.0	-23.9	-10.5	-13.4
-57.0	-27.4	-10.5	-16.9

60.0	-34.8	-10.5	-24.3
61.0	-37.8	-10.5	-27.3
62.0	-36.9	-10.5	-26.4
63.0	-39.8	-10.5	-29.3
64.0	-30.5	-10.5	-20.0
65.0	-32.2	-10.5	-21.7
66.0	-39.8	-10.5	-29.3
67.0	-32.3	-10.5	-21.8
68.0	-37.5	-10.5	-27.0
69.0	-33.7	-10.5	-23.2
70.0	-32.7	-10.5	-22.2
71.0	-32.3	-10.5	-21.8
72.0	-28.5	-10.5	-18.0
73.0	-27.5	-10.5	-17.0
74.0	-29.7	-10.5	-19.2
75.0	-29.8	-10.5	-19.3
76.0	-32.3	-10.5	-21.8
77.0	-39.8	-10.5	-29.3
78.0	-32.8	-10.5	-22.3
79.0	-39.8	-10.5	-29.3
80.0	-33.9	-10.5	-23.4
81.0	-34.6	-10.5	-24.1
82.0	-35.9	-10.5	-25.4
83.0	-35.5	-10.5	-25.0
84.0	-38.8	-10.5	-28.3
85.0	-39.8	-10.5	-29.3
86.0	-37.8	-10.5	-27.3
87.0	-33.9	-10.5	-23.4
88.0	-32.0	-10.5	-21.5
89.0	-38.1	-10.5	-27.6
90.0	-31.0	-10.5	-20.5
91.0	-37.4	-10.5	-26.9
92.0	-39.2	-10.5	-28.7
93.0	-39.8	-10.5	-29.3
94.0	-30.6	-10.5	-20.1
95.0	-37.5	-10.5	-27.0
96.0	-35.0	-10.5	-24.5
97.0	-36.7	-10.5	-26.2
98.0	-37.6	-10.5	-27.1
99.0	-39.7	-10.5	-29.2
100.0	-32.3	-10.5	-21.8
101.0	-34.2	-10.5	-23.7
102.0	-36.8	-10.5	-26.3
103.0	-35.2	-10.5	-24.7
104.0	-34.6	-10.5	-24.1
105.0	-32.0	-10.5	-21.5
106.0	-36.9	-10.5	-26.4
107.0	-35.5	-10.5	-25.0
108.0	-35.8	-10.5	-25.3
109.0	-37.3	-10.5	-26.8
110.0	-35.4	-10.5	-24.9
111.0	-37.0	-10.5	-26.5
112.0	-32.1	-10.5	-21.6
113.0	-36.5	-10.5	-26.0
114.0	-37.5	-10.5	-27.0
115.0	-35.3	-10.5	-24.8
116.0	-35.6	-10.5	-25.1
117.0	-39.5	-10.5	-29.0
118.0	-37.4	-10.5	-26.9
119.0	-39.4	-10.5	-28.9
120.0	-39.8	-10.5	-29.3
121.0	-39.1	-10.5	-28.6
122.0	-33.5	-10.5	-23.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-27.5	-10.5	-17.0
-55.0	-27.0	-10.5	-16.5
-54.0	-28.3	-10.5	-17.8
-53.0	-23.8	-10.5	-13.3
-52.0	-24.1	-10.5	-13.6
-51.0	-27.9	-10.5	-17.4
-50.0	-28.2	-10.5	-17.7
-49.0	-28.9	-10.5	-18.4
-48.0	-33.1	-20.5	-12.5
-47.0	-39.8	-20.3	-19.5
-46.0	-26.4	-20.1	-6.3
-45.0	-28.1	-19.8	-8.3
-44.0	-25.1	-19.6	-5.5
-43.0	-30.8	-19.3	-11.5
-42.0	-28.6	-19.1	-9.5
-41.0	-29.7	-18.8	-10.9
-40.0	-29.3	-18.6	-10.8
-39.0	-35.3	-18.3	-17.0
-38.0	-34.4	-18.0	-16.4
-37.0	-31.3	-17.7	-13.6
-36.0	-26.7	-17.4	-9.2
-35.0	-30.8	-17.1	-13.7
-34.0	-28.0	-16.8	-11.2
-33.0	-28.6	-16.5	-12.1
-32.0	-29.7	-16.1	-13.5
-31.0	-32.0	-15.8	-16.2
-30.0	-27.2	-15.4	-11.8
-29.0	-30.6	-15.1	-15.6
-28.0	-31.7	-14.7	-17.1
-27.0	-33.8	-14.3	-19.5
-26.0	-33.6	-13.9	-19.7
-25.0	-23.1	-13.4	-9.7
-24.0	-32.1	-13.0	-19.1
-23.0	-30.5	-12.5	-18.0
-22.0	-31.7	-12.1	-19.6
-21.0	-31.7	-11.6	-20.1
-20.0	-30.4	-11.0	-19.4
-19.0	-33.2	-10.5	-22.7
-18.0	-31.6	-9.9	-21.7
-17.0	-31.3	-9.3	-22.1
-16.0	-21.2	-8.6	-12.6
-15.0	-34.9	-7.9	-27.0
-14.0	-25.2	-7.2	-18.1
-13.0	-23.3	-6.3	-17.0
-12.0	-24.4	-5.5	-19.0
-11.0	-18.8	-4.5	-14.2
-10.0	-15.5	-3.5	-12.0
-9.0	-20.5	-2.6	-17.9
-8.0	-20.1	-2.6	-17.5
-7.0	-15.0	-2.6	-12.4
-6.0	-11.6	-1.0	-10.7
-5.0	-20.8	1.0	-21.9
-4.0	-18.0	3.4	-21.5
-3.0	-4.5	6.6	-11.1
-2.0	-7.7	11.0	-18.6
-1.0	4.8		
0.0	40.2		

123.0	-37.9	-10.5	-27.4
124.0	-34.6	-10.5	-24.1
125.0	-31.9	-10.5	-21.4
126.0	-39.8	-10.5	-29.3
127.0	-37.2	-10.5	-26.7
128.0	-34.1	-10.5	-23.6
129.0	-37.8	-10.5	-27.3
130.0	-34.0	-10.5	-23.5
131.0	-38.5	-10.5	-28.0
132.0	-39.8	-10.5	-29.3
133.0	-39.8	-10.5	-29.3
134.0	-38.2	-10.5	-27.7
135.0	-39.4	-10.5	-28.9
136.0	-39.3	-10.5	-28.8
137.0	-39.8	-10.5	-29.3
138.0	-34.3	-10.5	-23.8
139.0	-37.2	-10.5	-26.7
140.0	-34.9	-10.5	-24.4
141.0	-33.2	-10.5	-22.7
142.0	-39.8	-10.5	-29.3
143.0	-38.2	-10.5	-27.7
144.0	-39.8	-10.5	-29.3
145.0	-39.8	-10.5	-29.3
146.0	-37.2	-10.5	-26.7
147.0	-35.9	-10.5	-25.4
148.0	-39.8	-10.5	-29.3
149.0	-36.0	-10.5	-25.5
150.0	-36.3	-10.5	-25.8
151.0	-39.4	-10.5	-28.9
152.0	-39.1	-10.5	-28.6
153.0	-34.5	-10.5	-24.0
154.0	-39.8	-10.5	-29.3
155.0	-31.0	-10.5	-20.5
156.0	-39.8	-10.5	-29.3
157.0	-39.8	-10.5	-29.3
158.0	-39.8	-10.5	-29.3
159.0	-37.9	-10.5	-27.4
160.0	-37.8	-10.5	-27.3
161.0	-32.4	-10.5	-21.9
162.0	-38.6	-10.5	-28.1
163.0	-32.6	-10.5	-22.1
164.0	-36.5	-10.5	-26.0
165.0	-39.8	-10.5	-29.3
166.0	-36.9	-10.5	-26.4
167.0	-39.8	-10.5	-29.3
168.0	-39.8	-10.5	-29.3
169.0	-39.8	-10.5	-29.3
170.0	-39.4	-10.5	-28.9
171.0	-38.9	-10.5	-28.4
172.0	-39.8	-10.5	-29.3
173.0	-39.8	-10.5	-29.3
174.0	-35.1	-10.5	-24.6
175.0	-37.2	-10.5	-26.7
176.0	-36.0	-10.5	-25.5
177.0	-39.8	-10.5	-29.3
178.0	-39.8	-10.5	-29.3
179.0	-36.3	-10.5	-25.8

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-15.5	-3.5	-12.0
-9.9	-13.5	-3.4	-10.1
-9.8	-12.4	-3.3	-9.1
-9.7	-13.3	-3.2	-10.1
-9.6	-15.5	-3.1	-12.5
-9.5	-17.7	-2.9	-14.8
-9.4	-17.3	-2.8	-14.5
-9.3	-16.3	-2.7	-13.6
-9.2	-19.8	-2.6	-17.1
-9.1	-33.8	-2.6	-31.1
-9.0	-20.5	-2.6	-17.9
-8.9	-22.4	-2.6	-19.8
-8.8	-28.2	-2.6	-25.6
-8.7	-26.3	-2.6	-23.7
-8.6	-24.4	-2.6	-21.7
-8.5	-23.1	-2.6	-20.5
-8.4	-24.0	-2.6	-21.4
-8.3	-34.4	-2.6	-31.8
-8.2	-23.4	-2.6	-20.8
-8.1	-20.4	-2.6	-17.8
-8.0	-20.1	-2.6	-17.5
-7.9	-17.9	-2.6	-15.3
-7.8	-16.6	-2.6	-14.0
-7.7	-13.8	-2.6	-11.2
-7.6	-12.6	-2.6	-10.0
-7.5	-13.8	-2.6	-11.2
-7.4	-14.3	-2.6	-11.6
-7.3	-11.8	-2.6	-9.2
-7.2	-11.1	-2.6	-8.5
-7.1	-11.8	-2.6	-9.1
-7.0	-15.0	-2.6	-12.4
-6.9	-10.8	-2.5	-8.4
-6.8	-7.9	-2.3	-5.6
-6.7	-8.3	-2.2	-6.1
-6.6	-12.1	-2.0	-10.1
-6.5	-13.2	-1.8	-11.3
-6.4	-11.3	-1.7	-9.6
-6.3	-10.3	-1.5	-8.9
-6.2	-10.3	-1.3	-8.9
-6.1	-10.7	-1.1	-9.6
-6.0	-11.6	-1.0	-10.7
-5.9	-17.2	-0.8	-16.4
-5.8	-21.8	-0.6	-21.2
-5.7	-21.9	-0.4	-21.5
-5.6	-23.5	-0.2	-23.2
-5.5	-17.2	0.0	-17.2
-5.4	-18.5	0.2	-18.7
-5.3	-23.8	0.4	-24.1
-5.2	-12.9	0.6	-13.5
-5.1	-11.9	0.8	-12.7
-5.0	-20.8	1.0	-21.9
-4.9	-11.8	1.2	-13.0
-4.8	-8.5	1.5	-10.0
-4.7	-8.7	1.7	-10.4
-4.6	-12.6	1.9	-14.5
-4.5	-10.4	2.2	-12.6
-4.4	-6.2	2.4	-8.6
-4.3	-5.6	2.7	-8.3
-4.2	-9.3	2.9	-12.2
-4.1	-18.5	3.2	-21.7

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol Az LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.2		
0.1	39.7		
0.2	37.4		
0.3	33.4		
0.4	28.7		
0.5	23.9		
0.6	17.8		
0.7	17.9		
0.8	18.3		
0.9	15.2		
1.0	3.3		
1.1	4.0		
1.2	1.6		
1.3	-1.4		
1.4	3.7		
1.5	3.2		
1.6	4.8		
1.7	5.4		
1.8	3.1		
1.9	-1.0		
2.0	-2.4	11.0	-13.4
2.1	-8.8	10.4	-19.3
2.2	-10.7	9.9	-20.6
2.3	-6.3	9.5	-15.8
2.4	-6.7	9.0	-15.7
2.5	-6.8	8.6	-15.4
2.6	-10.0	8.1	-18.1
2.7	-12.5	7.7	-20.2
2.8	-7.1	7.3	-14.4
2.9	-5.2	6.9	-12.1
3.0	-3.3	6.6	-9.9
3.1	-3.1	6.2	-9.3
3.2	-7.4	5.9	-13.3
3.3	-21.1	5.5	-26.6
3.4	-17.8	5.2	-23.0
3.5	-20.6	4.9	-25.5
3.6	-8.4	4.6	-13.0
3.7	-6.3	4.3	-10.5
3.8	-8.8	4.0	-12.8
3.9	-18.9	3.7	-22.6
4.0	-16.5	3.4	-20.0
4.1	-12.3	3.2	-15.5
4.2	-10.2	2.9	-13.1
4.3	-10.7	2.7	-13.3
4.4	-11.7	2.4	-14.1
4.5	-13.6	2.2	-15.7
4.6	-16.9	1.9	-18.8
4.7	-16.7	1.7	-18.4
4.8	-15.0	1.5	-16.4
4.9	-19.9	1.2	-21.2
5.0	-22.8	1.0	-23.8
5.1	-17.2	0.8	-18.1
5.2	-17.5	0.6	-18.1
5.3	-12.1	0.4	-12.5
5.4	-8.7	0.2	-8.9
5.5	-10.2	0.0	-10.2
5.6	-13.5	-0.2	-13.3
5.7	-17.8	-0.4	-17.4
5.8	-18.8	-0.6	-18.2
5.9	-14.8	-0.8	-14.0

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-18.0	3.4	-21.5
-3.9	-6.0	3.7	-9.7
-3.8	-1.2	4.0	-5.2
-3.7	-0.7	4.3	-5.0
-3.6	-4.4	4.6	-9.0
-3.5	-15.7	4.9	-20.6
-3.4	-6.1	5.2	-11.3
-3.3	-5.4	5.5	-10.9
-3.2	-7.2	5.9	-13.1
-3.1	-6.0	6.2	-12.2
-3.0	-4.5	6.6	-11.1
-2.9	-6.1	6.9	-13.0
-2.8	-3.3	7.3	-10.6
-2.7	-0.9	7.7	-8.6
-2.6	-2.0	8.1	-10.1
-2.5	-7.1	8.6	-15.7
-2.4	-14.8	9.0	-23.8
-2.3	-15.9	9.5	-25.4
-2.2	-8.3	9.9	-18.3
-2.1	-9.8	10.4	-20.2
-2.0	-7.7	11.0	-18.6
-1.9	-1.9		
-1.8	-2.8		
-1.7	-8.7		
-1.6	-8.1		
-1.5	-9.3		
-1.4	2.6		
-1.3	6.4		
-1.2	6.6		
-1.1	6.6		
-1.0	4.8		
-0.9	-1.4		
-0.8	3.5		
-0.7	1.6		
-0.6	10.6		
-0.5	20.4		
-0.4	27.5		
-0.3	33.4		
-0.2	37.5		
-0.1	39.7		
0.0	40.2		

6.0	-12.1	-1.0	-11.1
6.1	-12.8	-1.1	-11.6
6.2	-11.0	-1.3	-9.6
6.3	-11.7	-1.5	-10.2
6.4	-10.7	-1.7	-9.1
6.5	-9.1	-1.8	-7.2
6.6	-8.1	-2.0	-6.2
6.7	-9.2	-2.2	-7.0
6.8	-11.3	-2.3	-9.0
6.9	-16.0	-2.5	-13.5
7.0	-26.5	-2.6	-23.8
7.1	-14.4	-2.6	-11.8
7.2	-13.9	-2.6	-11.3
7.3	-16.1	-2.6	-13.5
7.4	-21.2	-2.6	-18.5
7.5	-18.9	-2.6	-16.3
7.6	-16.6	-2.6	-13.9
7.7	-14.2	-2.6	-11.6
7.8	-15.7	-2.6	-13.1
7.9	-18.8	-2.6	-16.2
8.0	-17.8	-2.6	-15.2
8.1	-14.4	-2.6	-11.7
8.2	-15.2	-2.6	-12.6
8.3	-14.4	-2.6	-11.8
8.4	-14.7	-2.6	-12.0
8.5	-17.4	-2.6	-14.8
8.6	-23.9	-2.6	-21.2
8.7	-28.2	-2.6	-25.5
8.8	-26.0	-2.6	-23.4
8.9	-17.2	-2.6	-14.5
9.0	-15.6	-2.6	-13.0
9.1	-15.5	-2.6	-12.9
9.2	-18.5	-2.6	-15.9
9.3	-15.7	-2.7	-13.0
9.4	-13.3	-2.8	-10.5
9.5	-13.8	-2.9	-10.8
9.6	-14.1	-3.1	-11.1
9.7	-18.6	-3.2	-15.4
9.8	-25.2	-3.3	-21.9
9.9	-26.9	-3.4	-23.5
10.0	-17.7	-3.5	-14.2

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.0	-12.4	-7.6
-29.5	-21.7	-12.2	-9.4
-29.0	-21.4	-12.1	-9.4
-28.5	-19.8	-11.9	-7.9
-28.0	-21.7	-11.7	-10.0
-27.5	-25.8	-11.5	-14.3
-27.0	-25.2	-11.3	-13.9
-26.5	-24.7	-11.1	-13.7
-26.0	-19.9	-10.9	-9.1
-25.5	-20.2	-10.7	-9.6
-25.0	-25.8	-10.4	-15.3
-24.5	-18.0	-10.2	-7.7
-24.0	-20.6	-10.0	-10.6
-23.5	-26.7	-9.8	-16.9
-23.0	-27.0	-9.5	-17.4
-22.5	-30.6	-9.3	-21.3
-22.0	-28.6	-9.1	-19.5
-21.5	-18.6	-8.8	-9.8
-21.0	-18.6	-8.6	-10.0
-20.5	-18.5	-8.3	-10.2
-20.0	-14.6	-8.0	-6.6
-19.5	-12.9	-7.8	-5.2
-19.0	-12.9	-7.5	-5.4
-18.5	-15.0	-7.2	-7.8
-18.0	-17.8	-6.9	-10.9
-17.5	-24.6	-6.6	-18.0
-17.0	-23.7	-6.3	-17.5
-16.5	-23.7	-5.9	-17.7
-16.0	-31.8	-5.6	-26.2
-15.5	-23.8	-5.3	-18.5
-15.0	-17.1	-4.9	-12.2
-14.5	-22.9	-4.5	-18.3
-14.0	-16.7	-4.2	-12.6
-13.5	-21.6	-3.8	-17.8
-13.0	-18.9	-3.3	-15.5
-12.5	-16.7	-2.9	-13.8
-12.0	-27.9	-2.5	-25.4
-11.5	-17.6	-2.0	-15.6
-11.0	-19.2	-1.5	-17.6
-10.5	-19.0	-1.0	-18.0
-10.0	-22.0	-0.5	-21.5
-9.5	-16.9	0.1	-17.0
-9.0	-17.7	0.4	-18.0
-8.5	-22.6	0.4	-23.0
-8.0	-15.3	0.4	-15.7
-7.5	-19.7	0.4	-20.0
-7.0	-11.4	0.4	-11.7
-6.5	-11.4	1.2	-12.6
-6.0	-11.1	2.0	-13.1
-5.5	-13.2	3.0	-16.2
-5.0	-8.6	4.0	-12.6
-4.5	-7.8	5.2	-12.9
-4.0	-2.4	6.4	-8.8
-3.5	-3.6	7.9	-11.5
-3.0	-13.9		
-2.5	-1.1		
-2.0	-0.7		
-1.5	6.4		
-1.0	10.2		
-0.5	22.0		
0.0	40.2		

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.2		
0.5	24.7		
1.0	5.7		
1.5	-2.2		
2.0	-2.1		
2.5	-5.5		
3.0	-11.3		
3.5	0.1	7.9	-7.8
4.0	1.6	6.4	-4.8
4.5	-9.5	5.2	-14.7
5.0	-2.1	4.0	-6.2
5.5	-9.6	3.0	-12.6
6.0	-15.8	2.0	-17.9
6.5	-10.0	1.2	-11.2
7.0	-16.5	0.4	-16.9
7.5	-24.1	0.4	-24.5
8.0	-20.2	0.4	-20.6
8.5	-20.2	0.4	-20.5
9.0	-20.0	0.4	-20.4
9.5	-17.7	0.1	-17.8
10.0	-11.4	-0.5	-10.9
10.5	-21.2	-1.0	-20.2
11.0	-17.5	-1.5	-15.9
11.5	-19.1	-2.0	-17.0
12.0	-22.4	-2.5	-19.9
12.5	-14.9	-2.9	-12.0
13.0	-16.3	-3.3	-13.0
13.5	-20.5	-3.8	-16.7
14.0	-32.3	-4.2	-28.1
14.5	-26.4	-4.5	-21.9
15.0	-25.3	-4.9	-20.4
15.5	-36.1	-5.3	-30.8
16.0	-38.3	-5.6	-32.7
16.5	-23.6	-5.9	-17.6
17.0	-27.2	-6.3	-21.0
17.5	-28.3	-6.6	-21.7
18.0	-24.9	-6.9	-18.1
18.5	-23.5	-7.2	-16.3
19.0	-38.8	-7.5	-31.3
19.5	-22.9	-7.8	-15.2
20.0	-27.7	-8.0	-19.6
20.5	-28.0	-8.3	-19.7
21.0	-26.8	-8.6	-18.3
21.5	-28.6	-8.8	-19.7
22.0	-29.1	-9.1	-20.0
22.5	-26.7	-9.3	-17.4
23.0	-30.8	-9.5	-21.3
23.5	-28.3	-9.8	-18.5
24.0	-32.5	-10.0	-22.5
24.5	-39.0	-10.2	-28.8
25.0	-34.6	-10.4	-24.2
25.5	-32.7	-10.7	-22.0
26.0	-33.7	-10.9	-22.8
26.5	-30.5	-11.1	-19.4
27.0	-32.0	-11.3	-20.7
27.5	-32.8	-11.5	-21.3
28.0	-34.8	-11.7	-23.2
28.5	-35.9	-11.9	-24.1
29.0	-34.9	-12.1	-22.8
29.5	-33.7	-12.2	-21.4
30.0	-30.9	-12.4	-18.5

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-22.0	-0.5	-21.5
-9.9	-30.1	-0.4	-29.7
-9.8	-23.7	-0.3	-23.5
-9.7	-15.8	-0.2	-15.7
-9.6	-14.5	-0.1	-14.4
-9.5	-16.9	0.1	-17.0
-9.4	-23.1	0.2	-23.3
-9.3	-24.5	0.3	-24.8
-9.2	-21.9	0.4	-22.3
-9.1	-22.4	0.4	-22.8
-9.0	-17.7	0.4	-18.0
-8.9	-16.2	0.4	-16.6
-8.8	-14.9	0.4	-15.3
-8.7	-14.4	0.4	-14.8
-8.6	-15.7	0.4	-16.0
-8.5	-22.6	0.4	-23.0
-8.4	-20.9	0.4	-21.3
-8.3	-20.0	0.4	-20.3
-8.2	-17.6	0.4	-18.0
-8.1	-16.8	0.4	-17.1
-8.0	-15.3	0.4	-15.7
-7.9	-14.5	0.4	-14.8
-7.8	-14.2	0.4	-14.6
-7.7	-15.0	0.4	-15.3
-7.6	-17.7	0.4	-18.1
-7.5	-19.7	0.4	-20.0
-7.4	-19.4	0.4	-19.7
-7.3	-21.1	0.4	-21.5
-7.2	-24.6	0.4	-25.0
-7.1	-16.8	0.4	-17.2
-7.0	-11.4	0.4	-11.7
-6.9	-10.3	0.5	-10.8
-6.8	-12.5	0.7	-13.2
-6.7	-19.9	0.8	-20.8
-6.6	-11.5	1.0	-12.5
-6.5	-11.4	1.2	-12.6
-6.4	-13.9	1.3	-15.3
-6.3	-19.5	1.5	-21.0
-6.2	-14.9	1.7	-16.5
-6.1	-12.6	1.9	-14.4
-6.0	-11.1	2.0	-13.1
-5.9	-12.5	2.2	-14.7
-5.8	-14.8	2.4	-17.2
-5.7	-11.8	2.6	-14.4
-5.6	-10.9	2.8	-13.7
-5.5	-13.2	3.0	-16.2
-5.4	-16.9	3.2	-20.0
-5.3	-18.4	3.4	-21.8
-5.2	-18.9	3.6	-22.5
-5.1	-11.8	3.8	-15.6
-5.0	-8.6	4.0	-12.6
-4.9	-8.7	4.2	-12.9
-4.8	-8.3	4.5	-12.7
-4.7	-7.8	4.7	-12.5
-4.6	-6.7	4.9	-11.6
-4.5	-7.8	5.2	-12.9
-4.4	-14.1	5.4	-19.5
-4.3	-9.4	5.7	-15.1
-4.2	-4.0	5.9	-9.9
-4.1	-2.3	6.2	-8.5

29.15 GHz @ -12.39 dBW / 40 kHz in Co-pol EI LHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.2		
0.1	39.4		
0.2	36.7		
0.3	31.9		
0.4	27.3		
0.5	24.7		
0.6	20.1		
0.7	9.6		
0.8	-2.1		
0.9	-6.3		
1.0	5.7		
1.1	7.1		
1.2	0.3		
1.3	-2.8		
1.4	-0.5		
1.5	-2.2		
1.6	1.3		
1.7	1.3		
1.8	-1.1		
1.9	-2.1		
2.0	-2.1		
2.1	0.3		
2.2	1.5		
2.3	0.3		
2.4	-2.8		
2.5	-5.5		
2.6	-11.9		
2.7	-20.1		
2.8	-13.7		
2.9	-9.3		
3.0	-11.3		
3.1	-11.9		
3.2	-2.6		
3.3	0.2		
3.4	1.1		
3.5	0.1	7.9	-7.8
3.6	-1.9	7.6	-9.5
3.7	-1.0	7.3	-8.3
3.8	0.6	7.0	-6.4
3.9	1.1	6.7	-5.6
4.0	1.6	6.4	-4.8
4.1	1.3	6.2	-4.9
4.2	0.0	5.9	-5.9
4.3	-4.2	5.7	-9.9
4.4	-10.1	5.4	-15.5
4.5	-9.5	5.2	-14.7
4.6	-7.7	4.9	-12.7
4.7	-6.1	4.7	-10.8
4.8	-4.9	4.5	-9.4
4.9	-2.7	4.2	-6.9
5.0	-2.1	4.0	-6.2
5.1	-4.3	3.8	-8.1
5.2	-10.7	3.6	-14.3
5.3	-15.3	3.4	-18.7
5.4	-9.5	3.2	-12.7
5.5	-9.6	3.0	-12.6
5.6	-13.6	2.8	-16.4
5.7	-17.6	2.6	-20.2
5.8	-15.7	2.4	-18.1
5.9	-13.5	2.2	-15.8

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	-2.4	6.4	-8.8
-3.9	-6.0	6.7	-12.8
-3.8	-23.0	7.0	-30.0
-3.7	-5.8	7.3	-13.0
-3.6	-3.2	7.6	-10.8
-3.5	-3.6	7.9	-11.5
-3.4	-5.3		
-3.3	-11.2		
-3.2	-17.2		
-3.1	-9.0		
-3.0	-13.9		
-2.9	-3.0		
-2.8	2.1		
-2.7	3.0		
-2.6	0.9		
-2.5	-1.1		
-2.4	0.4		
-2.3	1.4		
-2.2	1.5		
-2.1	0.8		
-2.0	-0.7		
-1.9	-2.6		
-1.8	-4.7		
-1.7	-0.6		
-1.6	3.4		
-1.5	6.4		
-1.4	5.9		
-1.3	0.8		
-1.2	8.1		
-1.1	11.1		
-1.0	10.2		
-0.9	9.5		
-0.8	12.7		
-0.7	15.5		
-0.6	19.5		
-0.5	22.0		
-0.4	26.8		
-0.3	33.3		
-0.2	37.6		
-0.1	39.8		
0.0	40.2		

6.0	-15.8	2.0	-17.9
6.1	-21.4	1.9	-23.3
6.2	-21.1	1.7	-22.8
6.3	-16.9	1.5	-18.4
6.4	-11.6	1.3	-12.9
6.5	-10.0	1.2	-11.2
6.6	-10.5	1.0	-11.5
6.7	-12.5	0.8	-13.4
6.8	-14.4	0.7	-15.1
6.9	-18.4	0.5	-19.0
7.0	-16.5	0.4	-16.9
7.1	-13.2	0.4	-13.5
7.2	-13.4	0.4	-13.8
7.3	-15.2	0.4	-15.5
7.4	-16.3	0.4	-16.7
7.5	-24.1	0.4	-24.5
7.6	-18.1	0.4	-18.5
7.7	-13.9	0.4	-14.3
7.8	-14.2	0.4	-14.6
7.9	-16.1	0.4	-16.5
8.0	-20.2	0.4	-20.6
8.1	-22.9	0.4	-23.3
8.2	-39.5	0.4	-39.9
8.3	-23.3	0.4	-23.6
8.4	-17.6	0.4	-17.9
8.5	-20.2	0.4	-20.5
8.6	-25.1	0.4	-25.5
8.7	-21.9	0.4	-22.3
8.8	-21.1	0.4	-21.5
8.9	-20.0	0.4	-20.4
9.0	-20.0	0.4	-20.4
9.1	-24.7	0.4	-25.0
9.2	-29.0	0.4	-29.3
9.3	-32.5	0.3	-32.8
9.4	-22.6	0.2	-22.7
9.5	-17.7	0.1	-17.8
9.6	-15.1	-0.1	-15.0
9.7	-12.6	-0.2	-12.4
9.8	-10.8	-0.3	-10.6
9.9	-10.3	-0.4	-9.9
10.0	-11.4	-0.5	-10.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.15 GHz @ -12.39 dBW / 40 kHz in X-pol Az LHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-22.8	-12.6	-10.1
-9.9	-21.5	-12.6	-8.8
-9.8	-23.9	-12.6	-11.2
-9.7	-23.6	-12.6	-11.0
-9.6	-23.0	-12.6	-10.4
-9.5	-21.0	-12.6	-8.4
-9.4	-22.2	-12.6	-9.6
-9.3	-20.6	-12.6	-8.0
-9.2	-19.9	-12.6	-7.3
-9.1	-17.8	-12.6	-5.2
-9.0	-19.0	-12.6	-6.4
-8.9	-19.2	-12.6	-6.6
-8.8	-20.6	-12.6	-8.0
-8.7	-23.7	-12.6	-11.1
-8.6	-26.6	-12.6	-14.0
-8.5	-22.4	-12.6	-9.7
-8.4	-21.2	-12.6	-8.5
-8.3	-24.7	-12.6	-12.1
-8.2	-27.8	-12.6	-15.2
-8.1	-31.0	-12.6	-18.4
-8.0	-29.0	-12.6	-16.3
-7.9	-29.2	-12.6	-16.6
-7.8	-32.8	-12.6	-20.2
-7.7	-29.8	-12.6	-17.1
-7.6	-24.2	-12.6	-11.6
-7.5	-22.1	-12.6	-9.5
-7.4	-22.3	-12.6	-9.7
-7.3	-24.8	-12.6	-12.2
-7.2	-19.1	-12.6	-6.5
-7.1	-14.5	-12.6	-1.8
-7.0	-12.6	-12.6	0.0
-6.9	-13.2	-12.5	-0.7
-6.8	-15.6	-12.3	-3.3
-6.7	-20.8	-12.2	-8.7
-6.6	-23.5	-12.0	-11.5
-6.5	-23.0	-11.8	-11.2
-6.4	-22.0	-11.7	-10.4
-6.3	-31.3	-11.5	-19.8
-6.2	-27.8	-11.3	-16.4
-6.1	-23.5	-11.1	-12.4
-6.0	-23.6	-11.0	-12.7
-5.9	-29.6	-10.8	-18.8
-5.8	-34.5	-10.6	-23.9
-5.7	-29.0	-10.4	-18.6
-5.6	-22.1	-10.2	-11.9
-5.5	-17.9	-10.0	-7.9
-5.4	-15.1	-9.8	-5.3
-5.3	-13.5	-9.6	-3.9
-5.2	-15.6	-9.4	-6.2
-5.1	-28.8	-9.2	-19.6
-5.0	-17.6	-9.0	-8.6
-4.9	-13.9	-8.8	-5.2
-4.8	-16.3	-8.5	-7.8
-4.7	-22.3	-8.3	-14.0
-4.6	-17.5	-8.1	-9.5
-4.5	-16.0	-7.8	-8.1
-4.4	-18.4	-7.6	-10.8
-4.3	-20.6	-7.3	-13.2
-4.2	-18.7	-7.1	-11.6
-4.1	-14.8	-6.8	-8.0

29.15 GHz @ -12.39 dBW / 40 kHz in X-pol Az LHCP

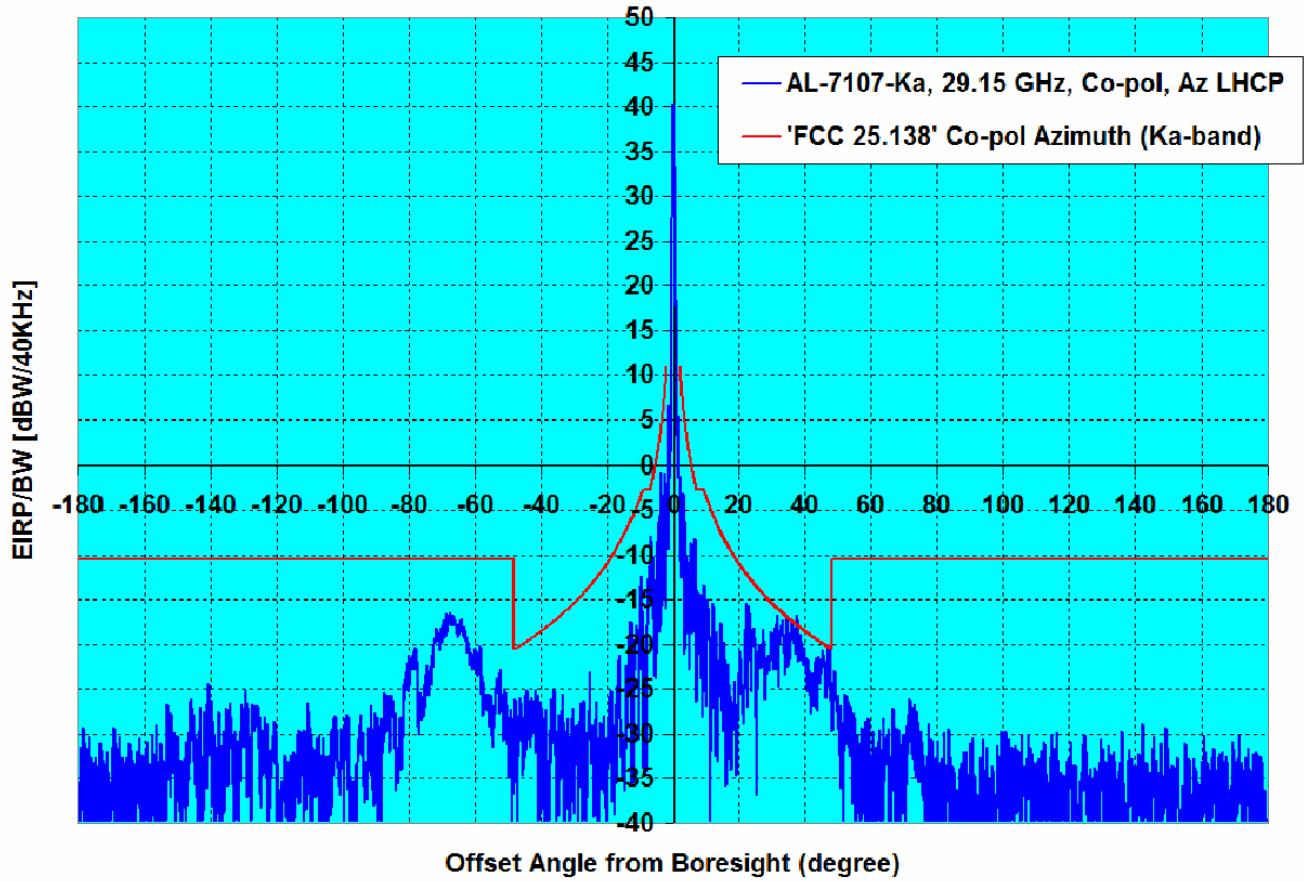
Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	11.0		
0.1	8.3		
0.2	11.8		
0.3	15.9		
0.4	16.7		
0.5	15.7		
0.6	12.0		
0.7	4.8		
0.8	-11.0		
0.9	-1.8		
1.0	1.9		
1.1	1.7		
1.2	0.3		
1.3	0.7		
1.4	0.5		
1.5	-1.3		
1.6	-4.9		
1.7	-6.8		
1.8	-9.2		
1.9	-11.8		
2.0	-12.4	1.0	-13.4
2.1	-11.1	0.4	-11.6
2.2	-10.1	-0.1	-10.1
2.3	-11.6	-0.5	-11.0
2.4	-14.8	-1.0	-13.8
2.5	-20.3	-1.4	-18.8
2.6	-19.1	-1.9	-17.2
2.7	-16.0	-2.3	-13.7
2.8	-17.9	-2.7	-15.2
2.9	-20.7	-3.1	-17.6
3.0	-16.7	-3.4	-13.3
3.1	-18.7	-3.8	-14.9
3.2	-21.2	-4.1	-17.0
3.3	-20.2	-4.5	-15.8
3.4	-18.8	-4.8	-14.0
3.5	-18.3	-5.1	-13.2
3.6	-15.2	-5.4	-9.8
3.7	-16.5	-5.7	-10.8
3.8	-21.2	-6.0	-15.2
3.9	-18.9	-6.3	-12.6
4.0	-16.8	-6.6	-10.2
4.1	-20.0	-6.8	-13.1
4.2	-24.8	-7.1	-17.7
4.3	-23.3	-7.3	-15.9
4.4	-23.6	-7.6	-16.0
4.5	-21.4	-7.8	-13.6
4.6	-18.3	-8.1	-10.2
4.7	-18.6	-8.3	-10.3
4.8	-20.3	-8.5	-11.8
4.9	-21.7	-8.8	-12.9
5.0	-19.9	-9.0	-10.9
5.1	-21.3	-9.2	-12.1
5.2	-21.9	-9.4	-12.5
5.3	-26.5	-9.6	-16.9
5.4	-33.6	-9.8	-23.8
5.5	-22.9	-10.0	-12.9
5.6	-20.5	-10.2	-10.3
5.7	-24.7	-10.4	-14.3
5.8	-25.1	-10.6	-14.5
5.9	-24.0	-10.8	-13.2

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-15.7	-6.6	-9.1
-3.9	-19.9	-6.3	-13.6
-3.8	-26.0	-6.0	-20.1
-3.7	-34.4	-5.7	-28.7
-3.6	-21.3	-5.4	-15.9
-3.5	-16.5	-5.1	-11.4
-3.4	-14.2	-4.8	-9.4
-3.3	-13.3	-4.5	-8.8
-3.2	-16.8	-4.1	-12.7
-3.1	-24.5	-3.8	-20.7
-3.0	-18.3	-3.4	-14.8
-2.9	-17.5	-3.1	-14.4
-2.8	-19.3	-2.7	-16.6
-2.7	-26.8	-2.3	-24.5
-2.6	-21.5	-1.9	-19.6
-2.5	-17.2	-1.4	-15.8
-2.4	-17.9	-1.0	-16.9
-2.3	-34.7	-0.5	-34.1
-2.2	-23.6	-0.1	-23.5
-2.1	-23.0	0.4	-23.4
-2.0	-18.0	1.0	-18.9
-1.9	-14.0		
-1.8	-15.2		
-1.7	-9.6		
-1.6	-5.0		
-1.5	-2.6		
-1.4	-1.3		
-1.3	-0.6		
-1.2	-0.2		
-1.1	0.5		
-1.0	1.1		
-0.9	1.1		
-0.8	-1.7		
-0.7	2.0		
-0.6	11.6		
-0.5	16.2		
-0.4	17.9		
-0.3	17.7		
-0.2	15.5		
-0.1	12.1		
0.0	11.0		

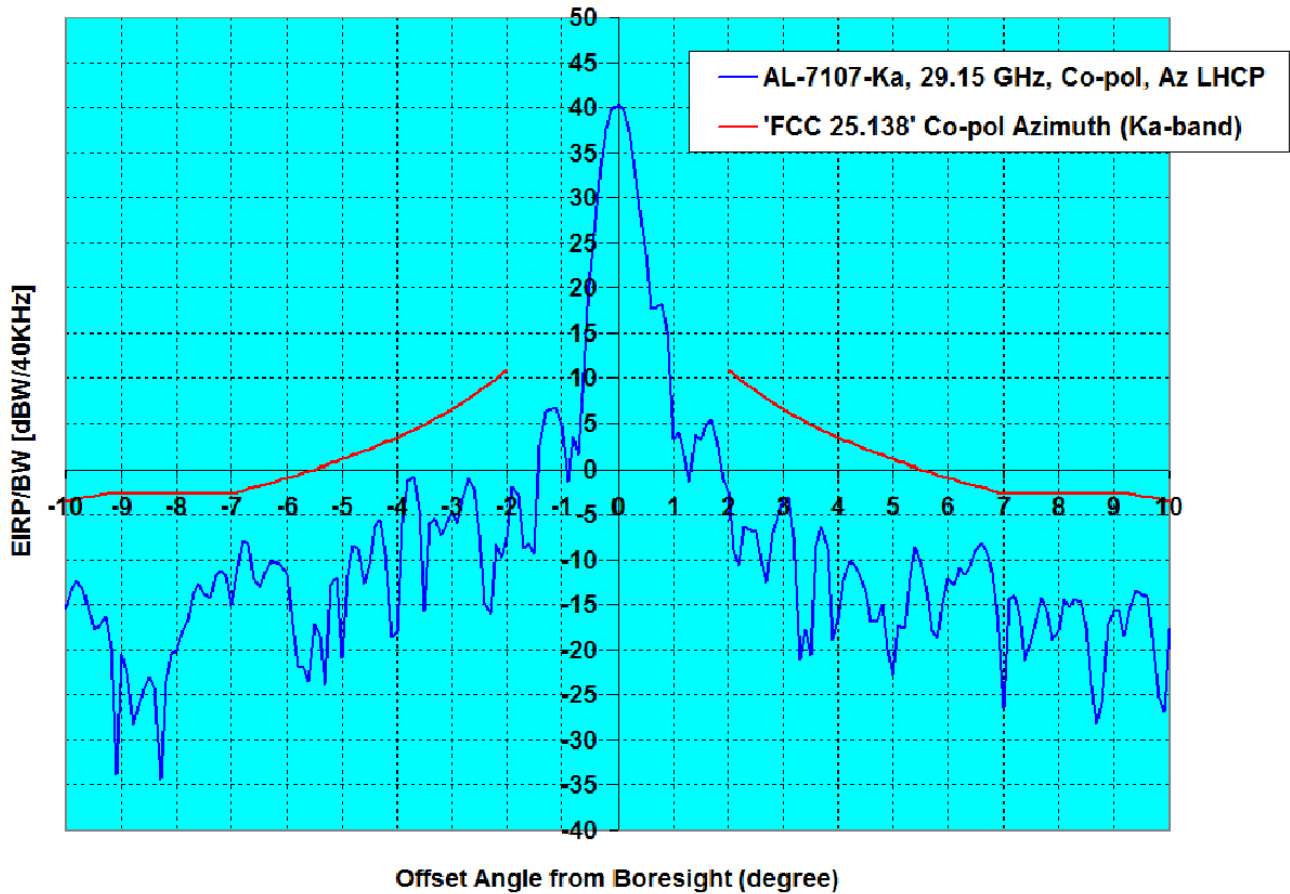
6.0	-24.5	-11.0	-13.5
6.1	-25.5	-11.1	-14.4
6.2	-29.1	-11.3	-17.8
6.3	-34.6	-11.5	-23.2
6.4	-26.6	-11.7	-15.0
6.5	-25.6	-11.8	-13.8
6.6	-27.1	-12.0	-15.1
6.7	-20.8	-12.2	-8.7
6.8	-17.7	-12.3	-5.4
6.9	-17.6	-12.5	-5.1
7.0	-19.4	-12.6	-6.8
7.1	-23.9	-12.6	-11.3
7.2	-25.2	-12.6	-12.6
7.3	-25.6	-12.6	-13.0
7.4	-25.6	-12.6	-12.9
7.5	-27.4	-12.6	-14.7
7.6	-28.7	-12.6	-16.1
7.7	-23.4	-12.6	-10.7
7.8	-25.4	-12.6	-12.7
7.9	-27.0	-12.6	-14.4
8.0	-32.1	-12.6	-19.4
8.1	-31.8	-12.6	-19.2
8.2	-27.6	-12.6	-15.0
8.3	-28.2	-12.6	-15.6
8.4	-26.4	-12.6	-13.8
8.5	-25.2	-12.6	-12.6
8.6	-23.3	-12.6	-10.7
8.7	-24.6	-12.6	-12.0
8.8	-28.8	-12.6	-16.2
8.9	-30.2	-12.6	-17.6
9.0	-33.7	-12.6	-21.1
9.1	-29.3	-12.6	-16.6
9.2	-30.1	-12.6	-17.4
9.3	-28.4	-12.6	-15.8
9.4	-32.4	-12.6	-19.8
9.5	-37.2	-12.6	-24.6
9.6	-36.5	-12.6	-23.9
9.7	-25.4	-12.6	-12.8
9.8	-22.9	-12.6	-10.3
9.9	-21.3	-12.6	-8.6
10.0	-22.0	-12.6	-9.4

'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.39 dBW/40KHz to Input and 40.24 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in Az LHCP
 Min BW of 7.98 MHz in case of 20W BUC



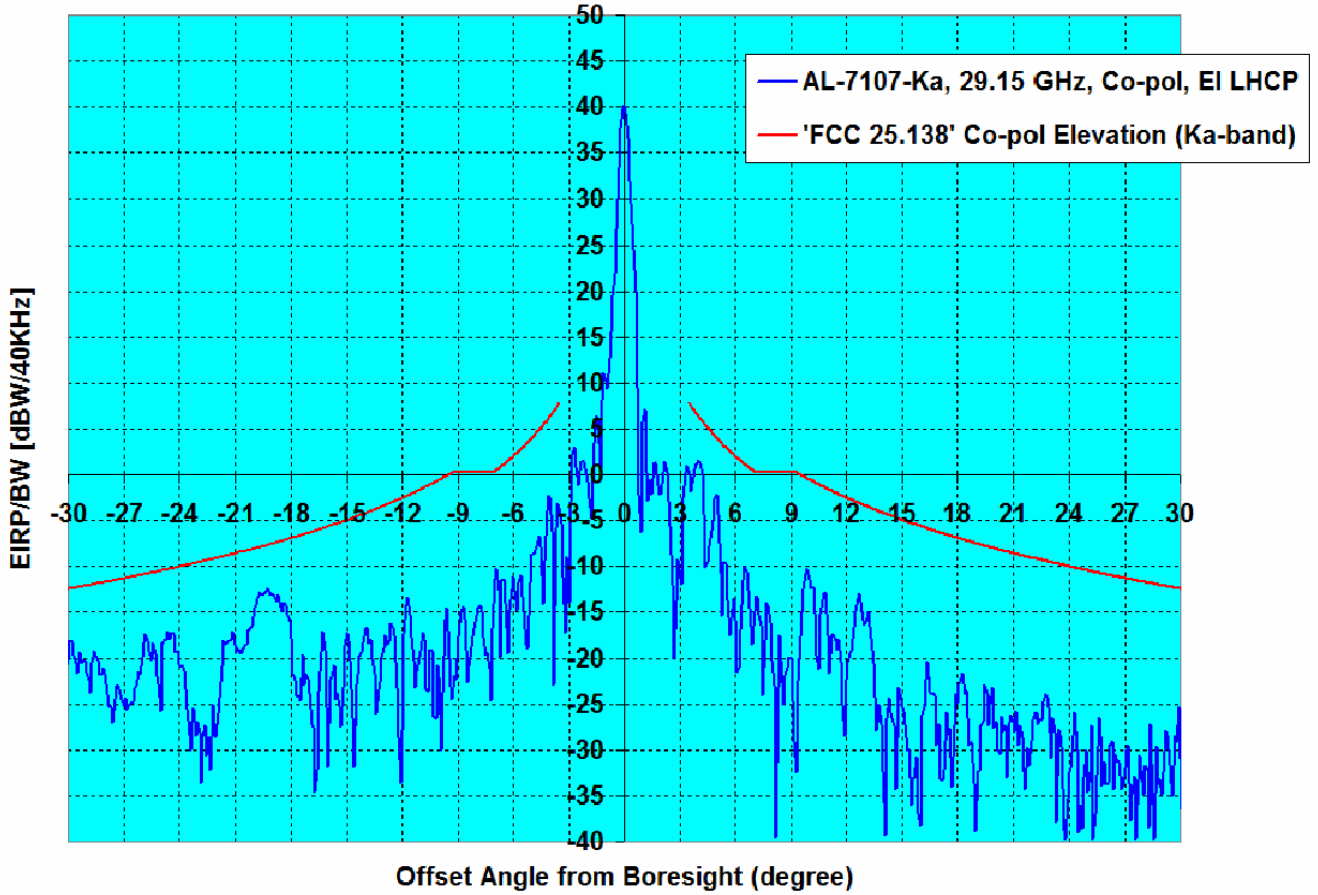
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7107-Ka, 29.15 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.62	-12.39	-5.01	1.11	0.17

'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.39 dBW/40KHz to Input and 40.24 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in Az LHCP
 Min BW of 7.98 MHz in case of 20W BUC



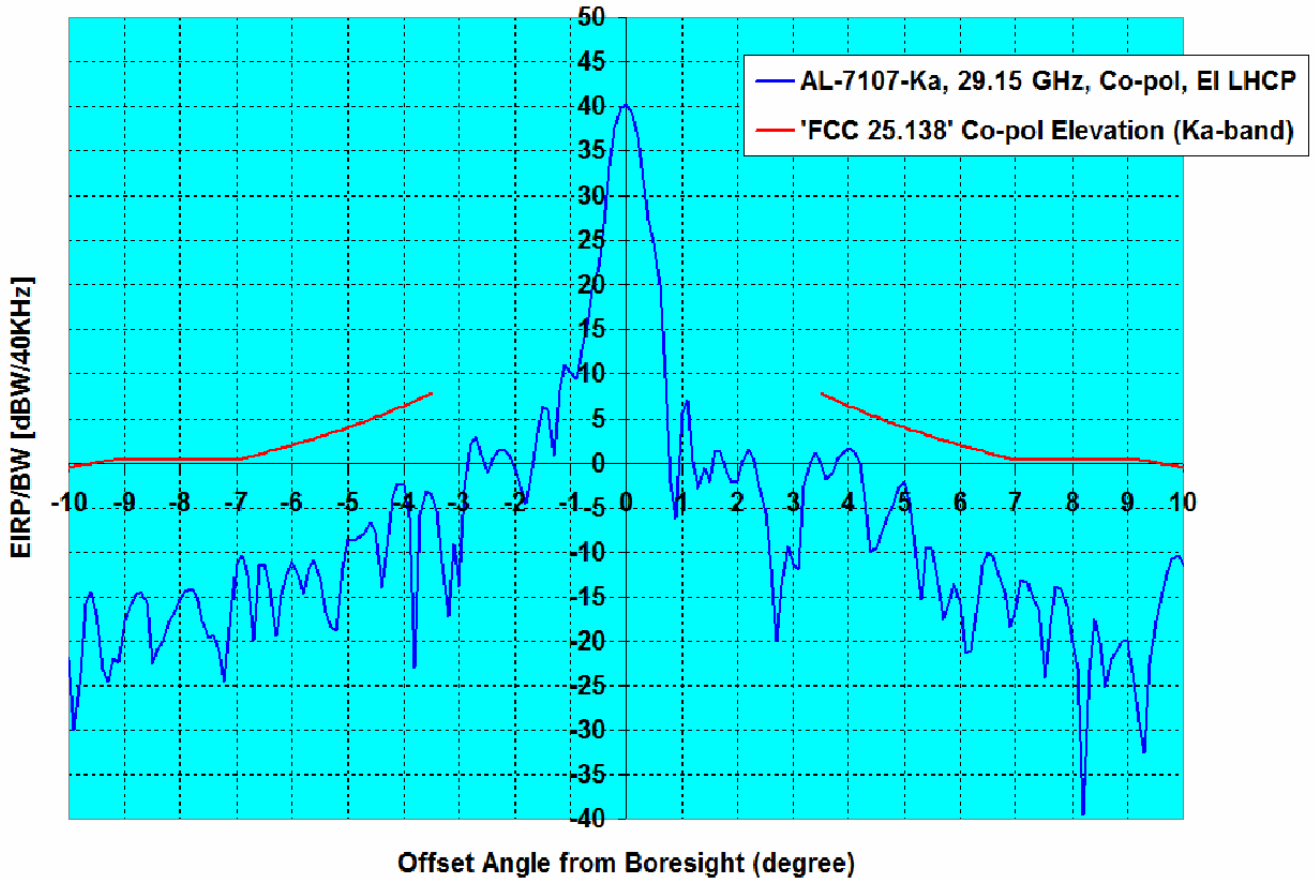
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7107-Ka, 29.15 GHz, Co-pol, Az LHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.62	-12.39	-5.01	1.11	0.17

'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.39 dBW/40KHz to Input and 40.24 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in EI LHCP
 Min BW of 7.98 MHz in case of 20W BUC



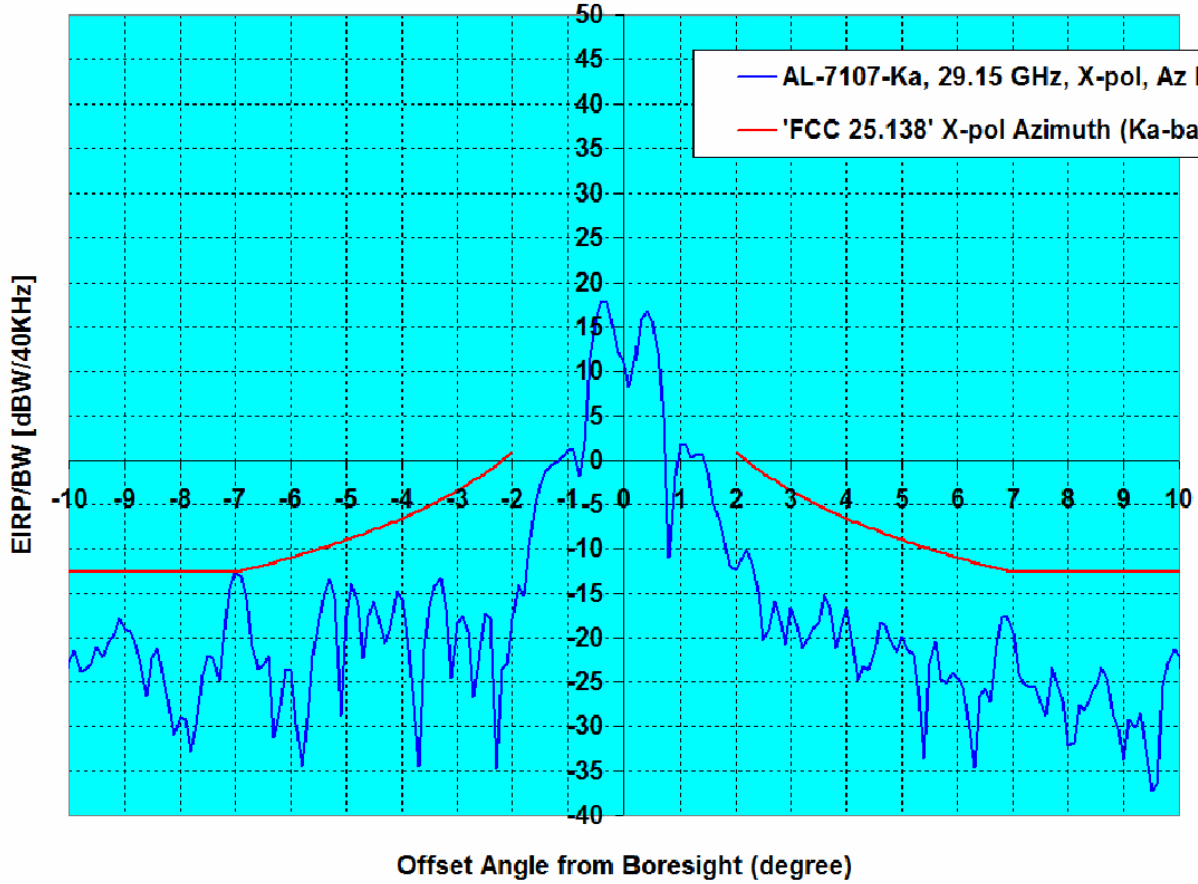
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 29.15 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.62	-12.39	-4.81	-4.73	0.00

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -12.39 dBW/40KHz to Input and
 40.24 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in Az LHCP
 Min BW of 7.98 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 29.15 GHz, Co-pol, EI LHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.62	-12.39	-4.81	-4.73	0.00

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -12.39 dBW/40KHz to Input and
 40.24 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in Az LHCP
 Min BW of 7.98 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7107-Ka, 29.15 GHz, X-pol, Az LHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	52.62	-12.39	0.00	0.00	0.00

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-179.0	-38.3	-10.5	-27.8
-178.0	-30.5	-10.5	-20.0
-177.0	-32.9	-10.5	-22.4
-176.0	-37.4	-10.5	-26.9
-175.0	-39.8	-10.5	-29.3
-174.0	-39.8	-10.5	-29.3
-173.0	-39.3	-10.5	-28.8
-172.0	-39.8	-10.5	-29.3
-171.0	-36.3	-10.5	-25.8
-170.0	-38.3	-10.5	-27.8
-169.0	-30.5	-10.5	-20.0
-168.0	-32.9	-10.5	-22.4
-167.0	-37.4	-10.5	-26.9
-166.0	-39.8	-10.5	-29.3
-165.0	-39.8	-10.5	-29.3
-164.0	-39.3	-10.5	-28.8
-163.0	-39.8	-10.5	-29.3
-162.0	-31.8	-10.5	-21.3
-161.0	-33.2	-10.5	-22.7
-160.0	-39.4	-10.5	-28.9
-159.0	-38.3	-10.5	-27.8
-158.0	-39.8	-10.5	-29.3
-157.0	-32.2	-10.5	-21.7
-156.0	-39.8	-10.5	-29.3
-155.0	-39.7	-10.5	-29.2
-154.0	-33.1	-10.5	-22.6
-153.0	-35.0	-10.5	-24.5
-152.0	-27.6	-10.5	-17.1
-151.0	-31.7	-10.5	-21.2
-150.0	-30.1	-10.5	-19.6
-149.0	-39.8	-10.5	-29.3
-148.0	-38.2	-10.5	-27.7
-147.0	-36.9	-10.5	-26.4
-146.0	-28.2	-10.5	-17.7
-145.0	-27.9	-10.5	-17.4
-144.0	-32.6	-10.5	-22.1
-143.0	-32.6	-10.5	-22.1
-142.0	-34.0	-10.5	-23.5
-141.0	-32.6	-10.5	-22.1
-140.0	-28.4	-10.5	-17.9
-139.0	-32.6	-10.5	-22.1
-138.0	-33.0	-10.5	-22.5
-137.0	-32.9	-10.5	-22.4
-136.0	-36.1	-10.5	-25.6
-135.0	-27.4	-10.5	-16.9
-134.0	-28.2	-10.5	-17.7
-133.0	-39.8	-10.5	-29.3
-132.0	-37.6	-10.5	-27.1
-131.0	-34.5	-10.5	-24.0
-130.0	-28.4	-10.5	-17.9
-129.0	-28.5	-10.5	-18.0
-128.0	-31.3	-10.5	-20.8
-127.0	-28.3	-10.5	-17.8
-126.0	-27.4	-10.5	-16.9
-125.0	-34.9	-10.5	-24.4
-124.0	-31.9	-10.5	-21.4
-123.0	-33.2	-10.5	-22.7
-122.0	-37.6	-10.5	-27.1
-121.0	-33.0	-10.5	-22.5
-120.0	-38.4	-10.5	-27.9

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	40.2		
1.0	3.3		
2.0	-2.4	11.0	-13.4
3.0	-3.3	6.6	-9.9
4.0	-16.5	3.4	-20.0
5.0	-22.8	1.0	-23.8
6.0	-12.1	-1.0	-11.1
7.0	-26.5	-2.6	-23.8
8.0	-17.8	-2.6	-15.2
9.0	-15.6	-2.6	-13.0
10.0	-17.7	-3.5	-14.2
11.0	-27.9	-4.5	-23.4
12.0	-15.5	-5.5	-10.0
13.0	-19.1	-6.3	-12.7
14.0	-25.1	-7.2	-17.9
15.0	-29.8	-7.9	-21.9
16.0	-35.8	-8.6	-27.2
17.0	-29.0	-9.3	-19.8
18.0	-26.8	-9.9	-16.9
19.0	-31.9	-10.5	-21.5
20.0	-23.2	-11.0	-12.2
21.0	-27.7	-11.6	-16.2
22.0	-16.9	-12.1	-4.9
23.0	-16.1	-12.5	-3.6
24.0	-18.3	-13.0	-5.3
25.0	-23.6	-13.4	-10.2
26.0	-20.0	-13.9	-6.2
27.0	-19.9	-14.3	-5.6
28.0	-25.9	-14.7	-11.2
29.0	-21.2	-15.1	-6.2
30.0	-19.6	-15.4	-4.2
31.0	-18.2	-15.8	-2.4
32.0	-22.2	-16.1	-6.1
33.0	-17.4	-16.5	-1.0
34.0	-23.3	-16.8	-6.5
35.0	-21.7	-17.1	-4.6
36.0	-17.4	-17.4	0.0
37.0	-18.8	-17.7	-1.1
38.0	-22.0	-18.0	-4.0
39.0	-21.7	-18.3	-3.5
40.0	-22.0	-18.6	-3.4
41.0	-24.7	-18.8	-5.9
42.0	-23.5	-19.1	-4.4
43.0	-24.1	-19.3	-4.8
44.0	-21.4	-19.6	-1.8
45.0	-21.6	-19.8	-1.8
46.0	-21.8	-20.1	-1.8
47.0	-20.0	-20.3	0.3
48.0	-26.5	-20.5	-6.0
49.0	-23.0	-10.5	-12.5
50.0	-25.7	-10.5	-15.2
51.0	-34.0	-10.5	-23.5
52.0	-29.1	-10.5	-18.6
53.0	-26.5	-10.5	-16.0
54.0	-28.7	-10.5	-18.2
55.0	-31.9	-10.5	-21.4
56.0	-38.9	-10.5	-28.4
57.0	-35.6	-10.5	-25.1
58.0	-32.0	-10.5	-21.5
59.0	-37.4	-10.5	-26.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-38.6	-10.5	-28.1
-118.0	-36.4	-10.5	-25.9
-117.0	-38.7	-10.5	-28.2
-116.0	-34.5	-10.5	-24.0
-115.0	-39.8	-10.5	-29.3
-114.0	-34.8	-10.5	-24.3
-113.0	-30.0	-10.5	-19.5
-112.0	-32.2	-10.5	-21.7
-111.0	-29.7	-10.5	-19.2
-110.0	-29.7	-10.5	-19.2
-109.0	-39.8	-10.5	-29.3
-108.0	-37.1	-10.5	-26.6
-107.0	-37.6	-10.5	-27.1
-106.0	-32.6	-10.5	-22.1
-105.0	-32.9	-10.5	-22.4
-104.0	-32.3	-10.5	-21.8
-103.0	-32.4	-10.5	-21.9
-102.0	-28.6	-10.5	-18.1
-101.0	-35.7	-10.5	-25.2
-100.0	-29.4	-10.5	-18.9
-99.0	-32.4	-10.5	-21.9
-98.0	-39.8	-10.5	-29.3
-97.0	-36.1	-10.5	-25.6
-96.0	-39.8	-10.5	-29.3
-95.0	-32.1	-10.5	-21.6
-94.0	-32.0	-10.5	-21.5
-93.0	-35.0	-10.5	-24.5
-92.0	-32.4	-10.5	-21.9
-91.0	-31.1	-10.5	-20.6
-90.0	-34.1	-10.5	-23.6
-89.0	-39.6	-10.5	-29.1
-88.0	-31.1	-10.5	-20.6
-87.0	-28.3	-10.5	-17.8
-86.0	-25.7	-10.5	-15.2
-85.0	-25.7	-10.5	-15.2
-84.0	-27.7	-10.5	-17.2
-83.0	-32.6	-10.5	-22.1
-82.0	-32.6	-10.5	-22.1
-81.0	-25.1	-10.5	-14.6
-80.0	-25.2	-10.5	-14.7
-79.0	-22.7	-10.5	-12.2
-78.0	-21.7	-10.5	-11.2
-77.0	-29.1	-10.5	-18.6
-76.0	-26.6	-10.5	-16.1
-75.0	-27.0	-10.5	-16.5
-74.0	-23.3	-10.5	-12.8
-73.0	-22.6	-10.5	-12.1
-72.0	-19.3	-10.5	-8.8
-71.0	-19.1	-10.5	-8.6
-70.0	-18.2	-10.5	-7.7
-69.0	-19.1	-10.5	-8.6
-68.0	-17.1	-10.5	-6.6
-67.0	-17.0	-10.5	-6.5
-66.0	-17.5	-10.5	-7.0
-65.0	-18.8	-10.5	-8.3
-64.0	-17.2	-10.5	-6.7
-63.0	-19.3	-10.5	-8.8
-62.0	-19.8	-10.5	-9.3
-61.0	-21.8	-10.5	-11.3
-60.0	-22.8	-10.5	-12.3
-59.0	-23.5	-10.5	-13.0
-58.0	-23.9	-10.5	-13.4
-57.0	-27.4	-10.5	-16.9

60.0	-34.8	-10.5	-24.3
61.0	-37.8	-10.5	-27.3
62.0	-36.9	-10.5	-26.4
63.0	-39.8	-10.5	-29.3
64.0	-30.5	-10.5	-20.0
65.0	-32.2	-10.5	-21.7
66.0	-39.8	-10.5	-29.3
67.0	-32.3	-10.5	-21.8
68.0	-37.5	-10.5	-27.0
69.0	-33.7	-10.5	-23.2
70.0	-32.7	-10.5	-22.2
71.0	-32.3	-10.5	-21.8
72.0	-28.5	-10.5	-18.0
73.0	-27.5	-10.5	-17.0
74.0	-29.7	-10.5	-19.2
75.0	-29.8	-10.5	-19.3
76.0	-32.3	-10.5	-21.8
77.0	-39.8	-10.5	-29.3
78.0	-32.8	-10.5	-22.3
79.0	-39.8	-10.5	-29.3
80.0	-33.9	-10.5	-23.4
81.0	-34.6	-10.5	-24.1
82.0	-35.9	-10.5	-25.4
83.0	-35.5	-10.5	-25.0
84.0	-38.8	-10.5	-28.3
85.0	-39.8	-10.5	-29.3
86.0	-37.8	-10.5	-27.3
87.0	-33.9	-10.5	-23.4
88.0	-32.0	-10.5	-21.5
89.0	-38.1	-10.5	-27.6
90.0	-31.0	-10.5	-20.5
91.0	-37.4	-10.5	-26.9
92.0	-39.2	-10.5	-28.7
93.0	-39.8	-10.5	-29.3
94.0	-30.6	-10.5	-20.1
95.0	-37.5	-10.5	-27.0
96.0	-35.0	-10.5	-24.5
97.0	-36.7	-10.5	-26.2
98.0	-37.6	-10.5	-27.1
99.0	-39.7	-10.5	-29.2
100.0	-32.3	-10.5	-21.8
101.0	-34.2	-10.5	-23.7
102.0	-36.8	-10.5	-26.3
103.0	-35.2	-10.5	-24.7
104.0	-34.6	-10.5	-24.1
105.0	-32.0	-10.5	-21.5
106.0	-36.9	-10.5	-26.4
107.0	-35.5	-10.5	-25.0
108.0	-35.8	-10.5	-25.3
109.0	-37.3	-10.5	-26.8
110.0	-35.4	-10.5	-24.9
111.0	-37.0	-10.5	-26.5
112.0	-32.1	-10.5	-21.6
113.0	-36.5	-10.5	-26.0
114.0	-37.5	-10.5	-27.0
115.0	-35.3	-10.5	-24.8
116.0	-35.6	-10.5	-25.1
117.0	-39.5	-10.5	-29.0
118.0	-37.4	-10.5	-26.9
119.0	-39.4	-10.5	-28.9
120.0	-39.8	-10.5	-29.3
121.0	-39.1	-10.5	-28.6
122.0	-33.5	-10.5	-23.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-27.5	-10.5	-17.0
-55.0	-27.0	-10.5	-16.5
-54.0	-28.3	-10.5	-17.8
-53.0	-23.8	-10.5	-13.3
-52.0	-24.1	-10.5	-13.6
-51.0	-27.9	-10.5	-17.4
-50.0	-28.2	-10.5	-17.7
-49.0	-28.9	-10.5	-18.4
-48.0	-33.1	-20.5	-12.5
-47.0	-39.8	-20.3	-19.5
-46.0	-26.4	-20.1	-6.3
-45.0	-28.1	-19.8	-8.3
-44.0	-25.1	-19.6	-5.5
-43.0	-30.8	-19.3	-11.5
-42.0	-28.6	-19.1	-9.5
-41.0	-29.7	-18.8	-10.9
-40.0	-29.3	-18.6	-10.8
-39.0	-35.3	-18.3	-17.0
-38.0	-34.4	-18.0	-16.4
-37.0	-31.3	-17.7	-13.6
-36.0	-26.7	-17.4	-9.2
-35.0	-30.8	-17.1	-13.7
-34.0	-28.0	-16.8	-11.2
-33.0	-28.6	-16.5	-12.1
-32.0	-29.7	-16.1	-13.5
-31.0	-32.0	-15.8	-16.2
-30.0	-27.2	-15.4	-11.8
-29.0	-30.6	-15.1	-15.6
-28.0	-31.7	-14.7	-17.1
-27.0	-33.8	-14.3	-19.5
-26.0	-33.6	-13.9	-19.7
-25.0	-23.1	-13.4	-9.7
-24.0	-32.1	-13.0	-19.1
-23.0	-30.5	-12.5	-18.0
-22.0	-31.7	-12.1	-19.6
-21.0	-31.7	-11.6	-20.1
-20.0	-30.4	-11.0	-19.4
-19.0	-33.2	-10.5	-22.7
-18.0	-31.6	-9.9	-21.7
-17.0	-31.3	-9.3	-22.1
-16.0	-21.2	-8.6	-12.6
-15.0	-34.9	-7.9	-27.0
-14.0	-25.2	-7.2	-18.1
-13.0	-23.3	-6.3	-17.0
-12.0	-24.4	-5.5	-19.0
-11.0	-18.8	-4.5	-14.2
-10.0	-15.5	-3.5	-12.0
-9.0	-20.5	-2.6	-17.9
-8.0	-20.1	-2.6	-17.5
-7.0	-15.0	-2.6	-12.4
-6.0	-11.6	-1.0	-10.7
-5.0	-20.8	1.0	-21.9
-4.0	-18.0	3.4	-21.5
-3.0	-4.5	6.6	-11.1
-2.0	-7.7	11.0	-18.6
-1.0	4.8		
0.0	40.2		

123.0	-37.9	-10.5	-27.4
124.0	-34.6	-10.5	-24.1
125.0	-31.9	-10.5	-21.4
126.0	-39.8	-10.5	-29.3
127.0	-37.2	-10.5	-26.7
128.0	-34.1	-10.5	-23.6
129.0	-37.8	-10.5	-27.3
130.0	-34.0	-10.5	-23.5
131.0	-38.5	-10.5	-28.0
132.0	-39.8	-10.5	-29.3
133.0	-39.8	-10.5	-29.3
134.0	-38.2	-10.5	-27.7
135.0	-39.4	-10.5	-28.9
136.0	-39.3	-10.5	-28.8
137.0	-39.8	-10.5	-29.3
138.0	-34.3	-10.5	-23.8
139.0	-37.2	-10.5	-26.7
140.0	-34.9	-10.5	-24.4
141.0	-33.2	-10.5	-22.7
142.0	-39.8	-10.5	-29.3
143.0	-38.2	-10.5	-27.7
144.0	-39.8	-10.5	-29.3
145.0	-39.8	-10.5	-29.3
146.0	-37.2	-10.5	-26.7
147.0	-35.9	-10.5	-25.4
148.0	-39.8	-10.5	-29.3
149.0	-36.0	-10.5	-25.5
150.0	-36.3	-10.5	-25.8
151.0	-39.4	-10.5	-28.9
152.0	-39.1	-10.5	-28.6
153.0	-34.5	-10.5	-24.0
154.0	-39.8	-10.5	-29.3
155.0	-31.0	-10.5	-20.5
156.0	-39.8	-10.5	-29.3
157.0	-39.8	-10.5	-29.3
158.0	-39.8	-10.5	-29.3
159.0	-37.9	-10.5	-27.4
160.0	-37.8	-10.5	-27.3
161.0	-32.4	-10.5	-21.9
162.0	-38.6	-10.5	-28.1
163.0	-32.6	-10.5	-22.1
164.0	-36.5	-10.5	-26.0
165.0	-39.8	-10.5	-29.3
166.0	-36.9	-10.5	-26.4
167.0	-39.8	-10.5	-29.3
168.0	-39.8	-10.5	-29.3
169.0	-39.8	-10.5	-29.3
170.0	-39.4	-10.5	-28.9
171.0	-38.9	-10.5	-28.4
172.0	-39.8	-10.5	-29.3
173.0	-39.8	-10.5	-29.3
174.0	-35.1	-10.5	-24.6
175.0	-37.2	-10.5	-26.7
176.0	-36.0	-10.5	-25.5
177.0	-39.8	-10.5	-29.3
178.0	-39.8	-10.5	-29.3
179.0	-36.3	-10.5	-25.8

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
-10.0	-12.5	-3.5	-9.0
-9.9	-11.6	-3.4	-8.2
-9.8	-11.6	-3.3	-8.3
-9.7	-12.8	-3.2	-9.7
-9.6	-14.8	-3.1	-11.7
-9.5	-16.8	-2.9	-13.9
-9.4	-17.1	-2.8	-14.3
-9.3	-19.6	-2.7	-16.9
-9.2	-25.9	-2.6	-23.3
-9.1	-21.8	-2.6	-19.1
-9.0	-17.0	-2.6	-14.3
-8.9	-16.4	-2.6	-13.7
-8.8	-19.9	-2.6	-17.3
-8.7	-26.2	-2.6	-23.6
-8.6	-22.7	-2.6	-20.1
-8.5	-17.8	-2.6	-15.2
-8.4	-16.5	-2.6	-13.9
-8.3	-19.3	-2.6	-16.7
-8.2	-20.5	-2.6	-17.9
-8.1	-20.9	-2.6	-18.2
-8.0	-20.0	-2.6	-17.4
-7.9	-17.4	-2.6	-14.8
-7.8	-13.7	-2.6	-11.0
-7.7	-11.7	-2.6	-9.1
-7.6	-11.0	-2.6	-8.4
-7.5	-11.4	-2.6	-8.8
-7.4	-10.9	-2.6	-8.3
-7.3	-10.1	-2.6	-7.5
-7.2	-11.3	-2.6	-8.7
-7.1	-16.8	-2.6	-14.2
-7.0	-18.9	-2.6	-16.3
-6.9	-9.0	-2.5	-6.5
-6.8	-7.4	-2.3	-5.0
-6.7	-8.6	-2.2	-6.5
-6.6	-13.3	-2.0	-11.3
-6.5	-10.2	-1.8	-8.4
-6.4	-8.4	-1.7	-6.7
-6.3	-8.0	-1.5	-6.6
-6.2	-8.1	-1.3	-6.8
-6.1	-8.2	-1.1	-7.1
-6.0	-9.5	-1.0	-8.5
-5.9	-14.2	-0.8	-13.5
-5.8	-23.9	-0.6	-23.3
-5.7	-23.5	-0.4	-23.1
-5.6	-26.5	-0.2	-26.3
-5.5	-23.0	0.0	-23.0
-5.4	-26.1	0.2	-26.3
-5.3	-13.0	0.4	-13.4
-5.2	-10.8	0.6	-11.4
-5.1	-13.4	0.8	-14.2
-5.0	-15.1	1.0	-16.1
-4.9	-8.7	1.2	-9.9
-4.8	-7.5	1.5	-9.0
-4.7	-10.3	1.7	-11.9
-4.6	-17.2	1.9	-19.2
-4.5	-11.3	2.2	-13.4
-4.4	-5.7	2.4	-8.1
-4.3	-4.9	2.7	-7.5
-4.2	-9.3	2.9	-12.2
-4.1	-27.3	3.2	-30.5

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol Az RHCP

Angle Degrees	EIRPsd dBW/40kHz	Mask dBW/40kHz	Over Mask dB
0.0	40.9		
0.1	40.2		
0.2	37.6		
0.3	33.2		
0.4	28.1		
0.5	23.6		
0.6	17.6		
0.7	17.7		
0.8	18.5		
0.9	15.6		
1.0	4.7		
1.1	5.3		
1.2	1.9		
1.3	-0.8		
1.4	4.3		
1.5	2.8		
1.6	4.3		
1.7	6.0		
1.8	3.8		
1.9	-1.5		
2.0	-2.4	11.0	-13.4
2.1	-6.6	10.4	-17.0
2.2	-10.8	9.9	-20.7
2.3	-7.2	9.5	-16.7
2.4	-5.7	9.0	-14.7
2.5	-4.5	8.6	-13.1
2.6	-6.7	8.1	-14.8
2.7	-11.8	7.7	-19.5
2.8	-6.8	7.3	-14.1
2.9	-4.9	6.9	-11.8
3.0	-2.5	6.6	-9.1
3.1	-2.2	6.2	-8.4
3.2	-4.1	5.9	-10.0
3.3	-12.0	5.5	-17.6
3.4	-27.5	5.2	-32.7
3.5	-16.2	4.9	-21.1
3.6	-9.0	4.6	-13.6
3.7	-7.5	4.3	-11.8
3.8	-9.9	4.0	-13.9
3.9	-18.1	3.7	-21.9
4.0	-19.6	3.4	-23.0
4.1	-13.2	3.2	-16.4
4.2	-9.3	2.9	-12.2
4.3	-8.9	2.7	-11.5
4.4	-9.2	2.4	-11.6
4.5	-10.0	2.2	-12.2
4.6	-12.7	1.9	-14.6
4.7	-21.5	1.7	-23.2
4.8	-15.9	1.5	-17.4
4.9	-19.6	1.2	-20.8
5.0	-20.1	1.0	-21.1
5.1	-15.3	0.8	-16.1
5.2	-17.3	0.6	-17.9
5.3	-15.7	0.4	-16.1
5.4	-11.4	0.2	-11.6
5.5	-10.4	0.0	-10.4
5.6	-12.3	-0.2	-12.1
5.7	-16.4	-0.4	-16.0
5.8	-23.9	-0.6	-23.3
5.9	-16.8	-0.8	-16.0

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-11.2	3.4	-14.6
-3.9	-4.1	3.7	-7.9
-3.8	-0.9	4.0	-4.9
-3.7	-0.9	4.3	-5.2
-3.6	-5.3	4.6	-9.9
-3.5	-11.5	4.9	-16.4
-3.4	-6.2	5.2	-11.4
-3.3	-6.9	5.5	-12.4
-3.2	-11.4	5.9	-17.2
-3.1	-6.0	6.2	-12.2
-3.0	-4.8	6.6	-11.4
-2.9	-4.3	6.9	-11.2
-2.8	-0.3	7.3	-7.6
-2.7	1.2	7.7	-6.5
-2.6	-0.8	8.1	-8.9
-2.5	-6.9	8.6	-15.4
-2.4	-14.3	9.0	-23.3
-2.3	-11.7	9.5	-21.2
-2.2	-7.7	9.9	-17.7
-2.1	-10.8	10.4	-21.2
-2.0	-5.8	11.0	-16.8
-1.9	-0.6		
-1.8	-2.0		
-1.7	-8.4		
-1.6	-5.2		
-1.5	-7.1		
-1.4	2.6		
-1.3	7.1		
-1.2	7.6		
-1.1	7.0		
-1.0	4.1		
-0.9	-5.1		
-0.8	6.5		
-0.7	6.5		
-0.6	7.8		
-0.5	20.5		
-0.4	28.4		
-0.3	34.4		
-0.2	38.4		
-0.1	40.4		
0.0	40.9		

6.0	-12.4	-1.0	-11.5
6.1	-11.0	-1.1	-9.9
6.2	-9.7	-1.3	-8.4
6.3	-10.1	-1.5	-8.6
6.4	-11.7	-1.7	-10.1
6.5	-10.7	-1.8	-8.9
6.6	-8.7	-2.0	-6.7
6.7	-9.3	-2.2	-7.2
6.8	-11.3	-2.3	-9.0
6.9	-14.9	-2.5	-12.5
7.0	-26.3	-2.6	-23.7
7.1	-16.1	-2.6	-13.5
7.2	-13.4	-2.6	-10.7
7.3	-14.9	-2.6	-12.3
7.4	-18.4	-2.6	-15.8
7.5	-17.1	-2.6	-14.5
7.6	-16.0	-2.6	-13.4
7.7	-13.7	-2.6	-11.1
7.8	-15.2	-2.6	-12.6
7.9	-18.6	-2.6	-16.0
8.0	-25.6	-2.6	-22.9
8.1	-17.7	-2.6	-15.1
8.2	-18.4	-2.6	-15.8
8.3	-17.3	-2.6	-14.6
8.4	-16.2	-2.6	-13.5
8.5	-17.9	-2.6	-15.3
8.6	-22.9	-2.6	-20.3
8.7	-32.1	-2.6	-29.4
8.8	-27.8	-2.6	-25.2
8.9	-20.0	-2.6	-17.4
9.0	-17.1	-2.6	-14.5
9.1	-20.3	-2.6	-17.7
9.2	-22.1	-2.6	-19.4
9.3	-18.4	-2.7	-15.7
9.4	-15.5	-2.8	-12.7
9.5	-15.6	-2.9	-12.7
9.6	-16.7	-3.1	-13.6
9.7	-18.4	-3.2	-15.2
9.8	-20.9	-3.3	-17.6
9.9	-23.8	-3.4	-20.4
10.0	-19.6	-3.5	-16.1

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-30.0	-20.0	-12.4	-7.6
-29.5	-21.7	-12.2	-9.4
-29.0	-21.4	-12.1	-9.4
-28.5	-19.8	-11.9	-7.9
-28.0	-21.7	-11.7	-10.0
-27.5	-25.8	-11.5	-14.3
-27.0	-25.2	-11.3	-13.9
-26.5	-24.7	-11.1	-13.7
-26.0	-19.9	-10.9	-9.1
-25.5	-20.2	-10.7	-9.6
-25.0	-25.8	-10.4	-15.3
-24.5	-18.0	-10.2	-7.7
-24.0	-20.6	-10.0	-10.6
-23.5	-26.7	-9.8	-16.9
-23.0	-27.0	-9.5	-17.4
-22.5	-30.6	-9.3	-21.3
-22.0	-28.6	-9.1	-19.5
-21.5	-18.6	-8.8	-9.8
-21.0	-18.6	-8.6	-10.0
-20.5	-18.5	-8.3	-10.2
-20.0	-14.6	-8.0	-6.6
-19.5	-12.9	-7.8	-5.2
-19.0	-12.9	-7.5	-5.4
-18.5	-15.0	-7.2	-7.8
-18.0	-17.8	-6.9	-10.9
-17.5	-24.6	-6.6	-18.0
-17.0	-23.7	-6.3	-17.5
-16.5	-23.7	-5.9	-17.7
-16.0	-31.8	-5.6	-26.2
-15.5	-23.8	-5.3	-18.5
-15.0	-17.1	-4.9	-12.2
-14.5	-22.9	-4.5	-18.3
-14.0	-16.7	-4.2	-12.6
-13.5	-21.6	-3.8	-17.8
-13.0	-18.9	-3.3	-15.5
-12.5	-16.7	-2.9	-13.8
-12.0	-27.9	-2.5	-25.4
-11.5	-17.6	-2.0	-15.6
-11.0	-19.2	-1.5	-17.6
-10.5	-19.0	-1.0	-18.0
-10.0	-22.0	-0.5	-21.5
-9.5	-16.9	0.1	-17.0
-9.0	-17.7	0.4	-18.0
-8.5	-22.6	0.4	-23.0
-8.0	-15.3	0.4	-15.7
-7.5	-19.7	0.4	-20.0
-7.0	-11.4	0.4	-11.7
-6.5	-11.4	1.2	-12.6
-6.0	-11.1	2.0	-13.1
-5.5	-13.2	3.0	-16.2
-5.0	-8.6	4.0	-12.6
-4.5	-7.8	5.2	-12.9
-4.0	-2.4	6.4	-8.8
-3.5	-3.6	7.9	-11.5
-3.0	-13.9		
-2.5	-1.1		
-2.0	-0.7		
-1.5	6.4		
-1.0	10.2		
-0.5	22.0		
0.0	40.2		

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.2		
0.5	24.7		
1.0	5.7		
1.5	-2.2		
2.0	-2.1		
2.5	-5.5		
3.0	-11.3		
3.5	0.1	7.9	-7.8
4.0	1.6	6.4	-4.8
4.5	-9.5	5.2	-14.7
5.0	-2.1	4.0	-6.2
5.5	-9.6	3.0	-12.6
6.0	-15.8	2.0	-17.9
6.5	-10.0	1.2	-11.2
7.0	-16.5	0.4	-16.9
7.5	-24.1	0.4	-24.5
8.0	-20.2	0.4	-20.6
8.5	-20.2	0.4	-20.5
9.0	-20.0	0.4	-20.4
9.5	-17.7	0.1	-17.8
10.0	-11.4	-0.5	-10.9
10.5	-21.2	-1.0	-20.2
11.0	-17.5	-1.5	-15.9
11.5	-19.1	-2.0	-17.0
12.0	-22.4	-2.5	-19.9
12.5	-14.9	-2.9	-12.0
13.0	-16.3	-3.3	-13.0
13.5	-20.5	-3.8	-16.7
14.0	-32.3	-4.2	-28.1
14.5	-26.4	-4.5	-21.9
15.0	-25.3	-4.9	-20.4
15.5	-36.1	-5.3	-30.8
16.0	-38.3	-5.6	-32.7
16.5	-23.6	-5.9	-17.6
17.0	-27.2	-6.3	-21.0
17.5	-28.3	-6.6	-21.7
18.0	-24.9	-6.9	-18.1
18.5	-23.5	-7.2	-16.3
19.0	-38.8	-7.5	-31.3
19.5	-22.9	-7.8	-15.2
20.0	-27.7	-8.0	-19.6
20.5	-28.0	-8.3	-19.7
21.0	-26.8	-8.6	-18.3
21.5	-28.6	-8.8	-19.7
22.0	-29.1	-9.1	-20.0
22.5	-26.7	-9.3	-17.4
23.0	-30.8	-9.5	-21.3
23.5	-28.3	-9.8	-18.5
24.0	-32.5	-10.0	-22.5
24.5	-39.0	-10.2	-28.8
25.0	-34.6	-10.4	-24.2
25.5	-32.7	-10.7	-22.0
26.0	-33.7	-10.9	-22.8
26.5	-30.5	-11.1	-19.4
27.0	-32.0	-11.3	-20.7
27.5	-32.8	-11.5	-21.3
28.0	-34.8	-11.7	-23.2
28.5	-35.9	-11.9	-24.1
29.0	-34.9	-12.1	-22.8
29.5	-33.7	-12.2	-21.4
30.0	-30.9	-12.4	-18.5

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-15.2	-0.5	-14.7
-9.9	-16.3	-0.4	-15.9
-9.8	-14.9	-0.3	-14.6
-9.7	-12.3	-0.2	-12.1
-9.6	-11.6	-0.1	-11.6
-9.5	-15.3	0.1	-15.4
-9.4	-22.6	0.2	-22.8
-9.3	-18.6	0.3	-18.9
-9.2	-19.7	0.4	-20.1
-9.1	-30.7	0.4	-31.1
-9.0	-19.3	0.4	-19.7
-8.9	-17.9	0.4	-18.3
-8.8	-20.6	0.4	-21.0
-8.7	-13.8	0.4	-14.2
-8.6	-11.6	0.4	-12.0
-8.5	-13.5	0.4	-13.8
-8.4	-21.6	0.4	-21.9
-8.3	-30.4	0.4	-30.8
-8.2	-25.0	0.4	-25.4
-8.1	-23.1	0.4	-23.4
-8.0	-18.2	0.4	-18.6
-7.9	-15.9	0.4	-16.3
-7.8	-13.8	0.4	-14.1
-7.7	-13.1	0.4	-13.4
-7.6	-16.5	0.4	-16.8
-7.5	-28.4	0.4	-28.8
-7.4	-25.2	0.4	-25.5
-7.3	-26.5	0.4	-26.9
-7.2	-30.2	0.4	-30.6
-7.1	-20.3	0.4	-20.7
-7.0	-13.0	0.4	-13.4
-6.9	-10.2	0.5	-10.7
-6.8	-11.3	0.7	-12.0
-6.7	-14.8	0.8	-15.6
-6.6	-12.2	1.0	-13.2
-6.5	-10.5	1.2	-11.7
-6.4	-12.7	1.3	-14.1
-6.3	-19.0	1.5	-20.6
-6.2	-16.1	1.7	-17.7
-6.1	-13.8	1.9	-15.7
-6.0	-11.6	2.0	-13.7
-5.9	-11.1	2.2	-13.4
-5.8	-14.3	2.4	-16.7
-5.7	-13.1	2.6	-15.7
-5.6	-11.0	2.8	-13.8
-5.5	-13.1	3.0	-16.0
-5.4	-18.8	3.2	-22.0
-5.3	-17.6	3.4	-21.0
-5.2	-16.5	3.6	-20.1
-5.1	-12.8	3.8	-16.6
-5.0	-10.1	4.0	-14.2
-4.9	-9.0	4.2	-13.2
-4.8	-10.1	4.5	-14.6
-4.7	-9.8	4.7	-14.5
-4.6	-8.0	4.9	-12.9
-4.5	-8.6	5.2	-13.7
-4.4	-12.4	5.4	-17.8
-4.3	-9.8	5.7	-15.4
-4.2	-4.8	5.9	-10.7
-4.1	-3.0	6.2	-9.2

29.15 GHz @ -11.90 dBW / 40 kHz in Co-pol EI RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	40.9		
0.1	40.1		
0.2	37.5		
0.3	33.0		
0.4	28.6		
0.5	25.5		
0.6	20.9		
0.7	8.3		
0.8	8.1		
0.9	5.9		
1.0	4.0		
1.1	6.5		
1.2	1.9		
1.3	-5.3		
1.4	-2.0		
1.5	-5.6		
1.6	0.2		
1.7	0.3		
1.8	-1.9		
1.9	-0.3		
2.0	0.7		
2.1	1.8		
2.2	2.2		
2.3	1.4		
2.4	0.2		
2.5	-3.0		
2.6	-11.7		
2.7	-12.7		
2.8	-13.2		
2.9	-14.2		
3.0	-11.8		
3.1	-12.2		
3.2	-3.5		
3.3	-0.1		
3.4	0.4		
3.5	-0.9	7.9	-8.8
3.6	-2.7	7.6	-10.3
3.7	-0.9	7.3	-8.2
3.8	1.1	7.0	-5.9
3.9	1.3	6.7	-5.4
4.0	1.1	6.4	-5.3
4.1	0.4	6.2	-5.7
4.2	-2.6	5.9	-8.5
4.3	-10.6	5.7	-16.3
4.4	-9.8	5.4	-15.3
4.5	-8.7	5.2	-13.8
4.6	-7.5	4.9	-12.5
4.7	-6.4	4.7	-11.1
4.8	-5.8	4.5	-10.3
4.9	-2.9	4.2	-7.1
5.0	-2.4	4.0	-6.4
5.1	-4.6	3.8	-8.4
5.2	-13.7	3.6	-17.3
5.3	-17.4	3.4	-20.8
5.4	-12.9	3.2	-16.0
5.5	-15.4	3.0	-18.3
5.6	-18.8	2.8	-21.6
5.7	-23.6	2.6	-26.2
5.8	-18.5	2.4	-20.9
5.9	-18.6	2.2	-20.8

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	-3.3	6.4	-9.7
-3.9	-6.4	6.7	-13.1
-3.8	-22.6	7.0	-29.6
-3.7	-7.1	7.3	-14.4
-3.6	-3.7	7.6	-11.2
-3.5	-3.9	7.9	-11.8
-3.4	-5.2		
-3.3	-9.9		
-3.2	-19.5		
-3.1	-7.9		
-3.0	-11.0		
-2.9	-5.4		
-2.8	1.6		
-2.7	2.8		
-2.6	0.8		
-2.5	-1.7		
-2.4	1.6		
-2.3	2.6		
-2.2	2.5		
-2.1	1.7		
-2.0	-1.1		
-1.9	-4.8		
-1.8	-6.0		
-1.7	-2.6		
-1.6	4.1		
-1.5	7.5		
-1.4	7.8		
-1.3	1.9		
-1.2	5.6		
-1.1	10.8		
-1.0	10.6		
-0.9	9.0		
-0.8	12.5		
-0.7	16.1		
-0.6	19.1		
-0.5	20.8		
-0.4	26.3		
-0.3	33.5		
-0.2	38.1		
-0.1	40.4		
0.0	40.9		

6.0	-23.1	2.0	-25.1
6.1	-23.1	1.9	-24.9
6.2	-20.9	1.7	-22.6
6.3	-14.3	1.5	-15.8
6.4	-10.6	1.3	-12.0
6.5	-9.9	1.2	-11.0
6.6	-11.6	1.0	-12.6
6.7	-13.7	0.8	-14.5
6.8	-16.6	0.7	-17.2
6.9	-22.4	0.5	-22.9
7.0	-15.8	0.4	-16.2
7.1	-12.1	0.4	-12.5
7.2	-11.9	0.4	-12.2
7.3	-13.0	0.4	-13.3
7.4	-16.4	0.4	-16.8
7.5	-26.4	0.4	-26.8
7.6	-16.2	0.4	-16.6
7.7	-14.0	0.4	-14.4
7.8	-13.5	0.4	-13.9
7.9	-14.2	0.4	-14.6
8.0	-16.0	0.4	-16.3
8.1	-19.9	0.4	-20.3
8.2	-19.6	0.4	-19.9
8.3	-16.5	0.4	-16.9
8.4	-17.6	0.4	-18.0
8.5	-20.9	0.4	-21.3
8.6	-19.1	0.4	-19.4
8.7	-17.1	0.4	-17.5
8.8	-18.8	0.4	-19.2
8.9	-21.4	0.4	-21.8
9.0	-25.2	0.4	-25.6
9.1	-25.2	0.4	-25.6
9.2	-20.7	0.4	-21.0
9.3	-21.1	0.3	-21.4
9.4	-19.7	0.2	-19.9
9.5	-14.7	0.1	-14.7
9.6	-11.6	-0.1	-11.5
9.7	-9.1	-0.2	-8.9
9.8	-8.7	-0.3	-8.5
9.9	-8.7	-0.4	-8.3
10.0	-11.3	-0.5	-10.8

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.15 GHz @ -11.90 dBW / 40 kHz in X-pol Az RHCP

Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
-10.0	-20.2	-12.6	-7.6
-9.9	-21.0	-12.6	-8.4
-9.8	-20.1	-12.6	-7.5
-9.7	-19.5	-12.6	-6.9
-9.6	-18.3	-12.6	-5.6
-9.5	-17.8	-12.6	-5.2
-9.4	-16.4	-12.6	-3.8
-9.3	-15.9	-12.6	-3.3
-9.2	-16.3	-12.6	-3.7
-9.1	-18.6	-12.6	-6.0
-9.0	-21.3	-12.6	-8.7
-8.9	-24.5	-12.6	-11.9
-8.8	-24.9	-12.6	-12.2
-8.7	-24.1	-12.6	-11.4
-8.6	-24.5	-12.6	-11.9
-8.5	-23.0	-12.6	-10.4
-8.4	-20.2	-12.6	-7.6
-8.3	-17.7	-12.6	-5.0
-8.2	-18.3	-12.6	-5.7
-8.1	-20.5	-12.6	-7.8
-8.0	-25.4	-12.6	-12.8
-7.9	-22.6	-12.6	-9.9
-7.8	-20.2	-12.6	-7.6
-7.7	-18.7	-12.6	-6.1
-7.6	-21.1	-12.6	-8.4
-7.5	-19.9	-12.6	-7.3
-7.4	-15.9	-12.6	-3.3
-7.3	-14.7	-12.6	-2.1
-7.2	-15.6	-12.6	-2.9
-7.1	-13.6	-12.6	-1.0
-7.0	-12.6	-12.6	0.0
-6.9	-12.5	-12.5	0.0
-6.8	-14.1	-12.3	-1.8
-6.7	-16.5	-12.2	-4.3
-6.6	-16.1	-12.0	-4.1
-6.5	-13.6	-11.8	-1.8
-6.4	-13.4	-11.7	-1.8
-6.3	-15.8	-11.5	-4.3
-6.2	-21.3	-11.3	-10.0
-6.1	-33.4	-11.1	-22.2
-6.0	-26.4	-11.0	-15.5
-5.9	-27.5	-10.8	-16.7
-5.8	-22.1	-10.6	-11.5
-5.7	-19.2	-10.4	-8.8
-5.6	-17.5	-10.2	-7.3
-5.5	-23.6	-10.0	-13.6
-5.4	-29.0	-9.8	-19.2
-5.3	-20.0	-9.6	-10.4
-5.2	-18.4	-9.4	-9.0
-5.1	-26.9	-9.2	-17.7
-5.0	-18.8	-9.0	-9.8
-4.9	-13.7	-8.8	-4.9
-4.8	-12.5	-8.5	-4.0
-4.7	-14.1	-8.3	-5.8
-4.6	-22.7	-8.1	-14.6
-4.5	-27.8	-7.8	-20.0
-4.4	-18.0	-7.6	-10.4
-4.3	-11.7	-7.3	-4.4
-4.2	-9.0	-7.1	-2.0
-4.1	-9.4	-6.8	-2.6

29.15 GHz @ -11.90 dBW / 40 kHz in X-pol Az RHCP

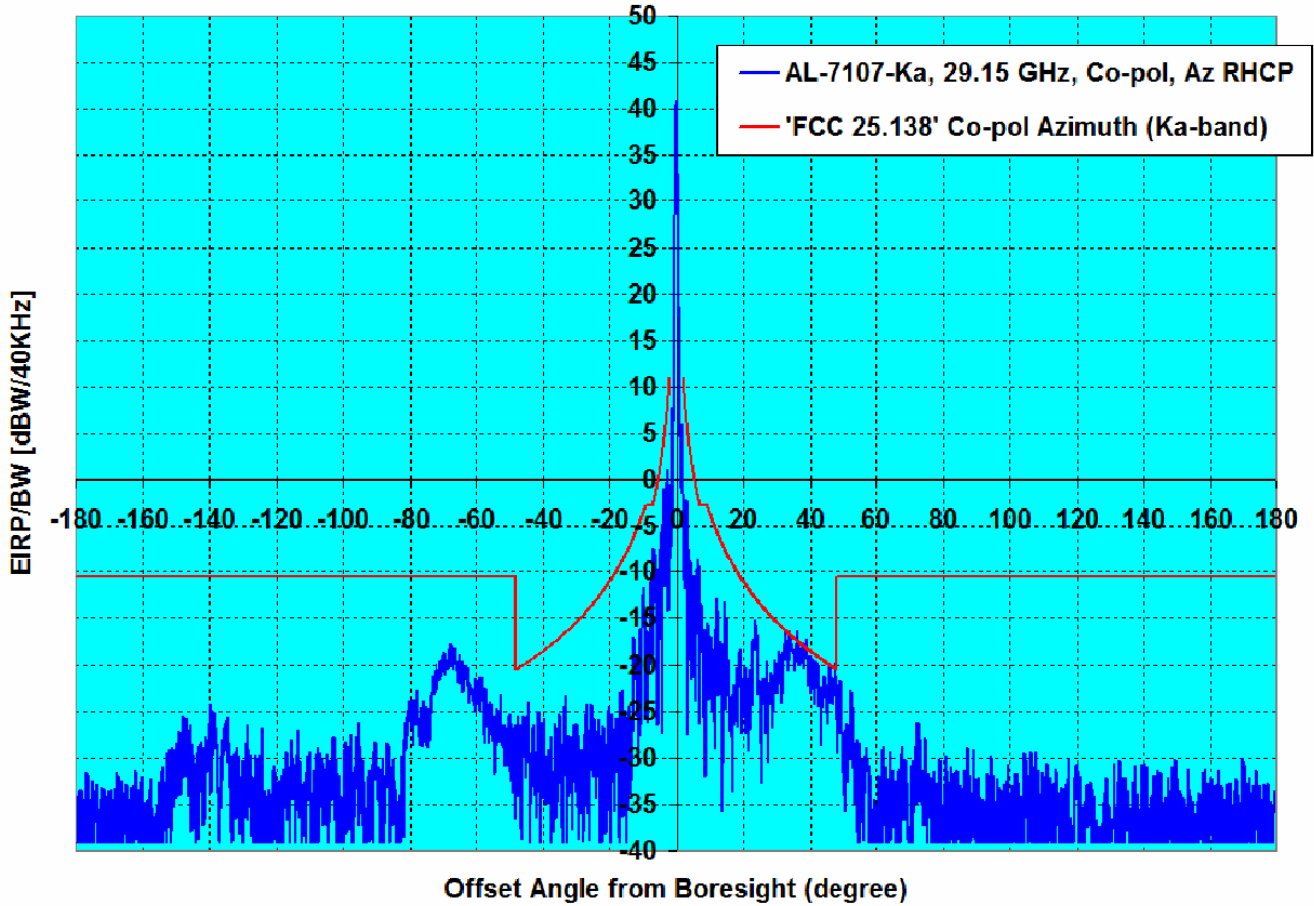
Angle	EIRPsd	Mask	Over Mask
Degrees	dBW/40kHz	dBW/40kHz	dB
0.0	15.1		
0.1	13.3		
0.2	18.8		
0.3	21.0		
0.4	21.0		
0.5	18.7		
0.6	13.7		
0.7	7.6		
0.8	0.5		
0.9	-9.7		
1.0	0.7		
1.1	0.3		
1.2	-5.1		
1.3	-4.9		
1.4	-3.5		
1.5	-3.5		
1.6	-4.8		
1.7	-9.0		
1.8	-21.4		
1.9	-20.5		
2.0	-22.8	1.0	-23.8
2.1	-17.2	0.4	-17.6
2.2	-14.9	-0.1	-14.8
2.3	-13.8	-0.5	-13.3
2.4	-14.2	-1.0	-13.2
2.5	-15.9	-1.4	-14.4
2.6	-13.4	-1.9	-11.6
2.7	-10.4	-2.3	-8.1
2.8	-9.8	-2.7	-7.2
2.9	-13.3	-3.1	-10.2
3.0	-18.6	-3.4	-15.2
3.1	-18.5	-3.8	-14.7
3.2	-20.9	-4.1	-16.8
3.3	-27.2	-4.5	-22.7
3.4	-38.8	-4.8	-34.0
3.5	-28.7	-5.1	-23.6
3.6	-30.2	-5.4	-24.8
3.7	-23.0	-5.7	-17.3
3.8	-24.1	-6.0	-18.1
3.9	-34.2	-6.3	-27.9
4.0	-20.6	-6.6	-14.0
4.1	-15.4	-6.8	-8.5
4.2	-16.8	-7.1	-9.7
4.3	-17.7	-7.3	-10.3
4.4	-16.6	-7.6	-9.0
4.5	-16.5	-7.8	-8.7
4.6	-21.9	-8.1	-13.8
4.7	-28.9	-8.3	-20.6
4.8	-29.2	-8.5	-20.7
4.9	-27.9	-8.8	-19.2
5.0	-25.0	-9.0	-16.0
5.1	-23.1	-9.2	-13.9
5.2	-22.7	-9.4	-13.3
5.3	-17.4	-9.6	-7.8
5.4	-16.0	-9.8	-6.2
5.5	-17.8	-10.0	-7.8
5.6	-21.4	-10.2	-11.2
5.7	-27.6	-10.4	-17.2
5.8	-33.2	-10.6	-22.6
5.9	-27.2	-10.8	-16.4

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, EIRPsd Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-14.3	-6.6	-7.8
-3.9	-21.6	-6.3	-15.4
-3.8	-13.2	-6.0	-7.2
-3.7	-13.4	-5.7	-7.7
-3.6	-20.3	-5.4	-14.9
-3.5	-20.3	-5.1	-15.2
-3.4	-20.7	-4.8	-15.9
-3.3	-36.9	-4.5	-32.4
-3.2	-19.6	-4.1	-15.5
-3.1	-20.2	-3.8	-16.4
-3.0	-32.2	-3.4	-28.7
-2.9	-16.4	-3.1	-13.4
-2.8	-14.1	-2.7	-11.4
-2.7	-17.7	-2.3	-15.4
-2.6	-33.4	-1.9	-31.5
-2.5	-23.8	-1.4	-22.4
-2.4	-13.8	-1.0	-12.8
-2.3	-8.5	-0.5	-8.0
-2.2	-7.4	-0.1	-7.3
-2.1	-8.3	0.4	-8.7
-2.0	-10.7	1.0	-11.7
-1.9	-20.4		
-1.8	-9.1		
-1.7	-3.0		
-1.6	-0.9		
-1.5	-0.4		
-1.4	-0.8		
-1.3	-4.6		
-1.2	-4.2		
-1.1	2.1		
-1.0	4.1		
-0.9	5.2		
-0.8	8.6		
-0.7	13.1		
-0.6	16.3		
-0.5	17.3		
-0.4	15.4		
-0.3	5.8		
-0.2	13.1		
-0.1	16.4		
0.0	15.1		

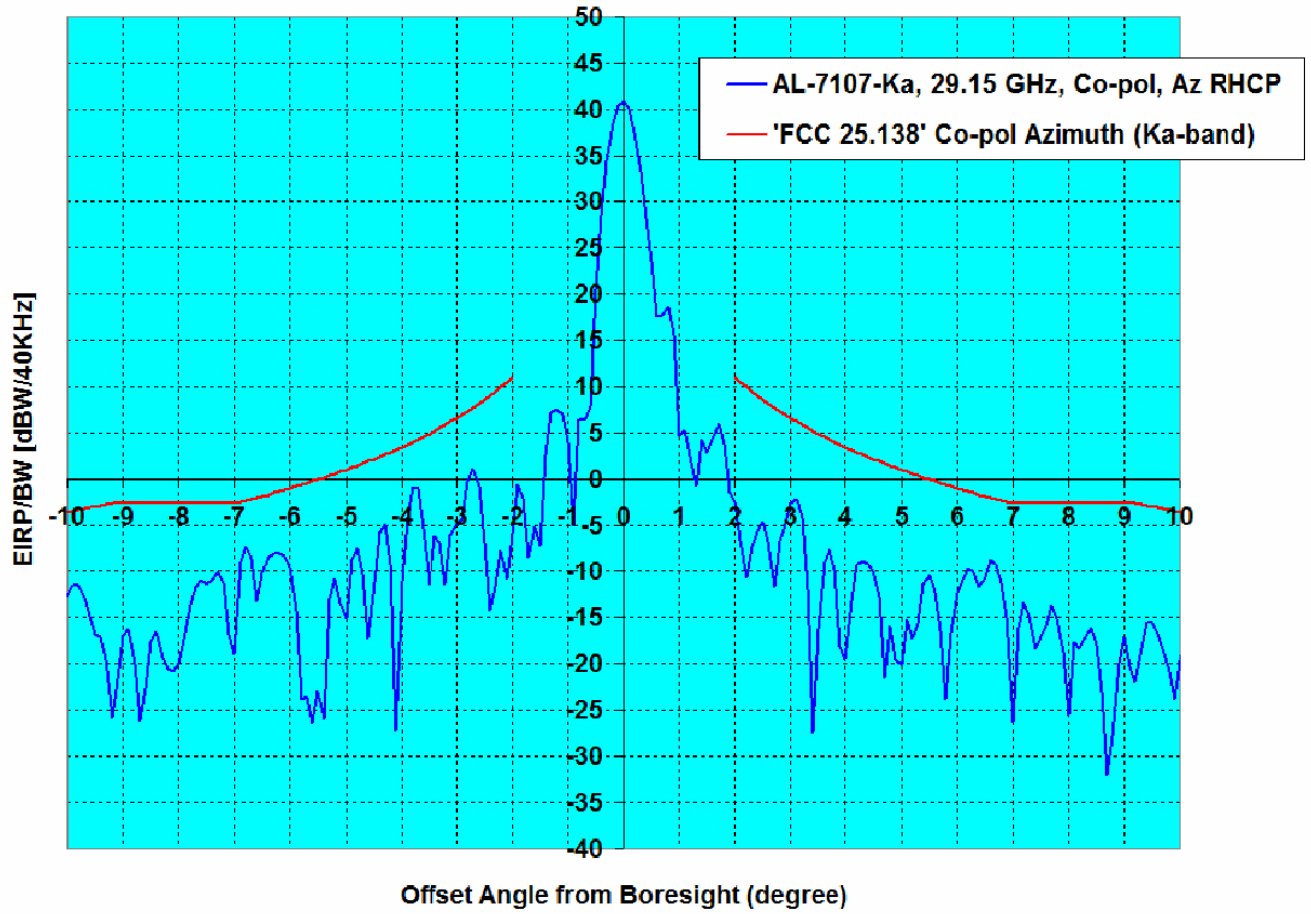
6.0	-25.4	-11.0	-14.4
6.1	-22.4	-11.1	-11.3
6.2	-19.1	-11.3	-7.8
6.3	-19.1	-11.5	-7.6
6.4	-20.2	-11.7	-8.5
6.5	-18.7	-11.8	-6.9
6.6	-16.6	-12.0	-4.6
6.7	-16.0	-12.2	-3.9
6.8	-16.2	-12.3	-3.9
6.9	-19.1	-12.5	-6.6
7.0	-22.0	-12.6	-9.4
7.1	-27.3	-12.6	-14.7
7.2	-29.4	-12.6	-16.7
7.3	-37.4	-12.6	-24.7
7.4	-34.6	-12.6	-21.9
7.5	-26.1	-12.6	-13.5
7.6	-21.3	-12.6	-8.7
7.7	-20.7	-12.6	-8.0
7.8	-26.7	-12.6	-14.1
7.9	-29.1	-12.6	-16.5
8.0	-21.7	-12.6	-9.1
8.1	-23.1	-12.6	-10.5
8.2	-26.1	-12.6	-13.5
8.3	-29.5	-12.6	-16.8
8.4	-26.5	-12.6	-13.8
8.5	-23.5	-12.6	-10.9
8.6	-23.1	-12.6	-10.4
8.7	-23.5	-12.6	-10.9
8.8	-23.9	-12.6	-11.3
8.9	-22.4	-12.6	-9.8
9.0	-21.6	-12.6	-9.0
9.1	-25.4	-12.6	-12.8
9.2	-22.8	-12.6	-10.1
9.3	-23.2	-12.6	-10.6
9.4	-25.3	-12.6	-12.7
9.5	-33.6	-12.6	-21.0
9.6	-35.5	-12.6	-22.9
9.7	-33.9	-12.6	-21.3
9.8	-30.9	-12.6	-18.3
9.9	-23.9	-12.6	-11.2
10.0	-23.8	-12.6	-11.2

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.90 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in Az RHCP
 Min BW of 7.13 MHz in case of 20W BUC**



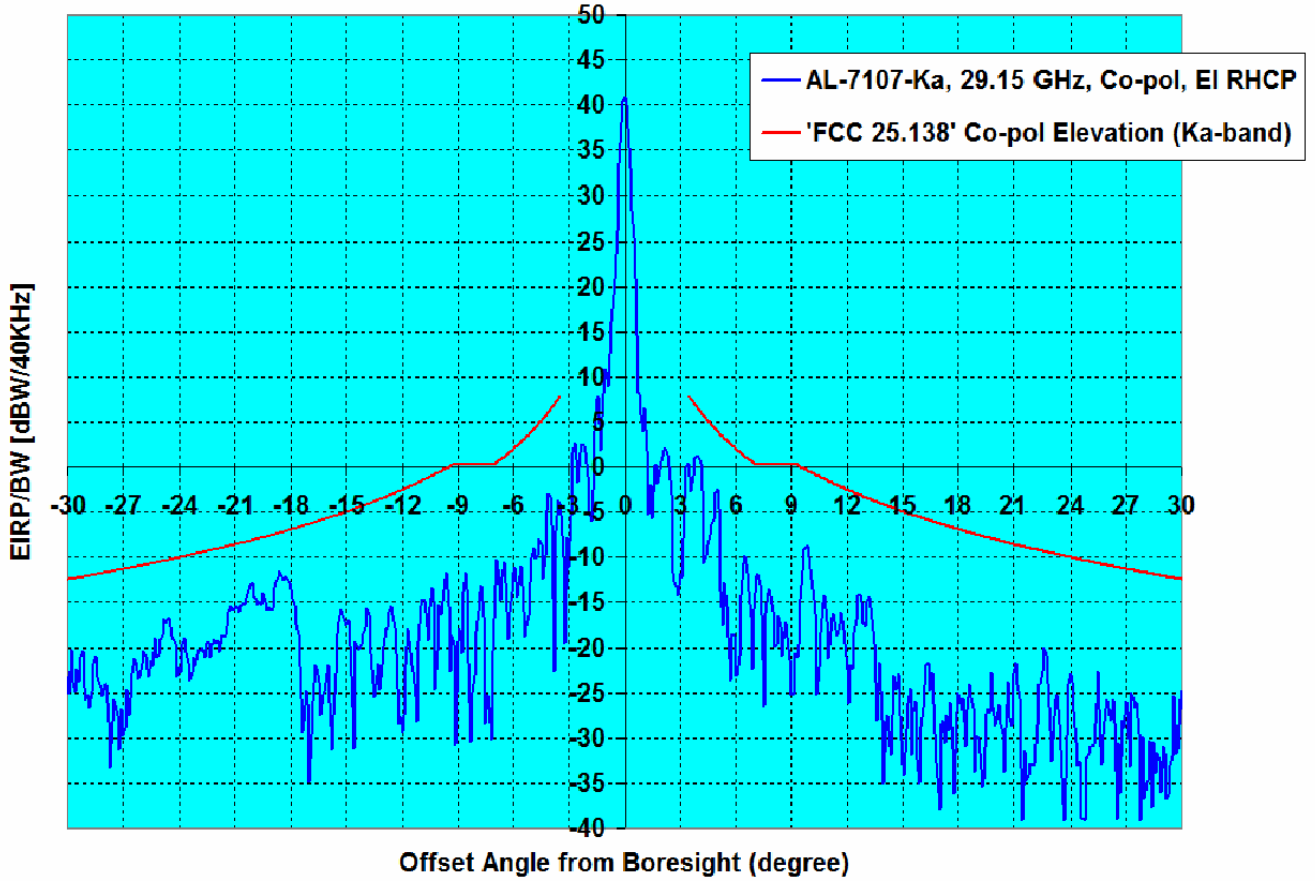
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Freq., Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (2° to 10°)	± (10° to 180°)	%
AL-7107-Ka, 29.15 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.76	-11.90	-4.92	1.10	0.34

'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.90 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in Az RHCP
 Min BW of 7.13 MHz in case of 20W BUC



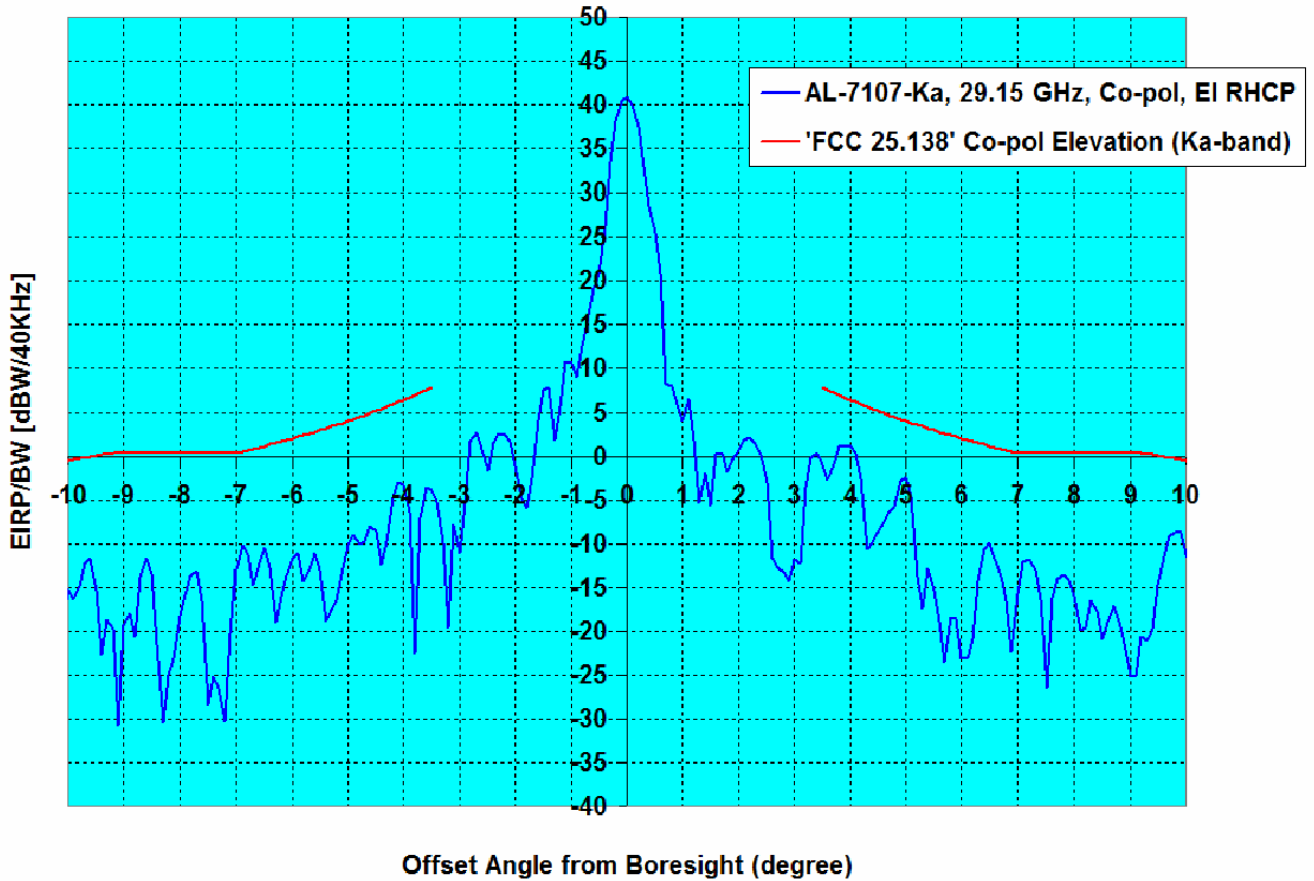
Configuration System, Freq., Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 10°)	± (10° to 180°)	
AL-7107-Ka, 29.15 GHz, Co-pol, Az RHCP	'FCC 25.138' Co-pol Azimuth (Ka-band)	52.76	-11.90	-4.92	1.10	0.34

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.90 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in EI RHCP
 Min BW of 7.13 MHz in case of 20W BUC**



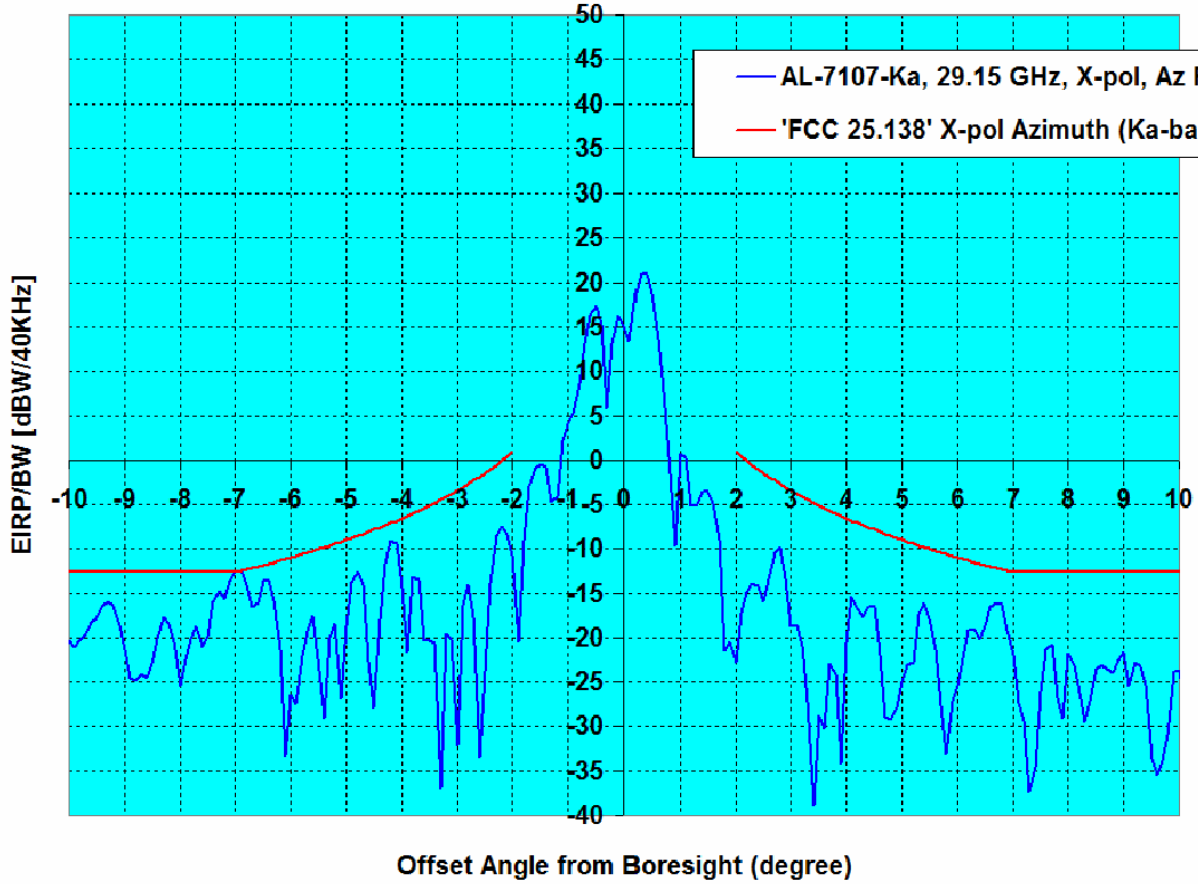
Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 29.15 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.76	-11.90	-5.34	-4.24	0.00

**'FCC 25.138' Co-pol Guide at Ka-band for EIRP/BW of -11.90 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in EI RHCP
 Min BW of 7.13 MHz in case of 20W BUC**



Configuration	Regulation	Antenna Gain	Input EIRPsd	Peak Excursions dB		Over Mask
System, Frequency, Polarization, Plane	EIRP/BW [dBW/40KHz]	dBi	dBW/40KHz	± (3.5° to 10°)	± (10° to 30°)	%
AL-7107-Ka, 29.15 GHz, Co-pol, EI RHCP	'FCC 25.138' Co-pol Elevation (Ka-band)	52.76	-11.90	-5.34	-4.24	0.00

**'FCC 25.138' X-pol Guide at Ka-band for EIRP/BW of -11.90 dBW/40KHz to Input and
 40.86 dBW/40KHz in the Output of AL-7107-Ka Antenna at 29.15 GHz in Az RHCP
 Min BW of 7.13 MHz in case of 20W BUC**



Configuration System, Frequency, Polarization, Plane	Regulation EIRP/BW [dBW/40KHz]	Antenna Gain dBi	Input EIRPsd dBW/40KHz	Peak Excursions dB		Over Mask %
				± (2° to 7°)	± (2° to 9.2°)	
AL-7107-Ka, 29.15 GHz, X-pol, Az RHCP	'FCC 25.138' X-pol Azimuth (Ka-band)	52.76	-11.90	0.00	0.00	0.00

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

27.55 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-20.9	0.0	-20.9
-178.0	-26.7	0.0	-26.7
-177.0	-26.5	0.0	-26.5
-176.0	-18.2	0.0	-18.2
-175.0	-20.9	0.0	-20.9
-174.0	-21.1	0.0	-21.1
-173.0	-23.3	0.0	-23.3
-172.0	-25.7	0.0	-25.7
-171.0	-22.9	0.0	-22.9
-170.0	-24.2	0.0	-24.2
-169.0	-22.5	0.0	-22.5
-168.0	-21.9	0.0	-21.9
-167.0	-27.9	0.0	-27.9
-166.0	-26.2	0.0	-26.2
-165.0	-19.5	0.0	-19.5
-164.0	-18.2	0.0	-18.2
-163.0	-21.6	0.0	-21.6
-162.0	-27.5	0.0	-27.5
-161.0	-25.5	0.0	-25.5
-160.0	-24.3	0.0	-24.3
-159.0	-17.4	0.0	-17.4
-158.0	-20.6	0.0	-20.6
-157.0	-18.7	0.0	-18.7
-156.0	-17.8	0.0	-17.8
-155.0	-26.4	0.0	-26.4
-154.0	-17.1	0.0	-17.1
-153.0	-22.6	0.0	-22.6
-152.0	-19.3	0.0	-19.3
-151.0	-14.8	0.0	-14.8
-150.0	-18.1	0.0	-18.1
-149.0	-16.6	0.0	-16.6
-148.0	-22.1	0.0	-22.1
-147.0	-24.1	0.0	-24.1
-146.0	-15.1	0.0	-15.1
-145.0	-18.9	0.0	-18.9
-144.0	-16.7	0.0	-16.7
-143.0	-14.5	0.0	-14.5
-142.0	-14.8	0.0	-14.8
-141.0	-14.2	0.0	-14.2
-140.0	-19.3	0.0	-19.3
-139.0	-16.6	0.0	-16.6
-138.0	-13.8	0.0	-13.8
-137.0	-24.9	0.0	-24.9
-136.0	-17.6	0.0	-17.6
-135.0	-15.6	0.0	-15.6
-134.0	-19.6	0.0	-19.6
-133.0	-19.4	0.0	-19.4
-132.0	-17.1	0.0	-17.1
-131.0	-18.8	0.0	-18.8
-130.0	-18.5	0.0	-18.5
-129.0	-14.9	0.0	-14.9
-128.0	-16.7	0.0	-16.7
-127.0	-21.7	0.0	-21.7
-126.0	-16.7	0.0	-16.7
-125.0	-15.8	0.0	-15.8
-124.0	-15.7	0.0	-15.7
-123.0	-19.9	0.0	-19.9
-122.0	-19.6	0.0	-19.6
-121.0	-17.4	0.0	-17.4
-120.0	-21.6	0.0	-21.6

27.55 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.1		
1.0	17.2		
2.0	11.5	21.5	-10.0
3.0	3.6	17.1	-13.4
4.0	5.9	13.9	-8.1
5.0	-2.8	11.5	-14.3
6.0	-0.4	9.5	-10.0
7.0	3.3	7.9	-4.6
8.0	-2.5	8.0	-10.5
9.0	-5.5	8.0	-13.5
10.0	-13.8	7.0	-20.8
11.0	-7.5	6.0	-13.4
12.0	-4.9	5.0	-10.0
13.0	-15.4	4.2	-19.5
14.0	-9.2	3.3	-12.6
15.0	-5.3	2.6	-7.9
16.0	-7.2	1.9	-9.1
17.0	-7.2	1.2	-8.4
18.0	-6.8	0.6	-7.4
19.0	-5.7	0.0	-5.7
20.0	-23.1	-0.5	-22.6
21.0	-16.5	-1.1	-15.4
22.0	-6.1	-1.6	-4.5
23.0	-7.9	-2.0	-5.8
24.0	-10.1	-2.5	-7.6
25.0	-11.5	-2.9	-8.6
26.0	-12.1	-3.4	-8.7
27.0	-12.1	-3.8	-8.3
28.0	-11.4	-4.2	-7.2
29.0	-6.3	-4.6	-1.8
30.0	-6.5	-4.9	-1.6
31.0	-5.2	-5.3	0.1
32.0	-4.3	-5.6	1.4
33.0	-5.8	-6.0	0.2
34.0	-3.4	-6.3	2.9
35.0	-4.9	-6.6	1.7
36.0	-2.9	-6.9	4.0
37.0	-3.0	-7.2	4.2
38.0	-6.1	-7.5	1.4
39.0	-5.1	-7.8	2.7
40.0	-7.4	-8.1	0.7
41.0	-8.9	-8.3	-0.5
42.0	-9.3	-8.6	-0.7
43.0	-12.5	-8.8	-3.7
44.0	-10.4	-9.1	-1.3
45.0	-11.0	-9.3	-1.7
46.0	-5.2	-9.6	4.4
47.0	-9.5	-9.8	0.3
48.0	-8.9	-10.0	1.2
49.0	-13.7	-10.0	-3.7
50.0	-14.0	-10.0	-4.0
51.0	-9.4	-10.0	0.6
52.0	-7.4	-10.0	2.6
53.0	-7.9	-10.0	2.1
54.0	-8.9	-10.0	1.1
55.0	-13.3	-10.0	-3.3
56.0	-14.7	-10.0	-4.7
57.0	-11.3	-10.0	-1.3
58.0	-11.6	-10.0	-1.6
59.0	-11.8	-10.0	-1.8

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-20.4	0.0	-20.4
-118.0	-26.4	0.0	-26.4
-117.0	-20.8	0.0	-20.8
-116.0	-18.3	0.0	-18.3
-115.0	-18.6	0.0	-18.6
-114.0	-20.2	0.0	-20.2
-113.0	-19.3	0.0	-19.3
-112.0	-20.9	0.0	-20.9
-111.0	-20.2	0.0	-20.2
-110.0	-19.0	0.0	-19.0
-109.0	-14.5	0.0	-14.5
-108.0	-20.8	0.0	-20.8
-107.0	-21.5	0.0	-21.5
-106.0	-19.2	0.0	-19.2
-105.0	-18.4	0.0	-18.4
-104.0	-18.0	0.0	-18.0
-103.0	-21.0	0.0	-21.0
-102.0	-24.7	0.0	-24.7
-101.0	-15.1	0.0	-15.1
-100.0	-18.9	0.0	-18.9
-99.0	-26.4	0.0	-26.4
-98.0	-14.1	0.0	-14.1
-97.0	-13.6	0.0	-13.6
-96.0	-12.9	0.0	-12.9
-95.0	-16.6	0.0	-16.6
-94.0	-17.7	0.0	-17.7
-93.0	-17.7	0.0	-17.7
-92.0	-12.0	0.0	-12.0
-91.0	-14.7	0.0	-14.7
-90.0	-16.2	0.0	-16.2
-89.0	-13.8	0.0	-13.8
-88.0	-18.2	0.0	-18.2
-87.0	-13.4	0.0	-13.4
-86.0	-12.2	0.0	-12.2
-85.0	-12.3	-10.0	-2.3
-84.0	-16.9	-10.0	-6.9
-83.0	-19.5	-10.0	-9.5
-82.0	-15.3	-10.0	-5.3
-81.0	-12.5	-10.0	-2.5
-80.0	-10.7	-10.0	-0.7
-79.0	-11.3	-10.0	-1.3
-78.0	-10.5	-10.0	-0.5
-77.0	-11.5	-10.0	-1.5
-76.0	-12.6	-10.0	-2.6
-75.0	-11.3	-10.0	-1.3
-74.0	-10.8	-10.0	-0.8
-73.0	-8.3	-10.0	1.7
-72.0	-8.2	-10.0	1.8
-71.0	-8.7	-10.0	1.3
-70.0	-7.8	-10.0	2.2
-69.0	-6.9	-10.0	3.1
-68.0	-5.8	-10.0	4.2
-67.0	-6.2	-10.0	3.8
-66.0	-5.3	-10.0	4.7
-65.0	-8.9	-10.0	1.1
-64.0	-8.1	-10.0	1.9
-63.0	-8.5	-10.0	1.5
-62.0	-9.6	-10.0	0.4
-61.0	-7.2	-10.0	2.8
-60.0	-10.1	-10.0	-0.1
-59.0	-10.8	-10.0	-0.8
-58.0	-10.1	-10.0	-0.1
-57.0	-11.1	-10.0	-1.1

60.0	-16.5	-10.0	-6.5
61.0	-17.9	-10.0	-7.9
62.0	-15.2	-10.0	-5.2
63.0	-13.0	-10.0	-3.0
64.0	-17.3	-10.0	-7.3
65.0	-19.7	-10.0	-9.7
66.0	-11.2	-10.0	-1.2
67.0	-17.3	-10.0	-7.3
68.0	-14.5	-10.0	-4.5
69.0	-14.8	-10.0	-4.8
70.0	-13.2	-10.0	-3.2
71.0	-16.2	-10.0	-6.2
72.0	-19.1	-10.0	-9.1
73.0	-13.4	-10.0	-3.4
74.0	-19.3	-10.0	-9.3
75.0	-25.5	-10.0	-15.5
76.0	-16.4	-10.0	-6.4
77.0	-16.4	-10.0	-6.4
78.0	-21.0	-10.0	-11.0
79.0	-22.0	-10.0	-12.0
80.0	-24.3	-10.0	-14.3
81.0	-20.9	-10.0	-10.9
82.0	-26.0	-10.0	-16.0
83.0	-18.1	-10.0	-8.1
84.0	-24.0	-10.0	-14.0
85.0	-25.7	-10.0	-15.7
86.0	-21.1	0.0	-21.1
87.0	-22.6	0.0	-22.6
88.0	-19.0	0.0	-19.0
89.0	-20.0	0.0	-20.0
90.0	-23.1	0.0	-23.1
91.0	-20.8	0.0	-20.8
92.0	-21.3	0.0	-21.3
93.0	-19.9	0.0	-19.9
94.0	-22.3	0.0	-22.3
95.0	-23.9	0.0	-23.9
96.0	-25.8	0.0	-25.8
97.0	-26.1	0.0	-26.1
98.0	-19.2	0.0	-19.2
99.0	-25.3	0.0	-25.3
100.0	-17.6	0.0	-17.6
101.0	-17.5	0.0	-17.5
102.0	-24.6	0.0	-24.6
103.0	-27.6	0.0	-27.6
104.0	-27.9	0.0	-27.9
105.0	-20.0	0.0	-20.0
106.0	-23.9	0.0	-23.9
107.0	-25.1	0.0	-25.1
108.0	-21.1	0.0	-21.1
109.0	-21.3	0.0	-21.3
110.0	-27.9	0.0	-27.9
111.0	-21.3	0.0	-21.3
112.0	-22.8	0.0	-22.8
113.0	-15.5	0.0	-15.5
114.0	-21.9	0.0	-21.9
115.0	-20.5	0.0	-20.5
116.0	-18.7	0.0	-18.7
117.0	-18.2	0.0	-18.2
118.0	-21.3	0.0	-21.3
119.0	-16.7	0.0	-16.7
120.0	-27.9	0.0	-27.9
121.0	-21.5	0.0	-21.5
122.0	-17.6	0.0	-17.6

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-9.1	-10.0	0.9
-55.0	-13.6	-10.0	-3.6
-54.0	-11.4	-10.0	-1.4
-53.0	-14.3	-10.0	-4.3
-52.0	-13.3	-10.0	-3.3
-51.0	-18.3	-10.0	-8.3
-50.0	-12.7	-10.0	-2.7
-49.0	-15.6	-10.0	-5.6
-48.0	-15.3	-10.0	-5.3
-47.0	-19.3	-9.8	-9.5
-46.0	-13.8	-9.6	-4.2
-45.0	-17.5	-9.3	-8.1
-44.0	-23.2	-9.1	-14.1
-43.0	-22.2	-8.8	-13.4
-42.0	-22.2	-8.6	-13.6
-41.0	-20.6	-8.3	-12.3
-40.0	-15.6	-8.1	-7.6
-39.0	-22.7	-7.8	-14.9
-38.0	-16.5	-7.5	-9.0
-37.0	-15.8	-7.2	-8.6
-36.0	-19.3	-6.9	-12.3
-35.0	-18.5	-6.6	-11.9
-34.0	-22.3	-6.3	-16.0
-33.0	-20.6	-6.0	-14.7
-32.0	-23.6	-5.6	-18.0
-31.0	-18.1	-5.3	-12.9
-30.0	-15.0	-4.9	-10.1
-29.0	-18.0	-4.6	-13.4
-28.0	-16.6	-4.2	-12.4
-27.0	-17.3	-3.8	-13.5
-26.0	-17.3	-3.4	-13.9
-25.0	-20.0	-2.9	-17.0
-24.0	-17.3	-2.5	-14.8
-23.0	-15.7	-2.0	-13.7
-22.0	-15.4	-1.6	-13.8
-21.0	-16.3	-1.1	-15.2
-20.0	-18.9	-0.5	-18.4
-19.0	-12.6	0.0	-12.7
-18.0	-18.1	0.6	-18.7
-17.0	-14.3	1.2	-15.5
-16.0	-17.5	1.9	-19.4
-15.0	-17.7	2.6	-20.3
-14.0	-25.8	3.3	-29.1
-13.0	-6.8	4.2	-11.0
-12.0	-4.1	5.0	-9.2
-11.0	-7.6	6.0	-13.6
-10.0	-5.5	7.0	-12.5
-9.0	-3.5	8.0	-11.5
-8.0	-4.1	8.0	-12.1
-7.0	1.8	7.9	-6.1
-6.0	-10.6	9.5	-20.2
-5.0	2.7	11.5	-8.9
-4.0	5.3	13.9	-8.7
-3.0	8.9	17.1	-8.2
-2.0	11.7	21.5	-9.8
-1.0	21.0		
0.0	52.1		

123.0	-20.4	0.0	-20.4
124.0	-21.7	0.0	-21.7
125.0	-25.7	0.0	-25.7
126.0	-24.9	0.0	-24.9
127.0	-19.6	0.0	-19.6
128.0	-27.9	0.0	-27.9
129.0	-25.8	0.0	-25.8
130.0	-22.0	0.0	-22.0
131.0	-20.6	0.0	-20.6
132.0	-21.8	0.0	-21.8
133.0	-24.8	0.0	-24.8
134.0	-23.8	0.0	-23.8
135.0	-23.4	0.0	-23.4
136.0	-23.1	0.0	-23.1
137.0	-21.8	0.0	-21.8
138.0	-19.0	0.0	-19.0
139.0	-23.1	0.0	-23.1
140.0	-23.6	0.0	-23.6
141.0	-21.1	0.0	-21.1
142.0	-26.3	0.0	-26.3
143.0	-18.5	0.0	-18.5
144.0	-27.9	0.0	-27.9
145.0	-21.1	0.0	-21.1
146.0	-23.5	0.0	-23.5
147.0	-19.7	0.0	-19.7
148.0	-24.1	0.0	-24.1
149.0	-23.3	0.0	-23.3
150.0	-22.0	0.0	-22.0
151.0	-27.9	0.0	-27.9
152.0	-23.3	0.0	-23.3
153.0	-21.9	0.0	-21.9
154.0	-23.1	0.0	-23.1
155.0	-17.8	0.0	-17.8
156.0	-27.9	0.0	-27.9
157.0	-27.0	0.0	-27.0
158.0	-23.3	0.0	-23.3
159.0	-27.2	0.0	-27.2
160.0	-14.9	0.0	-14.9
161.0	-22.5	0.0	-22.5
162.0	-22.3	0.0	-22.3
163.0	-19.8	0.0	-19.8
164.0	-16.6	0.0	-16.6
165.0	-20.0	0.0	-20.0
166.0	-22.5	0.0	-22.5
167.0	-21.2	0.0	-21.2
168.0	-24.4	0.0	-24.4
169.0	-27.3	0.0	-27.3
170.0	-20.9	0.0	-20.9
171.0	-21.2	0.0	-21.2
172.0	-27.9	0.0	-27.9
173.0	-20.3	0.0	-20.3
174.0	-19.1	0.0	-19.1
175.0	-27.9	0.0	-27.9
176.0	-24.3	0.0	-24.3
177.0	-20.9	0.0	-20.9
178.0	-24.6	0.0	-24.6
179.0	-19.3	0.0	-19.3

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

27.55 GHz Antenna Pattern in Co-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-5.5	7.0	-12.5
-9.9	-2.7	7.1	-9.8
-9.8	-1.9	7.2	-9.1
-9.7	-2.3	7.3	-9.6
-9.6	-3.4	7.4	-10.9
-9.5	-7.4	7.6	-15.0
-9.4	-12.0	7.7	-19.7
-9.3	-7.2	7.8	-14.9
-9.2	-3.0	8.0	-11.0
-9.1	-2.7	8.0	-10.7
-9.0	-3.5	8.0	-11.5
-8.9	-5.9	8.0	-13.9
-8.8	-4.3	8.0	-12.3
-8.7	-2.8	8.0	-10.8
-8.6	-2.5	8.0	-10.5
-8.5	-4.0	8.0	-12.0
-8.4	-6.4	8.0	-14.4
-8.3	-5.4	8.0	-13.4
-8.2	-2.3	8.0	-10.3
-8.1	-0.7	8.0	-8.7
-8.0	-4.1	8.0	-12.1
-7.9	-13.6	8.0	-21.6
-7.8	-11.4	8.0	-19.4
-7.7	-5.4	8.0	-13.4
-7.6	-3.3	8.0	-11.3
-7.5	-2.8	8.0	-10.8
-7.4	-5.8	8.0	-13.8
-7.3	-0.4	8.0	-8.4
-7.2	2.1	8.0	-5.9
-7.1	2.3	8.0	-5.7
-7.0	1.8	7.9	-6.1
-6.9	3.5	8.0	-4.6
-6.8	4.7	8.2	-3.5
-6.7	4.0	8.3	-4.4
-6.6	3.5	8.5	-5.0
-6.5	2.0	8.7	-6.7
-6.4	-2.2	8.8	-11.1
-6.3	-8.2	9.0	-17.2
-6.2	-3.4	9.2	-12.6
-6.1	-2.3	9.4	-11.7
-6.0	-10.6	9.5	-20.2
-5.9	-2.3	9.7	-12.0
-5.8	2.0	9.9	-8.0
-5.7	0.1	10.1	-10.0
-5.6	-15.2	10.3	-25.5
-5.5	-2.1	10.5	-12.6
-5.4	0.5	10.7	-10.2
-5.3	-2.9	10.9	-13.8
-5.2	-0.4	11.1	-11.5
-5.1	2.5	11.3	-8.8
-5.0	2.7	11.5	-8.9
-4.9	2.0	11.7	-9.7
-4.8	2.3	12.0	-9.7
-4.7	3.1	12.2	-9.1
-4.6	2.1	12.4	-10.4
-4.5	-0.8	12.7	-13.5
-4.4	-4.1	12.9	-17.0
-4.3	-2.3	13.2	-15.5
-4.2	1.8	13.4	-11.6
-4.1	4.1	13.7	-9.6

27.55 GHz Antenna Pattern in Co-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.1		
0.1	51.5		
0.2	49.3		
0.3	45.4		
0.4	40.0		
0.5	34.1		
0.6	27.7		
0.7	26.5		
0.8	28.4		
0.9	26.9		
1.0	17.2		
1.1	18.3		
1.2	21.0		
1.3	17.0		
1.4	9.5		
1.5	11.5	24.6	-13.1
1.6	11.8	23.9	-12.1
1.7	15.9	23.2	-7.4
1.8	17.6	22.6	-5.0
1.9	16.0	22.0	-6.0
2.0	11.5	21.5	-10.0
2.1	5.0	20.9	-16.0
2.2	-2.4	20.4	-22.8
2.3	3.1	20.0	-16.9
2.4	4.5	19.5	-15.0
2.5	3.5	19.1	-15.6
2.6	3.0	18.6	-15.6
2.7	0.0	18.2	-18.2
2.8	-1.5	17.8	-19.3
2.9	3.2	17.4	-14.2
3.0	3.6	17.1	-13.4
3.1	6.1	16.7	-10.6
3.2	8.7	16.4	-7.7
3.3	8.2	16.0	-7.9
3.4	2.7	15.7	-13.0
3.5	-9.8	15.4	-25.2
3.6	-1.7	15.1	-16.8
3.7	-15.1	14.8	-29.9
3.8	3.8	14.5	-10.7
3.9	7.5	14.2	-6.7
4.0	5.9	13.9	-8.1
4.1	0.5	13.7	-13.2
4.2	-3.8	13.4	-17.3
4.3	-0.4	13.2	-13.5
4.4	0.6	12.9	-12.3
4.5	-0.2	12.7	-12.9
4.6	-1.1	12.4	-13.5
4.7	-0.4	12.2	-12.6
4.8	0.3	12.0	-11.6
4.9	-0.5	11.7	-12.2
5.0	-2.8	11.5	-14.3
5.1	-7.4	11.3	-18.7
5.2	-12.3	11.1	-23.4
5.3	-7.4	10.9	-18.3
5.4	-6.5	10.7	-17.2
5.5	-12.7	10.5	-23.2
5.6	-4.9	10.3	-15.2
5.7	0.5	10.1	-9.6
5.8	1.6	9.9	-8.3
5.9	1.3	9.7	-8.4

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	5.3	13.9	-8.7
-3.9	8.3	14.2	-5.9
-3.8	10.2	14.5	-4.3
-3.7	8.1	14.8	-6.7
-3.6	-3.7	15.1	-18.8
-3.5	0.3	15.4	-15.1
-3.4	0.8	15.7	-15.0
-3.3	3.2	16.0	-12.9
-3.2	8.3	16.4	-8.0
-3.1	8.4	16.7	-8.3
-3.0	8.9	17.1	-8.2
-2.9	11.4	17.4	-6.0
-2.8	11.7	17.8	-6.1
-2.7	8.7	18.2	-9.5
-2.6	3.7	18.6	-14.9
-2.5	0.6	19.1	-18.5
-2.4	5.5	19.5	-14.0
-2.3	7.7	20.0	-12.2
-2.2	5.0	20.4	-15.5
-2.1	6.0	20.9	-15.0
-2.0	11.7	21.5	-9.8
-1.9	11.6	22.0	-10.4
-1.8	10.1	22.6	-12.5
-1.7	8.1	23.2	-15.1
-1.6	-0.9	23.9	-24.8
-1.5	12.8	24.6	-11.8
-1.4	18.1		
-1.3	20.0		
-1.2	22.0		
-1.1	22.9		
-1.0	21.0		
-0.9	13.3		
-0.8	11.8		
-0.7	11.6		
-0.6	22.9		
-0.5	33.0		
-0.4	40.6		
-0.3	46.2		
-0.2	49.7		
-0.1	51.6		
0.0	52.1		

6.0	-0.4	9.5	-10.0
6.1	-8.4	9.4	-17.7
6.2	-12.9	9.2	-22.1
6.3	-4.6	9.0	-13.6
6.4	-3.7	8.8	-12.6
6.5	-6.6	8.7	-15.3
6.6	-4.0	8.5	-12.5
6.7	-3.4	8.3	-11.8
6.8	-0.1	8.2	-8.3
6.9	2.6	8.0	-5.4
7.0	3.3	7.9	-4.6
7.1	3.4	8.0	-4.6
7.2	2.9	8.0	-5.1
7.3	-0.1	8.0	-8.1
7.4	-9.9	8.0	-17.9
7.5	-3.9	8.0	-11.9
7.6	-0.8	8.0	-8.8
7.7	-2.3	8.0	-10.3
7.8	-6.9	8.0	-14.9
7.9	-4.7	8.0	-12.7
8.0	-2.5	8.0	-10.5
8.1	0.2	8.0	-7.8
8.2	1.1	8.0	-6.9
8.3	-0.5	8.0	-8.5
8.4	-2.3	8.0	-10.3
8.5	-3.3	8.0	-11.3
8.6	-5.3	8.0	-13.3
8.7	-8.0	8.0	-16.0
8.8	-5.6	8.0	-13.6
8.9	-3.9	8.0	-11.9
9.0	-5.5	8.0	-13.5
9.1	-9.4	8.0	-17.4
9.2	-12.0	8.0	-20.0
9.3	-9.3	7.8	-17.1
9.4	-4.0	7.7	-11.7
9.5	-3.6	7.6	-11.2
9.6	-5.2	7.4	-12.6
9.7	-14.3	7.3	-21.7
9.8	-8.1	7.2	-15.3
9.9	-9.3	7.1	-16.4
10.0	-13.8	7.0	-20.8

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

27.55 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-7.7	-4.9	-2.8
-29.5	-10.1	-4.7	-5.3
-29.0	-11.7	-4.6	-7.1
-28.5	-11.5	-4.4	-7.1
-28.0	-10.6	-4.2	-6.5
-27.5	-12.3	-4.0	-8.3
-27.0	-7.9	-3.8	-4.2
-26.5	-9.9	-3.6	-6.3
-26.0	-18.1	-3.4	-14.8
-25.5	-14.0	-3.2	-10.8
-25.0	-16.3	-2.9	-13.4
-24.5	-8.9	-2.7	-6.2
-24.0	-10.4	-2.5	-7.9
-23.5	-8.1	-2.3	-5.8
-23.0	-14.6	-2.0	-12.5
-22.5	-7.0	-1.8	-5.2
-22.0	-5.5	-1.6	-4.0
-21.5	-6.2	-1.3	-4.9
-21.0	-16.3	-1.1	-15.2
-20.5	-8.9	-0.8	-8.1
-20.0	-3.3	-0.5	-2.8
-19.5	0.2	-0.3	0.4
-19.0	1.4	0.0	1.4
-18.5	-2.0	0.3	-2.3
-18.0	-3.3	0.6	-4.0
-17.5	-19.1	0.9	-20.0
-17.0	-23.4	1.2	-24.6
-16.5	-14.1	1.6	-15.6
-16.0	-12.5	1.9	-14.4
-15.5	-8.0	2.2	-10.2
-15.0	-21.1	2.6	-23.7
-14.5	-7.3	3.0	-10.2
-14.0	-15.0	3.3	-18.3
-13.5	-10.9	3.7	-14.7
-13.0	-8.5	4.2	-12.6
-12.5	-11.0	4.6	-15.6
-12.0	-7.1	5.0	-12.1
-11.5	-19.4	5.5	-24.9
-11.0	-7.7	6.0	-13.7
-10.5	-10.5	6.5	-17.0
-10.0	-7.4	7.0	-14.4
-9.5	-18.5	7.6	-26.0
-9.0	-11.2	8.1	-19.4
-8.5	-2.5	8.8	-11.2
-8.0	-8.2	9.4	-17.6
-7.5	-2.7	10.1	-12.8
-7.0	-4.8	10.9	-15.7
-6.5	-1.7	11.7	-13.4
-6.0	-4.8	12.5	-17.3
-5.5	-10.7	13.5	-24.2
-5.0	4.5	14.5	-10.0
-4.5	4.3	15.7	-11.4
-4.0	-7.1	16.9	-24.0
-3.5	3.3	18.4	-15.1
-3.0	11.3	20.1	-8.8
-2.5	12.5		
-2.0	7.4		
-1.5	14.8		
-1.0	20.6		
-0.5	36.4		
0.0	52.1		

27.55 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.1		
0.5	37.5		
1.0	18.1		
1.5	8.1		
2.0	7.4		
2.5	10.0		
3.0	-5.1	20.1	-25.1
3.5	13.9	18.4	-4.5
4.0	11.3	16.9	-5.7
4.5	4.3	15.7	-11.4
5.0	7.0	14.5	-7.6
5.5	-9.1	13.5	-22.5
6.0	-2.0	12.5	-14.5
6.5	0.4	11.7	-11.3
7.0	1.4	10.9	-9.5
7.5	-6.3	10.1	-16.4
8.0	-8.1	9.4	-17.5
8.5	-14.4	8.8	-23.2
9.0	-9.8	8.1	-18.0
9.5	-3.8	7.6	-11.4
10.0	-7.2	7.0	-14.2
10.5	-5.0	6.5	-11.5
11.0	-3.1	6.0	-9.1
11.5	-2.1	5.5	-7.6
12.0	-1.4	5.0	-6.5
12.5	-2.1	4.6	-6.7
13.0	-9.0	4.2	-13.1
13.5	-10.8	3.7	-14.5
14.0	-13.5	3.3	-16.8
14.5	-9.4	3.0	-12.3
15.0	-12.9	2.6	-15.5
15.5	-11.6	2.2	-13.8
16.0	-22.1	1.9	-24.0
16.5	-14.3	1.6	-15.9
17.0	-19.8	1.2	-21.1
17.5	-19.9	0.9	-20.8
18.0	-21.5	0.6	-22.1
18.5	-10.7	0.3	-11.0
19.0	-10.7	0.0	-10.7
19.5	-17.7	-0.3	-17.4
20.0	-27.3	-0.5	-26.8
20.5	-19.3	-0.8	-18.5
21.0	-15.4	-1.1	-14.3
21.5	-15.5	-1.3	-14.2
22.0	-13.1	-1.6	-11.6
22.5	-17.6	-1.8	-15.8
23.0	-27.5	-2.0	-25.4
23.5	-22.0	-2.3	-19.7
24.0	-22.0	-2.5	-19.5
24.5	-25.2	-2.7	-22.4
25.0	-13.5	-2.9	-10.5
25.5	-17.5	-3.2	-14.3
26.0	-16.0	-3.4	-12.7
26.5	-18.1	-3.6	-14.6
27.0	-14.1	-3.8	-10.3
27.5	-23.1	-4.0	-19.1
28.0	-20.7	-4.2	-16.5
28.5	-22.3	-4.4	-17.9
29.0	-26.0	-4.6	-21.4
29.5	-18.3	-4.7	-13.6
30.0	-15.8	-4.9	-10.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

27.55 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-7.4	7.0	-14.4
-9.9	-5.2	7.1	-12.3
-9.8	-3.2	7.2	-10.4
-9.7	-3.9	7.3	-11.2
-9.6	-16.0	7.4	-23.5
-9.5	-18.5	7.6	-26.0
-9.4	-9.5	7.7	-17.2
-9.3	-6.1	7.8	-13.9
-9.2	-6.2	7.9	-14.1
-9.1	-8.1	8.0	-16.1
-9.0	-11.2	8.1	-19.4
-8.9	-8.5	8.3	-16.8
-8.8	-8.4	8.4	-16.8
-8.7	-16.2	8.5	-24.7
-8.6	-8.6	8.6	-17.2
-8.5	-2.5	8.8	-11.2
-8.4	-1.0	8.9	-9.9
-8.3	-0.1	9.0	-9.1
-8.2	-0.2	9.2	-9.4
-8.1	-1.6	9.3	-10.9
-8.0	-8.2	9.4	-17.6
-7.9	-20.8	9.6	-30.4
-7.8	-11.8	9.7	-21.5
-7.7	-7.2	9.8	-17.1
-7.6	-4.9	10.0	-14.8
-7.5	-2.7	10.1	-12.8
-7.4	-0.9	10.3	-11.2
-7.3	0.1	10.4	-10.4
-7.2	-1.5	10.6	-12.1
-7.1	-8.1	10.7	-18.8
-7.0	-4.8	10.9	-15.7
-6.9	-6.2	11.0	-17.2
-6.8	-10.0	11.2	-21.2
-6.7	-5.3	11.3	-16.6
-6.6	-2.0	11.5	-13.5
-6.5	-1.7	11.7	-13.4
-6.4	-0.7	11.8	-12.6
-6.3	0.6	12.0	-11.4
-6.2	-0.7	12.2	-12.9
-6.1	-3.8	12.4	-16.1
-6.0	-4.8	12.5	-17.3
-5.9	-7.6	12.7	-20.3
-5.8	-10.2	12.9	-23.1
-5.7	-9.4	13.1	-22.5
-5.6	-10.4	13.3	-23.7
-5.5	-10.7	13.5	-24.2
-5.4	-3.1	13.7	-16.8
-5.3	1.4	13.9	-12.5
-5.2	3.1	14.1	-11.0
-5.1	4.3	14.3	-10.0
-5.0	4.5	14.5	-10.0
-4.9	5.1	14.7	-9.7
-4.8	4.6	15.0	-10.3
-4.7	1.0	15.2	-14.2
-4.6	-5.9	15.4	-21.3
-4.5	4.3	15.7	-11.4
-4.4	8.2	15.9	-7.7
-4.3	9.5	16.2	-6.7
-4.2	8.4	16.4	-8.0
-4.1	4.6	16.7	-12.1

27.55 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.1		
0.1	51.4		
0.2	49.1		
0.3	45.3		
0.4	40.9		
0.5	37.5		
0.6	33.3		
0.7	25.1		
0.8	8.3		
0.9	15.5		
1.0	18.1		
1.1	20.4		
1.2	18.9		
1.3	11.4		
1.4	9.6		
1.5	8.1		
1.6	12.9		
1.7	15.5		
1.8	14.8		
1.9	10.5		
2.0	7.4		
2.1	8.5		
2.2	12.2		
2.3	13.7		
2.4	12.9		
2.5	10.0		
2.6	5.9		
2.7	-6.7		
2.8	2.4		
2.9	3.9		
3.0	-5.1	20.1	-25.1
3.1	0.0	19.7	-19.7
3.2	0.8	19.4	-18.5
3.3	5.6	19.0	-13.5
3.4	11.4	18.7	-7.3
3.5	13.9	18.4	-4.5
3.6	13.3	18.1	-4.8
3.7	9.7	17.8	-8.1
3.8	7.9	17.5	-9.6
3.9	10.3	17.2	-6.9
4.0	11.3	16.9	-5.7
4.1	9.9	16.7	-6.8
4.2	8.4	16.4	-8.0
4.3	8.3	16.2	-7.8
4.4	7.8	15.9	-8.1
4.5	4.3	15.7	-11.4
4.6	1.3	15.4	-14.1
4.7	1.3	15.2	-13.9
4.8	3.0	15.0	-12.0
4.9	4.9	14.7	-9.9
5.0	7.0	14.5	-7.6
5.1	8.5	14.3	-5.8
5.2	9.2	14.1	-4.9
5.3	7.4	13.9	-6.5
5.4	1.9	13.7	-11.8
5.5	-9.1	13.5	-22.5
5.6	-1.9	13.3	-15.2
5.7	-3.2	13.1	-16.3
5.8	-2.1	12.9	-15.0
5.9	-0.8	12.7	-13.6

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	-7.1	16.9	-24.0
-3.9	6.5	17.2	-10.7
-3.8	9.5	17.5	-8.0
-3.7	9.6	17.8	-8.2
-3.6	7.2	18.1	-10.9
-3.5	3.3	18.4	-15.1
-3.4	-6.4	18.7	-25.2
-3.3	-5.5	19.0	-24.5
-3.2	-9.3	19.4	-28.6
-3.1	4.1	19.7	-15.6
-3.0	11.3	20.1	-8.8
-2.9	13.2		
-2.8	12.3		
-2.7	9.7		
-2.6	10.4		
-2.5	12.5		
-2.4	14.0		
-2.3	14.4		
-2.2	13.2		
-2.1	10.6		
-2.0	7.4		
-1.9	2.6		
-1.8	4.5		
-1.7	11.7		
-1.6	14.6		
-1.5	14.8		
-1.4	12.8		
-1.3	19.3		
-1.2	22.9		
-1.1	22.9		
-1.0	20.6		
-0.9	21.8		
-0.8	25.2		
-0.7	29.7		
-0.6	33.4		
-0.5	36.4		
-0.4	41.2		
-0.3	46.4		
-0.2	49.9		
-0.1	51.7		
0.0	52.1		

6.0	-2.0	12.5	-14.5
6.1	-9.6	12.4	-21.9
6.2	-3.8	12.2	-16.0
6.3	0.8	12.0	-11.2
6.4	0.9	11.8	-10.9
6.5	0.4	11.7	-11.3
6.6	-0.1	11.5	-11.6
6.7	1.7	11.3	-9.7
6.8	3.9	11.2	-7.3
6.9	4.0	11.0	-7.0
7.0	1.4	10.9	-9.5
7.1	-7.7	10.7	-18.5
7.2	-13.2	10.6	-23.8
7.3	-7.6	10.4	-18.0
7.4	-10.2	10.3	-20.5
7.5	-6.3	10.1	-16.4
7.6	-7.4	10.0	-17.3
7.7	-5.3	9.8	-15.2
7.8	-5.1	9.7	-14.8
7.9	-7.2	9.6	-16.8
8.0	-8.1	9.4	-17.5
8.1	-14.1	9.3	-23.4
8.2	-21.8	9.2	-31.0
8.3	-11.8	9.0	-20.9
8.4	-10.6	8.9	-19.5
8.5	-14.4	8.8	-23.2
8.6	-5.7	8.6	-14.3
8.7	-5.2	8.5	-13.8
8.8	-4.5	8.4	-12.9
8.9	-7.6	8.3	-15.8
9.0	-9.8	8.1	-18.0
9.1	-6.9	8.0	-14.9
9.2	-7.9	7.9	-15.8
9.3	-14.8	7.8	-22.6
9.4	-9.2	7.7	-16.8
9.5	-3.8	7.6	-11.4
9.6	-1.7	7.4	-9.1
9.7	-0.7	7.3	-8.0
9.8	-1.1	7.2	-8.3
9.9	-3.1	7.1	-10.2
10.0	-7.2	7.0	-14.2

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

27.55 GHz Antenna Pattern in X-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-5.5	-2.0	-3.5
-9.9	-6.1	-2.0	-4.1
-9.8	-10.9	-2.0	-8.9
-9.7	-7.3	-2.0	-5.3
-9.6	-5.9	-2.0	-3.9
-9.5	-6.2	-2.0	-4.2
-9.4	-7.6	-2.0	-5.6
-9.3	-8.9	-2.0	-6.9
-9.2	-9.1	-2.0	-7.1
-9.1	-11.5	-2.0	-9.5
-9.0	-12.7	-2.0	-10.7
-8.9	-16.5	-2.0	-14.5
-8.8	-9.2	-2.0	-7.2
-8.7	-7.0	-2.0	-5.0
-8.6	-6.5	-2.0	-4.5
-8.5	-5.5	-2.0	-3.5
-8.4	-5.3	-2.0	-3.3
-8.3	-7.4	-2.0	-5.4
-8.2	-7.1	-2.0	-5.1
-8.1	-5.8	-2.0	-3.8
-8.0	-2.3	-2.0	-0.3
-7.9	-3.1	-2.0	-1.1
-7.8	-3.9	-2.0	-1.9
-7.7	-7.0	-2.0	-5.0
-7.6	-12.5	-2.0	-10.5
-7.5	-5.4	-2.0	-3.4
-7.4	-2.5	-2.0	-0.5
-7.3	-0.8	-2.0	1.2
-7.2	-2.9	-2.0	-0.9
-7.1	-6.5	-2.0	-4.5
-7.0	-17.8	-2.1	-15.7
-6.9	-14.8	-2.0	-12.8
-6.8	-8.8	-1.8	-7.0
-6.7	-4.3	-1.7	-2.6
-6.6	-2.2	-1.5	-0.7
-6.5	-3.4	-1.3	-2.0
-6.4	-3.5	-1.2	-2.3
-6.3	-2.8	-1.0	-1.8
-6.2	-1.3	-0.8	-0.4
-6.1	-1.5	-0.6	-0.9
-6.0	-3.1	-0.5	-2.6
-5.9	-7.9	-0.3	-7.6
-5.8	-3.9	-0.1	-3.8
-5.7	-1.8	0.1	-1.9
-5.6	-0.4	0.3	-0.7
-5.5	-0.3	0.5	-0.8
-5.4	-4.5	0.7	-5.2
-5.3	-9.8	0.9	-10.7
-5.2	-18.0	1.1	-19.1
-5.1	-11.0	1.3	-12.3
-5.0	-5.0	1.5	-6.5
-4.9	-5.0	1.7	-6.8
-4.8	-9.3	2.0	-11.2
-4.7	-14.5	2.2	-16.7
-4.6	-8.0	2.4	-10.4
-4.5	-7.9	2.7	-10.6
-4.4	-9.6	2.9	-12.5
-4.3	-3.7	3.2	-6.9
-4.2	-0.4	3.4	-3.9
-4.1	-1.0	3.7	-4.7

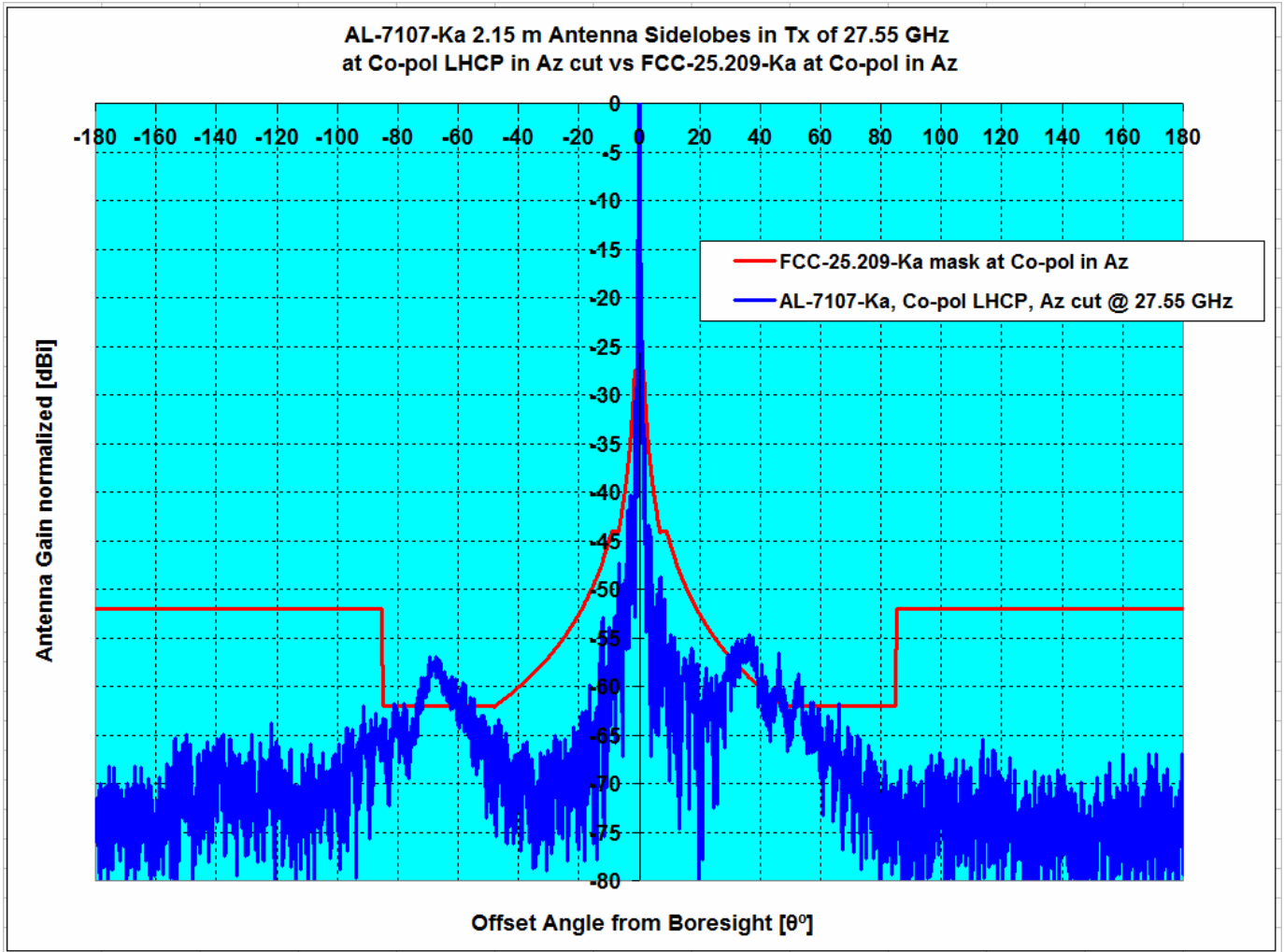
27.55 GHz Antenna Pattern in X-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	22.5		
0.1	23.4		
0.2	25.1		
0.3	25.9		
0.4	25.2		
0.5	22.9		
0.6	16.7		
0.7	0.6		
0.8	8.6		
0.9	13.4		
1.0	14.4		
1.1	11.5		
1.2	-2.5		
1.3	6.1		
1.4	9.2		
1.5	6.5		
1.6	1.6		
1.7	4.3		
1.8	4.4	12.6	-8.2
1.9	-1.1	12.0	-13.2
2.0	-6.2	11.5	-17.7
2.1	-10.1	10.9	-21.0
2.2	-6.5	10.4	-16.9
2.3	-1.4	10.0	-11.4
2.4	-1.8	9.5	-11.3
2.5	-5.7	9.1	-14.8
2.6	-12.7	8.6	-21.3
2.7	-12.6	8.2	-20.8
2.8	-10.4	7.8	-18.2
2.9	-12.6	7.4	-20.0
3.0	-19.9	7.1	-27.0
3.1	-13.8	6.7	-20.5
3.2	-15.8	6.4	-22.2
3.3	-14.4	6.0	-20.5
3.4	-8.0	5.7	-13.7
3.5	-11.9	5.4	-17.3
3.6	-18.5	5.1	-23.6
3.7	-10.7	4.8	-15.5
3.8	-4.9	4.5	-9.4
3.9	-8.3	4.2	-12.5
4.0	-27.9	3.9	-31.9
4.1	-9.6	3.7	-13.3
4.2	-7.6	3.4	-11.1
4.3	-10.3	3.2	-13.4
4.4	-15.2	2.9	-18.1
4.5	-16.7	2.7	-19.4
4.6	-20.5	2.4	-23.0
4.7	-11.9	2.2	-14.1
4.8	-16.7	2.0	-18.7
4.9	-14.6	1.7	-16.4
5.0	-11.9	1.5	-13.5
5.1	-11.3	1.3	-12.6
5.2	-16.3	1.1	-17.4
5.3	-10.8	0.9	-11.7
5.4	-9.1	0.7	-9.7
5.5	-12.0	0.5	-12.5
5.6	-13.0	0.3	-13.3
5.7	-7.7	0.1	-7.8
5.8	-7.6	-0.1	-7.5
5.9	-9.2	-0.3	-8.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

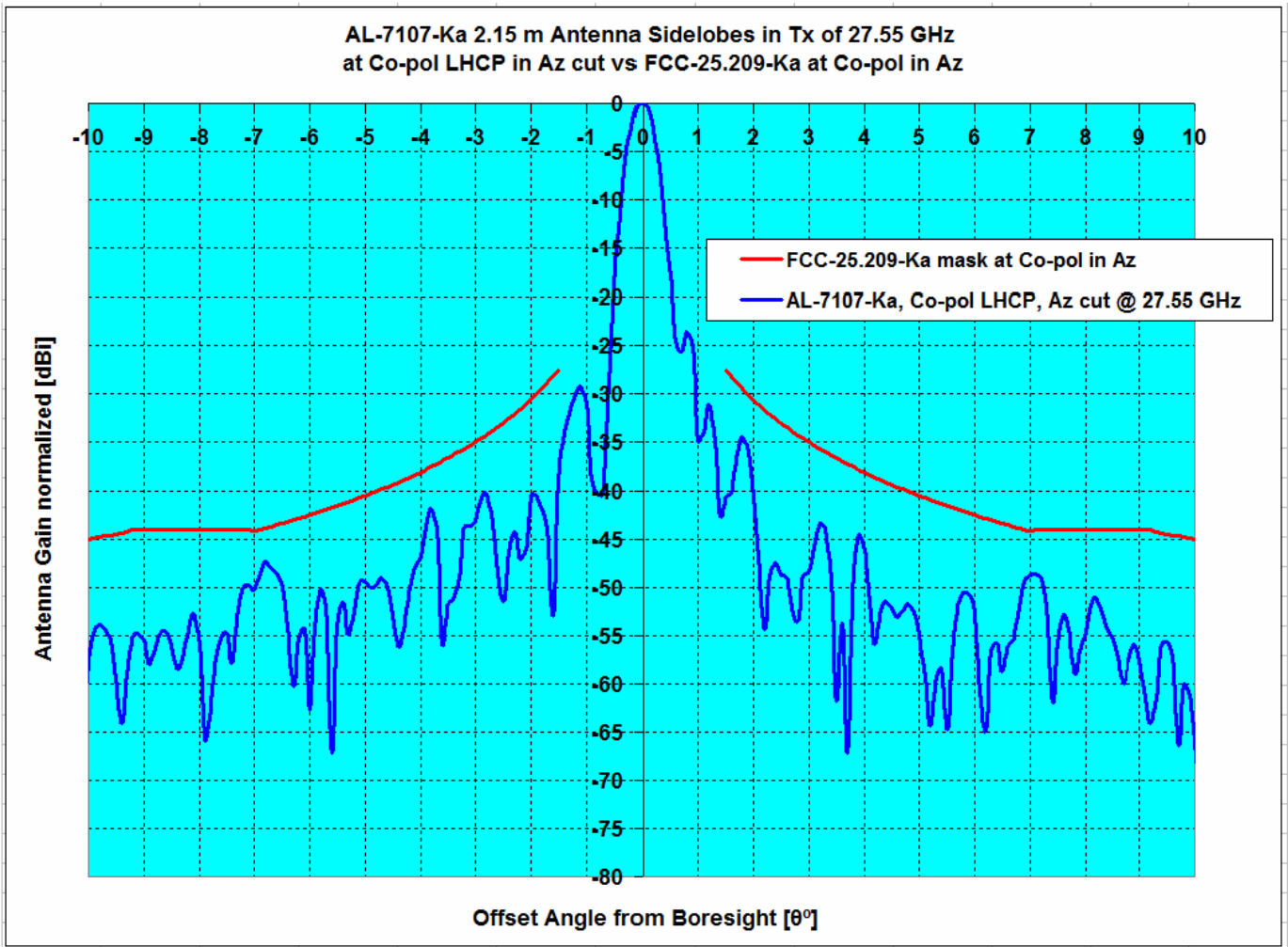
-4.0	-2.3	3.9	-6.3
-3.9	-4.6	4.2	-8.8
-3.8	0.6	4.5	-3.9
-3.7	2.0	4.8	-2.8
-3.6	1.2	5.1	-3.9
-3.5	-0.7	5.4	-6.1
-3.4	-3.2	5.7	-8.9
-3.3	-4.5	6.0	-10.5
-3.2	-6.9	6.4	-13.2
-3.1	-12.8	6.7	-19.6
-3.0	-9.6	7.1	-16.7
-2.9	-2.9	7.4	-10.3
-2.8	-2.5	7.8	-10.3
-2.7	-6.0	8.2	-14.2
-2.6	-5.5	8.6	-14.2
-2.5	-5.5	9.1	-14.5
-2.4	-7.3	9.5	-16.8
-2.3	-1.4	10.0	-11.3
-2.2	-0.4	10.4	-10.9
-2.1	-5.2	10.9	-16.1
-2.0	-4.0	11.5	-15.5
-1.9	-4.3	12.0	-16.3
-1.8	-4.5	12.6	-17.1
-1.7	-1.1		
-1.6	0.1		
-1.5	2.9		
-1.4	4.0		
-1.3	1.3		
-1.2	4.8		
-1.1	9.3		
-1.0	10.6		
-0.9	10.6		
-0.8	4.5		
-0.7	14.0		
-0.6	22.9		
-0.5	27.1		
-0.4	28.7		
-0.3	28.3		
-0.2	26.8		
-0.1	24.0		
0.0	22.5		

6.0	-17.3	-0.5	-16.8
6.1	-24.0	-0.6	-23.3
6.2	-11.3	-0.8	-10.5
6.3	-6.8	-1.0	-5.9
6.4	-8.9	-1.2	-7.7
6.5	-8.2	-1.3	-6.8
6.6	-7.2	-1.5	-5.7
6.7	-5.3	-1.7	-3.7
6.8	-5.4	-1.8	-3.6
6.9	-6.0	-2.0	-4.0
7.0	-8.9	-2.1	-6.8
7.1	-7.2	-2.0	-5.2
7.2	-9.3	-2.0	-7.3
7.3	-12.0	-2.0	-10.0
7.4	-12.2	-2.0	-10.2
7.5	-11.8	-2.0	-9.8
7.6	-8.7	-2.0	-6.7
7.7	-5.7	-2.0	-3.7
7.8	-5.7	-2.0	-3.7
7.9	-7.2	-2.0	-5.2
8.0	-6.5	-2.0	-4.5
8.1	-5.3	-2.0	-3.3
8.2	-6.4	-2.0	-4.4
8.3	-8.3	-2.0	-6.3
8.4	-8.2	-2.0	-6.2
8.5	-8.3	-2.0	-6.3
8.6	-9.7	-2.0	-7.7
8.7	-12.1	-2.0	-10.1
8.8	-11.7	-2.0	-9.7
8.9	-13.8	-2.0	-11.8
9.0	-19.1	-2.0	-17.1
9.1	-21.8	-2.0	-19.8
9.2	-17.2	-2.0	-15.2
9.3	-13.4	-2.0	-11.4
9.4	-13.2	-2.0	-11.2
9.5	-8.4	-2.0	-6.4
9.6	-7.6	-2.0	-5.6
9.7	-6.6	-2.0	-4.6
9.8	-9.8	-2.0	-7.8
9.9	-15.0	-2.0	-13.0
10.0	-11.3	-2.0	-9.3



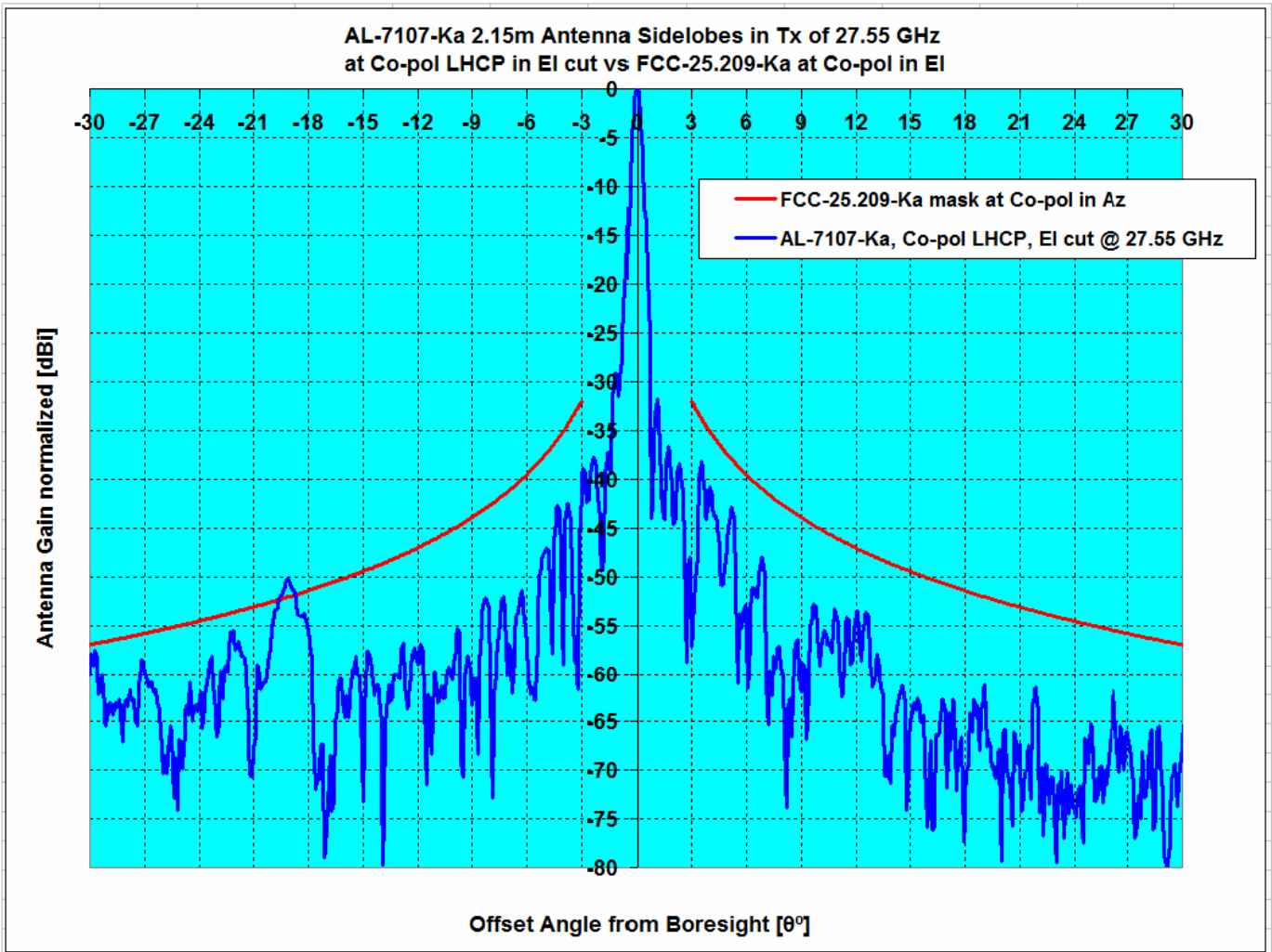
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , LHCP	27.55	52.06	-3.48	5.11	0.00%	8.04%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth LHCP



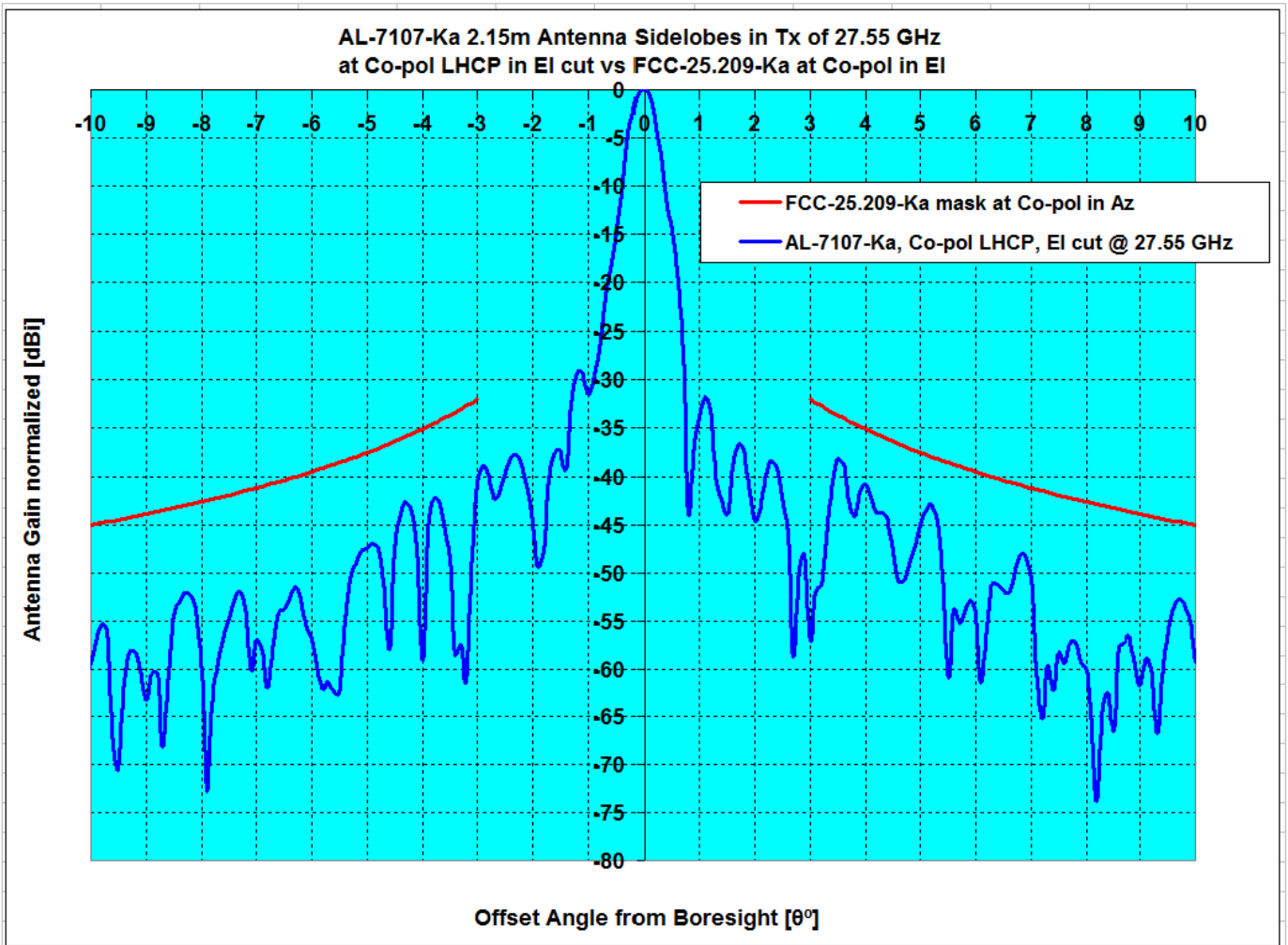
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , LHCP	27.55	52.06	-3.48	5.11	0.00%	8.04%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation LHCP



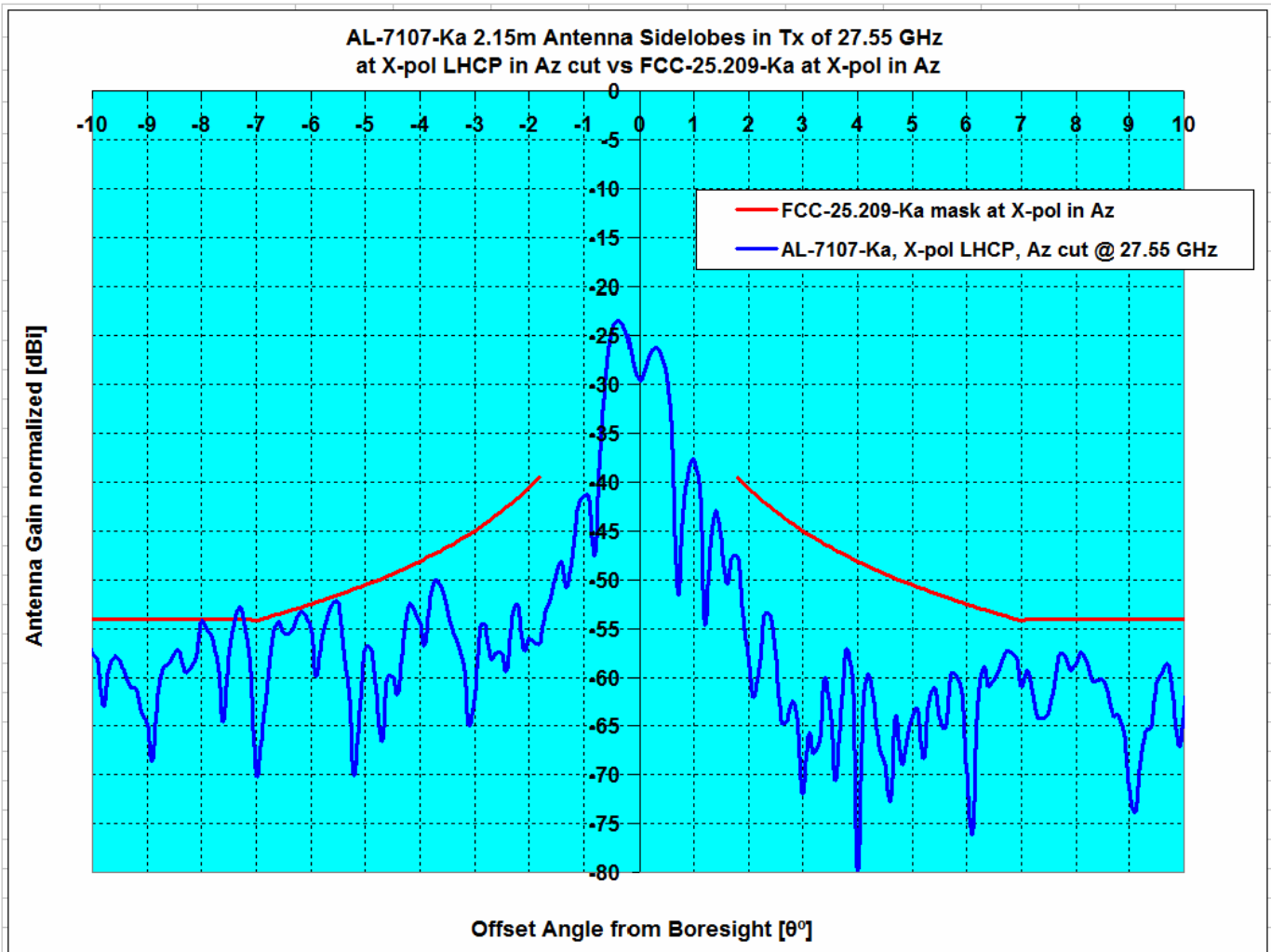
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , LHCP	27.55	52.06	-4.46	1.83	0.00%	1.66%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , LHCP	27.55	52.06	-4.46	1.83	0.00%	1.66%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, X-pol, Azimuth LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7107-Ka	Az , LHCP	27.55	52.06	-0.44	1.22	0.00%	0.60%

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

27.55 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-20.9	0.0	-20.9
-178.0	-26.7	0.0	-26.7
-177.0	-26.5	0.0	-26.5
-176.0	-18.2	0.0	-18.2
-175.0	-20.9	0.0	-20.9
-174.0	-21.1	0.0	-21.1
-173.0	-23.3	0.0	-23.3
-172.0	-25.7	0.0	-25.7
-171.0	-22.9	0.0	-22.9
-170.0	-24.2	0.0	-24.2
-169.0	-22.5	0.0	-22.5
-168.0	-21.9	0.0	-21.9
-167.0	-27.9	0.0	-27.9
-166.0	-26.2	0.0	-26.2
-165.0	-19.5	0.0	-19.5
-164.0	-18.2	0.0	-18.2
-163.0	-21.6	0.0	-21.6
-162.0	-27.5	0.0	-27.5
-161.0	-25.5	0.0	-25.5
-160.0	-24.3	0.0	-24.3
-159.0	-17.4	0.0	-17.4
-158.0	-20.6	0.0	-20.6
-157.0	-18.7	0.0	-18.7
-156.0	-17.8	0.0	-17.8
-155.0	-26.4	0.0	-26.4
-154.0	-17.1	0.0	-17.1
-153.0	-22.6	0.0	-22.6
-152.0	-19.3	0.0	-19.3
-151.0	-14.8	0.0	-14.8
-150.0	-18.1	0.0	-18.1
-149.0	-16.6	0.0	-16.6
-148.0	-22.1	0.0	-22.1
-147.0	-24.1	0.0	-24.1
-146.0	-15.1	0.0	-15.1
-145.0	-18.9	0.0	-18.9
-144.0	-16.7	0.0	-16.7
-143.0	-14.5	0.0	-14.5
-142.0	-14.8	0.0	-14.8
-141.0	-14.2	0.0	-14.2
-140.0	-19.3	0.0	-19.3
-139.0	-16.6	0.0	-16.6
-138.0	-13.8	0.0	-13.8
-137.0	-24.9	0.0	-24.9
-136.0	-17.6	0.0	-17.6
-135.0	-15.6	0.0	-15.6
-134.0	-19.6	0.0	-19.6
-133.0	-19.4	0.0	-19.4
-132.0	-17.1	0.0	-17.1
-131.0	-18.8	0.0	-18.8
-130.0	-18.5	0.0	-18.5
-129.0	-14.9	0.0	-14.9
-128.0	-16.7	0.0	-16.7
-127.0	-21.7	0.0	-21.7
-126.0	-16.7	0.0	-16.7
-125.0	-15.8	0.0	-15.8
-124.0	-15.7	0.0	-15.7
-123.0	-19.9	0.0	-19.9
-122.0	-19.6	0.0	-19.6

27.55 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.1		
1.0	17.2		
2.0	11.5	21.5	-10.0
3.0	3.6	17.1	-13.4
4.0	5.9	13.9	-8.1
5.0	-2.8	11.5	-14.3
6.0	-0.4	9.5	-10.0
7.0	3.3	7.9	-4.6
8.0	-2.5	8.0	-10.5
9.0	-5.5	8.0	-13.5
10.0	-13.8	7.0	-20.8
11.0	-7.5	6.0	-13.4
12.0	-4.9	5.0	-10.0
13.0	-15.4	4.2	-19.5
14.0	-9.2	3.3	-12.6
15.0	-5.3	2.6	-7.9
16.0	-7.2	1.9	-9.1
17.0	-7.2	1.2	-8.4
18.0	-6.8	0.6	-7.4
19.0	-5.7	0.0	-5.7
20.0	-23.1	-0.5	-22.6
21.0	-16.5	-1.1	-15.4
22.0	-6.1	-1.6	-4.5
23.0	-7.9	-2.0	-5.8
24.0	-10.1	-2.5	-7.6
25.0	-11.5	-2.9	-8.6
26.0	-12.1	-3.4	-8.7
27.0	-12.1	-3.8	-8.3
28.0	-11.4	-4.2	-7.2
29.0	-6.3	-4.6	-1.8
30.0	-6.5	-4.9	-1.6
31.0	-5.2	-5.3	0.1
32.0	-4.3	-5.6	1.4
33.0	-5.8	-6.0	0.2
34.0	-3.4	-6.3	2.9
35.0	-4.9	-6.6	1.7
36.0	-2.9	-6.9	4.0
37.0	-3.0	-7.2	4.2
38.0	-6.1	-7.5	1.4
39.0	-5.1	-7.8	2.7
40.0	-7.4	-8.1	0.7
41.0	-8.9	-8.3	-0.5
42.0	-9.3	-8.6	-0.7
43.0	-12.5	-8.8	-3.7
44.0	-10.4	-9.1	-1.3
45.0	-11.0	-9.3	-1.7
46.0	-5.2	-9.6	4.4
47.0	-9.5	-9.8	0.3
48.0	-8.9	-10.0	1.2
49.0	-13.7	-10.0	-3.7
50.0	-14.0	-10.0	-4.0
51.0	-9.4	-10.0	0.6
52.0	-7.4	-10.0	2.6
53.0	-7.9	-10.0	2.1
54.0	-8.9	-10.0	1.1
55.0	-13.3	-10.0	-3.3
56.0	-14.7	-10.0	-4.7
57.0	-11.3	-10.0	-1.3

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-121.0	-17.4	0.0	-17.4
-120.0	-21.6	0.0	-21.6
-119.0	-20.4	0.0	-20.4
-118.0	-26.4	0.0	-26.4
-117.0	-20.8	0.0	-20.8
-116.0	-18.3	0.0	-18.3
-115.0	-18.6	0.0	-18.6
-114.0	-20.2	0.0	-20.2
-113.0	-19.3	0.0	-19.3
-112.0	-20.9	0.0	-20.9
-111.0	-20.2	0.0	-20.2
-110.0	-19.0	0.0	-19.0
-109.0	-14.5	0.0	-14.5
-108.0	-20.8	0.0	-20.8
-107.0	-21.5	0.0	-21.5
-106.0	-19.2	0.0	-19.2
-105.0	-18.4	0.0	-18.4
-104.0	-18.0	0.0	-18.0
-103.0	-21.0	0.0	-21.0
-102.0	-24.7	0.0	-24.7
-101.0	-15.1	0.0	-15.1
-100.0	-18.9	0.0	-18.9
-99.0	-26.4	0.0	-26.4
-98.0	-14.1	0.0	-14.1
-97.0	-13.6	0.0	-13.6
-96.0	-12.9	0.0	-12.9
-95.0	-16.6	0.0	-16.6
-94.0	-17.7	0.0	-17.7
-93.0	-17.7	0.0	-17.7
-92.0	-12.0	0.0	-12.0
-91.0	-14.7	0.0	-14.7
-90.0	-16.2	0.0	-16.2
-89.0	-13.8	0.0	-13.8
-88.0	-18.2	0.0	-18.2
-87.0	-13.4	0.0	-13.4
-86.0	-12.2	0.0	-12.2
-85.0	-12.3	-10.0	-2.3
-84.0	-16.9	-10.0	-6.9
-83.0	-19.5	-10.0	-9.5
-82.0	-15.3	-10.0	-5.3
-81.0	-12.5	-10.0	-2.5
-80.0	-10.7	-10.0	-0.7
-79.0	-11.3	-10.0	-1.3
-78.0	-10.5	-10.0	-0.5
-77.0	-11.5	-10.0	-1.5
-76.0	-12.6	-10.0	-2.6
-75.0	-11.3	-10.0	-1.3
-74.0	-10.8	-10.0	-0.8
-73.0	-8.3	-10.0	1.7
-72.0	-8.2	-10.0	1.8
-71.0	-8.7	-10.0	1.3
-70.0	-7.8	-10.0	2.2
-69.0	-6.9	-10.0	3.1
-68.0	-5.8	-10.0	4.2
-67.0	-6.2	-10.0	3.8
-66.0	-5.3	-10.0	4.7
-65.0	-8.9	-10.0	1.1
-64.0	-8.1	-10.0	1.9
-63.0	-8.5	-10.0	1.5
-62.0	-9.6	-10.0	0.4
-61.0	-7.2	-10.0	2.8
-60.0	-10.1	-10.0	-0.1
-59.0	-10.8	-10.0	-0.8

58.0	-11.6	-10.0	-1.6
59.0	-11.8	-10.0	-1.8
60.0	-16.5	-10.0	-6.5
61.0	-17.9	-10.0	-7.9
62.0	-15.2	-10.0	-5.2
63.0	-13.0	-10.0	-3.0
64.0	-17.3	-10.0	-7.3
65.0	-19.7	-10.0	-9.7
66.0	-11.2	-10.0	-1.2
67.0	-17.3	-10.0	-7.3
68.0	-14.5	-10.0	-4.5
69.0	-14.8	-10.0	-4.8
70.0	-13.2	-10.0	-3.2
71.0	-16.2	-10.0	-6.2
72.0	-19.1	-10.0	-9.1
73.0	-13.4	-10.0	-3.4
74.0	-19.3	-10.0	-9.3
75.0	-25.5	-10.0	-15.5
76.0	-16.4	-10.0	-6.4
77.0	-16.4	-10.0	-6.4
78.0	-21.0	-10.0	-11.0
79.0	-22.0	-10.0	-12.0
80.0	-24.3	-10.0	-14.3
81.0	-20.9	-10.0	-10.9
82.0	-26.0	-10.0	-16.0
83.0	-18.1	-10.0	-8.1
84.0	-24.0	-10.0	-14.0
85.0	-25.7	-10.0	-15.7
86.0	-21.1	0.0	-21.1
87.0	-22.6	0.0	-22.6
88.0	-19.0	0.0	-19.0
89.0	-20.0	0.0	-20.0
90.0	-23.1	0.0	-23.1
91.0	-20.8	0.0	-20.8
92.0	-21.3	0.0	-21.3
93.0	-19.9	0.0	-19.9
94.0	-22.3	0.0	-22.3
95.0	-23.9	0.0	-23.9
96.0	-25.8	0.0	-25.8
97.0	-26.1	0.0	-26.1
98.0	-19.2	0.0	-19.2
99.0	-25.3	0.0	-25.3
100.0	-17.6	0.0	-17.6
101.0	-17.5	0.0	-17.5
102.0	-24.6	0.0	-24.6
103.0	-27.6	0.0	-27.6
104.0	-27.9	0.0	-27.9
105.0	-20.0	0.0	-20.0
106.0	-23.9	0.0	-23.9
107.0	-25.1	0.0	-25.1
108.0	-21.1	0.0	-21.1
109.0	-21.3	0.0	-21.3
110.0	-27.9	0.0	-27.9
111.0	-21.3	0.0	-21.3
112.0	-22.8	0.0	-22.8
113.0	-15.5	0.0	-15.5
114.0	-21.9	0.0	-21.9
115.0	-20.5	0.0	-20.5
116.0	-18.7	0.0	-18.7
117.0	-18.2	0.0	-18.2
118.0	-21.3	0.0	-21.3
119.0	-16.7	0.0	-16.7
120.0	-27.9	0.0	-27.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-58.0	-10.1	-10.0	-0.1
-57.0	-11.1	-10.0	-1.1
-56.0	-9.1	-10.0	0.9
-55.0	-13.6	-10.0	-3.6
-54.0	-11.4	-10.0	-1.4
-53.0	-14.3	-10.0	-4.3
-52.0	-13.3	-10.0	-3.3
-51.0	-18.3	-10.0	-8.3
-50.0	-12.7	-10.0	-2.7
-49.0	-15.6	-10.0	-5.6
-48.0	-15.3	-10.0	-5.3
-47.0	-19.3	-9.8	-9.5
-46.0	-13.8	-9.6	-4.2
-45.0	-17.5	-9.3	-8.1
-44.0	-23.2	-9.1	-14.1
-43.0	-22.2	-8.8	-13.4
-42.0	-22.2	-8.6	-13.6
-41.0	-20.6	-8.3	-12.3
-40.0	-15.6	-8.1	-7.6
-39.0	-22.7	-7.8	-14.9
-38.0	-16.5	-7.5	-9.0
-37.0	-15.8	-7.2	-8.6
-36.0	-19.3	-6.9	-12.3
-35.0	-18.5	-6.6	-11.9
-34.0	-22.3	-6.3	-16.0
-33.0	-20.6	-6.0	-14.7
-32.0	-23.6	-5.6	-18.0
-31.0	-18.1	-5.3	-12.9
-30.0	-15.0	-4.9	-10.1
-29.0	-18.0	-4.6	-13.4
-28.0	-16.6	-4.2	-12.4
-27.0	-17.3	-3.8	-13.5
-26.0	-17.3	-3.4	-13.9
-25.0	-20.0	-2.9	-17.0
-24.0	-17.3	-2.5	-14.8
-23.0	-15.7	-2.0	-13.7
-22.0	-15.4	-1.6	-13.8
-21.0	-16.3	-1.1	-15.2
-20.0	-18.9	-0.5	-18.4
-19.0	-12.6	0.0	-12.7
-18.0	-18.1	0.6	-18.7
-17.0	-14.3	1.2	-15.5
-16.0	-17.5	1.9	-19.4
-15.0	-17.7	2.6	-20.3
-14.0	-25.8	3.3	-29.1
-13.0	-6.8	4.2	-11.0
-12.0	-4.1	5.0	-9.2
-11.0	-7.6	6.0	-13.6
-10.0	-5.5	7.0	-12.5
-9.0	-3.5	8.0	-11.5
-8.0	-4.1	8.0	-12.1
-7.0	1.8	7.9	-6.1
-6.0	-10.6	9.5	-20.2
-5.0	2.7	11.5	-8.9
-4.0	5.3	13.9	-8.7
-3.0	8.9	17.1	-8.2
-2.0	11.7	21.5	-9.8
-1.0	21.0		
0.0	52.1		

121.0	-21.5	0.0	-21.5
122.0	-17.6	0.0	-17.6
123.0	-20.4	0.0	-20.4
124.0	-21.7	0.0	-21.7
125.0	-25.7	0.0	-25.7
126.0	-24.9	0.0	-24.9
127.0	-19.6	0.0	-19.6
128.0	-27.9	0.0	-27.9
129.0	-25.8	0.0	-25.8
130.0	-22.0	0.0	-22.0
131.0	-20.6	0.0	-20.6
132.0	-21.8	0.0	-21.8
133.0	-24.8	0.0	-24.8
134.0	-23.8	0.0	-23.8
135.0	-23.4	0.0	-23.4
136.0	-23.1	0.0	-23.1
137.0	-21.8	0.0	-21.8
138.0	-19.0	0.0	-19.0
139.0	-23.1	0.0	-23.1
140.0	-23.6	0.0	-23.6
141.0	-21.1	0.0	-21.1
142.0	-26.3	0.0	-26.3
143.0	-18.5	0.0	-18.5
144.0	-27.9	0.0	-27.9
145.0	-21.1	0.0	-21.1
146.0	-23.5	0.0	-23.5
147.0	-19.7	0.0	-19.7
148.0	-24.1	0.0	-24.1
149.0	-23.3	0.0	-23.3
150.0	-22.0	0.0	-22.0
151.0	-27.9	0.0	-27.9
152.0	-23.3	0.0	-23.3
153.0	-21.9	0.0	-21.9
154.0	-23.1	0.0	-23.1
155.0	-17.8	0.0	-17.8
156.0	-27.9	0.0	-27.9
157.0	-27.0	0.0	-27.0
158.0	-23.3	0.0	-23.3
159.0	-27.2	0.0	-27.2
160.0	-14.9	0.0	-14.9
161.0	-22.5	0.0	-22.5
162.0	-22.3	0.0	-22.3
163.0	-19.8	0.0	-19.8
164.0	-16.6	0.0	-16.6
165.0	-20.0	0.0	-20.0
166.0	-22.5	0.0	-22.5
167.0	-21.2	0.0	-21.2
168.0	-24.4	0.0	-24.4
169.0	-27.3	0.0	-27.3
170.0	-20.9	0.0	-20.9
171.0	-21.2	0.0	-21.2
172.0	-27.9	0.0	-27.9
173.0	-20.3	0.0	-20.3
174.0	-19.1	0.0	-19.1
175.0	-27.9	0.0	-27.9
176.0	-24.3	0.0	-24.3
177.0	-20.9	0.0	-20.9
178.0	-24.6	0.0	-24.6
179.0	-19.3	0.0	-19.3

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.55 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-2.9	7.0	-9.9
-9.9	-2.7	7.1	-9.8
-9.8	-2.1	7.2	-9.3
-9.7	-6.0	7.3	-13.3
-9.6	-8.3	7.4	-15.7
-9.5	-6.8	7.6	-14.4
-9.4	-14.7	7.7	-22.4
-9.3	-6.0	7.8	-13.8
-9.2	-3.8	8.0	-11.8
-9.1	-4.8	8.0	-12.8
-9.0	-10.7	8.0	-18.7
-8.9	-24.0	8.0	-32.0
-8.8	-19.9	8.0	-27.9
-8.7	-13.1	8.0	-21.1
-8.6	-13.2	8.0	-21.2
-8.5	-16.3	8.0	-24.3
-8.4	-11.2	8.0	-19.2
-8.3	-6.2	8.0	-14.2
-8.2	-2.1	8.0	-10.1
-8.1	-1.1	8.0	-9.1
-8.0	-3.6	8.0	-11.6
-7.9	-7.5	8.0	-15.5
-7.8	-2.4	8.0	-10.4
-7.7	0.1	8.0	-7.9
-7.6	1.4	8.0	-6.6
-7.5	-0.3	8.0	-8.3
-7.4	-7.4	8.0	-15.4
-7.3	-6.5	8.0	-14.5
-7.2	-0.8	8.0	-8.8
-7.1	0.1	8.0	-7.9
-7.0	0.2	7.9	-7.7
-6.9	2.9	8.0	-5.1
-6.8	3.8	8.2	-4.3
-6.7	3.3	8.3	-5.0
-6.6	1.5	8.5	-7.0
-6.5	-0.3	8.7	-8.9
-6.4	-0.4	8.8	-9.3
-6.3	-3.9	9.0	-12.9
-6.2	-11.2	9.2	-20.4
-6.1	-12.6	9.4	-21.9
-6.0	-3.2	9.5	-12.7
-5.9	1.1	9.7	-8.6
-5.8	1.8	9.9	-8.1
-5.7	-3.2	10.1	-13.3
-5.6	-4.1	10.3	-14.4
-5.5	1.9	10.5	-8.6
-5.4	2.5	10.7	-8.2
-5.3	-4.2	10.9	-15.1
-5.2	-4.5	11.1	-15.6
-5.1	1.1	11.3	-10.2
-5.0	2.1	11.5	-9.4
-4.9	2.4	11.7	-9.3
-4.8	2.8	12.0	-9.2
-4.7	3.7	12.2	-8.5
-4.6	3.9	12.4	-8.6
-4.5	2.7	12.7	-9.9
-4.4	1.1	12.9	-11.8
-4.3	0.5	13.2	-12.7
-4.2	2.6	13.4	-10.8
-4.1	3.9	13.7	-9.8

27.55 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.0		
0.1	51.3		
0.2	49.0		
0.3	44.7		
0.4	38.8		
0.5	32.1		
0.6	26.0		
0.7	27.0		
0.8	28.5		
0.9	25.7		
1.0	17.7		
1.1	16.9		
1.2	19.7		
1.3	14.8		
1.4	5.7		
1.5	9.9	24.6	-14.7
1.6	10.5	23.9	-13.4
1.7	15.7	23.2	-7.5
1.8	16.4	22.6	-6.2
1.9	14.3	22.0	-7.8
2.0	7.4	21.5	-14.0
2.1	3.9	20.9	-17.1
2.2	0.1	20.4	-20.4
2.3	-3.9	20.0	-23.9
2.4	1.8	19.5	-17.7
2.5	3.1	19.1	-15.9
2.6	3.7	18.6	-14.9
2.7	2.3	18.2	-15.9
2.8	1.0	17.8	-16.8
2.9	2.4	17.4	-15.0
3.0	3.7	17.1	-13.4
3.1	7.2	16.7	-9.5
3.2	9.0	16.4	-7.4
3.3	8.4	16.0	-7.6
3.4	2.8	15.7	-12.9
3.5	-9.1	15.4	-24.5
3.6	-3.9	15.1	-19.0
3.7	-4.2	14.8	-19.0
3.8	4.2	14.5	-10.3
3.9	7.3	14.2	-6.9
4.0	5.9	13.9	-8.1
4.1	-0.4	13.7	-14.0
4.2	-2.7	13.4	-16.1
4.3	1.2	13.2	-11.9
4.4	0.2	12.9	-12.8
4.5	-1.8	12.7	-14.5
4.6	-2.3	12.4	-14.7
4.7	0.2	12.2	-12.0
4.8	1.2	12.0	-10.8
4.9	0.7	11.7	-11.0
5.0	-1.8	11.5	-13.3
5.1	-10.5	11.3	-21.8
5.2	-14.5	11.1	-25.6
5.3	-6.9	10.9	-17.8
5.4	-9.7	10.7	-20.4
5.5	-11.1	10.5	-21.6
5.6	-4.5	10.3	-14.8
5.7	-1.3	10.1	-11.4
5.8	0.8	9.9	-9.1
5.9	0.5	9.7	-9.3

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	5.9	13.9	-8.1
-3.9	8.7	14.2	-5.5
-3.8	9.3	14.5	-5.2
-3.7	6.5	14.8	-8.3
-3.6	-2.3	15.1	-17.4
-3.5	0.8	15.4	-14.6
-3.4	2.6	15.7	-13.1
-3.3	3.9	16.0	-12.2
-3.2	8.1	16.4	-8.2
-3.1	8.9	16.7	-7.8
-3.0	9.1	17.1	-7.9
-2.9	11.6	17.4	-5.9
-2.8	11.5	17.8	-6.3
-2.7	9.1	18.2	-9.1
-2.6	1.7	18.6	-16.9
-2.5	-9.9	19.1	-29.0
-2.4	2.5	19.5	-17.0
-2.3	5.9	20.0	-14.0
-2.2	3.2	20.4	-17.2
-2.1	1.2	20.9	-19.7
-2.0	10.2	21.5	-11.3
-1.9	10.9	22.0	-11.1
-1.8	10.6	22.6	-12.0
-1.7	9.7	23.2	-13.5
-1.6	4.7	23.9	-19.2
-1.5	10.9	24.6	-13.7
-1.4	16.9		
-1.3	19.0		
-1.2	20.5		
-1.1	20.8		
-1.0	17.6		
-0.9	16.4		
-0.8	19.9		
-0.7	20.1		
-0.6	26.0		
-0.5	34.9		
-0.4	41.8		
-0.3	46.8		
-0.2	50.1		
-0.1	51.7		
0.0	52.0		

6.0	-2.3	9.5	-11.9
6.1	-12.6	9.4	-22.0
6.2	-8.1	9.2	-17.3
6.3	-5.1	9.0	-14.1
6.4	-3.2	8.8	-12.0
6.5	-1.7	8.7	-10.4
6.6	-4.0	8.5	-12.5
6.7	-2.4	8.3	-10.7
6.8	0.4	8.2	-7.8
6.9	3.3	8.0	-4.7
7.0	3.9	7.9	-4.0
7.1	3.9	8.0	-4.1
7.2	2.5	8.0	-5.5
7.3	-2.0	8.0	-10.0
7.4	-8.4	8.0	-16.4
7.5	-2.9	8.0	-10.9
7.6	-1.2	8.0	-9.2
7.7	-3.3	8.0	-11.3
7.8	-12.9	8.0	-20.9
7.9	-4.0	8.0	-12.0
8.0	0.0	8.0	-8.0
8.1	1.1	8.0	-6.9
8.2	0.3	8.0	-7.7
8.3	-2.2	8.0	-10.2
8.4	-5.8	8.0	-13.8
8.5	-7.2	8.0	-15.2
8.6	-4.7	8.0	-12.7
8.7	-6.7	8.0	-14.7
8.8	-4.9	8.0	-12.9
8.9	-2.8	8.0	-10.8
9.0	-2.8	8.0	-10.8
9.1	-6.1	8.0	-14.1
9.2	-13.9	8.0	-21.9
9.3	-10.9	7.8	-18.7
9.4	-5.2	7.7	-12.9
9.5	-4.5	7.6	-12.1
9.6	-10.9	7.4	-18.3
9.7	-16.2	7.3	-23.5
9.8	-7.3	7.2	-14.5
9.9	-5.5	7.1	-12.6
10.0	-8.4	7.0	-15.4

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

27.55 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-7.7	-4.9	-2.8
-29.5	-10.1	-4.7	-5.3
-29.0	-11.7	-4.6	-7.1
-28.5	-11.5	-4.4	-7.1
-28.0	-10.6	-4.2	-6.5
-27.5	-12.3	-4.0	-8.3
-27.0	-7.9	-3.8	-4.2
-26.5	-9.9	-3.6	-6.3
-26.0	-18.1	-3.4	-14.8
-25.5	-14.0	-3.2	-10.8
-25.0	-16.3	-2.9	-13.4
-24.5	-8.9	-2.7	-6.2
-24.0	-10.4	-2.5	-7.9
-23.5	-8.1	-2.3	-5.8
-23.0	-14.6	-2.0	-12.5
-22.5	-7.0	-1.8	-5.2
-22.0	-5.5	-1.6	-4.0
-21.5	-6.2	-1.3	-4.9
-21.0	-16.3	-1.1	-15.2
-20.5	-8.9	-0.8	-8.1
-20.0	-3.3	-0.5	-2.8
-19.5	0.2	-0.3	0.4
-19.0	1.4	0.0	1.4
-18.5	-2.0	0.3	-2.3
-18.0	-3.3	0.6	-4.0
-17.5	-19.1	0.9	-20.0
-17.0	-23.4	1.2	-24.6
-16.5	-14.1	1.6	-15.6
-16.0	-12.5	1.9	-14.4
-15.5	-8.0	2.2	-10.2
-15.0	-21.1	2.6	-23.7
-14.5	-7.3	3.0	-10.2
-14.0	-15.0	3.3	-18.3
-13.5	-10.9	3.7	-14.7
-13.0	-8.5	4.2	-12.6
-12.5	-11.0	4.6	-15.6
-12.0	-7.1	5.0	-12.1
-11.5	-19.4	5.5	-24.9
-11.0	-7.7	6.0	-13.7
-10.5	-10.5	6.5	-17.0
-10.0	-7.4	7.0	-14.4
-9.5	-18.5	7.6	-26.0
-9.0	-11.2	8.1	-19.4
-8.5	-2.5	8.8	-11.2
-8.0	-8.2	9.4	-17.6
-7.5	-2.7	10.1	-12.8
-7.0	-4.8	10.9	-15.7
-6.5	-1.7	11.7	-13.4
-6.0	-4.8	12.5	-17.3
-5.5	-10.7	13.5	-24.2
-5.0	4.5	14.5	-10.0
-4.5	4.3	15.7	-11.4
-4.0	-7.1	16.9	-24.0
-3.5	3.3	18.4	-15.1
-3.0	11.3	20.1	-8.8
-2.5	12.5		
-2.0	7.4		
-1.5	14.8		
-1.0	20.6		
-0.5	36.4		
0.0	52.1		

27.55 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.1		
0.5	37.5		
1.0	18.1		
1.5	8.1		
2.0	7.4		
2.5	10.0		
3.0	-5.1	20.1	-25.1
3.5	13.9	18.4	-4.5
4.0	11.3	16.9	-5.7
4.5	4.3	15.7	-11.4
5.0	7.0	14.5	-7.6
5.5	-9.1	13.5	-22.5
6.0	-2.0	12.5	-14.5
6.5	0.4	11.7	-11.3
7.0	1.4	10.9	-9.5
7.5	-6.3	10.1	-16.4
8.0	-8.1	9.4	-17.5
8.5	-14.4	8.8	-23.2
9.0	-9.8	8.1	-18.0
9.5	-3.8	7.6	-11.4
10.0	-7.2	7.0	-14.2
10.5	-5.0	6.5	-11.5
11.0	-3.1	6.0	-9.1
11.5	-2.1	5.5	-7.6
12.0	-1.4	5.0	-6.5
12.5	-2.1	4.6	-6.7
13.0	-9.0	4.2	-13.1
13.5	-10.8	3.7	-14.5
14.0	-13.5	3.3	-16.8
14.5	-9.4	3.0	-12.3
15.0	-12.9	2.6	-15.5
15.5	-11.6	2.2	-13.8
16.0	-22.1	1.9	-24.0
16.5	-14.3	1.6	-15.9
17.0	-19.8	1.2	-21.1
17.5	-19.9	0.9	-20.8
18.0	-21.5	0.6	-22.1
18.5	-10.7	0.3	-11.0
19.0	-10.7	0.0	-10.7
19.5	-17.7	-0.3	-17.4
20.0	-27.3	-0.5	-26.8
20.5	-19.3	-0.8	-18.5
21.0	-15.4	-1.1	-14.3
21.5	-15.5	-1.3	-14.2
22.0	-13.1	-1.6	-11.6
22.5	-17.6	-1.8	-15.8
23.0	-27.5	-2.0	-25.4
23.5	-22.0	-2.3	-19.7
24.0	-22.0	-2.5	-19.5
24.5	-25.2	-2.7	-22.4
25.0	-13.5	-2.9	-10.5
25.5	-17.5	-3.2	-14.3
26.0	-16.0	-3.4	-12.7
26.5	-18.1	-3.6	-14.6
27.0	-14.1	-3.8	-10.3
27.5	-23.1	-4.0	-19.1
28.0	-20.7	-4.2	-16.5
28.5	-22.3	-4.4	-17.9
29.0	-26.0	-4.6	-21.4
29.5	-18.3	-4.7	-13.6
30.0	-15.8	-4.9	-10.9

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

27.55 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-3.4	7.0	-10.4
-9.9	-1.4	7.1	-8.5
-9.8	-0.5	7.2	-7.7
-9.7	-3.0	7.3	-10.3
-9.6	-6.4	7.4	-13.9
-9.5	-13.5	7.6	-21.1
-9.4	-11.8	7.7	-19.5
-9.3	-9.4	7.8	-17.2
-9.2	-9.8	7.9	-17.7
-9.1	-11.4	8.0	-19.4
-9.0	-5.8	8.1	-14.0
-8.9	-3.0	8.3	-11.3
-8.8	-4.3	8.4	-12.7
-8.7	-6.5	8.5	-15.1
-8.6	-9.7	8.6	-18.3
-8.5	-5.5	8.8	-14.3
-8.4	-3.9	8.9	-12.8
-8.3	-3.6	9.0	-12.7
-8.2	-4.8	9.2	-13.9
-8.1	-6.9	9.3	-16.2
-8.0	-10.3	9.4	-19.7
-7.9	-9.7	9.6	-19.3
-7.8	-13.4	9.7	-23.1
-7.7	-13.0	9.8	-22.8
-7.6	-8.3	10.0	-18.2
-7.5	-4.2	10.1	-14.3
-7.4	-1.1	10.3	-11.4
-7.3	-1.1	10.4	-11.5
-7.2	-3.6	10.6	-14.2
-7.1	-10.5	10.7	-21.2
-7.0	-3.8	10.9	-14.7
-6.9	-1.1	11.0	-12.2
-6.8	-6.5	11.2	-17.7
-6.7	-3.8	11.3	-15.2
-6.6	-2.8	11.5	-14.3
-6.5	-2.0	11.7	-13.7
-6.4	-0.2	11.8	-12.0
-6.3	1.5	12.0	-10.5
-6.2	0.3	12.2	-11.9
-6.1	-1.7	12.4	-14.1
-6.0	-3.7	12.5	-16.3
-5.9	-4.3	12.7	-17.1
-5.8	-5.8	12.9	-18.7
-5.7	-4.4	13.1	-17.5
-5.6	-7.1	13.3	-20.4
-5.5	-7.5	13.5	-21.0
-5.4	-4.6	13.7	-18.3
-5.3	0.2	13.9	-13.7
-5.2	2.5	14.1	-11.6
-5.1	3.6	14.3	-10.7
-5.0	3.9	14.5	-10.6
-4.9	4.8	14.7	-9.9
-4.8	4.7	15.0	-10.3
-4.7	1.1	15.2	-14.1
-4.6	-9.1	15.4	-24.5
-4.5	4.1	15.7	-11.6
-4.4	8.3	15.9	-7.6
-4.3	9.1	16.2	-7.1
-4.2	8.6	16.4	-7.8
-4.1	4.1	16.7	-12.6

27.55 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.0		
0.1	51.3		
0.2	49.1		
0.3	45.4		
0.4	41.3		
0.5	37.9		
0.6	33.8		
0.7	24.7		
0.8	11.9		
0.9	19.3		
1.0	21.1		
1.1	22.6		
1.2	20.8		
1.3	12.7		
1.4	8.4		
1.5	9.1		
1.6	12.7		
1.7	16.7		
1.8	16.5		
1.9	12.2		
2.0	9.5		
2.1	9.3		
2.2	11.3		
2.3	13.6		
2.4	13.0		
2.5	10.6		
2.6	8.7		
2.7	4.2		
2.8	-2.9		
2.9	4.7		
3.0	2.6	20.1	-17.5
3.1	-5.6	19.7	-25.3
3.2	3.9	19.4	-15.5
3.3	3.4	19.0	-15.6
3.4	9.3	18.7	-9.4
3.5	13.2	18.4	-5.2
3.6	13.6	18.1	-4.5
3.7	11.7	17.8	-6.1
3.8	7.4	17.5	-10.1
3.9	9.4	17.2	-7.8
4.0	12.3	16.9	-4.7
4.1	12.0	16.7	-4.7
4.2	10.3	16.4	-6.1
4.3	8.6	16.2	-7.6
4.4	7.9	15.9	-8.0
4.5	5.9	15.7	-9.7
4.6	3.4	15.4	-12.0
4.7	3.1	15.2	-12.1
4.8	4.8	15.0	-10.2
4.9	4.8	14.7	-10.0
5.0	5.6	14.5	-8.9
5.1	7.0	14.3	-7.3
5.2	8.0	14.1	-6.1
5.3	7.9	13.9	-6.0
5.4	4.1	13.7	-9.6
5.5	-6.3	13.5	-19.8
5.6	-6.8	13.3	-20.1
5.7	-4.7	13.1	-17.8
5.8	-3.8	12.9	-16.7
5.9	-1.1	12.7	-13.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	-2.6	16.9	-19.5
-3.9	7.7	17.2	-9.5
-3.8	9.9	17.5	-7.6
-3.7	9.7	17.8	-8.1
-3.6	7.9	18.1	-10.2
-3.5	4.9	18.4	-13.5
-3.4	-6.5	18.7	-25.2
-3.3	-0.8	19.0	-19.8
-3.2	-3.2	19.4	-22.5
-3.1	3.1	19.7	-16.6
-3.0	11.2	20.1	-8.8
-2.9	13.3		
-2.8	13.0		
-2.7	10.3		
-2.6	10.3		
-2.5	12.9		
-2.4	13.9		
-2.3	14.1		
-2.2	11.9		
-2.1	9.4		
-2.0	7.4		
-1.9	6.0		
-1.8	6.2		
-1.7	12.3		
-1.6	15.9		
-1.5	16.4		
-1.4	14.5		
-1.3	18.9		
-1.2	23.2		
-1.1	23.7		
-1.0	21.1		
-0.9	20.3		
-0.8	24.8		
-0.7	28.8		
-0.6	32.8		
-0.5	35.8		
-0.4	40.3		
-0.3	45.9		
-0.2	49.8		
-0.1	51.7		
0.0	52.0		

6.0	-2.3	12.5	-14.8
6.1	-3.9	12.4	-16.3
6.2	-1.4	12.2	-13.6
6.3	1.4	12.0	-10.6
6.4	1.5	11.8	-10.3
6.5	2.3	11.7	-9.4
6.6	1.7	11.5	-9.8
6.7	2.5	11.3	-8.9
6.8	4.3	11.2	-6.8
6.9	4.9	11.0	-6.1
7.0	3.4	10.9	-7.5
7.1	-2.8	10.7	-13.5
7.2	-11.8	10.6	-22.4
7.3	-12.0	10.4	-22.4
7.4	-8.4	10.3	-18.7
7.5	-5.0	10.1	-15.1
7.6	-3.9	10.0	-13.8
7.7	-4.6	9.8	-14.4
7.8	-5.2	9.7	-14.9
7.9	-7.5	9.6	-17.1
8.0	-4.3	9.4	-13.7
8.1	-2.9	9.3	-12.2
8.2	-7.4	9.2	-16.6
8.3	-12.0	9.0	-21.0
8.4	-6.8	8.9	-15.7
8.5	-5.5	8.8	-14.2
8.6	-7.0	8.6	-15.7
8.7	-9.0	8.5	-17.5
8.8	-12.3	8.4	-20.6
8.9	-13.9	8.3	-22.1
9.0	-14.1	8.1	-22.3
9.1	-13.8	8.0	-21.8
9.2	-8.7	7.9	-16.6
9.3	-10.0	7.8	-17.8
9.4	-24.4	7.7	-32.0
9.5	-10.5	7.6	-18.0
9.6	-5.1	7.4	-12.5
9.7	-1.6	7.3	-9.0
9.8	-1.1	7.2	-8.3
9.9	-1.8	7.1	-8.9
10.0	-3.4	7.0	-10.4

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

27.55 GHz Antenna Pattern in X-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-7.5	-2.0	-5.5
-9.9	-10.8	-2.0	-8.8
-9.8	-12.5	-2.0	-10.5
-9.7	-17.0	-2.0	-15.0
-9.6	-15.1	-2.0	-13.1
-9.5	-16.9	-2.0	-14.9
-9.4	-14.4	-2.0	-12.4
-9.3	-11.3	-2.0	-9.3
-9.2	-10.0	-2.0	-8.0
-9.1	-6.8	-2.0	-4.8
-9.0	-6.3	-2.0	-4.3
-8.9	-7.0	-2.0	-5.0
-8.8	-8.6	-2.0	-6.6
-8.7	-12.8	-2.0	-10.8
-8.6	-18.3	-2.0	-16.3
-8.5	-16.7	-2.0	-14.7
-8.4	-23.6	-2.0	-21.6
-8.3	-17.1	-2.0	-15.1
-8.2	-12.3	-2.0	-10.3
-8.1	-8.8	-2.0	-6.8
-8.0	-6.7	-2.0	-4.7
-7.9	-7.9	-2.0	-5.9
-7.8	-7.6	-2.0	-5.6
-7.7	-7.2	-2.0	-5.2
-7.6	-6.6	-2.0	-4.6
-7.5	-6.7	-2.0	-4.7
-7.4	-6.3	-2.0	-4.3
-7.3	-4.3	-2.0	-2.3
-7.2	-4.9	-2.0	-2.9
-7.1	-6.0	-2.0	-4.0
-7.0	-7.6	-2.1	-5.5
-6.9	-6.7	-2.0	-4.7
-6.8	-6.1	-1.8	-4.3
-6.7	-7.5	-1.7	-5.9
-6.6	-8.8	-1.5	-7.3
-6.5	-7.3	-1.3	-5.9
-6.4	-5.3	-1.2	-4.2
-6.3	-3.7	-1.0	-2.7
-6.2	-5.4	-0.8	-4.6
-6.1	-7.7	-0.6	-7.1
-6.0	-11.9	-0.5	-11.4
-5.9	-5.2	-0.3	-4.9
-5.8	-3.4	-0.1	-3.3
-5.7	-5.3	0.1	-5.4
-5.6	-11.3	0.3	-11.6
-5.5	-8.2	0.5	-8.7
-5.4	-6.9	0.7	-7.6
-5.3	-8.6	0.9	-9.5
-5.2	-16.6	1.1	-17.7
-5.1	-15.9	1.3	-17.2
-5.0	-8.2	1.5	-9.7
-4.9	-8.2	1.7	-9.9
-4.8	-12.2	2.0	-14.1
-4.7	-11.8	2.2	-14.0
-4.6	-8.2	2.4	-10.6
-4.5	-8.2	2.7	-10.9
-4.4	-9.6	2.9	-12.5
-4.3	-14.6	3.2	-17.8
-4.2	-15.3	3.4	-18.7
-4.1	-5.6	3.7	-9.3

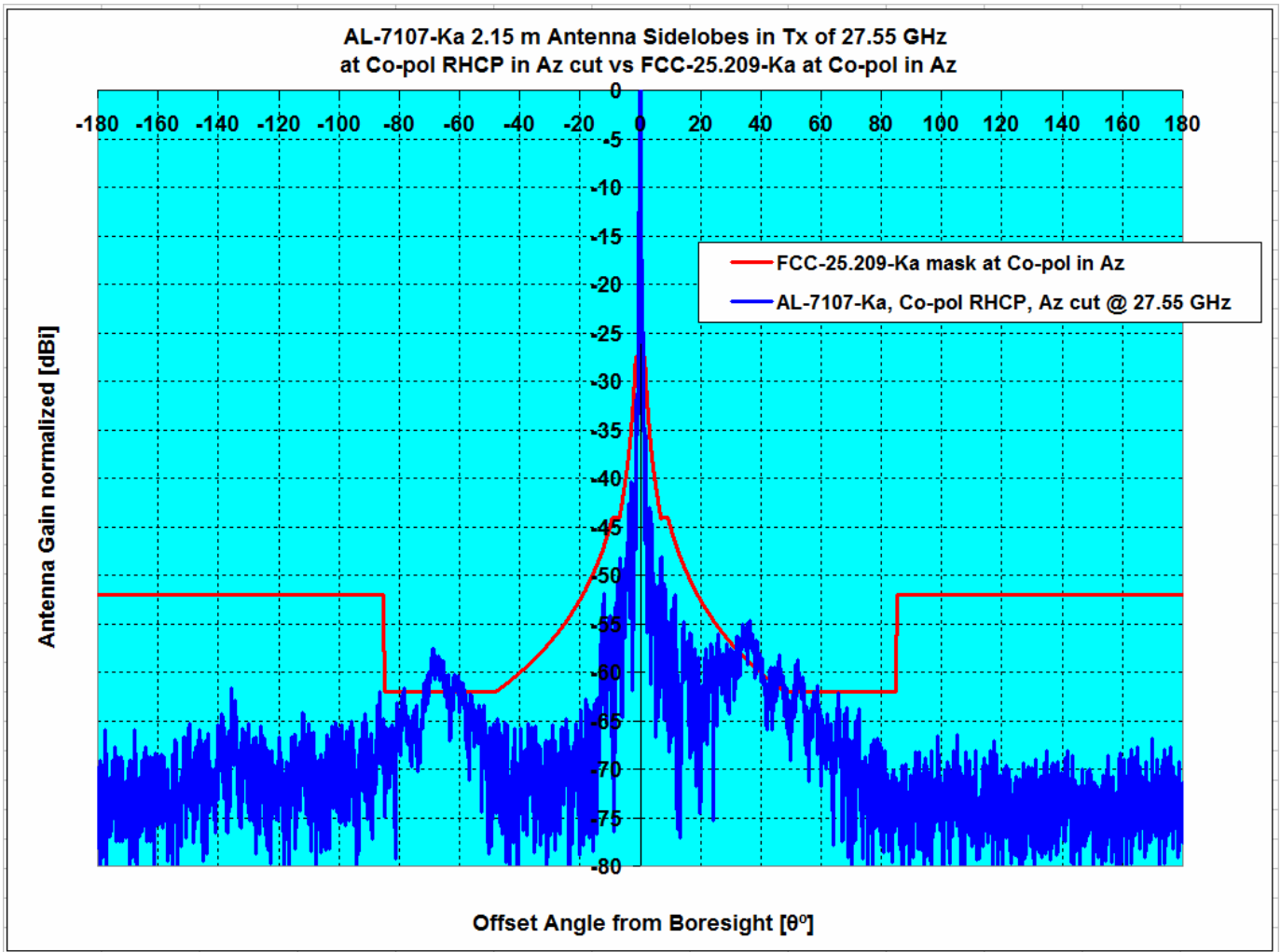
27.55 GHz Antenna Pattern in X-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	20.3		
0.1	18.8		
0.2	9.9		
0.3	22.2		
0.4	25.1		
0.5	25.2		
0.6	22.3		
0.7	15.0		
0.8	2.0		
0.9	1.8		
1.0	6.9		
1.1	10.7		
1.2	10.9		
1.3	6.8		
1.4	1.6		
1.5	4.0		
1.6	1.8		
1.7	-3.6		
1.8	-3.2	12.6	-15.8
1.9	-0.1	12.0	-12.2
2.0	0.6	11.5	-10.9
2.1	0.0	10.9	-10.9
2.2	-7.1	10.4	-17.5
2.3	-12.0	10.0	-22.0
2.4	-4.2	9.5	-13.7
2.5	-3.3	9.1	-12.4
2.6	-5.4	8.6	-14.1
2.7	-13.2	8.2	-21.4
2.8	-3.2	7.8	-11.0
2.9	-0.4	7.4	-7.9
3.0	-2.3	7.1	-9.3
3.1	-8.6	6.7	-15.3
3.2	-9.9	6.4	-16.3
3.3	-7.8	6.0	-13.9
3.4	-14.7	5.7	-20.4
3.5	-9.0	5.4	-14.4
3.6	-4.8	5.1	-9.9
3.7	-8.9	4.8	-13.7
3.8	-16.2	4.5	-20.7
3.9	-9.4	4.2	-13.6
4.0	-7.6	3.9	-11.6
4.1	-9.7	3.7	-13.3
4.2	-10.0	3.4	-13.4
4.3	-9.7	3.2	-12.8
4.4	-8.6	2.9	-11.6
4.5	-8.4	2.7	-11.1
4.6	-7.8	2.4	-10.2
4.7	-5.6	2.2	-7.8
4.8	-4.8	2.0	-6.8
4.9	-8.8	1.7	-10.5
5.0	-18.5	1.5	-20.1
5.1	-23.8	1.3	-25.1
5.2	-17.5	1.1	-18.6
5.3	-11.1	0.9	-12.0
5.4	-7.9	0.7	-8.6
5.5	-7.3	0.5	-7.8
5.6	-7.3	0.3	-7.6
5.7	-4.7	0.1	-4.8
5.8	-3.5	-0.1	-3.4
5.9	-7.4	-0.3	-7.1

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

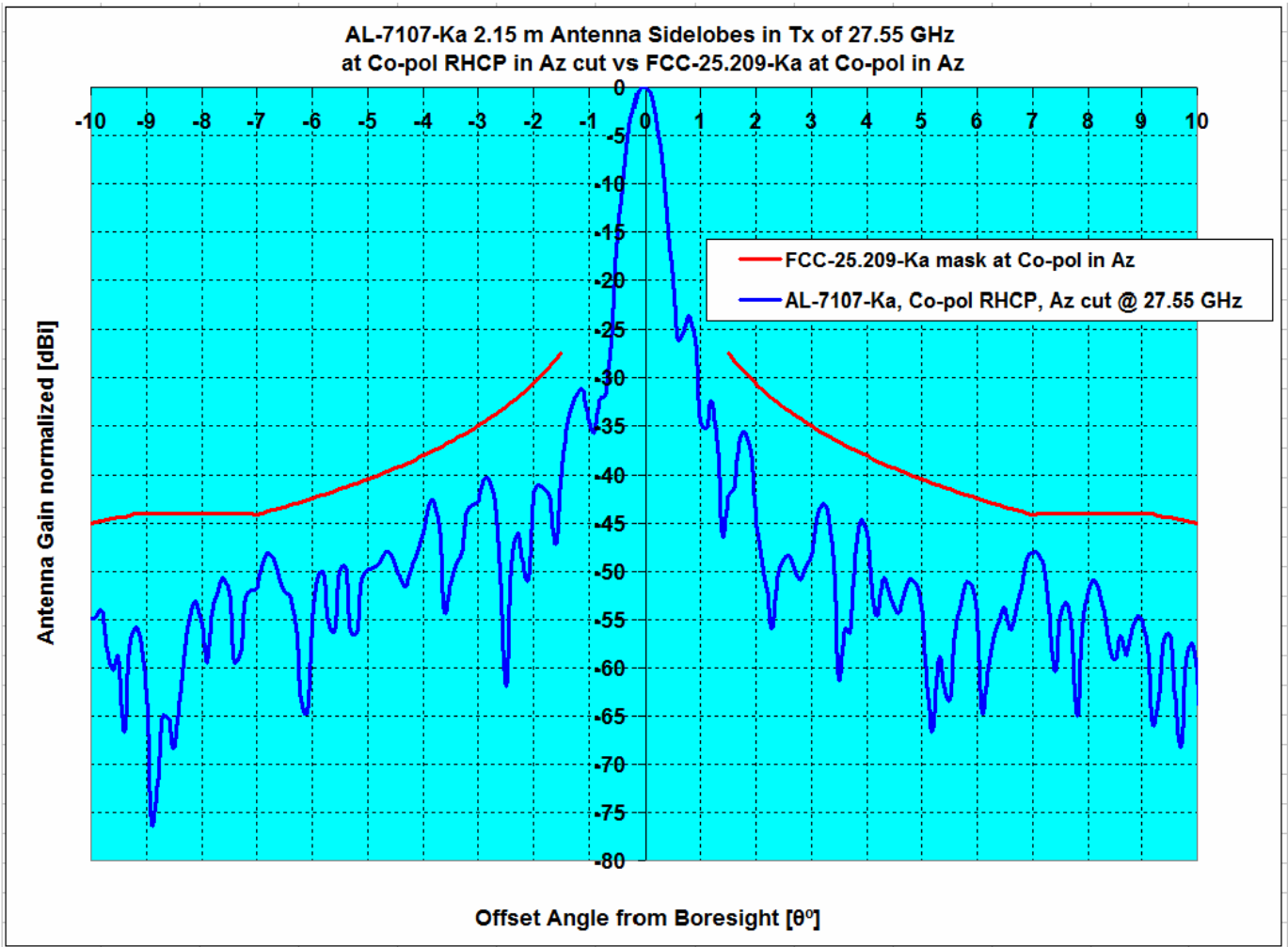
-4.0	-3.7	3.9	-7.7
-3.9	-5.3	4.2	-9.5
-3.8	-8.3	4.5	-12.8
-3.7	-2.1	4.8	-6.9
-3.6	-1.0	5.1	-6.1
-3.5	-1.9	5.4	-7.3
-3.4	-6.9	5.7	-12.6
-3.3	-4.4	6.0	-10.4
-3.2	-1.3	6.4	-7.7
-3.1	-4.7	6.7	-11.4
-3.0	-15.0	7.1	-22.1
-2.9	-6.9	7.4	-14.3
-2.8	-10.5	7.8	-18.3
-2.7	-8.6	8.2	-16.8
-2.6	-3.4	8.6	-12.1
-2.5	-3.7	9.1	-12.7
-2.4	-3.6	9.5	-13.1
-2.3	0.9	10.0	-9.1
-2.2	2.0	10.4	-8.5
-2.1	1.6	10.9	-9.3
-2.0	1.6	11.5	-9.9
-1.9	-5.5	12.0	-17.6
-1.8	-2.5	12.6	-15.1
-1.7	4.6		
-1.6	5.8		
-1.5	7.3		
-1.4	10.5		
-1.3	9.8		
-1.2	5.8		
-1.1	11.3		
-1.0	15.3		
-0.9	16.1		
-0.8	16.5		
-0.7	19.7		
-0.6	23.8		
-0.5	26.5		
-0.4	27.2		
-0.3	26.1		
-0.2	21.4		
-0.1	15.8		
0.0	20.3		

6.0	-8.9	-0.5	-8.4
6.1	-11.4	-0.6	-10.8
6.2	-15.9	-0.8	-15.1
6.3	-18.3	-1.0	-17.4
6.4	-15.0	-1.2	-13.8
6.5	-14.3	-1.3	-12.9
6.6	-9.6	-1.5	-8.1
6.7	-7.4	-1.7	-5.8
6.8	-7.8	-1.8	-6.0
6.9	-10.7	-2.0	-8.7
7.0	-11.6	-2.1	-9.5
7.1	-13.1	-2.0	-11.1
7.2	-20.8	-2.0	-18.8
7.3	-17.3	-2.0	-15.3
7.4	-16.6	-2.0	-14.6
7.5	-17.2	-2.0	-15.2
7.6	-10.0	-2.0	-8.0
7.7	-8.6	-2.0	-6.6
7.8	-10.9	-2.0	-8.9
7.9	-14.2	-2.0	-12.2
8.0	-15.8	-2.0	-13.8
8.1	-17.5	-2.0	-15.5
8.2	-19.2	-2.0	-17.2
8.3	-17.6	-2.0	-15.6
8.4	-13.7	-2.0	-11.7
8.5	-18.4	-2.0	-16.4
8.6	-25.2	-2.0	-23.2
8.7	-13.8	-2.0	-11.8
8.8	-15.0	-2.0	-13.0
8.9	-8.7	-2.0	-6.7
9.0	-6.3	-2.0	-4.3
9.1	-5.3	-2.0	-3.3
9.2	-6.9	-2.0	-4.9
9.3	-7.0	-2.0	-5.0
9.4	-10.6	-2.0	-8.6
9.5	-6.7	-2.0	-4.7
9.6	-5.5	-2.0	-3.5
9.7	-4.5	-2.0	-2.5
9.8	-5.9	-2.0	-3.9
9.9	-11.6	-2.0	-9.6
10.0	-12.6	-2.0	-10.6



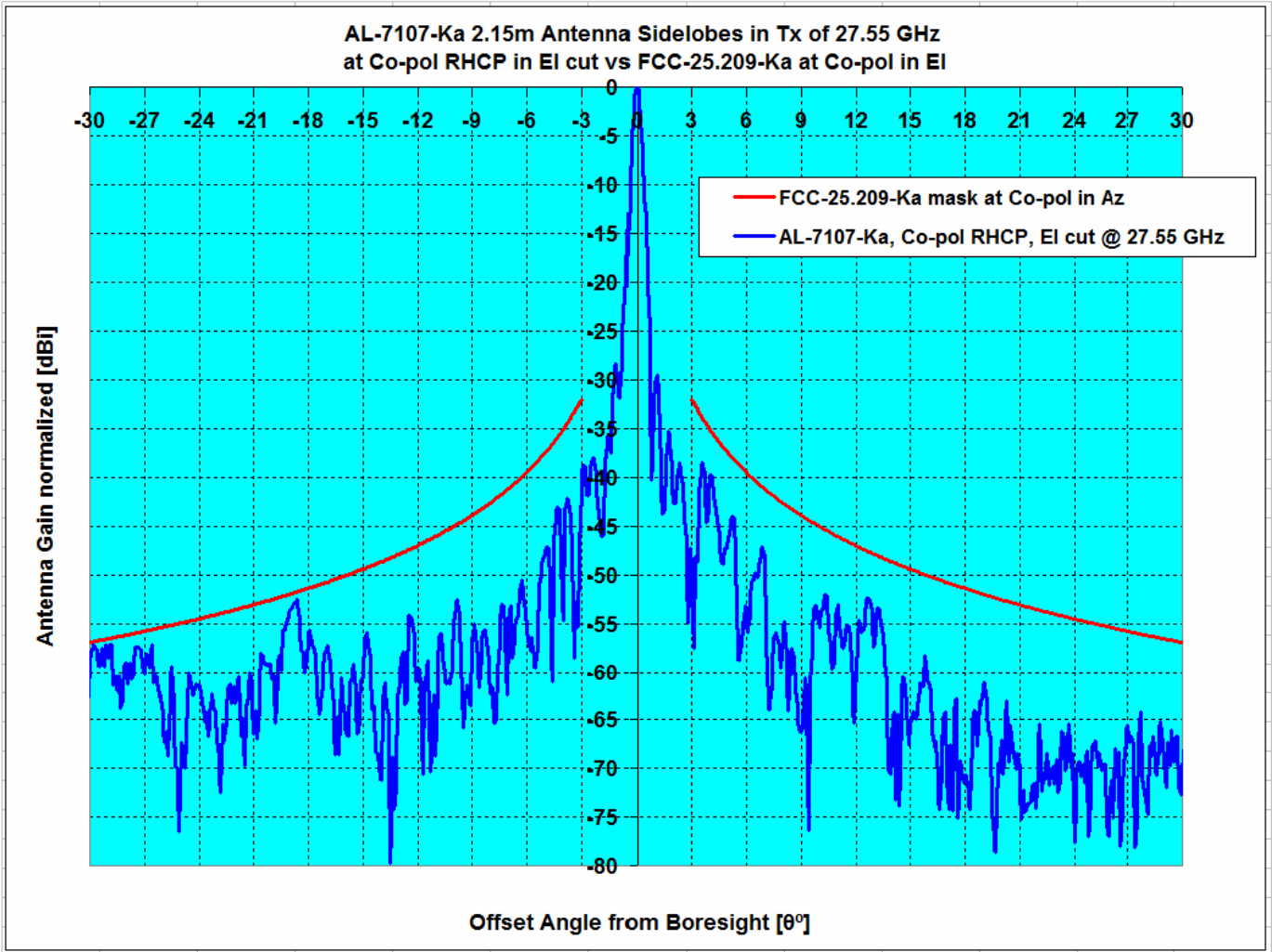
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , RHCP	27.55	52.02	-3.99	4.44	0.00%	6.55%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth RHCP



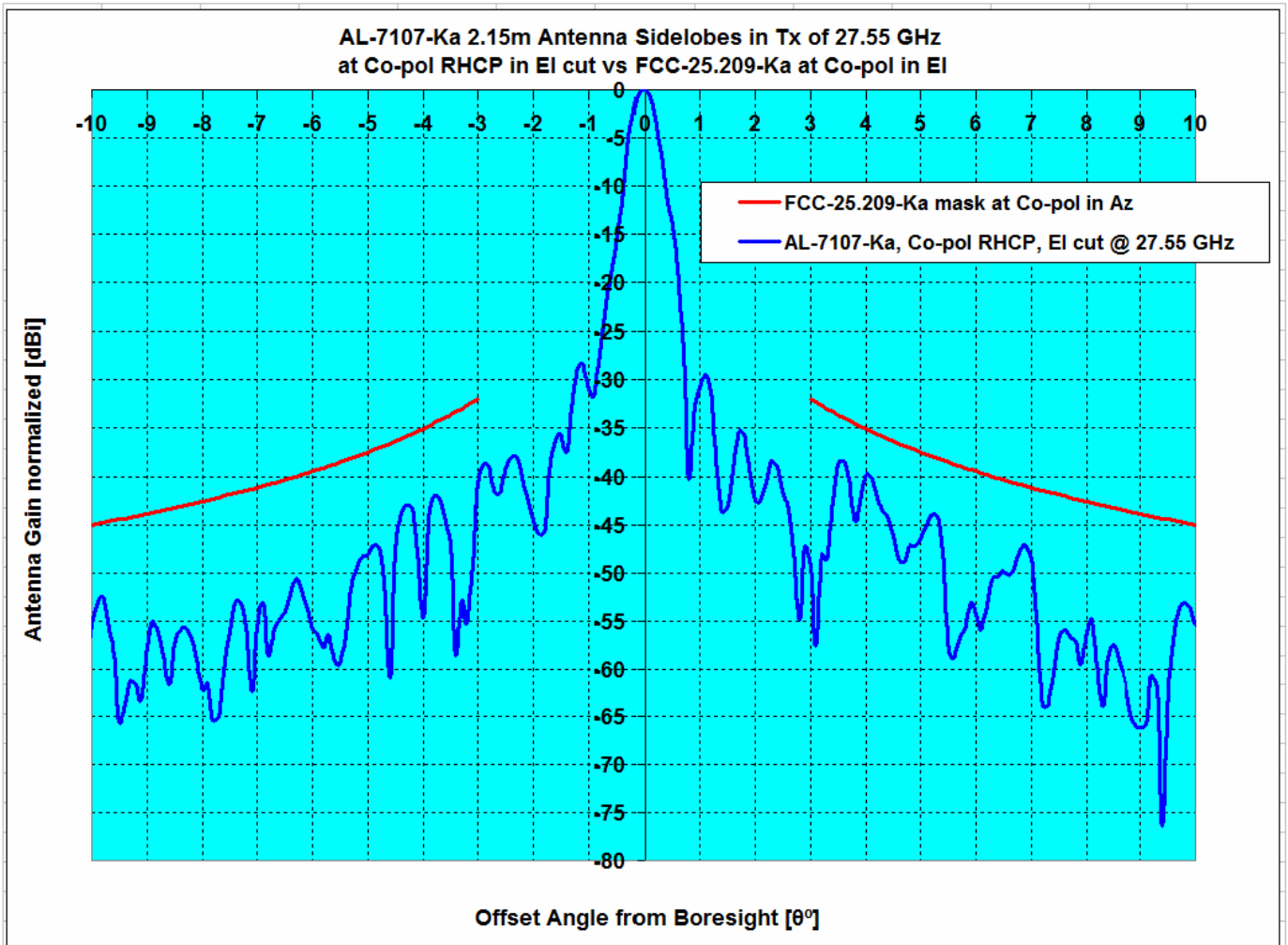
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , RHCP	27.55	52.02	-3.99	4.44	0.00%	6.55%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation RHCP



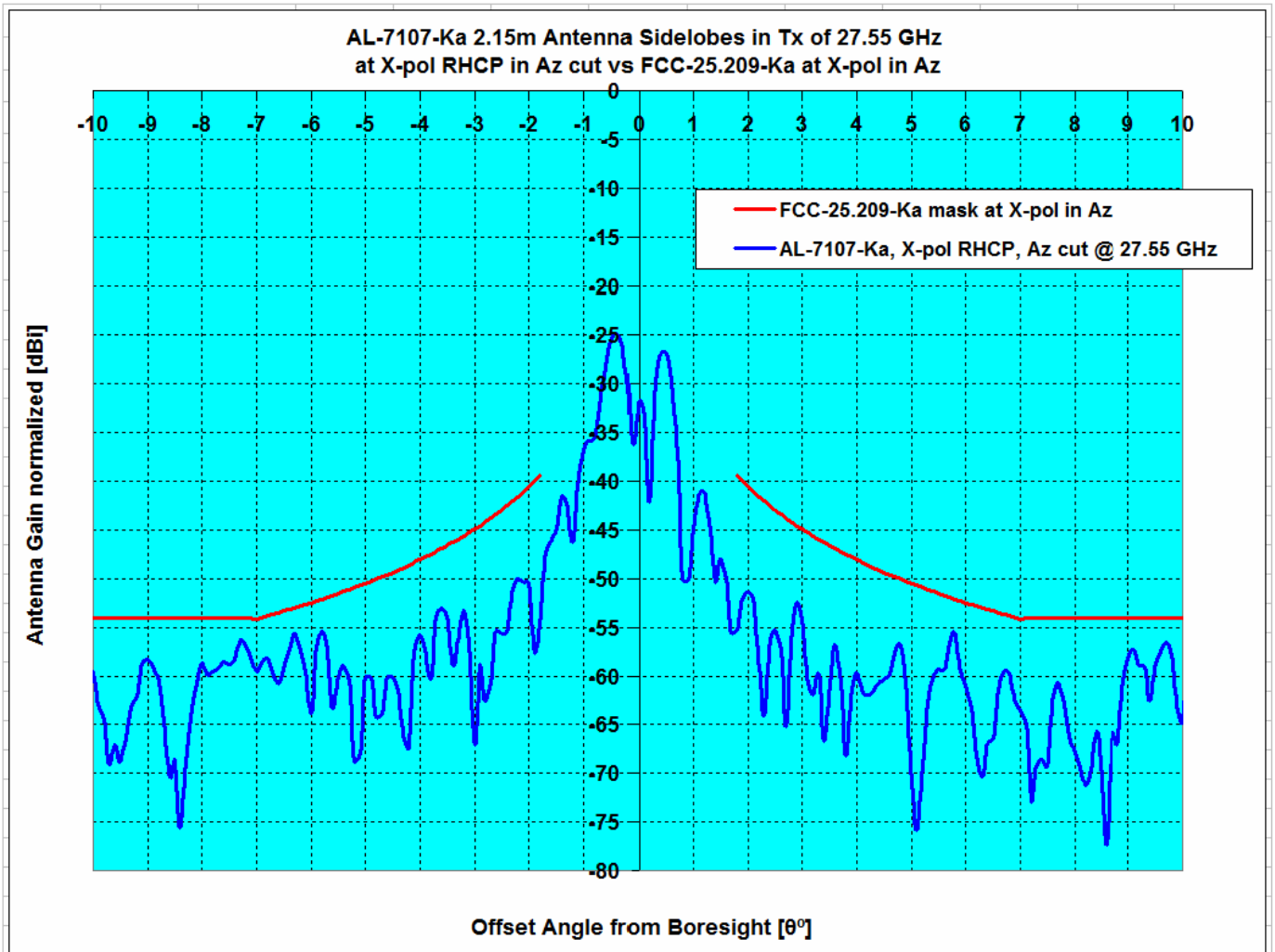
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , RHCP	27.55	52.02	-4.53	-0.33	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI, RHCP	27.55	52.02	-4.53	-0.33	0.00%	0.00%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, X-pol, Azimuth RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7107-Ka	Az , RHCP	27.55	52.02	-2.70	-2.32	0.00%	0.00%

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-23.3	0.0	-23.3
-178.0	-25.3	0.0	-25.3
-177.0	-18.7	0.0	-18.7
-176.0	-27.6	0.0	-27.6
-175.0	-18.5	0.0	-18.5
-174.0	-27.5	0.0	-27.5
-173.0	-21.8	0.0	-21.8
-172.0	-24.4	0.0	-24.4
-171.0	-18.7	0.0	-18.7
-170.0	-27.6	0.0	-27.6
-169.0	-25.5	0.0	-25.5
-168.0	-19.5	0.0	-19.5
-167.0	-20.6	0.0	-20.6
-166.0	-20.1	0.0	-20.1
-165.0	-25.7	0.0	-25.7
-164.0	-27.6	0.0	-27.6
-163.0	-26.7	0.0	-26.7
-162.0	-22.4	0.0	-22.4
-161.0	-22.7	0.0	-22.7
-160.0	-22.7	0.0	-22.7
-159.0	-25.5	0.0	-25.5
-158.0	-22.9	0.0	-22.9
-157.0	-27.6	0.0	-27.6
-156.0	-23.9	0.0	-23.9
-155.0	-16.8	0.0	-16.8
-154.0	-23.9	0.0	-23.9
-153.0	-26.7	0.0	-26.7
-152.0	-18.6	0.0	-18.6
-151.0	-14.8	0.0	-14.8
-150.0	-13.9	0.0	-13.9
-149.0	-15.8	0.0	-15.8
-148.0	-27.6	0.0	-27.6
-147.0	-18.7	0.0	-18.7
-146.0	-17.5	0.0	-17.5
-145.0	-21.6	0.0	-21.6
-144.0	-17.3	0.0	-17.3
-143.0	-18.9	0.0	-18.9
-142.0	-16.5	0.0	-16.5
-141.0	-12.3	0.0	-12.3
-140.0	-15.7	0.0	-15.7
-139.0	-22.2	0.0	-22.2
-138.0	-24.1	0.0	-24.1
-137.0	-17.5	0.0	-17.5
-136.0	-20.8	0.0	-20.8
-135.0	-20.9	0.0	-20.9
-134.0	-25.3	0.0	-25.3
-133.0	-25.5	0.0	-25.5
-132.0	-27.6	0.0	-27.6
-131.0	-27.6	0.0	-27.6
-130.0	-23.4	0.0	-23.4
-129.0	-19.0	0.0	-19.0
-128.0	-27.6	0.0	-27.6
-127.0	-23.5	0.0	-23.5
-126.0	-18.5	0.0	-18.5
-125.0	-27.6	0.0	-27.6
-124.0	-18.9	0.0	-18.9
-123.0	-27.0	0.0	-27.0
-122.0	-16.5	0.0	-16.5
-121.0	-20.3	0.0	-20.3
-120.0	-23.3	0.0	-23.3

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.4		
1.0	17.1		
2.0	10.6	21.5	-10.9
3.0	0.4	17.1	-16.6
4.0	-7.9	13.9	-21.8
5.0	-1.2	11.5	-12.7
6.0	-10.1	9.5	-19.6
7.0	0.0	7.9	-7.9
8.0	-2.9	8.0	-10.9
9.0	-10.0	8.0	-18.0
10.0	-3.5	7.0	-10.5
11.0	-1.5	6.0	-7.5
12.0	-3.5	5.0	-8.5
13.0	-5.5	4.2	-9.7
14.0	-13.6	3.3	-17.0
15.0	-8.0	2.6	-10.6
16.0	-16.4	1.9	-18.3
17.0	-26.4	1.2	-27.6
18.0	-14.3	0.6	-14.9
19.0	-8.3	0.0	-8.3
20.0	-16.9	-0.5	-16.4
21.0	-18.1	-1.1	-17.1
22.0	-5.9	-1.6	-4.3
23.0	-8.0	-2.0	-6.0
24.0	-10.2	-2.5	-7.7
25.0	-14.9	-2.9	-12.0
26.0	-8.9	-3.4	-5.5
27.0	-7.3	-3.8	-3.5
28.0	-8.6	-4.2	-4.4
29.0	-7.5	-4.6	-2.9
30.0	-8.4	-4.9	-3.4
31.0	-6.4	-5.3	-1.1
32.0	-5.4	-5.6	0.2
33.0	-3.9	-6.0	2.1
34.0	-5.5	-6.3	0.8
35.0	-8.1	-6.6	-1.5
36.0	-4.5	-6.9	2.4
37.0	-7.6	-7.2	-0.4
38.0	-5.0	-7.5	2.5
39.0	-7.1	-7.8	0.7
40.0	-8.0	-8.1	0.1
41.0	-10.5	-8.3	-2.2
42.0	-9.4	-8.6	-0.9
43.0	-11.2	-8.8	-2.3
44.0	-10.3	-9.1	-1.2
45.0	-8.9	-9.3	0.4
46.0	-6.7	-9.6	2.8
47.0	-9.2	-9.8	0.6
48.0	-15.2	-10.0	-5.1
49.0	-13.9	-10.0	-3.9
50.0	-12.6	-10.0	-2.6
51.0	-10.9	-10.0	-0.9
52.0	-10.3	-10.0	-0.3
53.0	-13.6	-10.0	-3.6
54.0	-14.2	-10.0	-4.2
55.0	-22.1	-10.0	-12.1
56.0	-17.3	-10.0	-7.3
57.0	-15.4	-10.0	-5.4
58.0	-15.6	-10.0	-5.6
59.0	-19.4	-10.0	-9.4

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-20.2	0.0	-20.2
-118.0	-22.4	0.0	-22.4
-117.0	-21.3	0.0	-21.3
-116.0	-22.3	0.0	-22.3
-115.0	-20.2	0.0	-20.2
-114.0	-19.3	0.0	-19.3
-113.0	-27.3	0.0	-27.3
-112.0	-25.8	0.0	-25.8
-111.0	-16.7	0.0	-16.7
-110.0	-19.2	0.0	-19.2
-109.0	-18.1	0.0	-18.1
-108.0	-14.4	0.0	-14.4
-107.0	-22.5	0.0	-22.5
-106.0	-26.4	0.0	-26.4
-105.0	-22.3	0.0	-22.3
-104.0	-22.2	0.0	-22.2
-103.0	-23.8	0.0	-23.8
-102.0	-22.4	0.0	-22.4
-101.0	-27.3	0.0	-27.3
-100.0	-16.1	0.0	-16.1
-99.0	-15.0	0.0	-15.0
-98.0	-17.8	0.0	-17.8
-97.0	-19.5	0.0	-19.5
-96.0	-11.1	0.0	-11.1
-95.0	-14.1	0.0	-14.1
-94.0	-17.9	0.0	-17.9
-93.0	-19.2	0.0	-19.2
-92.0	-15.9	0.0	-15.9
-91.0	-14.9	0.0	-14.9
-90.0	-14.9	0.0	-14.9
-89.0	-15.3	0.0	-15.3
-88.0	-20.4	0.0	-20.4
-87.0	-13.3	0.0	-13.3
-86.0	-14.4	0.0	-14.4
-85.0	-14.4	-10.0	-4.4
-84.0	-15.1	-10.0	-5.1
-83.0	-14.6	-10.0	-4.6
-82.0	-13.1	-10.0	-3.1
-81.0	-16.5	-10.0	-6.5
-80.0	-10.3	-10.0	-0.3
-79.0	-10.0	-10.0	0.0
-78.0	-9.9	-10.0	0.1
-77.0	-12.9	-10.0	-2.9
-76.0	-12.9	-10.0	-2.9
-75.0	-11.4	-10.0	-1.4
-74.0	-11.7	-10.0	-1.7
-73.0	-11.0	-10.0	-1.0
-72.0	-8.9	-10.0	1.1
-71.0	-8.3	-10.0	1.7
-70.0	-6.4	-10.0	3.6
-69.0	-6.4	-10.0	3.6
-68.0	-4.3	-10.0	5.7
-67.0	-6.6	-10.0	3.4
-66.0	-6.1	-10.0	3.9
-65.0	-7.0	-10.0	3.0
-64.0	-7.3	-10.0	2.7
-63.0	-8.4	-10.0	1.6
-62.0	-9.1	-10.0	0.9
-61.0	-9.8	-10.0	0.2
-60.0	-8.9	-10.0	1.1
-59.0	-10.2	-10.0	-0.2
-58.0	-11.1	-10.0	-1.1
-57.0	-14.7	-10.0	-4.7

60.0	-17.8	-10.0	-7.8
61.0	-26.4	-10.0	-16.4
62.0	-20.4	-10.0	-10.4
63.0	-12.8	-10.0	-2.8
64.0	-19.5	-10.0	-9.5
65.0	-12.2	-10.0	-2.2
66.0	-20.0	-10.0	-10.0
67.0	-18.8	-10.0	-8.8
68.0	-25.8	-10.0	-15.8
69.0	-16.0	-10.0	-6.0
70.0	-24.6	-10.0	-14.6
71.0	-25.0	-10.0	-15.0
72.0	-23.0	-10.0	-13.0
73.0	-15.9	-10.0	-5.9
74.0	-20.0	-10.0	-10.0
75.0	-19.5	-10.0	-9.5
76.0	-21.6	-10.0	-11.6
77.0	-20.9	-10.0	-10.9
78.0	-27.6	-10.0	-17.6
79.0	-23.2	-10.0	-13.2
80.0	-27.0	-10.0	-17.0
81.0	-26.4	-10.0	-16.4
82.0	-22.3	-10.0	-12.3
83.0	-27.5	-10.0	-17.5
84.0	-22.5	-10.0	-12.5
85.0	-27.6	-10.0	-17.6
86.0	-18.4	0.0	-18.4
87.0	-25.3	0.0	-25.3
88.0	-23.9	0.0	-23.9
89.0	-27.6	0.0	-27.6
90.0	-23.1	0.0	-23.1
91.0	-22.6	0.0	-22.6
92.0	-25.5	0.0	-25.5
93.0	-27.6	0.0	-27.6
94.0	-27.6	0.0	-27.6
95.0	-21.9	0.0	-21.9
96.0	-20.2	0.0	-20.2
97.0	-21.6	0.0	-21.6
98.0	-19.0	0.0	-19.0
99.0	-23.9	0.0	-23.9
100.0	-27.2	0.0	-27.2
101.0	-22.1	0.0	-22.1
102.0	-18.8	0.0	-18.8
103.0	-23.2	0.0	-23.2
104.0	-27.6	0.0	-27.6
105.0	-27.6	0.0	-27.6
106.0	-27.6	0.0	-27.6
107.0	-21.8	0.0	-21.8
108.0	-21.0	0.0	-21.0
109.0	-23.5	0.0	-23.5
110.0	-27.6	0.0	-27.6
111.0	-20.2	0.0	-20.2
112.0	-27.6	0.0	-27.6
113.0	-27.6	0.0	-27.6
114.0	-21.8	0.0	-21.8
115.0	-21.3	0.0	-21.3
116.0	-24.5	0.0	-24.5
117.0	-25.8	0.0	-25.8
118.0	-23.8	0.0	-23.8
119.0	-22.4	0.0	-22.4
120.0	-23.4	0.0	-23.4
121.0	-20.5	0.0	-20.5
122.0	-26.9	0.0	-26.9

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-15.3	-10.0	-5.3
-55.0	-14.7	-10.0	-4.7
-54.0	-16.3	-10.0	-6.3
-53.0	-14.3	-10.0	-4.3
-52.0	-18.2	-10.0	-8.2
-51.0	-15.7	-10.0	-5.7
-50.0	-18.2	-10.0	-8.2
-49.0	-14.3	-10.0	-4.3
-48.0	-14.6	-10.0	-4.6
-47.0	-20.8	-9.8	-11.0
-46.0	-17.9	-9.6	-8.3
-45.0	-19.1	-9.3	-9.8
-44.0	-16.5	-9.1	-7.5
-43.0	-17.2	-8.8	-8.3
-42.0	-16.8	-8.6	-8.2
-41.0	-10.7	-8.3	-2.4
-40.0	-27.6	-8.1	-19.5
-39.0	-17.2	-7.8	-9.4
-38.0	-16.3	-7.5	-8.8
-37.0	-20.2	-7.2	-13.0
-36.0	-15.6	-6.9	-8.7
-35.0	-22.8	-6.6	-16.2
-34.0	-18.4	-6.3	-12.1
-33.0	-25.3	-6.0	-19.3
-32.0	-16.2	-5.6	-10.5
-31.0	-16.0	-5.3	-10.8
-30.0	-20.2	-4.9	-15.2
-29.0	-20.2	-4.6	-15.7
-28.0	-19.2	-4.2	-15.1
-27.0	-21.7	-3.8	-17.9
-26.0	-11.8	-3.4	-8.4
-25.0	-18.8	-2.9	-15.9
-24.0	-17.6	-2.5	-15.1
-23.0	-19.8	-2.0	-17.7
-22.0	-17.5	-1.6	-15.9
-21.0	-22.7	-1.1	-21.6
-20.0	-24.2	-0.5	-23.7
-19.0	-17.9	0.0	-17.9
-18.0	-17.0	0.6	-17.6
-17.0	-14.6	1.2	-15.8
-16.0	-24.2	1.9	-26.1
-15.0	-27.6	2.6	-30.2
-14.0	-10.3	3.3	-13.6
-13.0	-14.8	4.2	-19.0
-12.0	-7.3	5.0	-12.3
-11.0	-10.9	6.0	-16.9
-10.0	-7.9	7.0	-14.9
-9.0	-17.0	8.0	-25.0
-8.0	-11.4	8.0	-19.4
-7.0	-0.8	7.9	-8.7
-6.0	-1.1	9.5	-10.7
-5.0	5.0	11.5	-6.6
-4.0	9.5	13.9	-4.5
-3.0	4.9	17.1	-12.1
-2.0	12.5	21.5	-9.0
-1.0	20.8		
0.0	52.4		

123.0	-21.4	0.0	-21.4
124.0	-27.6	0.0	-27.6
125.0	-21.1	0.0	-21.1
126.0	-27.6	0.0	-27.6
127.0	-27.6	0.0	-27.6
128.0	-27.6	0.0	-27.6
129.0	-23.1	0.0	-23.1
130.0	-23.0	0.0	-23.0
131.0	-19.2	0.0	-19.2
132.0	-27.6	0.0	-27.6
133.0	-25.8	0.0	-25.8
134.0	-26.2	0.0	-26.2
135.0	-22.5	0.0	-22.5
136.0	-22.1	0.0	-22.1
137.0	-25.2	0.0	-25.2
138.0	-22.2	0.0	-22.2
139.0	-27.6	0.0	-27.6
140.0	-24.7	0.0	-24.7
141.0	-24.0	0.0	-24.0
142.0	-27.2	0.0	-27.2
143.0	-26.3	0.0	-26.3
144.0	-23.6	0.0	-23.6
145.0	-26.1	0.0	-26.1
146.0	-27.6	0.0	-27.6
147.0	-27.6	0.0	-27.6
148.0	-26.3	0.0	-26.3
149.0	-23.5	0.0	-23.5
150.0	-25.5	0.0	-25.5
151.0	-27.6	0.0	-27.6
152.0	-27.6	0.0	-27.6
153.0	-22.1	0.0	-22.1
154.0	-27.6	0.0	-27.6
155.0	-27.6	0.0	-27.6
156.0	-26.4	0.0	-26.4
157.0	-27.6	0.0	-27.6
158.0	-27.6	0.0	-27.6
159.0	-23.9	0.0	-23.9
160.0	-22.1	0.0	-22.1
161.0	-19.4	0.0	-19.4
162.0	-18.4	0.0	-18.4
163.0	-25.6	0.0	-25.6
164.0	-20.1	0.0	-20.1
165.0	-23.4	0.0	-23.4
166.0	-21.0	0.0	-21.0
167.0	-27.6	0.0	-27.6
168.0	-22.7	0.0	-22.7
169.0	-23.9	0.0	-23.9
170.0	-18.5	0.0	-18.5
171.0	-22.5	0.0	-22.5
172.0	-23.6	0.0	-23.6
173.0	-22.5	0.0	-22.5
174.0	-27.6	0.0	-27.6
175.0	-27.6	0.0	-27.6
176.0	-27.2	0.0	-27.2
177.0	-27.2	0.0	-27.2
178.0	-23.6	0.0	-23.6
179.0	-23.9	0.0	-23.9

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-7.9	7.0	-14.9
-9.9	-7.5	7.1	-14.6
-9.8	-7.3	7.2	-14.5
-9.7	-6.2	7.3	-13.6
-9.6	-10.2	7.4	-17.7
-9.5	-7.7	7.6	-15.3
-9.4	-3.9	7.7	-11.6
-9.3	-1.9	7.8	-9.7
-9.2	-2.5	8.0	-10.5
-9.1	-6.7	8.0	-14.7
-9.0	-17.0	8.0	-25.0
-8.9	-11.6	8.0	-19.6
-8.8	-13.7	8.0	-21.7
-8.7	-15.7	8.0	-23.7
-8.6	-14.7	8.0	-22.7
-8.5	-15.2	8.0	-23.2
-8.4	-14.5	8.0	-22.5
-8.3	-27.6	8.0	-35.6
-8.2	-15.5	8.0	-23.5
-8.1	-13.2	8.0	-21.2
-8.0	-11.4	8.0	-19.4
-7.9	-5.7	8.0	-13.7
-7.8	-4.5	8.0	-12.5
-7.7	-4.8	8.0	-12.8
-7.6	-4.4	8.0	-12.4
-7.5	-5.4	8.0	-13.4
-7.4	-4.0	8.0	-12.0
-7.3	-1.9	8.0	-9.9
-7.2	-5.1	8.0	-13.1
-7.1	-10.7	8.0	-18.7
-7.0	-0.8	7.9	-8.7
-6.9	1.4	8.0	-6.6
-6.8	2.7	8.2	-5.5
-6.7	4.1	8.3	-4.2
-6.6	4.3	8.5	-4.2
-6.5	2.5	8.7	-6.1
-6.4	-0.1	8.8	-9.0
-6.3	-1.7	9.0	-10.7
-6.2	0.4	9.2	-8.8
-6.1	1.4	9.4	-8.0
-6.0	-1.1	9.5	-10.7
-5.9	-0.8	9.7	-10.5
-5.8	0.9	9.9	-9.0
-5.7	0.3	10.1	-9.8
-5.6	-5.1	10.3	-15.4
-5.5	-5.4	10.5	-15.9
-5.4	2.2	10.7	-8.5
-5.3	2.3	10.9	-8.6
-5.2	-5.1	11.1	-16.2
-5.1	-0.3	11.3	-11.6
-5.0	5.0	11.5	-6.6
-4.9	5.3	11.7	-6.4
-4.8	1.6	12.0	-10.3
-4.7	-2.7	12.2	-14.9
-4.6	4.3	12.4	-8.1
-4.5	6.4	12.7	-6.3
-4.4	4.7	12.9	-8.3
-4.3	0.3	13.2	-12.9
-4.2	-5.9	13.4	-19.3
-4.1	1.0	13.7	-12.7

28.30 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.4		
0.1	51.9		
0.2	49.6		
0.3	45.6		
0.4	40.0		
0.5	34.3		
0.6	28.3		
0.7	29.1		
0.8	30.4		
0.9	27.7		
1.0	17.1		
1.1	19.1		
1.2	19.7		
1.3	14.1		
1.4	10.6		
1.5	10.4	24.6	-14.2
1.6	12.5	23.9	-11.4
1.7	16.5	23.2	-6.7
1.8	16.4	22.6	-6.3
1.9	13.5	22.0	-8.6
2.0	10.6	21.5	-10.9
2.1	5.3	20.9	-15.7
2.2	-3.7	20.4	-24.2
2.3	7.1	20.0	-12.8
2.4	8.6	19.5	-10.9
2.5	7.4	19.1	-11.7
2.6	4.7	18.6	-13.9
2.7	-1.5	18.2	-19.8
2.8	-9.7	17.8	-27.5
2.9	-2.4	17.4	-19.9
3.0	0.4	17.1	-16.6
3.1	4.8	16.7	-11.9
3.2	5.2	16.4	-11.2
3.3	2.7	16.0	-13.3
3.4	0.3	15.7	-15.4
3.5	-4.6	15.4	-20.0
3.6	-1.8	15.1	-16.9
3.7	5.0	14.8	-9.8
3.8	5.1	14.5	-9.4
3.9	0.1	14.2	-14.1
4.0	-7.9	13.9	-21.8
4.1	-2.9	13.7	-16.5
4.2	-5.2	13.4	-18.6
4.3	0.5	13.2	-12.7
4.4	2.8	12.9	-10.2
4.5	4.0	12.7	-8.7
4.6	4.5	12.4	-7.9
4.7	3.2	12.2	-9.0
4.8	-6.3	12.0	-18.3
4.9	-4.0	11.7	-15.7
5.0	-1.2	11.5	-12.7
5.1	-6.6	11.3	-17.9
5.2	-2.6	11.1	-13.7
5.3	-0.6	10.9	-11.5
5.4	-4.5	10.7	-15.2
5.5	-5.2	10.5	-15.7
5.6	0.1	10.3	-10.2
5.7	1.1	10.1	-9.1
5.8	1.4	9.9	-8.5
5.9	-1.1	9.7	-10.8

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	9.5	13.9	-4.5
-3.9	12.0	14.2	-2.2
-3.8	10.5	14.5	-4.0
-3.7	0.9	14.8	-13.9
-3.6	7.0	15.1	-8.1
-3.5	10.2	15.4	-5.2
-3.4	8.9	15.7	-6.8
-3.3	4.9	16.0	-11.2
-3.2	7.7	16.4	-8.6
-3.1	8.8	16.7	-7.9
-3.0	4.9	17.1	-12.1
-2.9	6.6	17.4	-10.9
-2.8	9.6	17.8	-8.2
-2.7	8.5	18.2	-9.7
-2.6	1.6	18.6	-17.0
-2.5	-4.6	19.1	-23.7
-2.4	-0.9	19.5	-20.4
-2.3	6.5	20.0	-13.5
-2.2	7.1	20.4	-13.4
-2.1	7.4	20.9	-13.6
-2.0	12.5	21.5	-9.0
-1.9	12.9	22.0	-9.2
-1.8	7.2	22.6	-15.4
-1.7	8.8	23.2	-14.4
-1.6	9.7	23.9	-14.2
-1.5	4.7	24.6	-19.9
-1.4	17.3		
-1.3	19.9		
-1.2	20.4		
-1.1	21.2		
-1.0	20.8		
-0.9	16.1		
-0.8	11.8		
-0.7	10.5		
-0.6	18.5		
-0.5	30.7		
-0.4	39.7		
-0.3	45.8		
-0.2	49.9		
-0.1	51.9		
0.0	52.4		

6.0	-10.1	9.5	-19.6
6.1	-3.1	9.4	-12.5
6.2	-0.2	9.2	-9.3
6.3	0.3	9.0	-8.7
6.4	2.0	8.8	-6.8
6.5	2.0	8.7	-6.7
6.6	0.6	8.5	-7.9
6.7	-0.4	8.3	-8.7
6.8	0.7	8.2	-7.5
6.9	1.3	8.0	-6.7
7.0	0.0	7.9	-7.9
7.1	-2.4	8.0	-10.4
7.2	-10.1	8.0	-18.1
7.3	-6.8	8.0	-14.8
7.4	-1.8	8.0	-9.8
7.5	-1.8	8.0	-9.8
7.6	-4.5	8.0	-12.5
7.7	-6.0	8.0	-14.0
7.8	-6.1	8.0	-14.1
7.9	-3.7	8.0	-11.7
8.0	-2.9	8.0	-10.9
8.1	-5.1	8.0	-13.1
8.2	-9.7	8.0	-17.7
8.3	-4.4	8.0	-12.4
8.4	-6.2	8.0	-14.2
8.5	-6.3	8.0	-14.3
8.6	-6.4	8.0	-14.4
8.7	-4.5	8.0	-12.5
8.8	-5.4	8.0	-13.4
8.9	-7.9	8.0	-15.9
9.0	-10.0	8.0	-18.0
9.1	-7.4	8.0	-15.4
9.2	-5.8	8.0	-13.8
9.3	-4.6	7.8	-12.4
9.4	-6.5	7.7	-14.2
9.5	-12.0	7.6	-19.6
9.6	-9.3	7.4	-16.8
9.7	-4.9	7.3	-12.3
9.8	-3.7	7.2	-11.0
9.9	-3.3	7.1	-10.4
10.0	-3.5	7.0	-10.5

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-8.9	-4.9	-4.0
-29.5	-8.2	-4.7	-3.5
-29.0	-11.1	-4.6	-6.6
-28.5	-9.4	-4.4	-5.1
-28.0	-10.5	-4.2	-6.4
-27.5	-11.4	-4.0	-7.4
-27.0	-14.6	-3.8	-10.8
-26.5	-11.7	-3.6	-8.2
-26.0	-13.1	-3.4	-9.7
-25.5	-11.1	-3.2	-7.9
-25.0	-7.1	-2.9	-4.1
-24.5	-6.9	-2.7	-4.2
-24.0	-6.2	-2.5	-3.7
-23.5	-16.4	-2.3	-14.1
-23.0	-19.0	-2.0	-17.0
-22.5	-9.0	-1.8	-7.2
-22.0	-5.7	-1.6	-4.1
-21.5	-5.0	-1.3	-3.7
-21.0	-13.8	-1.1	-12.7
-20.5	-5.7	-0.8	-4.9
-20.0	-6.0	-0.5	-5.5
-19.5	-1.6	-0.3	-1.3
-19.0	-1.6	0.0	-1.6
-18.5	-2.8	0.3	-3.1
-18.0	-14.4	0.6	-15.0
-17.5	-23.5	0.9	-24.4
-17.0	-15.1	1.2	-16.4
-16.5	-14.3	1.6	-15.9
-16.0	-18.3	1.9	-20.2
-15.5	-13.5	2.2	-15.8
-15.0	-9.1	2.6	-11.7
-14.5	-17.0	3.0	-19.9
-14.0	-2.1	3.3	-5.4
-13.5	-6.7	3.7	-10.5
-13.0	-9.7	4.2	-13.9
-12.5	-11.8	4.6	-16.4
-12.0	-6.5	5.0	-11.5
-11.5	-6.0	5.5	-11.5
-11.0	-13.0	6.0	-19.0
-10.5	-10.3	6.5	-16.8
-10.0	-6.5	7.0	-13.5
-9.5	-6.6	7.6	-14.2
-9.0	-2.8	8.1	-10.9
-8.5	-8.5	8.8	-17.2
-8.0	-2.4	9.4	-11.8
-7.5	-10.0	10.1	-20.2
-7.0	-2.0	10.9	-12.9
-6.5	-5.7	11.7	-17.4
-6.0	-1.1	12.5	-13.7
-5.5	-1.6	13.5	-15.1
-5.0	1.5	14.5	-13.1
-4.5	1.5	15.7	-14.2
-4.0	2.9	16.9	-14.0
-3.5	4.7	18.4	-13.7
-3.0	10.6		
-2.5	9.4		
-2.0	8.1		
-1.5	17.9		
-1.0	21.1		
-0.5	35.7		
0.0	52.4		

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.4		
0.5	38.0		
1.0	16.8		
1.5	9.7		
2.0	5.4		
2.5	10.1		
3.0	7.5		
3.5	8.5	18.4	-9.9
4.0	13.0	16.9	-4.0
4.5	-1.0	15.7	-16.6
5.0	7.3	14.5	-7.2
5.5	-12.4	13.5	-25.9
6.0	-1.8	12.5	-14.4
6.5	0.9	11.7	-10.8
7.0	-1.8	10.9	-12.7
7.5	-12.0	10.1	-22.1
8.0	-14.6	9.4	-24.0
8.5	-1.5	8.8	-10.3
9.0	-2.8	8.1	-11.0
9.5	-9.7	7.6	-17.3
10.0	-0.2	7.0	-7.2
10.5	-4.7	6.5	-11.1
11.0	-8.1	6.0	-14.1
11.5	-13.2	5.5	-18.6
12.0	-13.1	5.0	-18.1
12.5	-5.9	4.6	-10.5
13.0	-4.3	4.2	-8.4
13.5	-8.9	3.7	-12.6
14.0	-17.5	3.3	-20.8
14.5	-12.7	3.0	-15.7
15.0	-12.0	2.6	-14.6
15.5	-15.1	2.2	-17.4
16.0	-18.5	1.9	-20.3
16.5	-16.7	1.6	-18.2
17.0	-15.4	1.2	-16.7
17.5	-22.5	0.9	-23.5
18.0	-13.5	0.6	-14.1
18.5	-17.0	0.3	-17.3
19.0	-12.1	0.0	-12.1
19.5	-12.8	-0.3	-12.6
20.0	-18.1	-0.5	-17.6
20.5	-12.0	-0.8	-11.2
21.0	-26.3	-1.1	-25.3
21.5	-26.9	-1.3	-25.6
22.0	-18.6	-1.6	-17.1
22.5	-12.9	-1.8	-11.1
23.0	-16.0	-2.0	-14.0
23.5	-15.0	-2.3	-12.7
24.0	-21.6	-2.5	-19.1
24.5	-19.9	-2.7	-17.2
25.0	-15.4	-2.9	-12.4
25.5	-19.2	-3.2	-16.1
26.0	-27.6	-3.4	-24.2
26.5	-19.8	-3.6	-16.2
27.0	-20.5	-3.8	-16.7
27.5	-15.7	-4.0	-11.7
28.0	-14.3	-4.2	-10.1
28.5	-17.6	-4.4	-13.2
29.0	-17.5	-4.6	-13.0
29.5	-15.3	-4.7	-10.6
30.0	-24.6	-4.9	-19.7

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-6.5	7.0	-13.5
-9.9	-5.3	7.1	-12.4
-9.8	-7.3	7.2	-14.5
-9.7	-12.0	7.3	-19.3
-9.6	-7.5	7.4	-15.0
-9.5	-6.6	7.6	-14.2
-9.4	-10.3	7.7	-18.0
-9.3	-12.4	7.8	-20.2
-9.2	-5.1	7.9	-13.0
-9.1	-2.8	8.0	-10.8
-9.0	-2.8	8.1	-10.9
-8.9	-5.3	8.3	-13.6
-8.8	-14.1	8.4	-22.5
-8.7	-9.5	8.5	-18.0
-8.6	-5.6	8.6	-14.3
-8.5	-8.5	8.8	-17.2
-8.4	-6.1	8.9	-15.0
-8.3	-3.3	9.0	-12.3
-8.2	-1.8	9.2	-10.9
-8.1	-1.4	9.3	-10.7
-8.0	-2.4	9.4	-11.8
-7.9	-4.4	9.6	-14.0
-7.8	-10.6	9.7	-20.3
-7.7	-12.2	9.8	-22.1
-7.6	-12.1	10.0	-22.1
-7.5	-10.0	10.1	-20.2
-7.4	-4.2	10.3	-14.4
-7.3	-0.7	10.4	-11.1
-7.2	1.7	10.6	-8.8
-7.1	1.9	10.7	-8.9
-7.0	-2.0	10.9	-12.9
-6.9	-14.1	11.0	-25.2
-6.8	-0.9	11.2	-12.1
-6.7	-0.4	11.3	-11.8
-6.6	-4.8	11.5	-16.3
-6.5	-5.7	11.7	-17.4
-6.4	-2.0	11.8	-13.8
-6.3	-1.0	12.0	-13.1
-6.2	0.0	12.2	-12.2
-6.1	-0.6	12.4	-13.0
-6.0	-1.1	12.5	-13.7
-5.9	0.3	12.7	-12.4
-5.8	1.5	12.9	-11.4
-5.7	0.3	13.1	-12.8
-5.6	-0.9	13.3	-14.2
-5.5	-1.6	13.5	-15.1
-5.4	-4.1	13.7	-17.8
-5.3	0.1	13.9	-13.8
-5.2	3.6	14.1	-10.5
-5.1	3.5	14.3	-10.8
-5.0	1.5	14.5	-13.1
-4.9	-0.7	14.7	-15.4
-4.8	-0.4	15.0	-15.4
-4.7	1.2	15.2	-14.0
-4.6	2.0	15.4	-13.5
-4.5	1.5	15.7	-14.2
-4.4	3.1	15.9	-12.8
-4.3	5.7	16.2	-10.4
-4.2	7.0	16.4	-9.4
-4.1	6.3	16.7	-10.3

28.30 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.4		
0.1	51.7		
0.2	49.3		
0.3	45.2		
0.4	40.9		
0.5	38.0		
0.6	33.6		
0.7	24.4		
0.8	16.4		
0.9	17.4		
1.0	16.8		
1.1	19.0		
1.2	16.6		
1.3	7.2		
1.4	9.1		
1.5	9.7		
1.6	14.0		
1.7	14.6		
1.8	10.6		
1.9	6.2		
2.0	5.4		
2.1	6.5		
2.2	10.9		
2.3	11.6		
2.4	10.9		
2.5	10.1		
2.6	7.0		
2.7	-3.3		
2.8	-9.3		
2.9	-2.2		
3.0	7.5		
3.1	9.7		
3.2	7.5		
3.3	1.4		
3.4	4.6		
3.5	8.5	18.4	-9.9
3.6	9.7	18.1	-8.4
3.7	9.0	17.8	-8.8
3.8	9.2	17.5	-8.3
3.9	12.3	17.2	-4.9
4.0	13.0	16.9	-4.0
4.1	12.7	16.7	-4.0
4.2	12.9	16.4	-3.5
4.3	12.6	16.2	-3.6
4.4	9.1	15.9	-6.9
4.5	-1.0	15.7	-16.6
4.6	-7.0	15.4	-22.4
4.7	-1.9	15.2	-17.1
4.8	4.2	15.0	-10.8
4.9	6.8	14.7	-8.0
5.0	7.3	14.5	-7.2
5.1	6.7	14.3	-7.6
5.2	4.8	14.1	-9.3
5.3	1.3	13.9	-12.6
5.4	-1.9	13.7	-15.6
5.5	-12.4	13.5	-25.9
5.6	-5.0	13.3	-18.3
5.7	0.0	13.1	-13.1
5.8	-1.3	12.9	-14.3
5.9	-6.0	12.7	-18.7

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	2.9	16.9	-14.0
-3.9	-1.8	17.2	-19.0
-3.8	5.8	17.5	-11.7
-3.7	7.7	17.8	-10.1
-3.6	7.0	18.1	-11.0
-3.5	4.7	18.4	-13.7
-3.4	0.9		
-3.3	0.6		
-3.2	0.5		
-3.1	1.5		
-3.0	10.6		
-2.9	14.0		
-2.8	14.1		
-2.7	12.0		
-2.6	8.0		
-2.5	9.4		
-2.4	10.8		
-2.3	12.3		
-2.2	12.8		
-2.1	11.1		
-2.0	8.1		
-1.9	7.1		
-1.8	5.3		
-1.7	8.7		
-1.6	15.0		
-1.5	17.9		
-1.4	16.7		
-1.3	15.9		
-1.2	21.3		
-1.1	22.6		
-1.0	21.1		
-0.9	22.1		
-0.8	25.1		
-0.7	29.3		
-0.6	33.2		
-0.5	35.7		
-0.4	40.4		
-0.3	46.0		
-0.2	49.9		
-0.1	52.0		
0.0	52.4		

6.0	-1.8	12.5	-14.4
6.1	-1.0	12.4	-13.4
6.2	-1.6	12.2	-13.8
6.3	-2.7	12.0	-14.7
6.4	-2.0	11.8	-13.8
6.5	0.9	11.7	-10.8
6.6	3.8	11.5	-7.7
6.7	3.5	11.3	-7.9
6.8	2.2	11.2	-9.0
6.9	-0.5	11.0	-11.5
7.0	-1.8	10.9	-12.7
7.1	-6.2	10.7	-16.9
7.2	-2.1	10.6	-12.7
7.3	1.2	10.4	-9.3
7.4	-0.4	10.3	-10.6
7.5	-12.0	10.1	-22.1
7.6	-7.3	10.0	-17.3
7.7	-5.2	9.8	-15.1
7.8	-10.2	9.7	-19.9
7.9	-22.4	9.6	-31.9
8.0	-14.6	9.4	-24.0
8.1	-12.6	9.3	-21.9
8.2	-8.3	9.2	-17.5
8.3	-6.0	9.0	-15.0
8.4	-2.6	8.9	-11.5
8.5	-1.5	8.8	-10.3
8.6	-4.8	8.6	-13.4
8.7	-4.8	8.5	-13.3
8.8	-4.6	8.4	-13.0
8.9	-2.5	8.3	-10.8
9.0	-2.8	8.1	-11.0
9.1	-7.6	8.0	-15.6
9.2	-11.6	7.9	-19.5
9.3	-9.0	7.8	-16.8
9.4	-8.8	7.7	-16.5
9.5	-9.7	7.6	-17.3
9.6	-18.5	7.4	-25.9
9.7	-5.2	7.3	-12.5
9.8	-2.0	7.2	-9.2
9.9	0.0	7.1	-7.1
10.0	-0.2	7.0	-7.2

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in X-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-15.9	-2.0	-13.9
-9.9	-15.9	-2.0	-13.9
-9.8	-14.2	-2.0	-12.2
-9.7	-15.2	-2.0	-13.2
-9.6	-15.9	-2.0	-13.9
-9.5	-14.2	-2.0	-12.2
-9.4	-13.6	-2.0	-11.6
-9.3	-12.0	-2.0	-10.0
-9.2	-10.0	-2.0	-8.0
-9.1	-6.9	-2.0	-4.9
-9.0	-5.1	-2.0	-3.1
-8.9	-4.4	-2.0	-2.4
-8.8	-5.7	-2.0	-3.7
-8.7	-7.2	-2.0	-5.2
-8.6	-9.3	-2.0	-7.3
-8.5	-8.9	-2.0	-6.9
-8.4	-7.8	-2.0	-5.8
-8.3	-7.1	-2.0	-5.1
-8.2	-9.5	-2.0	-7.5
-8.1	-11.9	-2.0	-9.9
-8.0	-11.6	-2.0	-9.6
-7.9	-9.8	-2.0	-7.8
-7.8	-8.4	-2.0	-6.4
-7.7	-9.4	-2.0	-7.4
-7.6	-12.9	-2.0	-10.9
-7.5	-10.3	-2.0	-8.3
-7.4	-6.0	-2.0	-4.0
-7.3	-4.1	-2.0	-2.1
-7.2	-5.1	-2.0	-3.1
-7.1	-5.0	-2.0	-3.0
-7.0	-3.3	-2.1	-1.1
-6.9	-0.9	-2.0	1.0
-6.8	-0.7	-1.8	1.1
-6.7	-2.7	-1.7	-1.1
-6.6	-9.5	-1.5	-8.1
-6.5	-7.1	-1.3	-5.8
-6.4	-6.9	-1.2	-5.7
-6.3	-11.1	-1.0	-10.1
-6.2	-15.5	-0.8	-14.7
-6.1	-11.7	-0.6	-11.0
-6.0	-12.3	-0.5	-11.8
-5.9	-11.9	-0.3	-11.6
-5.8	-9.1	-0.1	-9.1
-5.7	-8.2	0.1	-8.3
-5.6	-13.6	0.3	-13.9
-5.5	-21.4	0.5	-21.9
-5.4	-10.1	0.7	-10.8
-5.3	-4.1	0.9	-5.0
-5.2	-2.2	1.1	-3.3
-5.1	-2.2	1.3	-3.6
-5.0	-8.1	1.5	-9.6
-4.9	-7.5	1.7	-9.3
-4.8	-2.9	2.0	-4.9
-4.7	-3.6	2.2	-5.8
-4.6	-10.3	2.4	-12.8
-4.5	-11.7	2.7	-14.4
-4.4	-13.9	2.9	-16.8
-4.3	-3.8	3.2	-7.0
-4.2	-0.2	3.4	-3.7
-4.1	-0.8	3.7	-4.5

28.30 GHz Antenna Pattern in X-pol Az LHCP

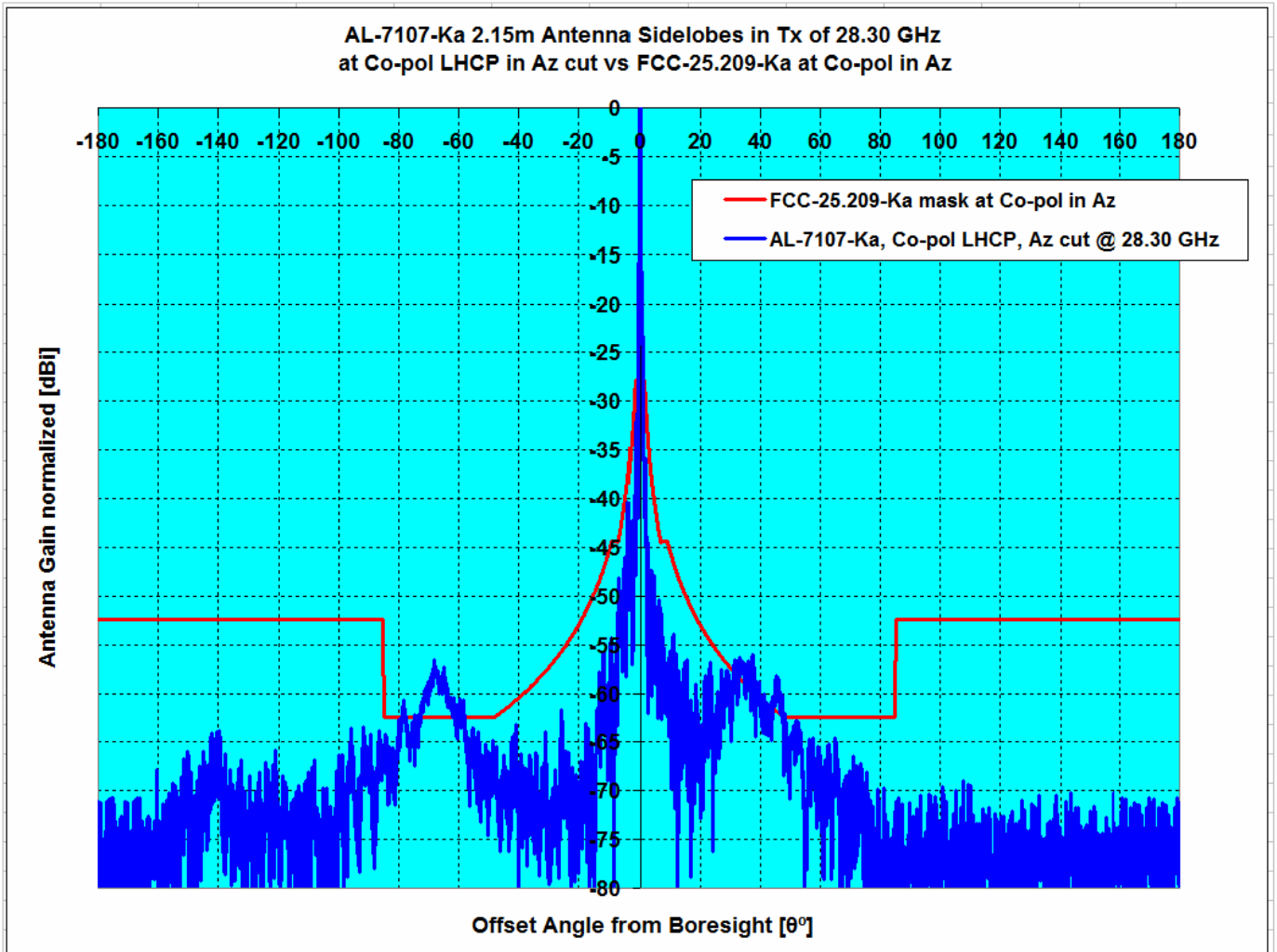
Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	17.6		
0.1	16.5		
0.2	22.3		
0.3	25.9		
0.4	26.5		
0.5	24.6		
0.6	21.0		
0.7	11.6		
0.8	9.1		
0.9	14.4		
1.0	15.9		
1.1	14.5		
1.2	8.8		
1.3	5.2		
1.4	6.4		
1.5	5.0		
1.6	5.7		
1.7	6.6		
1.8	4.6	12.6	-8.0
1.9	-1.0	12.0	-13.0
2.0	-6.4	11.5	-17.8
2.1	-3.9	10.9	-14.9
2.2	-0.6	10.4	-11.1
2.3	-1.2	10.0	-11.1
2.4	-5.3	9.5	-14.8
2.5	-5.9	9.1	-14.9
2.6	-5.6	8.6	-14.3
2.7	-6.7	8.2	-14.9
2.8	-4.5	7.8	-12.3
2.9	-5.3	7.4	-12.7
3.0	-8.9	7.1	-16.0
3.1	-5.7	6.7	-12.4
3.2	-6.1	6.4	-12.4
3.3	-8.7	6.0	-14.7
3.4	-7.1	5.7	-12.8
3.5	-8.1	5.4	-13.5
3.6	-9.6	5.1	-14.7
3.7	-3.0	4.8	-7.8
3.8	-4.3	4.5	-8.8
3.9	-12.7	4.2	-16.9
4.0	-13.7	3.9	-17.7
4.1	-7.5	3.7	-11.2
4.2	-10.3	3.4	-13.7
4.3	-14.6	3.2	-17.7
4.4	-9.5	2.9	-12.4
4.5	-9.7	2.7	-12.4
4.6	-9.2	2.4	-11.6
4.7	-7.6	2.2	-9.8
4.8	-7.8	2.0	-9.8
4.9	-8.2	1.7	-9.9
5.0	-7.3	1.5	-8.8
5.1	-10.2	1.3	-11.5
5.2	-12.6	1.1	-13.7
5.3	-13.1	0.9	-14.0
5.4	-14.1	0.7	-14.8
5.5	-11.9	0.5	-12.4
5.6	-10.6	0.3	-10.9
5.7	-10.7	0.1	-10.8
5.8	-10.0	-0.1	-9.9
5.9	-9.7	-0.3	-9.4

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-7.2	3.9	-11.1
-3.9	-10.8	4.2	-15.0
-3.8	-5.1	4.5	-9.6
-3.7	-4.8	4.8	-9.6
-3.6	-3.7	5.1	-8.8
-3.5	-2.1	5.4	-7.5
-3.4	-2.7	5.7	-8.4
-3.3	-6.1	6.0	-12.2
-3.2	-6.2	6.4	-12.6
-3.1	-0.7	6.7	-7.4
-3.0	-2.1	7.1	-9.1
-2.9	-11.9	7.4	-19.4
-2.8	-7.9	7.8	-15.7
-2.7	-5.8	8.2	-14.0
-2.6	-8.0	8.6	-16.6
-2.5	-7.8	9.1	-16.8
-2.4	-12.0	9.5	-21.5
-2.3	-9.2	10.0	-19.2
-2.2	-3.7	10.4	-14.1
-2.1	-7.8	10.9	-18.7
-2.0	-6.2	11.5	-17.7
-1.9	-3.6	12.0	-15.7
-1.8	-9.9	12.6	-22.5
-1.7	2.3		
-1.6	6.1		
-1.5	6.4		
-1.4	5.5		
-1.3	5.5		
-1.2	9.1		
-1.1	12.7		
-1.0	15.1		
-0.9	14.9		
-0.8	8.5		
-0.7	15.8		
-0.6	24.9		
-0.5	29.3		
-0.4	31.0		
-0.3	30.5		
-0.2	28.6		
-0.1	23.9		
0.0	17.6		

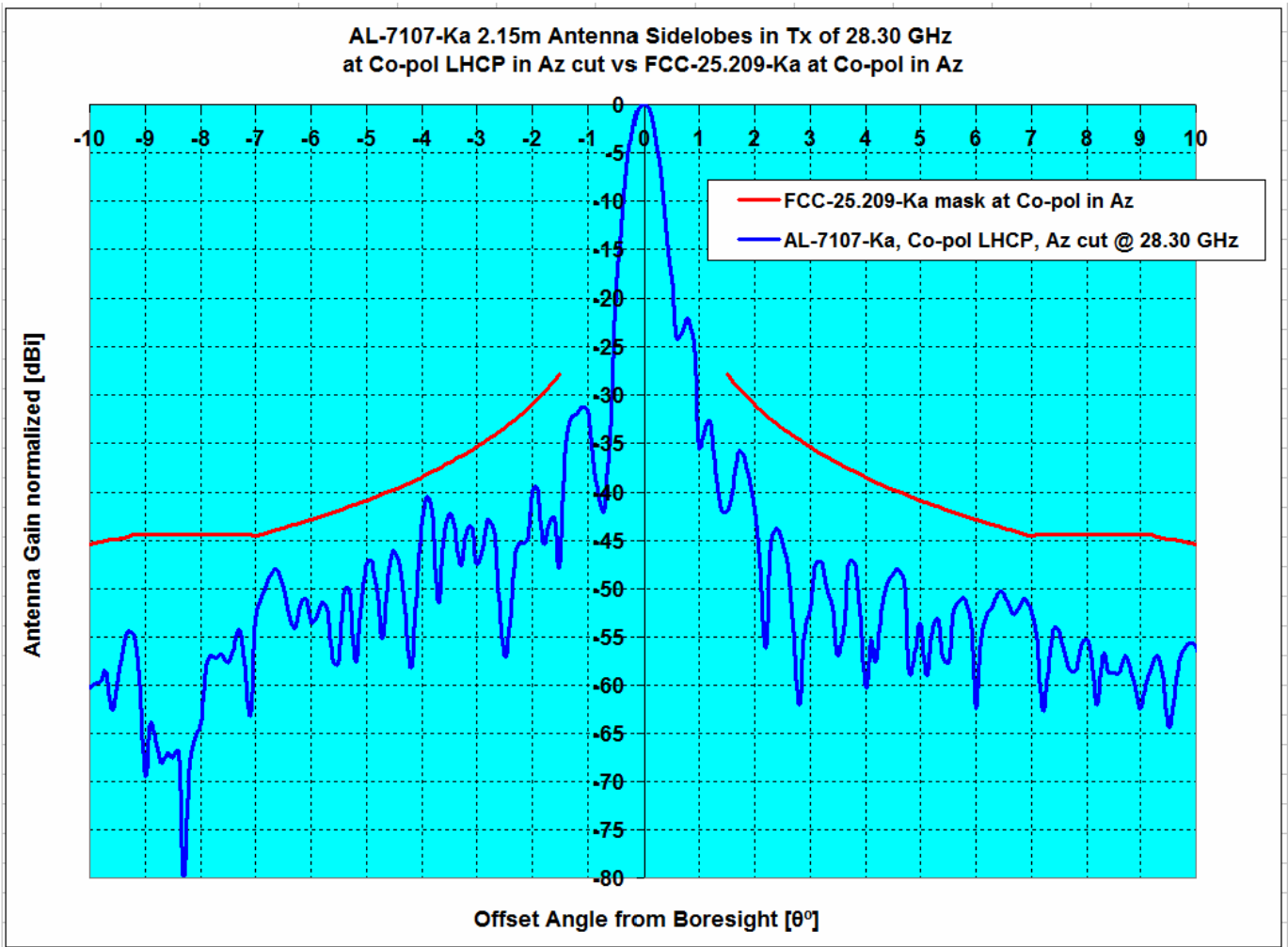
6.0	-11.5	-0.5	-11.0
6.1	-13.7	-0.6	-13.0
6.2	-11.1	-0.8	-10.3
6.3	-8.8	-1.0	-7.9
6.4	-9.2	-1.2	-8.0
6.5	-13.6	-1.3	-12.3
6.6	-17.9	-1.5	-16.4
6.7	-20.2	-1.7	-18.5
6.8	-18.2	-1.8	-16.4
6.9	-18.3	-2.0	-16.3
7.0	-12.0	-2.1	-9.8
7.1	-8.4	-2.0	-6.4
7.2	-8.3	-2.0	-6.3
7.3	-8.1	-2.0	-6.1
7.4	-12.2	-2.0	-10.2
7.5	-13.0	-2.0	-11.0
7.6	-13.6	-2.0	-11.6
7.7	-17.3	-2.0	-15.3
7.8	-18.7	-2.0	-16.7
7.9	-8.7	-2.0	-6.7
8.0	-6.2	-2.0	-4.2
8.1	-7.1	-2.0	-5.1
8.2	-10.4	-2.0	-8.4
8.3	-11.8	-2.0	-9.8
8.4	-12.6	-2.0	-10.6
8.5	-12.7	-2.0	-10.7
8.6	-11.7	-2.0	-9.7
8.7	-16.3	-2.0	-14.3
8.8	-11.0	-2.0	-9.0
8.9	-7.4	-2.0	-5.4
9.0	-7.6	-2.0	-5.6
9.1	-9.7	-2.0	-7.7
9.2	-14.1	-2.0	-12.1
9.3	-18.5	-2.0	-16.5
9.4	-17.1	-2.0	-15.1
9.5	-15.4	-2.0	-13.4
9.6	-14.7	-2.0	-12.7
9.7	-14.3	-2.0	-12.3
9.8	-13.7	-2.0	-11.7
9.9	-17.6	-2.0	-15.6
10.0	-26.1	-2.0	-24.1

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth LHCP



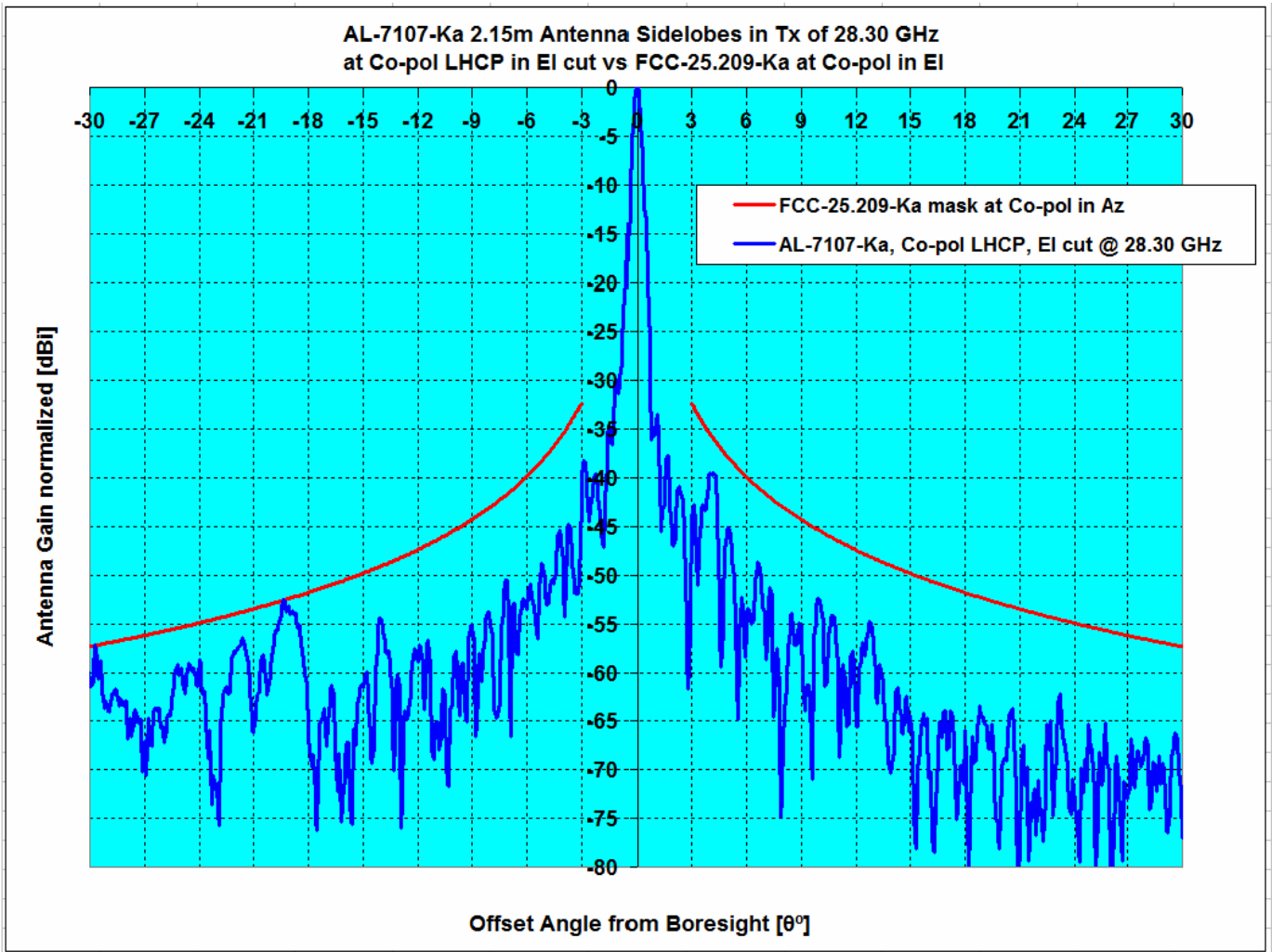
Description	Plane, CirP Type	Frequency GHz	Ant. Gain dBi	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , LHCP	28.30	52.43	-2.23	5.85	0.00%	6.94%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth LHCP



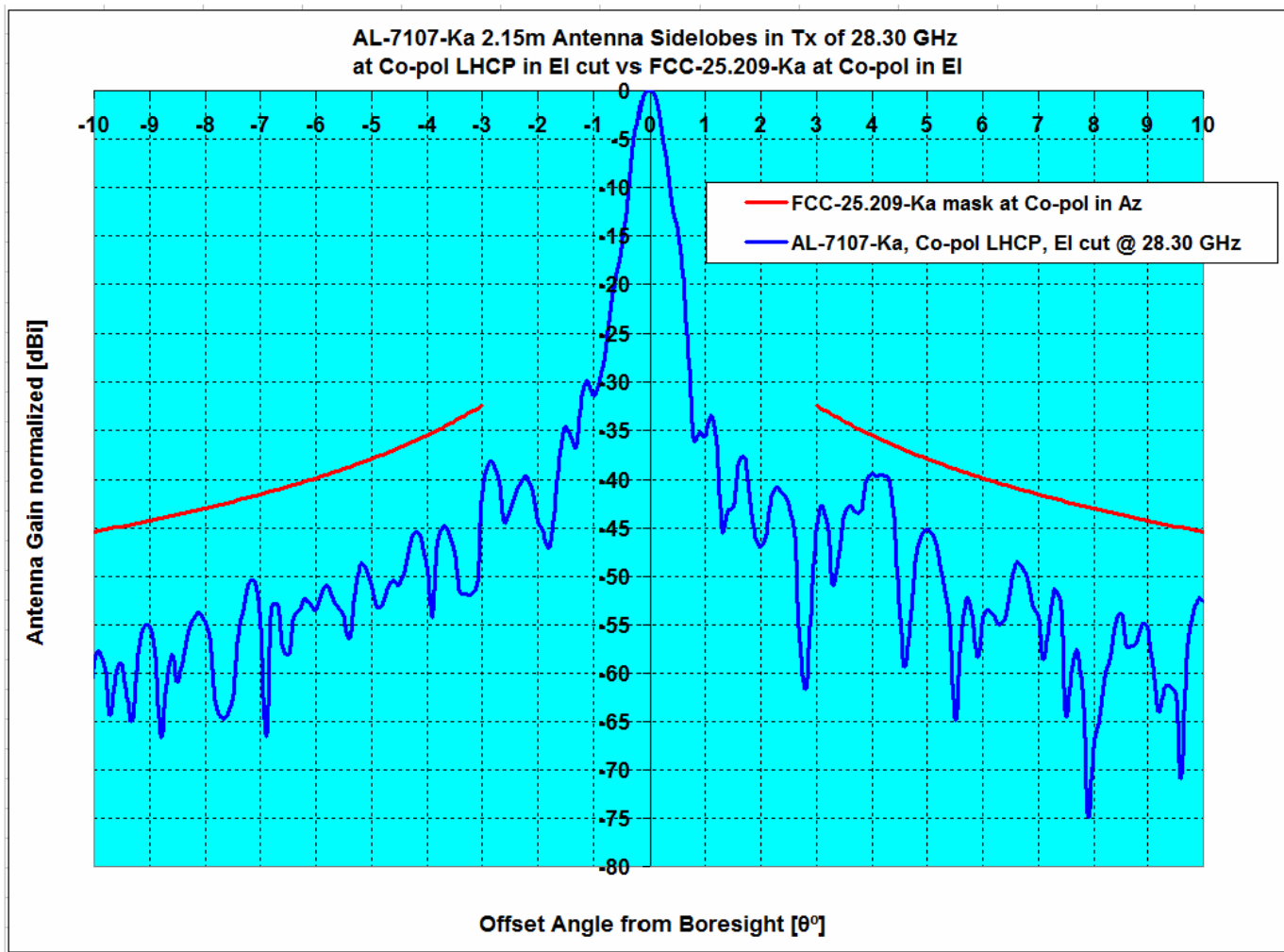
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , LHCP	28.30	52.43	-2.23	5.85	0.00%	6.94%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation LHCP



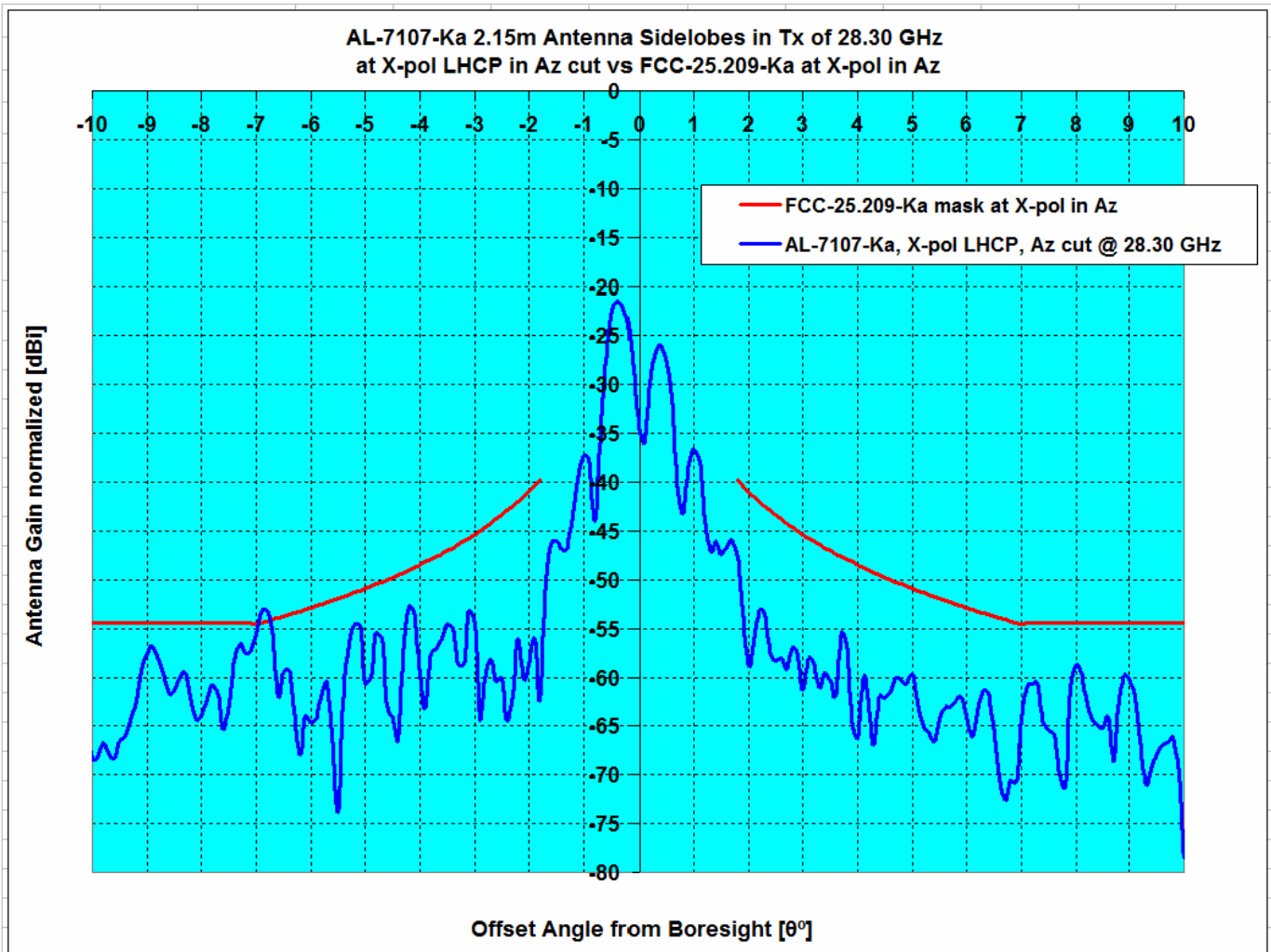
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , LHCP	28.30	52.43	-3.53	0.07	0.00%	0.18%

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , LHCP	28.30	52.43	-3.53	0.07	0.00%	0.18%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, X-pol, Azimuth LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7107-Ka	Az , LHCP	28.30	52.43	1.06	1.06	1.89%	1.20%

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-23.3	0.0	-23.3
-178.0	-25.3	0.0	-25.3
-177.0	-18.7	0.0	-18.7
-176.0	-27.6	0.0	-27.6
-175.0	-18.5	0.0	-18.5
-174.0	-27.5	0.0	-27.5
-173.0	-21.8	0.0	-21.8
-172.0	-24.4	0.0	-24.4
-171.0	-18.7	0.0	-18.7
-170.0	-27.6	0.0	-27.6
-169.0	-25.5	0.0	-25.5
-168.0	-19.5	0.0	-19.5
-167.0	-20.6	0.0	-20.6
-166.0	-20.1	0.0	-20.1
-165.0	-25.7	0.0	-25.7
-164.0	-27.6	0.0	-27.6
-163.0	-26.7	0.0	-26.7
-162.0	-22.4	0.0	-22.4
-161.0	-22.7	0.0	-22.7
-160.0	-22.7	0.0	-22.7
-159.0	-25.5	0.0	-25.5
-158.0	-22.9	0.0	-22.9
-157.0	-27.6	0.0	-27.6
-156.0	-23.9	0.0	-23.9
-155.0	-16.8	0.0	-16.8
-154.0	-23.9	0.0	-23.9
-153.0	-26.7	0.0	-26.7
-152.0	-18.6	0.0	-18.6
-151.0	-14.8	0.0	-14.8
-150.0	-13.9	0.0	-13.9
-149.0	-15.8	0.0	-15.8
-148.0	-27.6	0.0	-27.6
-147.0	-18.7	0.0	-18.7
-146.0	-17.5	0.0	-17.5
-145.0	-21.6	0.0	-21.6
-144.0	-17.3	0.0	-17.3
-143.0	-18.9	0.0	-18.9
-142.0	-16.5	0.0	-16.5
-141.0	-12.3	0.0	-12.3
-140.0	-15.7	0.0	-15.7
-139.0	-22.2	0.0	-22.2
-138.0	-24.1	0.0	-24.1
-137.0	-17.5	0.0	-17.5
-136.0	-20.8	0.0	-20.8
-135.0	-20.9	0.0	-20.9
-134.0	-25.3	0.0	-25.3
-133.0	-25.5	0.0	-25.5
-132.0	-27.6	0.0	-27.6
-131.0	-27.6	0.0	-27.6
-130.0	-23.4	0.0	-23.4
-129.0	-19.0	0.0	-19.0
-128.0	-27.6	0.0	-27.6
-127.0	-23.5	0.0	-23.5
-126.0	-18.5	0.0	-18.5
-125.0	-27.6	0.0	-27.6
-124.0	-18.9	0.0	-18.9
-123.0	-27.0	0.0	-27.0
-122.0	-16.5	0.0	-16.5
-121.0	-20.3	0.0	-20.3
-120.0	-23.3	0.0	-23.3

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.4		
1.0	17.1		
2.0	10.6	21.5	-10.9
3.0	0.4	17.1	-16.6
4.0	-7.9	13.9	-21.8
5.0	-1.2	11.5	-12.7
6.0	-10.1	9.5	-19.6
7.0	0.0	7.9	-7.9
8.0	-2.9	8.0	-10.9
9.0	-10.0	8.0	-18.0
10.0	-3.5	7.0	-10.5
11.0	-1.5	6.0	-7.5
12.0	-3.5	5.0	-8.5
13.0	-5.5	4.2	-9.7
14.0	-13.6	3.3	-17.0
15.0	-8.0	2.6	-10.6
16.0	-16.4	1.9	-18.3
17.0	-26.4	1.2	-27.6
18.0	-14.3	0.6	-14.9
19.0	-8.3	0.0	-8.3
20.0	-16.9	-0.5	-16.4
21.0	-18.1	-1.1	-17.1
22.0	-5.9	-1.6	-4.3
23.0	-8.0	-2.0	-6.0
24.0	-10.2	-2.5	-7.7
25.0	-14.9	-2.9	-12.0
26.0	-8.9	-3.4	-5.5
27.0	-7.3	-3.8	-3.5
28.0	-8.6	-4.2	-4.4
29.0	-7.5	-4.6	-2.9
30.0	-8.4	-4.9	-3.4
31.0	-6.4	-5.3	-1.1
32.0	-5.4	-5.6	0.2
33.0	-3.9	-6.0	2.1
34.0	-5.5	-6.3	0.8
35.0	-8.1	-6.6	-1.5
36.0	-4.5	-6.9	2.4
37.0	-7.6	-7.2	-0.4
38.0	-5.0	-7.5	2.5
39.0	-7.1	-7.8	0.7
40.0	-8.0	-8.1	0.1
41.0	-10.5	-8.3	-2.2
42.0	-9.4	-8.6	-0.9
43.0	-11.2	-8.8	-2.3
44.0	-10.3	-9.1	-1.2
45.0	-8.9	-9.3	0.4
46.0	-6.7	-9.6	2.8
47.0	-9.2	-9.8	0.6
48.0	-15.2	-10.0	-5.1
49.0	-13.9	-10.0	-3.9
50.0	-12.6	-10.0	-2.6
51.0	-10.9	-10.0	-0.9
52.0	-10.3	-10.0	-0.3
53.0	-13.6	-10.0	-3.6
54.0	-14.2	-10.0	-4.2
55.0	-22.1	-10.0	-12.1
56.0	-17.3	-10.0	-7.3
57.0	-15.4	-10.0	-5.4
58.0	-15.6	-10.0	-5.6
59.0	-19.4	-10.0	-9.4

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-20.2	0.0	-20.2
-118.0	-22.4	0.0	-22.4
-117.0	-21.3	0.0	-21.3
-116.0	-22.3	0.0	-22.3
-115.0	-20.2	0.0	-20.2
-114.0	-19.3	0.0	-19.3
-113.0	-27.3	0.0	-27.3
-112.0	-25.8	0.0	-25.8
-111.0	-16.7	0.0	-16.7
-110.0	-19.2	0.0	-19.2
-109.0	-18.1	0.0	-18.1
-108.0	-14.4	0.0	-14.4
-107.0	-22.5	0.0	-22.5
-106.0	-26.4	0.0	-26.4
-105.0	-22.3	0.0	-22.3
-104.0	-22.2	0.0	-22.2
-103.0	-23.8	0.0	-23.8
-102.0	-22.4	0.0	-22.4
-101.0	-27.3	0.0	-27.3
-100.0	-16.1	0.0	-16.1
-99.0	-15.0	0.0	-15.0
-98.0	-17.8	0.0	-17.8
-97.0	-19.5	0.0	-19.5
-96.0	-11.1	0.0	-11.1
-95.0	-14.1	0.0	-14.1
-94.0	-17.9	0.0	-17.9
-93.0	-19.2	0.0	-19.2
-92.0	-15.9	0.0	-15.9
-91.0	-14.9	0.0	-14.9
-90.0	-14.9	0.0	-14.9
-89.0	-15.3	0.0	-15.3
-88.0	-20.4	0.0	-20.4
-87.0	-13.3	0.0	-13.3
-86.0	-14.4	0.0	-14.4
-85.0	-14.4	-10.0	-4.4
-84.0	-15.1	-10.0	-5.1
-83.0	-14.6	-10.0	-4.6
-82.0	-13.1	-10.0	-3.1
-81.0	-16.5	-10.0	-6.5
-80.0	-10.3	-10.0	-0.3
-79.0	-10.0	-10.0	0.0
-78.0	-9.9	-10.0	0.1
-77.0	-12.9	-10.0	-2.9
-76.0	-12.9	-10.0	-2.9
-75.0	-11.4	-10.0	-1.4
-74.0	-11.7	-10.0	-1.7
-73.0	-11.0	-10.0	-1.0
-72.0	-8.9	-10.0	1.1
-71.0	-8.3	-10.0	1.7
-70.0	-6.4	-10.0	3.6
-69.0	-6.4	-10.0	3.6
-68.0	-4.3	-10.0	5.7
-67.0	-6.6	-10.0	3.4
-66.0	-6.1	-10.0	3.9
-65.0	-7.0	-10.0	3.0
-64.0	-7.3	-10.0	2.7
-63.0	-8.4	-10.0	1.6
-62.0	-9.1	-10.0	0.9
-61.0	-9.8	-10.0	0.2
-60.0	-8.9	-10.0	1.1
-59.0	-10.2	-10.0	-0.2
-58.0	-11.1	-10.0	-1.1
-57.0	-14.7	-10.0	-4.7

60.0	-17.8	-10.0	-7.8
61.0	-26.4	-10.0	-16.4
62.0	-20.4	-10.0	-10.4
63.0	-12.8	-10.0	-2.8
64.0	-19.5	-10.0	-9.5
65.0	-12.2	-10.0	-2.2
66.0	-20.0	-10.0	-10.0
67.0	-18.8	-10.0	-8.8
68.0	-25.8	-10.0	-15.8
69.0	-16.0	-10.0	-6.0
70.0	-24.6	-10.0	-14.6
71.0	-25.0	-10.0	-15.0
72.0	-23.0	-10.0	-13.0
73.0	-15.9	-10.0	-5.9
74.0	-20.0	-10.0	-10.0
75.0	-19.5	-10.0	-9.5
76.0	-21.6	-10.0	-11.6
77.0	-20.9	-10.0	-10.9
78.0	-27.6	-10.0	-17.6
79.0	-23.2	-10.0	-13.2
80.0	-27.0	-10.0	-17.0
81.0	-26.4	-10.0	-16.4
82.0	-22.3	-10.0	-12.3
83.0	-27.5	-10.0	-17.5
84.0	-22.5	-10.0	-12.5
85.0	-27.6	-10.0	-17.6
86.0	-18.4	0.0	-18.4
87.0	-25.3	0.0	-25.3
88.0	-23.9	0.0	-23.9
89.0	-27.6	0.0	-27.6
90.0	-23.1	0.0	-23.1
91.0	-22.6	0.0	-22.6
92.0	-25.5	0.0	-25.5
93.0	-27.6	0.0	-27.6
94.0	-27.6	0.0	-27.6
95.0	-21.9	0.0	-21.9
96.0	-20.2	0.0	-20.2
97.0	-21.6	0.0	-21.6
98.0	-19.0	0.0	-19.0
99.0	-23.9	0.0	-23.9
100.0	-27.2	0.0	-27.2
101.0	-22.1	0.0	-22.1
102.0	-18.8	0.0	-18.8
103.0	-23.2	0.0	-23.2
104.0	-27.6	0.0	-27.6
105.0	-27.6	0.0	-27.6
106.0	-27.6	0.0	-27.6
107.0	-21.8	0.0	-21.8
108.0	-21.0	0.0	-21.0
109.0	-23.5	0.0	-23.5
110.0	-27.6	0.0	-27.6
111.0	-20.2	0.0	-20.2
112.0	-27.6	0.0	-27.6
113.0	-27.6	0.0	-27.6
114.0	-21.8	0.0	-21.8
115.0	-21.3	0.0	-21.3
116.0	-24.5	0.0	-24.5
117.0	-25.8	0.0	-25.8
118.0	-23.8	0.0	-23.8
119.0	-22.4	0.0	-22.4
120.0	-23.4	0.0	-23.4
121.0	-20.5	0.0	-20.5
122.0	-26.9	0.0	-26.9

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-15.3	-10.0	-5.3
-55.0	-14.7	-10.0	-4.7
-54.0	-16.3	-10.0	-6.3
-53.0	-14.3	-10.0	-4.3
-52.0	-18.2	-10.0	-8.2
-51.0	-15.7	-10.0	-5.7
-50.0	-18.2	-10.0	-8.2
-49.0	-14.3	-10.0	-4.3
-48.0	-14.6	-10.0	-4.6
-47.0	-20.8	-9.8	-11.0
-46.0	-17.9	-9.6	-8.3
-45.0	-19.1	-9.3	-9.8
-44.0	-16.5	-9.1	-7.5
-43.0	-17.2	-8.8	-8.3
-42.0	-16.8	-8.6	-8.2
-41.0	-10.7	-8.3	-2.4
-40.0	-27.6	-8.1	-19.5
-39.0	-17.2	-7.8	-9.4
-38.0	-16.3	-7.5	-8.8
-37.0	-20.2	-7.2	-13.0
-36.0	-15.6	-6.9	-8.7
-35.0	-22.8	-6.6	-16.2
-34.0	-18.4	-6.3	-12.1
-33.0	-25.3	-6.0	-19.3
-32.0	-16.2	-5.6	-10.5
-31.0	-16.0	-5.3	-10.8
-30.0	-20.2	-4.9	-15.2
-29.0	-20.2	-4.6	-15.7
-28.0	-19.2	-4.2	-15.1
-27.0	-21.7	-3.8	-17.9
-26.0	-11.8	-3.4	-8.4
-25.0	-18.8	-2.9	-15.9
-24.0	-17.6	-2.5	-15.1
-23.0	-19.8	-2.0	-17.7
-22.0	-17.5	-1.6	-15.9
-21.0	-22.7	-1.1	-21.6
-20.0	-24.2	-0.5	-23.7
-19.0	-17.9	0.0	-17.9
-18.0	-17.0	0.6	-17.6
-17.0	-14.6	1.2	-15.8
-16.0	-24.2	1.9	-26.1
-15.0	-27.6	2.6	-30.2
-14.0	-10.3	3.3	-13.6
-13.0	-14.8	4.2	-19.0
-12.0	-7.3	5.0	-12.3
-11.0	-10.9	6.0	-16.9
-10.0	-7.9	7.0	-14.9
-9.0	-17.0	8.0	-25.0
-8.0	-11.4	8.0	-19.4
-7.0	-0.8	7.9	-8.7
-6.0	-1.1	9.5	-10.7
-5.0	5.0	11.5	-6.6
-4.0	9.5	13.9	-4.5
-3.0	4.9	17.1	-12.1
-2.0	12.5	21.5	-9.0
-1.0	20.8		
0.0	52.4		

123.0	-21.4	0.0	-21.4
124.0	-27.6	0.0	-27.6
125.0	-21.1	0.0	-21.1
126.0	-27.6	0.0	-27.6
127.0	-27.6	0.0	-27.6
128.0	-27.6	0.0	-27.6
129.0	-23.1	0.0	-23.1
130.0	-23.0	0.0	-23.0
131.0	-19.2	0.0	-19.2
132.0	-27.6	0.0	-27.6
133.0	-25.8	0.0	-25.8
134.0	-26.2	0.0	-26.2
135.0	-22.5	0.0	-22.5
136.0	-22.1	0.0	-22.1
137.0	-25.2	0.0	-25.2
138.0	-22.2	0.0	-22.2
139.0	-27.6	0.0	-27.6
140.0	-24.7	0.0	-24.7
141.0	-24.0	0.0	-24.0
142.0	-27.2	0.0	-27.2
143.0	-26.3	0.0	-26.3
144.0	-23.6	0.0	-23.6
145.0	-26.1	0.0	-26.1
146.0	-27.6	0.0	-27.6
147.0	-27.6	0.0	-27.6
148.0	-26.3	0.0	-26.3
149.0	-23.5	0.0	-23.5
150.0	-25.5	0.0	-25.5
151.0	-27.6	0.0	-27.6
152.0	-27.6	0.0	-27.6
153.0	-22.1	0.0	-22.1
154.0	-27.6	0.0	-27.6
155.0	-27.6	0.0	-27.6
156.0	-26.4	0.0	-26.4
157.0	-27.6	0.0	-27.6
158.0	-27.6	0.0	-27.6
159.0	-23.9	0.0	-23.9
160.0	-22.1	0.0	-22.1
161.0	-19.4	0.0	-19.4
162.0	-18.4	0.0	-18.4
163.0	-25.6	0.0	-25.6
164.0	-20.1	0.0	-20.1
165.0	-23.4	0.0	-23.4
166.0	-21.0	0.0	-21.0
167.0	-27.6	0.0	-27.6
168.0	-22.7	0.0	-22.7
169.0	-23.9	0.0	-23.9
170.0	-18.5	0.0	-18.5
171.0	-22.5	0.0	-22.5
172.0	-23.6	0.0	-23.6
173.0	-22.5	0.0	-22.5
174.0	-27.6	0.0	-27.6
175.0	-27.6	0.0	-27.6
176.0	-27.2	0.0	-27.2
177.0	-27.2	0.0	-27.2
178.0	-23.6	0.0	-23.6
179.0	-23.9	0.0	-23.9

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-7.6	7.0	-14.6
-9.9	-5.8	7.1	-12.9
-9.8	-5.4	7.2	-12.6
-9.7	-5.6	7.3	-12.9
-9.6	-7.9	7.4	-15.3
-9.5	-7.5	7.6	-15.0
-9.4	-4.7	7.7	-12.4
-9.3	-3.2	7.8	-11.0
-9.2	-3.7	8.0	-11.7
-9.1	-11.3	8.0	-19.3
-9.0	-7.9	8.0	-15.9
-8.9	-4.8	8.0	-12.8
-8.8	-4.8	8.0	-12.8
-8.7	-7.1	8.0	-15.1
-8.6	-7.1	8.0	-15.1
-8.5	-3.9	8.0	-11.9
-8.4	-3.3	8.0	-11.3
-8.3	-3.7	8.0	-11.7
-8.2	-3.1	8.0	-11.1
-8.1	-4.1	8.0	-12.1
-8.0	-4.5	8.0	-12.5
-7.9	-6.3	8.0	-14.3
-7.8	-6.2	8.0	-14.2
-7.7	-4.6	8.0	-12.6
-7.6	-3.4	8.0	-11.4
-7.5	-6.4	8.0	-14.4
-7.4	-9.0	8.0	-17.0
-7.3	-4.0	8.0	-12.0
-7.2	-9.0	8.0	-17.0
-7.1	-5.1	8.0	-13.1
-7.0	2.0	7.9	-5.9
-6.9	4.7	8.0	-3.4
-6.8	5.7	8.2	-2.5
-6.7	6.2	8.3	-2.1
-6.6	5.1	8.5	-3.4
-6.5	3.3	8.7	-5.4
-6.4	-0.5	8.8	-9.4
-6.3	-3.3	9.0	-12.3
-6.2	-0.9	9.2	-10.1
-6.1	-1.0	9.4	-10.4
-6.0	-4.3	9.5	-13.8
-5.9	-3.7	9.7	-13.5
-5.8	-1.3	9.9	-11.2
-5.7	-1.0	10.1	-11.1
-5.6	-5.5	10.3	-15.8
-5.5	-7.3	10.5	-17.8
-5.4	-1.1	10.7	-11.8
-5.3	-1.2	10.9	-12.1
-5.2	-4.1	11.1	-15.2
-5.1	2.4	11.3	-8.9
-5.0	3.7	11.5	-7.8
-4.9	1.0	11.7	-10.8
-4.8	-5.1	12.0	-17.1
-4.7	-1.6	12.2	-13.8
-4.6	4.5	12.4	-8.0
-4.5	6.5	12.7	-6.2
-4.4	4.6	12.9	-8.3
-4.3	-3.9	13.2	-17.1
-4.2	-6.0	13.4	-19.4
-4.1	5.3	13.7	-8.4

28.30 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.5		
0.1	51.7		
0.2	49.0		
0.3	44.4		
0.4	38.4		
0.5	32.9		
0.6	27.8		
0.7	28.5		
0.8	29.2		
0.9	25.2		
1.0	9.5		
1.1	19.5		
1.2	19.3		
1.3	9.4		
1.4	9.2		
1.5	7.1	24.6	-17.5
1.6	12.4	23.9	-11.5
1.7	16.2	23.2	-7.0
1.8	15.0	22.6	-7.6
1.9	10.9	22.0	-11.1
2.0	10.9	21.5	-10.6
2.1	9.4	20.9	-11.6
2.2	2.6	20.4	-17.9
2.3	6.0	20.0	-13.9
2.4	7.7	19.5	-11.8
2.5	7.9	19.1	-11.1
2.6	6.9	18.6	-11.7
2.7	1.3	18.2	-16.9
2.8	-2.8	17.8	-20.6
2.9	-0.8	17.4	-18.2
3.0	2.0	17.1	-15.0
3.1	5.6	16.7	-11.1
3.2	6.0	16.4	-10.4
3.3	2.8	16.0	-13.3
3.4	-0.4	15.7	-16.1
3.5	-7.4	15.4	-22.8
3.6	0.9	15.1	-14.2
3.7	4.8	14.8	-10.0
3.8	4.0	14.5	-10.5
3.9	-5.4	14.2	-19.6
4.0	-7.8	13.9	-21.8
4.1	-3.9	13.7	-17.6
4.2	-5.9	13.4	-19.4
4.3	1.3	13.2	-11.9
4.4	3.7	12.9	-9.2
4.5	4.8	12.7	-7.9
4.6	5.3	12.4	-7.1
4.7	2.7	12.2	-9.5
4.8	-6.1	12.0	-18.1
4.9	-5.5	11.7	-17.2
5.0	-4.7	11.5	-16.3
5.1	-5.9	11.3	-17.2
5.2	-1.6	11.1	-12.7
5.3	-2.5	10.9	-13.4
5.4	-9.1	10.7	-19.8
5.5	-4.3	10.5	-14.8
5.6	0.9	10.3	-9.4
5.7	1.5	10.1	-8.6
5.8	0.8	9.9	-9.1
5.9	-2.0	9.7	-11.7

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	10.4	13.9	-3.5
-3.9	11.5	14.2	-2.7
-3.8	9.6	14.5	-4.9
-3.7	0.5	14.8	-14.3
-3.6	7.7	15.1	-7.4
-3.5	9.9	15.4	-5.5
-3.4	7.7	15.7	-8.0
-3.3	2.3	16.0	-13.7
-3.2	7.0	16.4	-9.4
-3.1	7.9	16.7	-8.8
-3.0	6.8	17.1	-10.3
-2.9	9.1	17.4	-8.3
-2.8	10.4	17.8	-7.4
-2.7	8.1	18.2	-10.2
-2.6	-2.0	18.6	-20.6
-2.5	-4.2	19.1	-23.3
-2.4	-2.6	19.5	-22.1
-2.3	4.6	20.0	-15.3
-2.2	5.7	20.4	-14.8
-2.1	8.7	20.9	-12.2
-2.0	12.3	21.5	-9.1
-1.9	12.1	22.0	-9.9
-1.8	6.3	22.6	-16.3
-1.7	9.8	23.2	-13.4
-1.6	10.3	23.9	-13.6
-1.5	4.3	24.6	-20.3
-1.4	15.9		
-1.3	18.2		
-1.2	18.6		
-1.1	19.3		
-1.0	18.1		
-0.9	17.6		
-0.8	21.2		
-0.7	20.3		
-0.6	21.9		
-0.5	33.9		
-0.4	41.4		
-0.3	47.0		
-0.2	50.5		
-0.1	52.2		
0.0	52.5		

6.0	-9.2	9.5	-18.7
6.1	-3.5	9.4	-12.9
6.2	0.9	9.2	-8.3
6.3	1.4	9.0	-7.6
6.4	1.9	8.8	-7.0
6.5	0.8	8.7	-7.8
6.6	-0.7	8.5	-9.2
6.7	-0.8	8.3	-9.1
6.8	0.1	8.2	-8.1
6.9	0.5	8.0	-7.5
7.0	-0.4	7.9	-8.3
7.1	-3.0	8.0	-11.0
7.2	-13.3	8.0	-21.3
7.3	-8.3	8.0	-16.3
7.4	-4.0	8.0	-12.0
7.5	-4.6	8.0	-12.6
7.6	-6.5	8.0	-14.5
7.7	-4.5	8.0	-12.5
7.8	-2.2	8.0	-10.2
7.9	-1.5	8.0	-9.5
8.0	-1.8	8.0	-9.8
8.1	-3.8	8.0	-11.8
8.2	-11.1	8.0	-19.1
8.3	-7.2	8.0	-15.2
8.4	-4.4	8.0	-12.4
8.5	-4.2	8.0	-12.2
8.6	-5.0	8.0	-13.0
8.7	-5.0	8.0	-13.0
8.8	-6.4	8.0	-14.4
8.9	-7.9	8.0	-15.9
9.0	-9.1	8.0	-17.1
9.1	-9.8	8.0	-17.8
9.2	-10.7	8.0	-18.7
9.3	-17.4	7.8	-25.2
9.4	-14.6	7.7	-22.3
9.5	-6.6	7.6	-14.2
9.6	-5.1	7.4	-12.6
9.7	-4.8	7.3	-12.1
9.8	-5.0	7.2	-12.2
9.9	-5.4	7.1	-12.5
10.0	-5.8	7.0	-12.8

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-30.0	-8.9	-4.9	-4.0
-29.5	-8.2	-4.7	-3.5
-29.0	-11.1	-4.6	-6.6
-28.5	-9.4	-4.4	-5.1
-28.0	-10.5	-4.2	-6.4
-27.5	-11.4	-4.0	-7.4
-27.0	-14.6	-3.8	-10.8
-26.5	-11.7	-3.6	-8.2
-26.0	-13.1	-3.4	-9.7
-25.5	-11.1	-3.2	-7.9
-25.0	-7.1	-2.9	-4.1
-24.5	-6.9	-2.7	-4.2
-24.0	-6.2	-2.5	-3.7
-23.5	-16.4	-2.3	-14.1
-23.0	-19.0	-2.0	-17.0
-22.5	-9.0	-1.8	-7.2
-22.0	-5.7	-1.6	-4.1
-21.5	-5.0	-1.3	-3.7
-21.0	-13.8	-1.1	-12.7
-20.5	-5.7	-0.8	-4.9
-20.0	-6.0	-0.5	-5.5
-19.5	-1.6	-0.3	-1.3
-19.0	-1.6	0.0	-1.6
-18.5	-2.8	0.3	-3.1
-18.0	-14.4	0.6	-15.0
-17.5	-23.5	0.9	-24.4
-17.0	-15.1	1.2	-16.4
-16.5	-14.3	1.6	-15.9
-16.0	-18.3	1.9	-20.2
-15.5	-13.5	2.2	-15.8
-15.0	-9.1	2.6	-11.7
-14.5	-17.0	3.0	-19.9
-14.0	-2.1	3.3	-5.4
-13.5	-6.7	3.7	-10.5
-13.0	-9.7	4.2	-13.9
-12.5	-11.8	4.6	-16.4
-12.0	-6.5	5.0	-11.5
-11.5	-6.0	5.5	-11.5
-11.0	-13.0	6.0	-19.0
-10.5	-10.3	6.5	-16.8
-10.0	-6.5	7.0	-13.5
-9.5	-6.6	7.6	-14.2
-9.0	-2.8	8.1	-10.9
-8.5	-8.5	8.8	-17.2
-8.0	-2.4	9.4	-11.8
-7.5	-10.0	10.1	-20.2
-7.0	-2.0	10.9	-12.9
-6.5	-5.7	11.7	-17.4
-6.0	-1.1	12.5	-13.7
-5.5	-1.6	13.5	-15.1
-5.0	1.5	14.5	-13.1
-4.5	1.5	15.7	-14.2
-4.0	2.9	16.9	-14.0
-3.5	4.7	18.4	-13.7
-3.0	10.6		
-2.5	9.4		
-2.0	8.1		
-1.5	17.9		
-1.0	21.1		
-0.5	35.7		
0.0	52.4		

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.4		
0.5	38.0		
1.0	16.8		
1.5	9.7		
2.0	5.4		
2.5	10.1		
3.0	7.5		
3.5	8.5	18.4	-9.9
4.0	13.0	16.9	-4.0
4.5	-1.0	15.7	-16.6
5.0	7.3	14.5	-7.2
5.5	-12.4	13.5	-25.9
6.0	-1.8	12.5	-14.4
6.5	0.9	11.7	-10.8
7.0	-1.8	10.9	-12.7
7.5	-12.0	10.1	-22.1
8.0	-14.6	9.4	-24.0
8.5	-1.5	8.8	-10.3
9.0	-2.8	8.1	-11.0
9.5	-9.7	7.6	-17.3
10.0	-0.2	7.0	-7.2
10.5	-4.7	6.5	-11.1
11.0	-8.1	6.0	-14.1
11.5	-13.2	5.5	-18.6
12.0	-13.1	5.0	-18.1
12.5	-5.9	4.6	-10.5
13.0	-4.3	4.2	-8.4
13.5	-8.9	3.7	-12.6
14.0	-17.5	3.3	-20.8
14.5	-12.7	3.0	-15.7
15.0	-12.0	2.6	-14.6
15.5	-15.1	2.2	-17.4
16.0	-18.5	1.9	-20.3
16.5	-16.7	1.6	-18.2
17.0	-15.4	1.2	-16.7
17.5	-22.5	0.9	-23.5
18.0	-13.5	0.6	-14.1
18.5	-17.0	0.3	-17.3
19.0	-12.1	0.0	-12.1
19.5	-12.8	-0.3	-12.6
20.0	-18.1	-0.5	-17.6
20.5	-12.0	-0.8	-11.2
21.0	-26.3	-1.1	-25.3
21.5	-26.9	-1.3	-25.6
22.0	-18.6	-1.6	-17.1
22.5	-12.9	-1.8	-11.1
23.0	-16.0	-2.0	-14.0
23.5	-15.0	-2.3	-12.7
24.0	-21.6	-2.5	-19.1
24.5	-19.9	-2.7	-17.2
25.0	-15.4	-2.9	-12.4
25.5	-19.2	-3.2	-16.1
26.0	-27.6	-3.4	-24.2
26.5	-19.8	-3.6	-16.2
27.0	-20.5	-3.8	-16.7
27.5	-15.7	-4.0	-11.7
28.0	-14.3	-4.2	-10.1
28.5	-17.6	-4.4	-13.2
29.0	-17.5	-4.6	-13.0
29.5	-15.3	-4.7	-10.6
30.0	-24.6	-4.9	-19.7

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-13.2	7.0	-20.2
-9.9	-9.8	7.1	-16.9
-9.8	-7.0	7.2	-14.2
-9.7	-5.9	7.3	-13.2
-9.6	-5.0	7.4	-12.5
-9.5	-4.2	7.6	-11.8
-9.4	-4.6	7.7	-12.3
-9.3	-9.3	7.8	-17.1
-9.2	-12.8	7.9	-20.7
-9.1	-7.4	8.0	-15.4
-9.0	-3.0	8.1	-11.2
-8.9	-3.0	8.3	-11.3
-8.8	-5.9	8.4	-14.3
-8.7	-11.7	8.5	-20.2
-8.6	-8.2	8.6	-16.8
-8.5	-12.3	8.8	-21.1
-8.4	-17.1	8.9	-26.0
-8.3	-10.0	9.0	-19.1
-8.2	-4.8	9.2	-13.9
-8.1	-2.5	9.3	-11.8
-8.0	-3.1	9.4	-12.5
-7.9	-6.0	9.6	-15.6
-7.8	-15.5	9.7	-25.2
-7.7	-7.6	9.8	-17.5
-7.6	-5.6	10.0	-15.6
-7.5	-9.0	10.1	-19.2
-7.4	-17.5	10.3	-27.7
-7.3	-5.6	10.4	-16.0
-7.2	-1.2	10.6	-11.7
-7.1	0.8	10.7	-9.9
-7.0	0.0	10.9	-10.9
-6.9	-11.1	11.0	-22.1
-6.8	-1.7	11.2	-12.9
-6.7	1.8	11.3	-9.5
-6.6	-0.8	11.5	-12.4
-6.5	-7.3	11.7	-19.0
-6.4	-4.8	11.8	-16.6
-6.3	-3.0	12.0	-15.0
-6.2	-1.1	12.2	-13.2
-6.1	-0.5	12.4	-12.9
-6.0	-0.7	12.5	-13.2
-5.9	-0.5	12.7	-13.2
-5.8	0.8	12.9	-12.1
-5.7	-1.2	13.1	-14.3
-5.6	-2.5	13.3	-15.8
-5.5	-0.3	13.5	-13.8
-5.4	-2.6	13.7	-16.3
-5.3	-0.7	13.9	-14.6
-5.2	3.1	14.1	-11.0
-5.1	4.1	14.3	-10.2
-5.0	2.0	14.5	-12.5
-4.9	-1.1	14.7	-15.9
-4.8	-2.8	15.0	-17.7
-4.7	-0.2	15.2	-15.4
-4.6	0.9	15.4	-14.5
-4.5	1.2	15.7	-14.5
-4.4	1.3	15.9	-14.7
-4.3	2.6	16.2	-13.5
-4.2	4.7	16.4	-11.7
-4.1	4.7	16.7	-11.9

28.30 GHz Antenna Pattern in Co-pol EI RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.5		
0.1	51.7		
0.2	49.0		
0.3	44.5		
0.4	40.8		
0.5	37.4		
0.6	32.0		
0.7	15.3		
0.8	21.5		
0.9	20.7		
1.0	19.8		
1.1	20.0		
1.2	15.5		
1.3	4.7		
1.4	10.1		
1.5	9.2		
1.6	14.0		
1.7	14.5		
1.8	12.1		
1.9	8.2		
2.0	6.5		
2.1	8.3		
2.2	10.1		
2.3	9.6		
2.4	10.0		
2.5	10.1		
2.6	6.9		
2.7	0.1		
2.8	-11.8		
2.9	1.8		
3.0	6.7		
3.1	6.2		
3.2	3.7		
3.3	6.9		
3.4	7.8		
3.5	9.6	18.4	-8.8
3.6	9.7	18.1	-8.4
3.7	8.8	17.8	-9.0
3.8	11.3	17.5	-6.2
3.9	13.5	17.2	-3.8
4.0	13.3	16.9	-3.7
4.1	12.3	16.7	-4.4
4.2	12.4	16.4	-4.0
4.3	10.5	16.2	-5.6
4.4	2.9	15.9	-13.0
4.5	-9.0	15.7	-24.7
4.6	1.6	15.4	-13.8
4.7	5.1	15.2	-10.1
4.8	6.9	15.0	-8.1
4.9	6.4	14.7	-8.4
5.0	4.9	14.5	-9.6
5.1	3.6	14.3	-10.7
5.2	0.9	14.1	-13.2
5.3	-7.8	13.9	-21.7
5.4	-10.3	13.7	-24.0
5.5	-3.6	13.5	-17.1
5.6	-3.0	13.3	-16.3
5.7	-5.1	13.1	-18.2
5.8	-5.2	12.9	-18.1
5.9	-2.3	12.7	-15.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	2.3	16.9	-14.7
-3.9	-1.5	17.2	-18.8
-3.8	4.2	17.5	-13.3
-3.7	6.0	17.8	-11.8
-3.6	5.0	18.1	-13.1
-3.5	3.0	18.4	-15.4
-3.4	-1.3		
-3.3	-2.7		
-3.2	-3.1		
-3.1	-3.9		
-3.0	9.3		
-2.9	13.7		
-2.8	13.8		
-2.7	11.3		
-2.6	7.7		
-2.5	10.1		
-2.4	12.4		
-2.3	13.7		
-2.2	13.8		
-2.1	11.6		
-2.0	7.8		
-1.9	6.6		
-1.8	5.2		
-1.7	8.6		
-1.6	15.4		
-1.5	17.9		
-1.4	16.7		
-1.3	16.2		
-1.2	21.8		
-1.1	22.9		
-1.0	20.1		
-0.9	21.5		
-0.8	25.3		
-0.7	29.5		
-0.6	32.8		
-0.5	35.1		
-0.4	40.2		
-0.3	46.4		
-0.2	50.2		
-0.1	52.2		
0.0	52.5		

6.0	-2.3	12.5	-14.9
6.1	-3.4	12.4	-15.7
6.2	-1.9	12.2	-14.1
6.3	-1.2	12.0	-13.3
6.4	-0.6	11.8	-12.4
6.5	0.6	11.7	-11.1
6.6	2.8	11.5	-8.7
6.7	2.5	11.3	-8.8
6.8	0.4	11.2	-10.7
6.9	-3.1	11.0	-14.2
7.0	-13.4	10.9	-24.3
7.1	-4.7	10.7	-15.5
7.2	-2.2	10.6	-12.8
7.3	-4.6	10.4	-15.0
7.4	-9.1	10.3	-19.4
7.5	-3.8	10.1	-13.9
7.6	-2.8	10.0	-12.8
7.7	-7.1	9.8	-16.9
7.8	-3.9	9.7	-13.6
7.9	-3.4	9.6	-13.0
8.0	-5.0	9.4	-14.4
8.1	-5.6	9.3	-14.9
8.2	-4.2	9.2	-13.4
8.3	-3.0	9.0	-12.0
8.4	-2.7	8.9	-11.6
8.5	-8.0	8.8	-16.8
8.6	-8.9	8.6	-17.5
8.7	-11.7	8.5	-20.2
8.8	-27.5	8.4	-35.9
8.9	-14.1	8.3	-22.4
9.0	-7.5	8.1	-15.7
9.1	-2.2	8.0	-10.2
9.2	-1.2	7.9	-9.1
9.3	-2.0	7.8	-9.8
9.4	-4.1	7.7	-11.8
9.5	-3.5	7.6	-11.1
9.6	-0.4	7.4	-7.9
9.7	1.6	7.3	-5.7
9.8	2.0	7.2	-5.3
9.9	1.1	7.1	-6.0
10.0	-0.3	7.0	-7.3

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

28.30 GHz Antenna Pattern in X-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-9.3	-2.0	-7.3
-9.9	-8.7	-2.0	-6.7
-9.8	-8.5	-2.0	-6.5
-9.7	-6.1	-2.0	-4.1
-9.6	-6.5	-2.0	-4.5
-9.5	-5.1	-2.0	-3.1
-9.4	-5.5	-2.0	-3.5
-9.3	-5.9	-2.0	-3.9
-9.2	-5.7	-2.0	-3.7
-9.1	-4.4	-2.0	-2.4
-9.0	-6.1	-2.0	-4.1
-8.9	-6.6	-2.0	-4.6
-8.8	-8.0	-2.0	-6.0
-8.7	-5.1	-2.0	-3.1
-8.6	-3.5	-2.0	-1.5
-8.5	-3.1	-2.0	-1.1
-8.4	-3.8	-2.0	-1.8
-8.3	-4.8	-2.0	-2.8
-8.2	-3.9	-2.0	-1.9
-8.1	-4.3	-2.0	-2.3
-8.0	-6.6	-2.0	-4.6
-7.9	-10.0	-2.0	-8.0
-7.8	-8.3	-2.0	-6.3
-7.7	-5.9	-2.0	-3.9
-7.6	-5.4	-2.0	-3.4
-7.5	-4.7	-2.0	-2.7
-7.4	-2.1	-2.0	-0.1
-7.3	-1.2	-2.0	0.8
-7.2	-1.8	-2.0	0.2
-7.1	-4.0	-2.0	-2.0
-7.0	-5.1	-2.1	-3.0
-6.9	-4.6	-2.0	-2.7
-6.8	-3.8	-1.8	-2.0
-6.7	-3.2	-1.7	-1.6
-6.6	-4.2	-1.5	-2.8
-6.5	-8.1	-1.3	-6.8
-6.4	-15.0	-1.2	-13.9
-6.3	-13.3	-1.0	-12.3
-6.2	-17.2	-0.8	-16.4
-6.1	-13.1	-0.6	-12.4
-6.0	-6.4	-0.5	-5.9
-5.9	-4.5	-0.3	-4.2
-5.8	-6.7	-0.1	-6.6
-5.7	-17.8	0.1	-17.9
-5.6	-7.0	0.3	-7.3
-5.5	-5.0	0.5	-5.5
-5.4	-6.0	0.7	-6.7
-5.3	-11.0	0.9	-11.8
-5.2	-4.7	1.1	-5.8
-5.1	-1.6	1.3	-3.0
-5.0	-1.7	1.5	-3.2
-4.9	-3.9	1.7	-5.6
-4.8	-23.8	2.0	-25.8
-4.7	-4.9	2.2	-7.1
-4.6	-2.5	2.4	-4.9
-4.5	-4.3	2.7	-7.0
-4.4	-2.8	2.9	-5.7
-4.3	-1.8	3.2	-4.9
-4.2	-6.6	3.4	-10.0
-4.1	-5.2	3.7	-8.8

28.30 GHz Antenna Pattern in X-pol Az RHCP

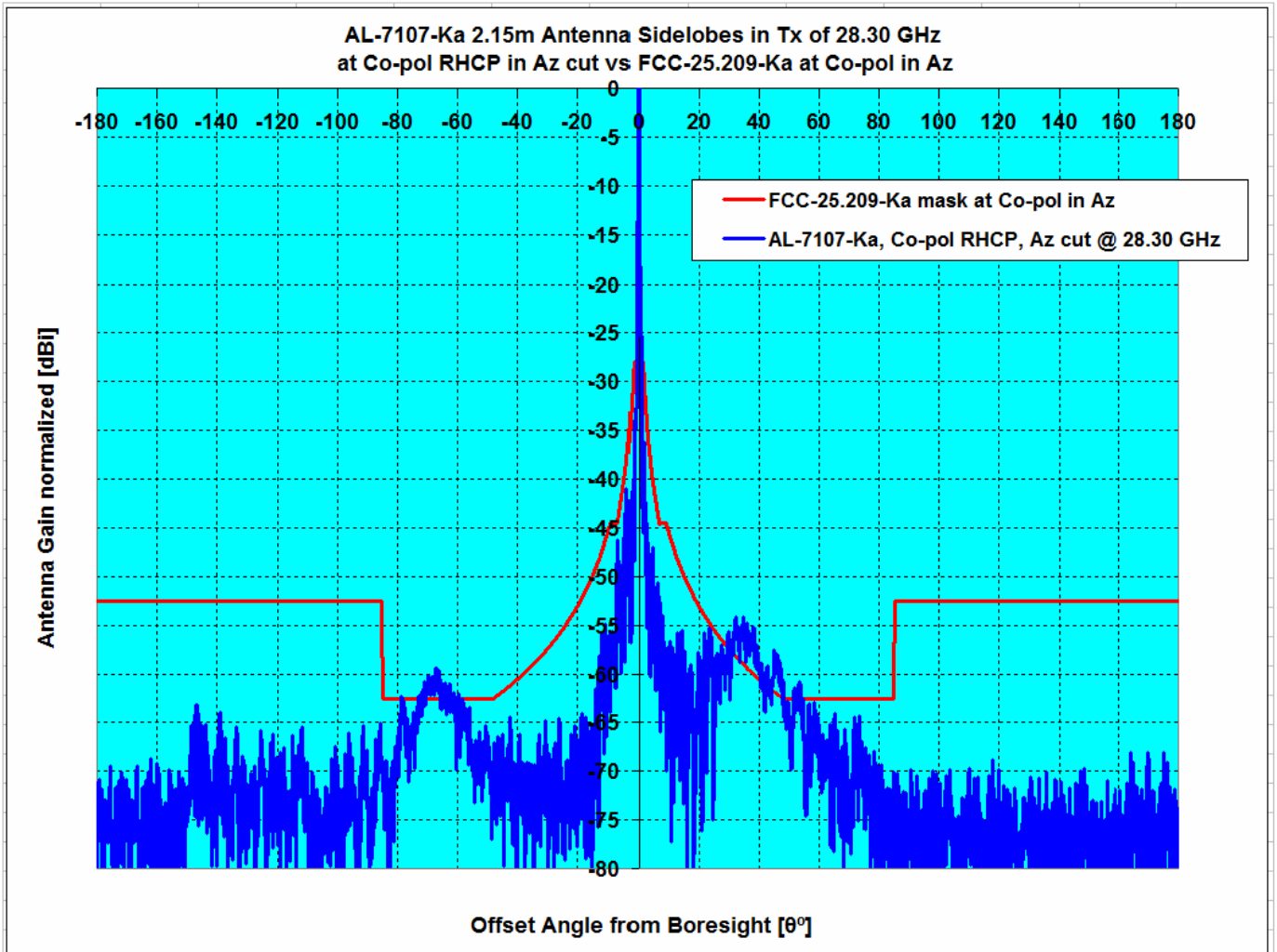
Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	27.6		
0.1	26.8		
0.2	28.6		
0.3	30.1		
0.4	29.6		
0.5	27.3		
0.6	21.9		
0.7	13.7		
0.8	4.1		
0.9	9.6		
1.0	14.8		
1.1	14.1		
1.2	7.5		
1.3	2.3		
1.4	7.3		
1.5	6.0		
1.6	2.0		
1.7	0.4		
1.8	-5.0	12.6	-17.6
1.9	-14.1	12.0	-26.1
2.0	-6.6	11.5	-18.1
2.1	-5.6	10.9	-16.5
2.2	-10.6	10.4	-21.1
2.3	-10.5	10.0	-20.4
2.4	-3.6	9.5	-13.1
2.5	-3.5	9.1	-12.5
2.6	-7.4	8.6	-16.0
2.7	-0.5	8.2	-8.8
2.8	0.7	7.8	-7.1
2.9	-0.6	7.4	-8.1
3.0	-7.4	7.1	-14.5
3.1	-10.7	6.7	-17.4
3.2	-10.9	6.4	-17.3
3.3	-16.5	6.0	-22.5
3.4	-8.2	5.7	-14.0
3.5	-10.0	5.4	-15.4
3.6	-11.0	5.1	-16.1
3.7	-9.5	4.8	-14.2
3.8	-12.1	4.5	-16.6
3.9	-9.7	4.2	-14.0
4.0	-6.8	3.9	-10.7
4.1	-7.3	3.7	-11.0
4.2	-10.3	3.4	-13.7
4.3	-10.7	3.2	-13.9
4.4	-11.3	2.9	-14.2
4.5	-9.8	2.7	-12.5
4.6	-5.9	2.4	-8.3
4.7	-7.0	2.2	-9.2
4.8	-11.5	2.0	-13.5
4.9	-14.1	1.7	-15.8
5.0	-12.7	1.5	-14.2
5.1	-10.1	1.3	-11.4
5.2	-11.4	1.1	-12.5
5.3	-12.0	0.9	-12.9
5.4	-6.1	0.7	-6.8
5.5	-5.3	0.5	-5.8
5.6	-6.1	0.3	-6.4
5.7	-11.5	0.1	-11.6
5.8	-12.9	-0.1	-12.8
5.9	-14.1	-0.3	-13.8

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	1.1	3.9	-2.8
-3.9	1.1	4.2	-3.1
-3.8	-3.0	4.5	-7.6
-3.7	-3.1	4.8	-7.9
-3.6	-2.0	5.1	-7.1
-3.5	-5.7	5.4	-11.1
-3.4	-7.8	5.7	-13.5
-3.3	-5.6	6.0	-11.7
-3.2	-9.8	6.4	-16.2
-3.1	-9.4	6.7	-16.1
-3.0	-3.0	7.1	-10.0
-2.9	-2.9	7.4	-10.4
-2.8	-5.3	7.8	-13.1
-2.7	-5.9	8.2	-14.1
-2.6	-4.4	8.6	-13.0
-2.5	-7.0	9.1	-16.0
-2.4	-3.0	9.5	-12.5
-2.3	1.5	10.0	-8.5
-2.2	2.5	10.4	-8.0
-2.1	3.9	10.9	-7.0
-2.0	2.9	11.5	-8.6
-1.9	-8.9	12.0	-20.9
-1.8	4.3	12.6	-8.3
-1.7	8.1		
-1.6	8.9		
-1.5	9.8		
-1.4	9.9		
-1.3	5.5		
-1.2	8.0		
-1.1	13.9		
-1.0	14.8		
-0.9	14.7		
-0.8	19.2		
-0.7	24.2		
-0.6	26.9		
-0.5	28.3		
-0.4	27.5		
-0.3	22.3		
-0.2	21.8		
-0.1	26.9		
0.0	27.6		

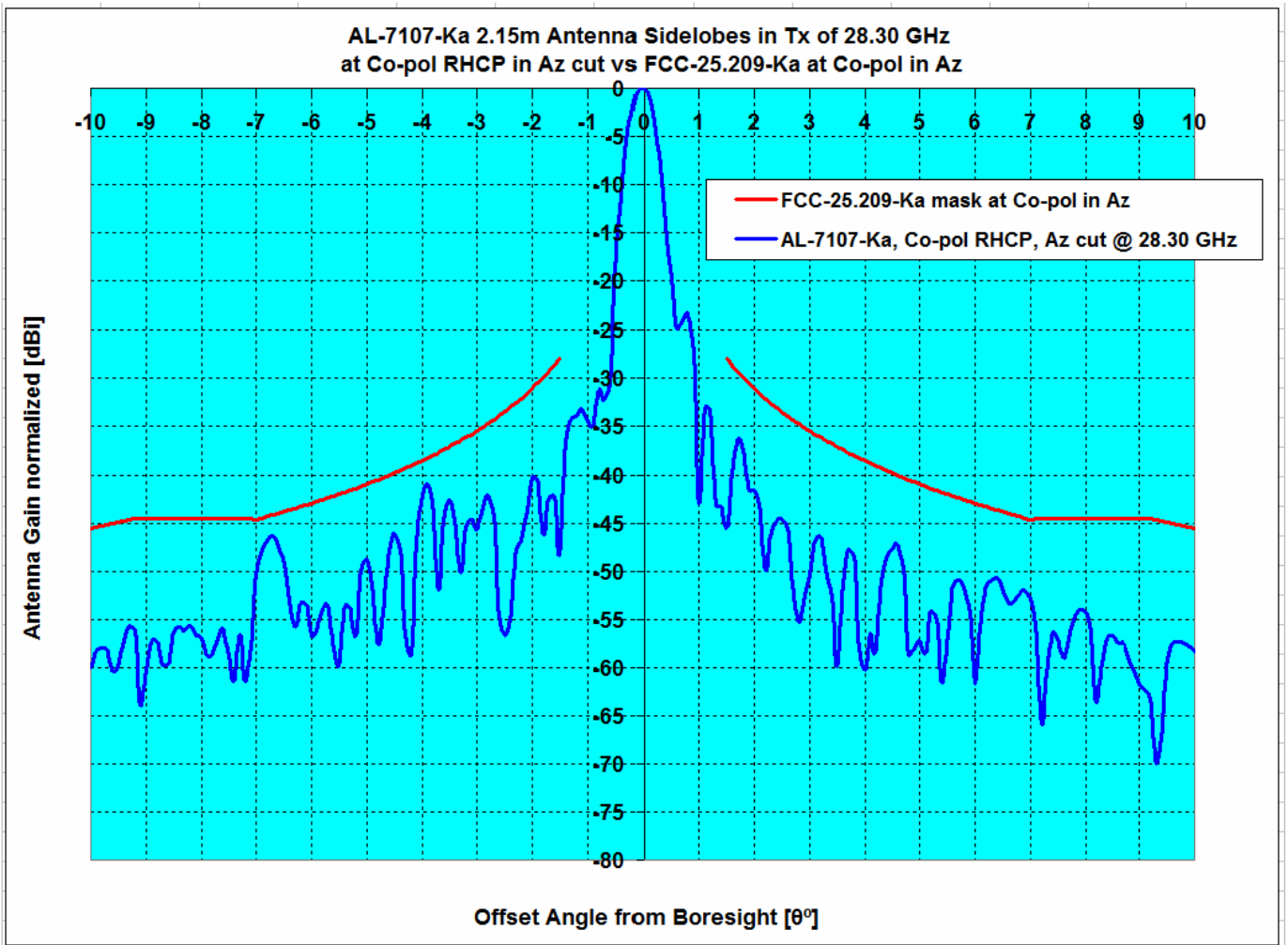
6.0	-18.3	-0.5	-17.9
6.1	-17.1	-0.6	-16.4
6.2	-18.1	-0.8	-17.3
6.3	-13.9	-1.0	-12.9
6.4	-8.8	-1.2	-7.6
6.5	-8.2	-1.3	-6.9
6.6	-9.3	-1.5	-7.8
6.7	-8.8	-1.7	-7.1
6.8	-7.5	-1.8	-5.7
6.9	-6.2	-2.0	-4.2
7.0	-7.3	-2.1	-5.1
7.1	-9.2	-2.0	-7.2
7.2	-10.4	-2.0	-8.4
7.3	-12.8	-2.0	-10.8
7.4	-14.5	-2.0	-12.5
7.5	-11.3	-2.0	-9.3
7.6	-8.7	-2.0	-6.7
7.7	-6.6	-2.0	-4.6
7.8	-5.0	-2.0	-3.0
7.9	-5.3	-2.0	-3.3
8.0	-6.1	-2.0	-4.1
8.1	-6.8	-2.0	-4.8
8.2	-8.3	-2.0	-6.3
8.3	-11.3	-2.0	-9.3
8.4	-12.9	-2.0	-10.9
8.5	-12.3	-2.0	-10.3
8.6	-10.0	-2.0	-8.0
8.7	-6.7	-2.0	-4.7
8.8	-5.6	-2.0	-3.6
8.9	-9.5	-2.0	-7.5
9.0	-9.6	-2.0	-7.6
9.1	-8.7	-2.0	-6.7
9.2	-9.6	-2.0	-7.6
9.3	-10.6	-2.0	-8.6
9.4	-11.9	-2.0	-9.9
9.5	-14.4	-2.0	-12.4
9.6	-13.1	-2.0	-11.1
9.7	-8.2	-2.0	-6.2
9.8	-9.6	-2.0	-7.6
9.9	-22.1	-2.0	-20.1
10.0	-10.8	-2.0	-8.8

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth RHCP



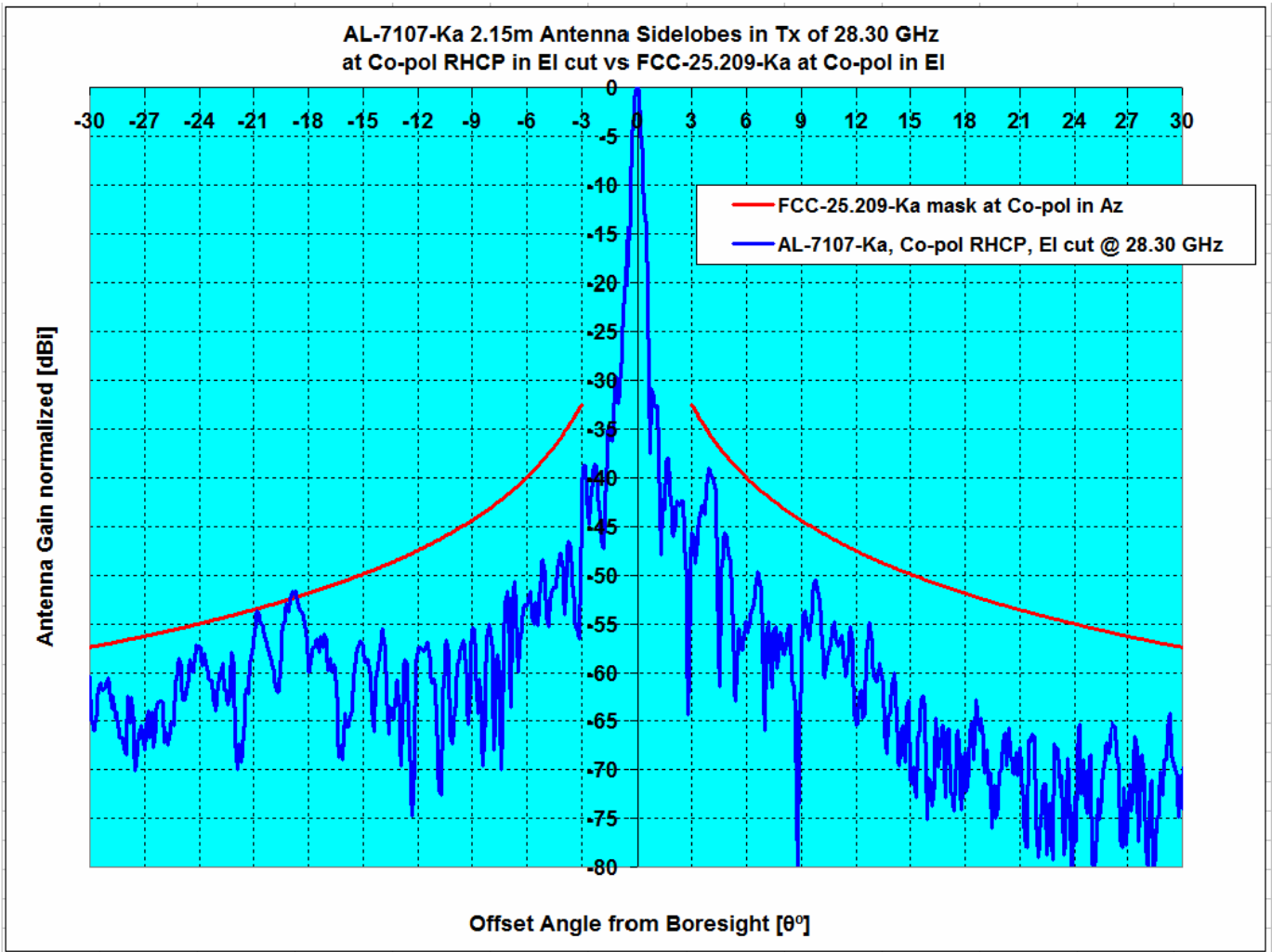
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , RHCP	28.30	52.51	-2.13	4.92	0.00%	7.22%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth RHCP



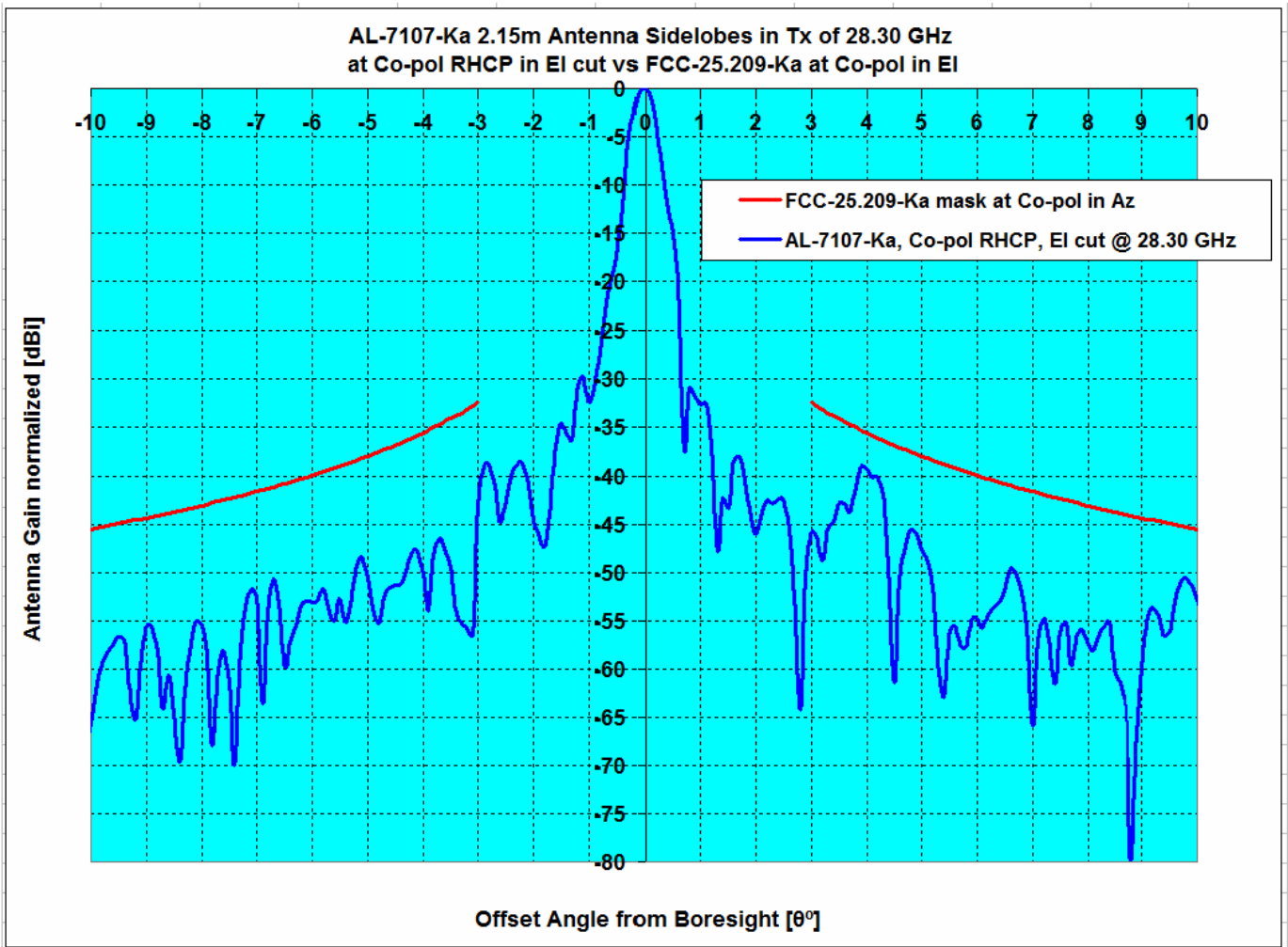
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , RHCP	28.30	52.51	-2.13	4.92	0.00%	7.22%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation RHCP



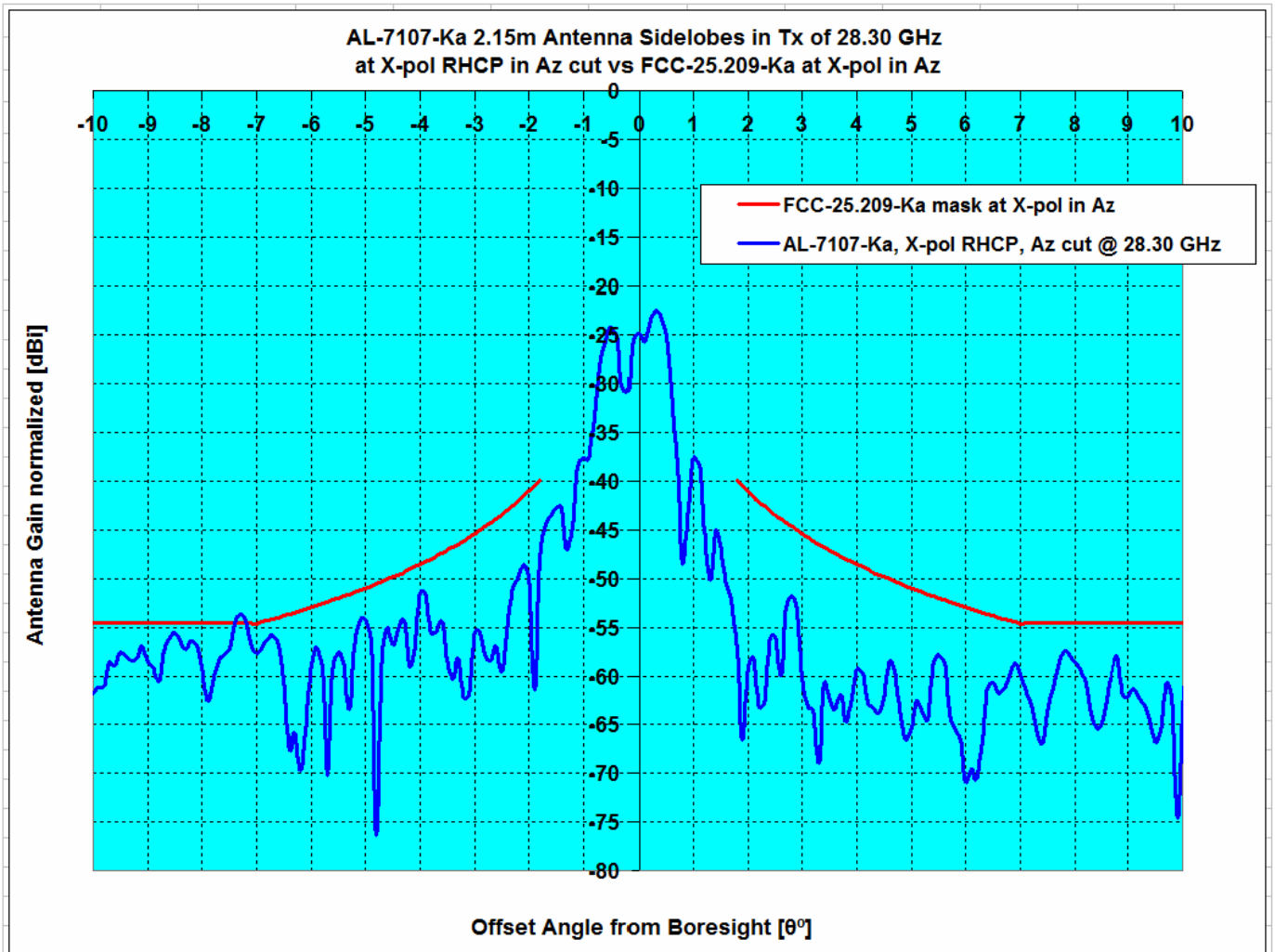
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , RHCP	28.30	52.51	-3.67	0.77	0.00%	0.55%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI, RHCP	28.30	52.51	-3.67	0.77	0.00%	0.55%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, X-pol, Azimuth RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7107-Ka	Az , RHCP	28.30	52.51	-1.58	0.81	0.00%	1.20%

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

29.15 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-25.9	0.0	-25.9
-178.0	-18.2	0.0	-18.2
-177.0	-20.5	0.0	-20.5
-176.0	-25.0	0.0	-25.0
-175.0	-27.4	0.0	-27.4
-174.0	-27.4	0.0	-27.4
-173.0	-26.9	0.0	-26.9
-172.0	-27.4	0.0	-27.4
-171.0	-23.9	0.0	-23.9
-170.0	-25.9	0.0	-25.9
-169.0	-18.2	0.0	-18.2
-168.0	-20.5	0.0	-20.5
-167.0	-25.0	0.0	-25.0
-166.0	-27.4	0.0	-27.4
-165.0	-27.4	0.0	-27.4
-164.0	-26.9	0.0	-26.9
-163.0	-27.4	0.0	-27.4
-162.0	-19.4	0.0	-19.4
-161.0	-20.8	0.0	-20.8
-160.0	-27.0	0.0	-27.0
-159.0	-26.0	0.0	-26.0
-158.0	-27.4	0.0	-27.4
-157.0	-19.8	0.0	-19.8
-156.0	-27.4	0.0	-27.4
-155.0	-27.4	0.0	-27.4
-154.0	-20.7	0.0	-20.7
-153.0	-22.6	0.0	-22.6
-152.0	-15.2	0.0	-15.2
-151.0	-19.3	0.0	-19.3
-150.0	-17.7	0.0	-17.7
-149.0	-27.4	0.0	-27.4
-148.0	-25.8	0.0	-25.8
-147.0	-24.5	0.0	-24.5
-146.0	-15.8	0.0	-15.8
-145.0	-15.5	0.0	-15.5
-144.0	-20.2	0.0	-20.2
-143.0	-20.2	0.0	-20.2
-142.0	-21.6	0.0	-21.6
-141.0	-20.2	0.0	-20.2
-140.0	-16.0	0.0	-16.0
-139.0	-20.2	0.0	-20.2
-138.0	-20.6	0.0	-20.6
-137.0	-20.5	0.0	-20.5
-136.0	-23.7	0.0	-23.7
-135.0	-15.0	0.0	-15.0
-134.0	-15.9	0.0	-15.9
-133.0	-27.4	0.0	-27.4
-132.0	-25.2	0.0	-25.2
-131.0	-22.1	0.0	-22.1
-130.0	-16.0	0.0	-16.0
-129.0	-16.1	0.0	-16.1
-128.0	-18.9	0.0	-18.9
-127.0	-15.9	0.0	-15.9
-126.0	-15.0	0.0	-15.0
-125.0	-22.5	0.0	-22.5
-124.0	-19.5	0.0	-19.5
-123.0	-20.8	0.0	-20.8
-122.0	-25.3	0.0	-25.3
-121.0	-20.6	0.0	-20.6
-120.0	-26.0	0.0	-26.0

29.15 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.6		
1.0	15.7		
2.0	10.0	21.5	-11.5
3.0	9.1	17.1	-8.0
4.0	-4.1	13.9	-18.1
5.0	-10.4	11.5	-21.9
6.0	0.3	9.5	-9.2
7.0	-14.1	7.9	-21.9
8.0	-5.4	8.0	-13.4
9.0	-3.3	8.0	-11.3
10.0	-5.3	7.0	-12.3
11.0	-15.6	6.0	-21.5
12.0	-3.1	5.0	-8.1
13.0	-6.7	4.2	-10.9
14.0	-12.7	3.3	-16.0
15.0	-17.4	2.6	-20.0
16.0	-23.4	1.9	-25.3
17.0	-16.6	1.2	-17.9
18.0	-14.4	0.6	-15.0
19.0	-19.6	0.0	-19.6
20.0	-10.9	-0.5	-10.3
21.0	-15.4	-1.1	-14.3
22.0	-4.5	-1.6	-3.0
23.0	-3.7	-2.0	-1.7
24.0	-5.9	-2.5	-3.4
25.0	-11.3	-2.9	-8.3
26.0	-7.7	-3.4	-4.3
27.0	-7.5	-3.8	-3.7
28.0	-13.5	-4.2	-9.3
29.0	-8.8	-4.6	-4.3
30.0	-7.2	-4.9	-2.3
31.0	-5.8	-5.3	-0.5
32.0	-9.8	-5.6	-4.2
33.0	-5.0	-6.0	0.9
34.0	-10.9	-6.3	-4.6
35.0	-9.4	-6.6	-2.8
36.0	-5.1	-6.9	1.9
37.0	-6.4	-7.2	0.8
38.0	-9.6	-7.5	-2.1
39.0	-9.4	-7.8	-1.6
40.0	-9.6	-8.1	-1.5
41.0	-12.3	-8.3	-4.0
42.0	-11.1	-8.6	-2.5
43.0	-11.7	-8.8	-2.9
44.0	-9.0	-9.1	0.1
45.0	-9.2	-9.3	0.1
46.0	-9.5	-9.6	0.1
47.0	-7.6	-9.8	2.2
48.0	-14.1	-10.0	-4.1
49.0	-10.6	-10.0	-0.6
50.0	-13.3	-10.0	-3.3
51.0	-21.6	-10.0	-11.6
52.0	-16.7	-10.0	-6.7
53.0	-14.1	-10.0	-4.1
54.0	-16.3	-10.0	-6.3
55.0	-19.5	-10.0	-9.5
56.0	-26.5	-10.0	-16.5
57.0	-23.2	-10.0	-13.2
58.0	-19.6	-10.0	-9.6
59.0	-25.0	-10.0	-15.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-119.0	-26.2	0.0	-26.2
-118.0	-24.0	0.0	-24.0
-117.0	-26.3	0.0	-26.3
-116.0	-22.1	0.0	-22.1
-115.0	-27.4	0.0	-27.4
-114.0	-22.4	0.0	-22.4
-113.0	-17.6	0.0	-17.6
-112.0	-19.9	0.0	-19.9
-111.0	-17.4	0.0	-17.4
-110.0	-17.3	0.0	-17.3
-109.0	-27.4	0.0	-27.4
-108.0	-24.7	0.0	-24.7
-107.0	-25.2	0.0	-25.2
-106.0	-20.2	0.0	-20.2
-105.0	-20.5	0.0	-20.5
-104.0	-19.9	0.0	-19.9
-103.0	-20.1	0.0	-20.1
-102.0	-16.2	0.0	-16.2
-101.0	-23.3	0.0	-23.3
-100.0	-17.0	0.0	-17.0
-99.0	-20.0	0.0	-20.0
-98.0	-27.4	0.0	-27.4
-97.0	-23.7	0.0	-23.7
-96.0	-27.4	0.0	-27.4
-95.0	-19.7	0.0	-19.7
-94.0	-19.6	0.0	-19.6
-93.0	-22.6	0.0	-22.6
-92.0	-20.0	0.0	-20.0
-91.0	-18.8	0.0	-18.8
-90.0	-21.7	0.0	-21.7
-89.0	-27.2	0.0	-27.2
-88.0	-18.7	0.0	-18.7
-87.0	-15.9	0.0	-15.9
-86.0	-13.3	0.0	-13.3
-85.0	-13.3	-10.0	-3.3
-84.0	-15.3	-10.0	-5.3
-83.0	-20.2	-10.0	-10.2
-82.0	-20.2	-10.0	-10.2
-81.0	-12.7	-10.0	-2.7
-80.0	-12.8	-10.0	-2.8
-79.0	-10.3	-10.0	-0.3
-78.0	-9.3	-10.0	0.7
-77.0	-16.7	-10.0	-6.7
-76.0	-14.2	-10.0	-4.2
-75.0	-14.6	-10.0	-4.6
-74.0	-10.9	-10.0	-0.9
-73.0	-10.2	-10.0	-0.2
-72.0	-6.9	-10.0	3.1
-71.0	-6.7	-10.0	3.3
-70.0	-5.8	-10.0	4.2
-69.0	-6.8	-10.0	3.2
-68.0	-4.7	-10.0	5.3
-67.0	-4.6	-10.0	5.4
-66.0	-5.1	-10.0	4.9
-65.0	-6.4	-10.0	3.6
-64.0	-4.8	-10.0	5.2
-63.0	-6.9	-10.0	3.1
-62.0	-7.4	-10.0	2.6
-61.0	-9.4	-10.0	0.6
-60.0	-10.4	-10.0	-0.4
-59.0	-11.1	-10.0	-1.1
-58.0	-11.5	-10.0	-1.5
-57.0	-15.0	-10.0	-5.0

60.0	-22.4	-10.0	-12.4
61.0	-25.4	-10.0	-15.4
62.0	-24.5	-10.0	-14.5
63.0	-27.4	-10.0	-17.4
64.0	-18.1	-10.0	-8.1
65.0	-19.8	-10.0	-9.8
66.0	-27.4	-10.0	-17.4
67.0	-19.9	-10.0	-9.9
68.0	-25.1	-10.0	-15.1
69.0	-21.3	-10.0	-11.3
70.0	-20.3	-10.0	-10.3
71.0	-19.9	-10.0	-9.9
72.0	-16.1	-10.0	-6.1
73.0	-15.1	-10.0	-5.1
74.0	-17.3	-10.0	-7.3
75.0	-17.4	-10.0	-7.4
76.0	-19.9	-10.0	-9.9
77.0	-27.4	-10.0	-17.4
78.0	-20.4	-10.0	-10.4
79.0	-27.4	-10.0	-17.4
80.0	-21.5	-10.0	-11.5
81.0	-22.2	-10.0	-12.2
82.0	-23.5	-10.0	-13.5
83.0	-23.1	-10.0	-13.1
84.0	-26.5	-10.0	-16.5
85.0	-27.4	-10.0	-17.4
86.0	-25.4	0.0	-25.4
87.0	-21.5	0.0	-21.5
88.0	-19.6	0.0	-19.6
89.0	-25.7	0.0	-25.7
90.0	-18.6	0.0	-18.6
91.0	-25.0	0.0	-25.0
92.0	-26.8	0.0	-26.8
93.0	-27.4	0.0	-27.4
94.0	-18.2	0.0	-18.2
95.0	-25.1	0.0	-25.1
96.0	-22.6	0.0	-22.6
97.0	-24.3	0.0	-24.3
98.0	-25.3	0.0	-25.3
99.0	-27.3	0.0	-27.3
100.0	-19.9	0.0	-19.9
101.0	-21.8	0.0	-21.8
102.0	-24.4	0.0	-24.4
103.0	-22.8	0.0	-22.8
104.0	-22.2	0.0	-22.2
105.0	-19.6	0.0	-19.6
106.0	-24.5	0.0	-24.5
107.0	-23.1	0.0	-23.1
108.0	-23.4	0.0	-23.4
109.0	-24.9	0.0	-24.9
110.0	-23.0	0.0	-23.0
111.0	-24.6	0.0	-24.6
112.0	-19.7	0.0	-19.7
113.0	-24.1	0.0	-24.1
114.0	-25.2	0.0	-25.2
115.0	-22.9	0.0	-22.9
116.0	-23.2	0.0	-23.2
117.0	-27.1	0.0	-27.1
118.0	-25.0	0.0	-25.0
119.0	-27.0	0.0	-27.0
120.0	-27.4	0.0	-27.4
121.0	-26.7	0.0	-26.7
122.0	-21.1	0.0	-21.1

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -180° to +180° @ 1.0° increment

-56.0	-15.1	-10.0	-5.1
-55.0	-14.6	-10.0	-4.6
-54.0	-15.9	-10.0	-5.9
-53.0	-11.4	-10.0	-1.4
-52.0	-11.8	-10.0	-1.8
-51.0	-15.5	-10.0	-5.5
-50.0	-15.8	-10.0	-5.8
-49.0	-16.5	-10.0	-6.5
-48.0	-20.7	-10.0	-10.7
-47.0	-27.4	-9.8	-17.6
-46.0	-14.0	-9.6	-4.4
-45.0	-15.7	-9.3	-6.4
-44.0	-12.7	-9.1	-3.6
-43.0	-18.4	-8.8	-9.6
-42.0	-16.2	-8.6	-7.6
-41.0	-17.4	-8.3	-9.0
-40.0	-16.9	-8.1	-8.9
-39.0	-22.9	-7.8	-15.1
-38.0	-22.0	-7.5	-14.5
-37.0	-18.9	-7.2	-11.7
-36.0	-14.3	-6.9	-7.4
-35.0	-18.4	-6.6	-11.8
-34.0	-15.6	-6.3	-9.3
-33.0	-16.2	-6.0	-10.2
-32.0	-17.3	-5.6	-11.6
-31.0	-19.6	-5.3	-14.3
-30.0	-14.8	-4.9	-9.9
-29.0	-18.2	-4.6	-13.7
-28.0	-19.4	-4.2	-15.2
-27.0	-21.4	-3.8	-17.6
-26.0	-21.2	-3.4	-17.8
-25.0	-10.8	-2.9	-7.8
-24.0	-19.7	-2.5	-17.2
-23.0	-18.1	-2.0	-16.1
-22.0	-19.3	-1.6	-17.8
-21.0	-19.3	-1.1	-18.2
-20.0	-18.0	-0.5	-17.5
-19.0	-20.8	0.0	-20.8
-18.0	-19.2	0.6	-19.8
-17.0	-18.9	1.2	-20.2
-16.0	-8.8	1.9	-10.7
-15.0	-22.5	2.6	-25.1
-14.0	-12.8	3.3	-16.2
-13.0	-10.9	4.2	-15.1
-12.0	-12.0	5.0	-17.1
-11.0	-6.4	6.0	-12.4
-10.0	-3.1	7.0	-10.1
-9.0	-8.1	8.0	-16.1
-8.0	-7.7	8.0	-15.7
-7.0	-2.7	7.9	-10.5
-6.0	0.8	9.5	-8.8
-5.0	-8.5	11.5	-20.0
-4.0	-5.6	13.9	-19.6
-3.0	7.9	17.1	-9.2
-2.0	4.7	21.5	-16.7
-1.0	17.2		
0.0	52.6		

123.0	-25.5	0.0	-25.5
124.0	-22.2	0.0	-22.2
125.0	-19.5	0.0	-19.5
126.0	-27.4	0.0	-27.4
127.0	-24.9	0.0	-24.9
128.0	-21.7	0.0	-21.7
129.0	-25.5	0.0	-25.5
130.0	-21.6	0.0	-21.6
131.0	-26.1	0.0	-26.1
132.0	-27.4	0.0	-27.4
133.0	-27.4	0.0	-27.4
134.0	-25.8	0.0	-25.8
135.0	-27.1	0.0	-27.1
136.0	-26.9	0.0	-26.9
137.0	-27.4	0.0	-27.4
138.0	-21.9	0.0	-21.9
139.0	-24.9	0.0	-24.9
140.0	-22.5	0.0	-22.5
141.0	-20.8	0.0	-20.8
142.0	-27.4	0.0	-27.4
143.0	-25.8	0.0	-25.8
144.0	-27.4	0.0	-27.4
145.0	-27.4	0.0	-27.4
146.0	-24.8	0.0	-24.8
147.0	-23.5	0.0	-23.5
148.0	-27.4	0.0	-27.4
149.0	-23.6	0.0	-23.6
150.0	-23.9	0.0	-23.9
151.0	-27.1	0.0	-27.1
152.0	-26.7	0.0	-26.7
153.0	-22.1	0.0	-22.1
154.0	-27.4	0.0	-27.4
155.0	-18.6	0.0	-18.6
156.0	-27.4	0.0	-27.4
157.0	-27.4	0.0	-27.4
158.0	-27.4	0.0	-27.4
159.0	-25.5	0.0	-25.5
160.0	-25.5	0.0	-25.5
161.0	-20.0	0.0	-20.0
162.0	-26.2	0.0	-26.2
163.0	-20.2	0.0	-20.2
164.0	-24.1	0.0	-24.1
165.0	-27.4	0.0	-27.4
166.0	-24.5	0.0	-24.5
167.0	-27.4	0.0	-27.4
168.0	-27.4	0.0	-27.4
169.0	-27.4	0.0	-27.4
170.0	-27.0	0.0	-27.0
171.0	-26.5	0.0	-26.5
172.0	-27.4	0.0	-27.4
173.0	-27.4	0.0	-27.4
174.0	-22.7	0.0	-22.7
175.0	-24.8	0.0	-24.8
176.0	-23.7	0.0	-23.7
177.0	-27.4	0.0	-27.4
178.0	-27.4	0.0	-27.4
179.0	-23.9	0.0	-23.9

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.15 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-3.1	7.0	-10.1
-9.9	-1.1	7.1	-8.2
-9.8	0.0	7.2	-7.2
-9.7	-0.9	7.3	-8.2
-9.6	-3.1	7.4	-10.6
-9.5	-5.3	7.6	-12.9
-9.4	-4.9	7.7	-12.6
-9.3	-3.9	7.8	-11.7
-9.2	-7.4	8.0	-15.4
-9.1	-21.4	8.0	-29.4
-9.0	-8.1	8.0	-16.1
-8.9	-10.1	8.0	-18.1
-8.8	-15.8	8.0	-23.8
-8.7	-13.9	8.0	-21.9
-8.6	-12.0	8.0	-20.0
-8.5	-10.7	8.0	-18.7
-8.4	-11.6	8.0	-19.6
-8.3	-22.0	8.0	-30.0
-8.2	-11.0	8.0	-19.0
-8.1	-8.0	8.0	-16.0
-8.0	-7.7	8.0	-15.7
-7.9	-5.5	8.0	-13.5
-7.8	-4.3	8.0	-12.3
-7.7	-1.4	8.0	-9.4
-7.6	-0.2	8.0	-8.2
-7.5	-1.4	8.0	-9.4
-7.4	-1.9	8.0	-9.9
-7.3	0.6	8.0	-7.4
-7.2	1.2	8.0	-6.8
-7.1	0.6	8.0	-7.4
-7.0	-2.7	7.9	-10.5
-6.9	1.6	8.0	-6.5
-6.8	4.5	8.2	-3.7
-6.7	4.1	8.3	-4.2
-6.6	0.3	8.5	-8.2
-6.5	-0.8	8.7	-9.4
-6.4	1.1	8.8	-7.7
-6.3	2.0	9.0	-7.0
-6.2	2.1	9.2	-7.1
-6.1	1.7	9.4	-7.7
-6.0	0.8	9.5	-8.8
-5.9	-4.8	9.7	-14.5
-5.8	-9.4	9.9	-19.4
-5.7	-9.5	10.1	-19.6
-5.6	-11.1	10.3	-21.4
-5.5	-4.8	10.5	-15.3
-5.4	-6.1	10.7	-16.8
-5.3	-11.4	10.9	-22.3
-5.2	-0.5	11.1	-11.6
-5.1	0.5	11.3	-10.8
-5.0	-8.5	11.5	-20.0
-4.9	0.6	11.7	-11.1
-4.8	3.9	12.0	-8.1
-4.7	3.7	12.2	-8.5
-4.6	-0.2	12.4	-12.7
-4.5	2.0	12.7	-10.7
-4.4	6.2	12.9	-6.7
-4.3	6.8	13.2	-6.4
-4.2	3.1	13.4	-10.3
-4.1	-6.1	13.7	-19.8

29.15 GHz Antenna Pattern in Co-pol Az LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.6		
0.1	52.1		
0.2	49.8		
0.3	45.8		
0.4	41.1		
0.5	36.3		
0.6	30.2		
0.7	30.3		
0.8	30.7		
0.9	27.6		
1.0	15.7		
1.1	16.3		
1.2	13.9		
1.3	11.0		
1.4	16.1		
1.5	15.6	24.6	-9.0
1.6	17.2	23.9	-6.7
1.7	17.8	23.2	-5.4
1.8	15.5	22.6	-7.1
1.9	11.3	22.0	-10.7
2.0	10.0	21.5	-11.5
2.1	3.6	20.9	-17.4
2.2	1.7	20.4	-18.7
2.3	6.1	20.0	-13.9
2.4	5.7	19.5	-13.8
2.5	5.5	19.1	-13.5
2.6	2.4	18.6	-16.2
2.7	-0.1	18.2	-18.3
2.8	5.3	17.8	-12.5
2.9	7.2	17.4	-10.2
3.0	9.1	17.1	-8.0
3.1	9.3	16.7	-7.4
3.2	5.0	16.4	-11.4
3.3	-8.7	16.0	-24.8
3.4	-5.4	15.7	-21.1
3.5	-8.2	15.4	-23.6
3.6	4.0	15.1	-11.1
3.7	6.1	14.8	-8.7
3.8	3.6	14.5	-10.9
3.9	-6.5	14.2	-20.8
4.0	-4.1	13.9	-18.1
4.1	0.1	13.7	-13.6
4.2	2.2	13.4	-11.2
4.3	1.7	13.2	-11.4
4.4	0.7	12.9	-12.2
4.5	-1.2	12.7	-13.8
4.6	-4.5	12.4	-17.0
4.7	-4.3	12.2	-16.5
4.8	-2.6	12.0	-14.5
4.9	-7.5	11.7	-19.3
5.0	-10.4	11.5	-21.9
5.1	-4.9	11.3	-16.2
5.2	-5.1	11.1	-16.2
5.3	0.3	10.9	-10.6
5.4	3.7	10.7	-7.0
5.5	2.2	10.5	-8.3
5.6	-1.1	10.3	-11.4
5.7	-5.4	10.1	-15.5
5.8	-6.4	9.9	-16.3
5.9	-2.4	9.7	-12.1

Orbit Communication Systems Ltd.
AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-5.6	13.9	-19.6
-3.9	6.4	14.2	-7.8
-3.8	11.2	14.5	-3.3
-3.7	11.7	14.8	-3.1
-3.6	8.0	15.1	-7.1
-3.5	-3.3	15.4	-18.7
-3.4	6.3	15.7	-9.4
-3.3	7.0	16.0	-9.0
-3.2	5.1	16.4	-11.2
-3.1	6.4	16.7	-10.3
-3.0	7.9	17.1	-9.2
-2.9	6.3	17.4	-11.1
-2.8	9.1	17.8	-8.7
-2.7	11.5	18.2	-6.7
-2.6	10.4	18.6	-8.3
-2.5	5.3	19.1	-13.8
-2.4	-2.4	19.5	-21.9
-2.3	-3.5	20.0	-23.5
-2.2	4.1	20.4	-16.4
-2.1	2.6	20.9	-18.3
-2.0	4.7	21.5	-16.7
-1.9	10.5	22.0	-11.5
-1.8	9.6	22.6	-13.0
-1.7	3.7	23.2	-19.6
-1.6	4.3	23.9	-19.6
-1.5	3.1	24.6	-21.5
-1.4	15.0		
-1.3	18.8		
-1.2	19.0		
-1.1	19.0		
-1.0	17.2		
-0.9	11.0		
-0.8	15.9		
-0.7	14.0		
-0.6	23.0		
-0.5	32.8		
-0.4	39.9		
-0.3	45.8		
-0.2	49.9		
-0.1	52.1		
0.0	52.6		

6.0	0.3	9.5	-9.2
6.1	-0.4	9.4	-9.7
6.2	1.4	9.2	-7.8
6.3	0.7	9.0	-8.3
6.4	1.7	8.8	-7.2
6.5	3.3	8.7	-5.4
6.6	4.2	8.5	-4.3
6.7	3.2	8.3	-5.2
6.8	1.1	8.2	-7.1
6.9	-3.6	8.0	-11.6
7.0	-14.1	7.9	-21.9
7.1	-2.0	8.0	-10.0
7.2	-1.5	8.0	-9.5
7.3	-3.8	8.0	-11.8
7.4	-8.8	8.0	-16.8
7.5	-6.5	8.0	-14.5
7.6	-4.2	8.0	-12.2
7.7	-1.8	8.0	-9.8
7.8	-3.3	8.0	-11.3
7.9	-6.4	8.0	-14.4
8.0	-5.4	8.0	-13.4
8.1	-2.0	8.0	-10.0
8.2	-2.9	8.0	-10.9
8.3	-2.0	8.0	-10.0
8.4	-2.3	8.0	-10.3
8.5	-5.0	8.0	-13.0
8.6	-11.5	8.0	-19.5
8.7	-15.8	8.0	-23.8
8.8	-13.6	8.0	-21.6
8.9	-4.8	8.0	-12.8
9.0	-3.3	8.0	-11.3
9.1	-3.1	8.0	-11.1
9.2	-6.1	8.0	-14.1
9.3	-3.4	7.8	-11.1
9.4	-1.0	7.7	-8.6
9.5	-1.4	7.6	-8.9
9.6	-1.7	7.4	-9.2
9.7	-6.2	7.3	-13.6
9.8	-12.8	7.2	-20.0
9.9	-14.5	7.1	-21.6
10.0	-5.3	7.0	-12.3

Orbit Communication Systems Ltd.

AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -30° to +30° @ 0.5° increment

29.15 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-7.6	-4.9	-2.7
-29.5	-9.3	-4.7	-4.5
-29.0	-9.0	-4.6	-4.5
-28.5	-7.4	-4.4	-3.1
-28.0	-9.3	-4.2	-5.1
-27.5	-13.4	-4.0	-9.4
-27.0	-12.8	-3.8	-9.1
-26.5	-12.4	-3.6	-8.8
-26.0	-7.6	-3.4	-4.2
-25.5	-7.8	-3.2	-4.7
-25.0	-13.4	-2.9	-10.4
-24.5	-5.6	-2.7	-2.8
-24.0	-8.2	-2.5	-5.7
-23.5	-14.3	-2.3	-12.0
-23.0	-14.6	-2.0	-12.5
-22.5	-18.2	-1.8	-16.4
-22.0	-16.2	-1.6	-14.6
-21.5	-6.2	-1.3	-4.9
-21.0	-6.2	-1.1	-5.1
-20.5	-6.1	-0.8	-5.3
-20.0	-2.2	-0.5	-1.7
-19.5	-0.5	-0.3	-0.3
-19.0	-0.5	0.0	-0.5
-18.5	-2.6	0.3	-2.9
-18.0	-5.4	0.6	-6.0
-17.5	-12.2	0.9	-13.1
-17.0	-11.4	1.2	-12.6
-16.5	-11.3	1.6	-12.8
-16.0	-19.4	1.9	-21.3
-15.5	-11.4	2.2	-13.6
-15.0	-4.8	2.6	-7.4
-14.5	-10.5	3.0	-13.5
-14.0	-4.3	3.3	-7.7
-13.5	-9.2	3.7	-12.9
-13.0	-6.5	4.2	-10.6
-12.5	-4.3	4.6	-8.9
-12.0	-15.5	5.0	-20.5
-11.5	-5.2	5.5	-10.7
-11.0	-6.8	6.0	-12.8
-10.5	-6.6	6.5	-13.1
-10.0	-9.6	7.0	-16.6
-9.5	-4.5	7.6	-12.1
-9.0	-5.3	8.1	-13.4
-8.5	-10.2	8.8	-19.0
-8.0	-2.9	9.4	-12.4
-7.5	-7.3	10.1	-17.4
-7.0	1.0	10.9	-9.8
-6.5	1.0	11.7	-10.7
-6.0	1.3	12.5	-11.2
-5.5	-0.8	13.5	-14.3
-5.0	3.8	14.5	-10.7
-4.5	4.6	15.7	-11.0
-4.0	10.0	16.9	-6.9
-3.5	8.8	18.4	-9.6
-3.0	-1.5		
-2.5	11.3		
-2.0	11.7		
-1.5	18.8		
-1.0	22.6		
-0.5	34.4		
0.0	52.6		

29.15 GHz Antenna Pattern in Co-pol EI LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.6		
0.5	37.1		
1.0	18.1		
1.5	10.2		
2.0	10.3		
2.5	6.9		
3.0	1.1		
3.5	12.4	18.4	-6.0
4.0	14.0	16.9	-2.9
4.5	2.9	15.7	-12.8
5.0	10.3	14.5	-4.3
5.5	2.8	13.5	-10.7
6.0	-3.4	12.5	-16.0
6.5	2.4	11.7	-9.3
7.0	-4.1	10.9	-15.0
7.5	-11.7	10.1	-21.8
8.0	-7.8	9.4	-17.2
8.5	-7.8	8.8	-16.5
9.0	-7.6	8.1	-15.7
9.5	-5.3	7.6	-12.9
10.0	1.0	7.0	-6.0
10.5	-8.9	6.5	-15.3
11.0	-5.1	6.0	-11.0
11.5	-6.7	5.5	-12.1
12.0	-10.0	5.0	-15.0
12.5	-2.5	4.6	-7.1
13.0	-3.9	4.2	-8.1
13.5	-8.1	3.7	-11.8
14.0	-19.9	3.3	-23.2
14.5	-14.1	3.0	-17.0
15.0	-12.9	2.6	-15.5
15.5	-23.7	2.2	-25.9
16.0	-25.9	1.9	-27.8
16.5	-11.2	1.6	-12.8
17.0	-14.8	1.2	-16.1
17.5	-15.9	0.9	-16.8
18.0	-12.5	0.6	-13.2
18.5	-11.1	0.3	-11.4
19.0	-26.4	0.0	-26.5
19.5	-10.5	-0.3	-10.3
20.0	-15.3	-0.5	-14.8
20.5	-15.6	-0.8	-14.8
21.0	-14.4	-1.1	-13.4
21.5	-16.2	-1.3	-14.8
22.0	-16.7	-1.6	-15.2
22.5	-14.3	-1.8	-12.5
23.0	-18.5	-2.0	-16.4
23.5	-15.9	-2.3	-13.6
24.0	-20.1	-2.5	-17.6
24.5	-26.6	-2.7	-23.9
25.0	-22.3	-2.9	-19.3
25.5	-20.3	-3.2	-17.2
26.0	-21.3	-3.4	-17.9
26.5	-18.1	-3.6	-14.5
27.0	-19.6	-3.8	-15.8
27.5	-20.4	-4.0	-16.4
28.0	-22.4	-4.2	-18.3
28.5	-23.5	-4.4	-19.2
29.0	-22.5	-4.6	-17.9
29.5	-21.3	-4.7	-16.5
30.0	-18.5	-4.9	-13.6

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

29.15 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-9.6	7.0	-16.6
-9.9	-17.7	7.1	-24.8
-9.8	-11.4	7.2	-18.6
-9.7	-3.5	7.3	-10.8
-9.6	-2.1	7.4	-9.5
-9.5	-4.5	7.6	-12.1
-9.4	-10.7	7.7	-18.4
-9.3	-12.1	7.8	-19.9
-9.2	-9.6	7.9	-17.5
-9.1	-10.0	8.0	-18.0
-9.0	-5.3	8.1	-13.4
-8.9	-3.8	8.3	-12.1
-8.8	-2.5	8.4	-10.9
-8.7	-2.0	8.5	-10.5
-8.6	-3.3	8.6	-11.9
-8.5	-10.2	8.8	-19.0
-8.4	-8.5	8.9	-17.4
-8.3	-7.6	9.0	-16.6
-8.2	-5.2	9.2	-14.4
-8.1	-4.4	9.3	-13.7
-8.0	-2.9	9.4	-12.4
-7.9	-2.1	9.6	-11.6
-7.8	-1.8	9.7	-11.5
-7.7	-2.6	9.8	-12.4
-7.6	-5.3	10.0	-15.3
-7.5	-7.3	10.1	-17.4
-7.4	-7.0	10.3	-17.2
-7.3	-8.7	10.4	-19.1
-7.2	-12.2	10.6	-22.8
-7.1	-4.4	10.7	-15.2
-7.0	1.0	10.9	-9.8
-6.9	2.1	11.0	-8.9
-6.8	-0.1	11.2	-11.3
-6.7	-7.6	11.3	-18.9
-6.6	0.9	11.5	-10.6
-6.5	1.0	11.7	-10.7
-6.4	-1.6	11.8	-13.4
-6.3	-7.1	12.0	-19.1
-6.2	-2.5	12.2	-14.7
-6.1	-0.2	12.4	-12.5
-6.0	1.3	12.5	-11.2
-5.9	-0.1	12.7	-12.9
-5.8	-2.4	12.9	-15.3
-5.7	0.6	13.1	-12.5
-5.6	1.5	13.3	-11.8
-5.5	-0.8	13.5	-14.3
-5.4	-4.5	13.7	-18.2
-5.3	-6.0	13.9	-19.9
-5.2	-6.5	14.1	-20.6
-5.1	0.6	14.3	-13.7
-5.0	3.8	14.5	-10.7
-4.9	3.7	14.7	-11.0
-4.8	4.1	15.0	-10.8
-4.7	4.6	15.2	-10.6
-4.6	5.7	15.4	-9.7
-4.5	4.6	15.7	-11.0
-4.4	-1.7	15.9	-17.6
-4.3	3.0	16.2	-13.2
-4.2	8.4	16.4	-8.0
-4.1	10.1	16.7	-6.6

29.15 GHz Antenna Pattern in Co-pol EI LHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.6		
0.1	51.8		
0.2	49.1		
0.3	44.3		
0.4	39.7		
0.5	37.1		
0.6	32.5		
0.7	22.0		
0.8	10.3		
0.9	6.1		
1.0	18.1		
1.1	19.5		
1.2	12.7		
1.3	9.6		
1.4	11.9		
1.5	10.2		
1.6	13.7		
1.7	13.7		
1.8	11.3		
1.9	10.3		
2.0	10.3		
2.1	12.7		
2.2	13.9		
2.3	12.6		
2.4	9.6		
2.5	6.9		
2.6	0.5		
2.7	-7.7		
2.8	-1.3		
2.9	3.1		
3.0	1.1		
3.1	0.5		
3.2	9.8		
3.3	12.5		
3.4	13.5		
3.5	12.4	18.4	-6.0
3.6	10.5	18.1	-7.6
3.7	11.3	17.8	-6.5
3.8	13.0	17.5	-4.5
3.9	13.5	17.2	-3.7
4.0	14.0	16.9	-2.9
4.1	13.7	16.7	-3.0
4.2	12.4	16.4	-4.0
4.3	8.2	16.2	-8.0
4.4	2.3	15.9	-13.6
4.5	2.9	15.7	-12.8
4.6	4.6	15.4	-10.8
4.7	6.3	15.2	-8.9
4.8	7.5	15.0	-7.5
4.9	9.7	14.7	-5.0
5.0	10.3	14.5	-4.3
5.1	8.1	14.3	-6.2
5.2	1.7	14.1	-12.4
5.3	-2.9	13.9	-16.8
5.4	2.9	13.7	-10.8
5.5	2.8	13.5	-10.7
5.6	-1.2	13.3	-14.5
5.7	-5.2	13.1	-18.3
5.8	-3.3	12.9	-16.2
5.9	-1.1	12.7	-13.9

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Elevation LHCP, -10° to +10° @ 0.1° increment

-4.0	10.0	16.9	-6.9
-3.9	6.3	17.2	-10.9
-3.8	-10.6	17.5	-28.1
-3.7	6.6	17.8	-11.2
-3.6	9.2	18.1	-8.9
-3.5	8.8	18.4	-9.6
-3.4	7.1		
-3.3	1.2		
-3.2	-4.8		
-3.1	3.4		
-3.0	-1.5		
-2.9	9.3		
-2.8	14.5		
-2.7	15.4		
-2.6	13.3		
-2.5	11.3		
-2.4	12.8		
-2.3	13.8		
-2.2	13.9		
-2.1	13.2		
-2.0	11.7		
-1.9	9.8		
-1.8	7.7		
-1.7	11.8		
-1.6	15.8		
-1.5	18.8		
-1.4	18.3		
-1.3	13.1		
-1.2	20.5		
-1.1	23.5		
-1.0	22.6		
-0.9	21.9		
-0.8	25.1		
-0.7	27.9		
-0.6	31.9		
-0.5	34.4		
-0.4	39.2		
-0.3	45.7		
-0.2	50.0		
-0.1	52.2		
0.0	52.6		

6.0	-3.4	12.5	-16.0
6.1	-9.0	12.4	-21.4
6.2	-8.7	12.2	-20.9
6.3	-4.5	12.0	-16.5
6.4	0.8	11.8	-11.0
6.5	2.4	11.7	-9.3
6.6	1.9	11.5	-9.6
6.7	-0.2	11.3	-11.5
6.8	-2.0	11.2	-13.2
6.9	-6.0	11.0	-17.1
7.0	-4.1	10.9	-15.0
7.1	-0.8	10.7	-11.5
7.2	-1.0	10.6	-11.6
7.3	-2.8	10.4	-13.2
7.4	-3.9	10.3	-14.2
7.5	-11.7	10.1	-21.8
7.6	-5.7	10.0	-15.7
7.7	-1.5	9.8	-11.4
7.8	-1.8	9.7	-11.5
7.9	-3.7	9.6	-13.3
8.0	-7.8	9.4	-17.2
8.1	-10.5	9.3	-19.8
8.2	-27.1	9.2	-36.3
8.3	-10.9	9.0	-19.9
8.4	-5.2	8.9	-14.1
8.5	-7.8	8.8	-16.5
8.6	-12.7	8.6	-21.4
8.7	-9.5	8.5	-18.0
8.8	-8.7	8.4	-17.1
8.9	-7.6	8.3	-15.9
9.0	-7.6	8.1	-15.7
9.1	-12.3	8.0	-20.3
9.2	-16.6	7.9	-24.5
9.3	-20.1	7.8	-27.9
9.4	-10.2	7.7	-17.8
9.5	-5.3	7.6	-12.9
9.6	-2.7	7.4	-10.1
9.7	-0.2	7.3	-7.5
9.8	1.6	7.2	-5.7
9.9	2.1	7.1	-5.0
10.0	1.0	7.0	-6.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

29.15 GHz Antenna Pattern in X-pol Az LHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-10.4	-2.0	-8.4
-9.9	-9.1	-2.0	-7.1
-9.8	-11.5	-2.0	-9.5
-9.7	-11.2	-2.0	-9.2
-9.6	-10.6	-2.0	-8.6
-9.5	-8.6	-2.0	-6.6
-9.4	-9.9	-2.0	-7.9
-9.3	-8.2	-2.0	-6.2
-9.2	-7.5	-2.0	-5.5
-9.1	-5.4	-2.0	-3.4
-9.0	-6.6	-2.0	-4.6
-8.9	-6.9	-2.0	-4.9
-8.8	-8.2	-2.0	-6.2
-8.7	-11.3	-2.0	-9.3
-8.6	-14.3	-2.0	-12.3
-8.5	-10.0	-2.0	-8.0
-8.4	-8.8	-2.0	-6.8
-8.3	-12.3	-2.0	-10.3
-8.2	-15.4	-2.0	-13.4
-8.1	-18.6	-2.0	-16.6
-8.0	-16.6	-2.0	-14.6
-7.9	-16.9	-2.0	-14.9
-7.8	-20.4	-2.0	-18.4
-7.7	-17.4	-2.0	-15.4
-7.6	-11.9	-2.0	-9.9
-7.5	-9.7	-2.0	-7.7
-7.4	-10.0	-2.0	-8.0
-7.3	-12.4	-2.0	-10.4
-7.2	-6.7	-2.0	-4.7
-7.1	-2.1	-2.0	-0.1
-7.0	-0.2	-2.1	1.9
-6.9	-0.8	-2.0	1.2
-6.8	-3.2	-1.8	-1.4
-6.7	-8.4	-1.7	-6.8
-6.6	-11.1	-1.5	-9.6
-6.5	-10.6	-1.3	-9.3
-6.4	-9.6	-1.2	-8.5
-6.3	-18.9	-1.0	-17.9
-6.2	-15.4	-0.8	-14.6
-6.1	-11.1	-0.6	-10.5
-6.0	-11.2	-0.5	-10.8
-5.9	-17.2	-0.3	-17.0
-5.8	-22.1	-0.1	-22.0
-5.7	-16.6	0.1	-16.7
-5.6	-9.7	0.3	-10.0
-5.5	-5.5	0.5	-6.0
-5.4	-2.7	0.7	-3.4
-5.3	-1.1	0.9	-2.0
-5.2	-3.2	1.1	-4.3
-5.1	-16.4	1.3	-17.7
-5.0	-5.2	1.5	-6.7
-4.9	-1.5	1.7	-3.3
-4.8	-3.9	2.0	-5.9
-4.7	-9.9	2.2	-12.1
-4.6	-5.1	2.4	-7.6
-4.5	-3.6	2.7	-6.2
-4.4	-6.0	2.9	-8.9
-4.3	-8.2	3.2	-11.3
-4.2	-6.3	3.4	-9.7
-4.1	-2.4	3.7	-6.1

29.15 GHz Antenna Pattern in X-pol Az LHCP

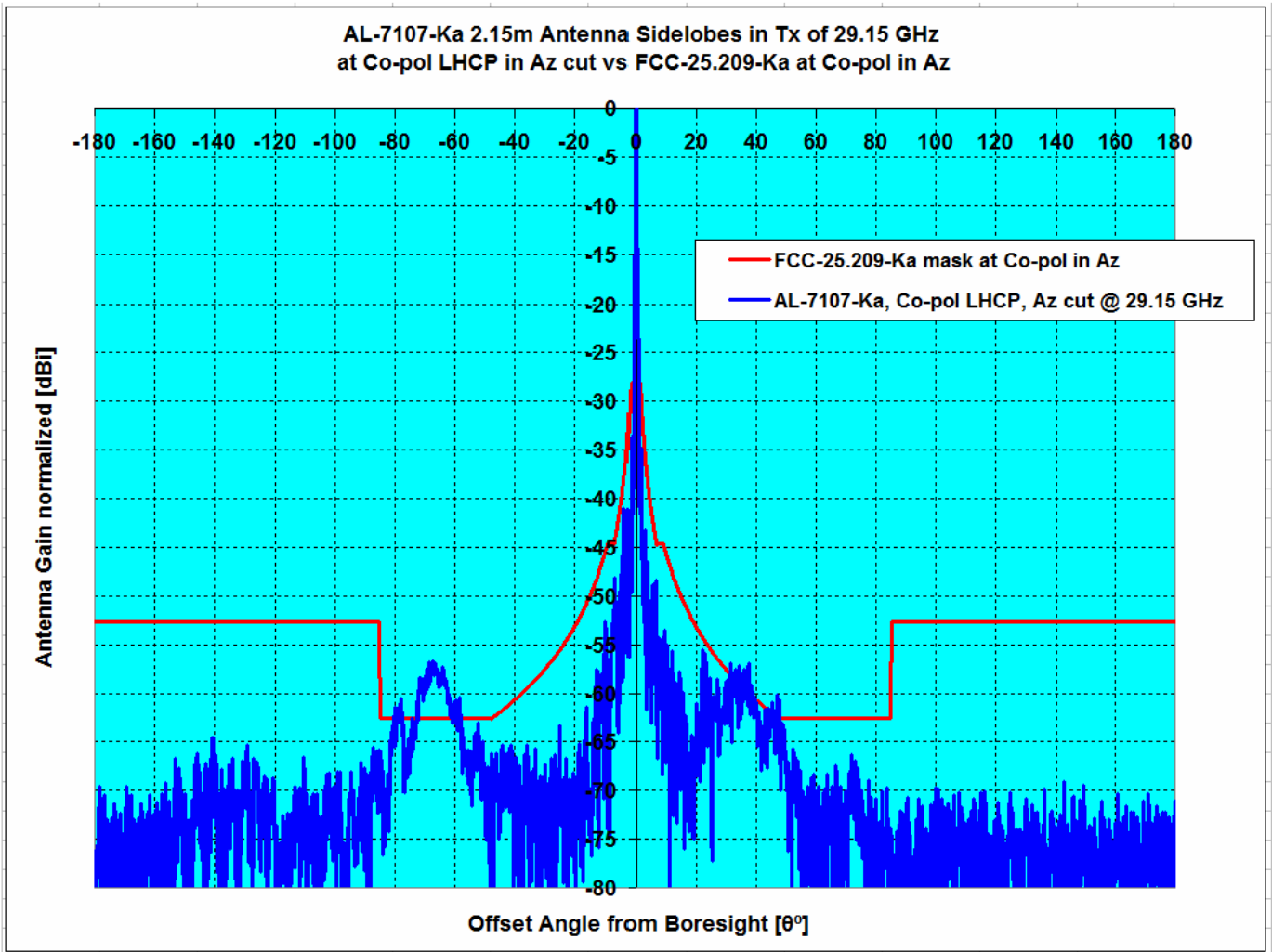
Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	23.4		
0.1	20.7		
0.2	24.2		
0.3	28.3		
0.4	29.1		
0.5	28.1		
0.6	24.4		
0.7	17.2		
0.8	1.4		
0.9	10.6		
1.0	14.3		
1.1	14.1		
1.2	12.7		
1.3	13.1		
1.4	12.9		
1.5	11.1		
1.6	7.5		
1.7	5.6		
1.8	3.2	12.6	-9.4
1.9	0.6	12.0	-11.5
2.0	-0.1	11.5	-11.5
2.1	1.3	10.9	-9.7
2.2	2.3	10.4	-8.2
2.3	0.8	10.0	-9.1
2.4	-2.4	9.5	-11.9
2.5	-7.9	9.1	-16.9
2.6	-6.7	8.6	-15.3
2.7	-3.6	8.2	-11.8
2.8	-5.5	7.8	-13.3
2.9	-8.3	7.4	-15.7
3.0	-4.3	7.1	-11.4
3.1	-6.3	6.7	-13.0
3.2	-8.8	6.4	-15.2
3.3	-7.8	6.0	-13.9
3.4	-6.4	5.7	-12.1
3.5	-5.9	5.4	-11.3
3.6	-2.8	5.1	-7.9
3.7	-4.1	4.8	-8.9
3.8	-8.8	4.5	-13.3
3.9	-6.5	4.2	-10.7
4.0	-4.4	3.9	-8.3
4.1	-7.6	3.7	-11.3
4.2	-12.4	3.4	-15.8
4.3	-10.9	3.2	-14.0
4.4	-11.2	2.9	-14.1
4.5	-9.0	2.7	-11.7
4.6	-5.9	2.4	-8.3
4.7	-6.2	2.2	-8.4
4.8	-7.9	2.0	-9.9
4.9	-9.3	1.7	-11.0
5.0	-7.5	1.5	-9.0
5.1	-8.9	1.3	-10.2
5.2	-9.5	1.1	-10.6
5.3	-14.1	0.9	-15.0
5.4	-21.2	0.7	-21.9
5.5	-10.5	0.5	-11.0
5.6	-8.1	0.3	-8.4
5.7	-12.3	0.1	-12.5
5.8	-12.7	-0.1	-12.6
5.9	-11.6	-0.3	-11.3

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth LHCP, -10° to +10° @ 0.1° increment

-4.0	-3.3	3.9	-7.3
-3.9	-7.5	4.2	-11.7
-3.8	-13.7	4.5	-18.2
-3.7	-22.0	4.8	-26.8
-3.6	-8.9	5.1	-14.0
-3.5	-4.1	5.4	-9.5
-3.4	-1.8	5.7	-7.5
-3.3	-0.9	6.0	-6.9
-3.2	-4.4	6.4	-10.8
-3.1	-12.1	6.7	-18.8
-3.0	-5.9	7.1	-13.0
-2.9	-5.1	7.4	-12.6
-2.8	-6.9	7.8	-14.8
-2.7	-14.4	8.2	-22.6
-2.6	-9.1	8.6	-17.7
-2.5	-4.8	9.1	-13.9
-2.4	-5.5	9.5	-15.0
-2.3	-22.3	10.0	-32.3
-2.2	-11.2	10.4	-21.6
-2.1	-10.6	10.9	-21.5
-2.0	-5.6	11.5	-17.0
-1.9	-1.6	12.0	-13.7
-1.8	-2.8	12.6	-15.5
-1.7	2.7		
-1.6	7.4		
-1.5	9.8		
-1.4	11.1		
-1.3	11.8		
-1.2	12.2		
-1.1	12.9		
-1.0	13.5		
-0.9	13.5		
-0.8	10.7		
-0.7	14.4		
-0.6	23.9		
-0.5	28.6		
-0.4	30.3		
-0.3	30.1		
-0.2	27.9		
-0.1	24.5		
0.0	23.4		

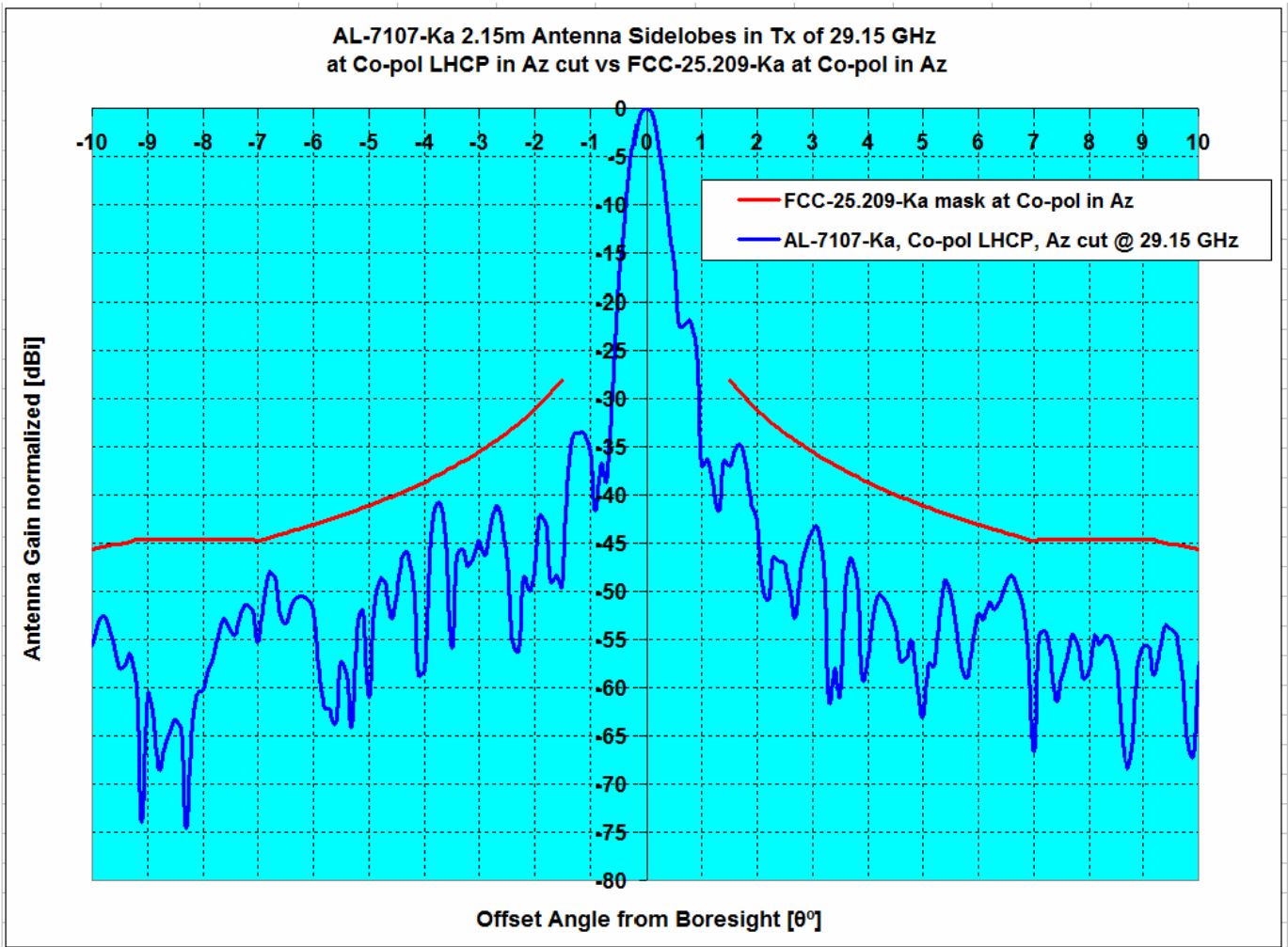
6.0	-12.1	-0.5	-11.6
6.1	-13.2	-0.6	-12.5
6.2	-16.7	-0.8	-15.9
6.3	-22.3	-1.0	-21.3
6.4	-14.3	-1.2	-13.1
6.5	-13.3	-1.3	-11.9
6.6	-14.7	-1.5	-13.2
6.7	-8.5	-1.7	-6.8
6.8	-5.3	-1.8	-3.5
6.9	-5.2	-2.0	-3.3
7.0	-7.0	-2.1	-4.9
7.1	-11.6	-2.0	-9.6
7.2	-12.8	-2.0	-10.8
7.3	-13.2	-2.0	-11.2
7.4	-13.2	-2.0	-11.2
7.5	-15.0	-2.0	-13.0
7.6	-16.4	-2.0	-14.4
7.7	-11.0	-2.0	-9.0
7.8	-13.0	-2.0	-11.0
7.9	-14.6	-2.0	-12.6
8.0	-19.7	-2.0	-17.7
8.1	-19.4	-2.0	-17.4
8.2	-15.2	-2.0	-13.2
8.3	-15.8	-2.0	-13.8
8.4	-14.0	-2.0	-12.0
8.5	-12.8	-2.0	-10.8
8.6	-11.0	-2.0	-9.0
8.7	-12.2	-2.0	-10.2
8.8	-16.4	-2.0	-14.4
8.9	-17.8	-2.0	-15.8
9.0	-21.4	-2.0	-19.4
9.1	-16.9	-2.0	-14.9
9.2	-17.7	-2.0	-15.7
9.3	-16.1	-2.0	-14.1
9.4	-20.0	-2.0	-18.0
9.5	-24.9	-2.0	-22.9
9.6	-24.1	-2.0	-22.1
9.7	-13.0	-2.0	-11.0
9.8	-10.5	-2.0	-8.5
9.9	-8.9	-2.0	-6.9
10.0	-9.6	-2.0	-7.6

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth LHCP



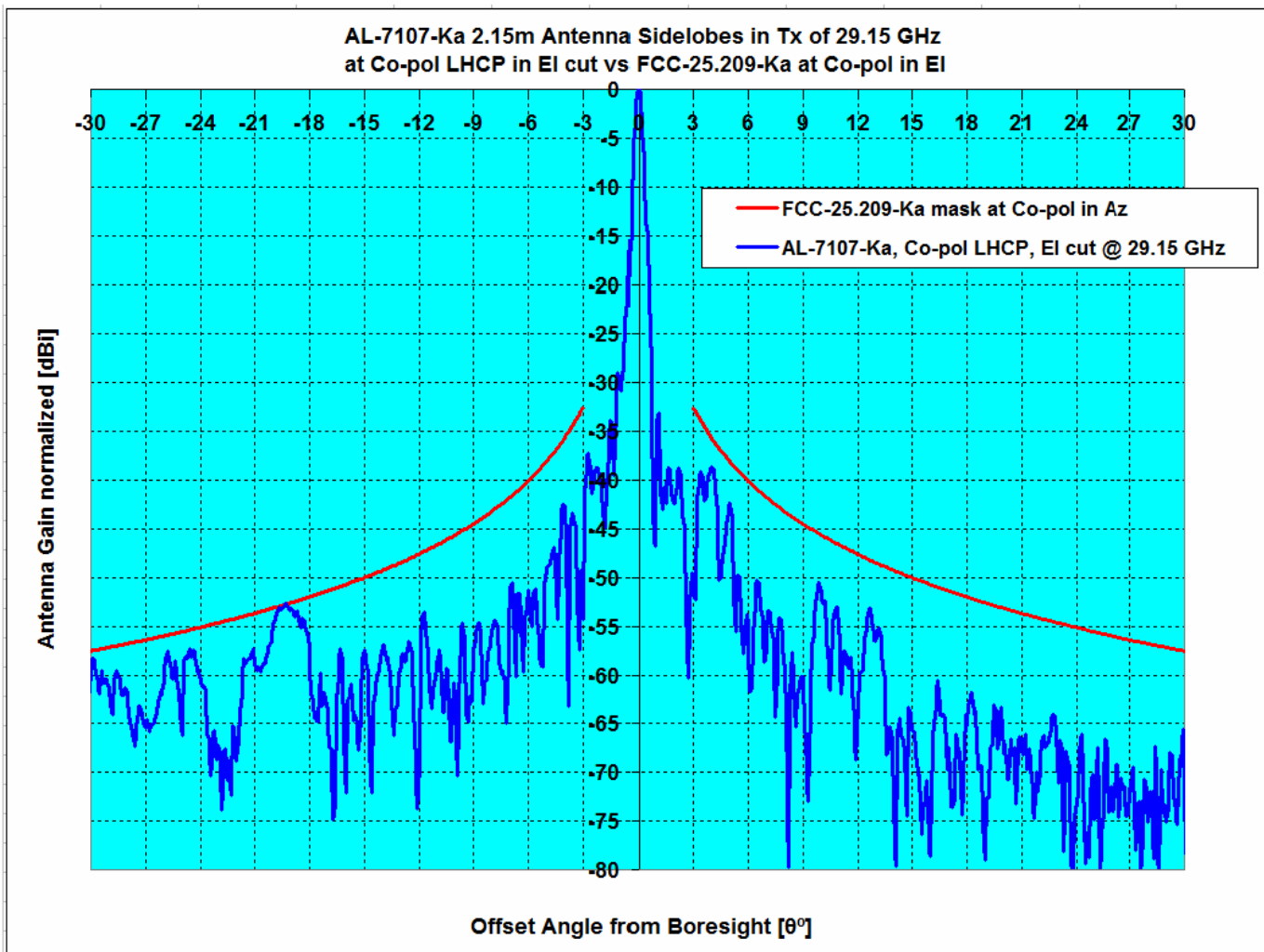
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , LHCP	29.15	52.63	-3.12	5.91	0.00%	5.71%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth LHCP



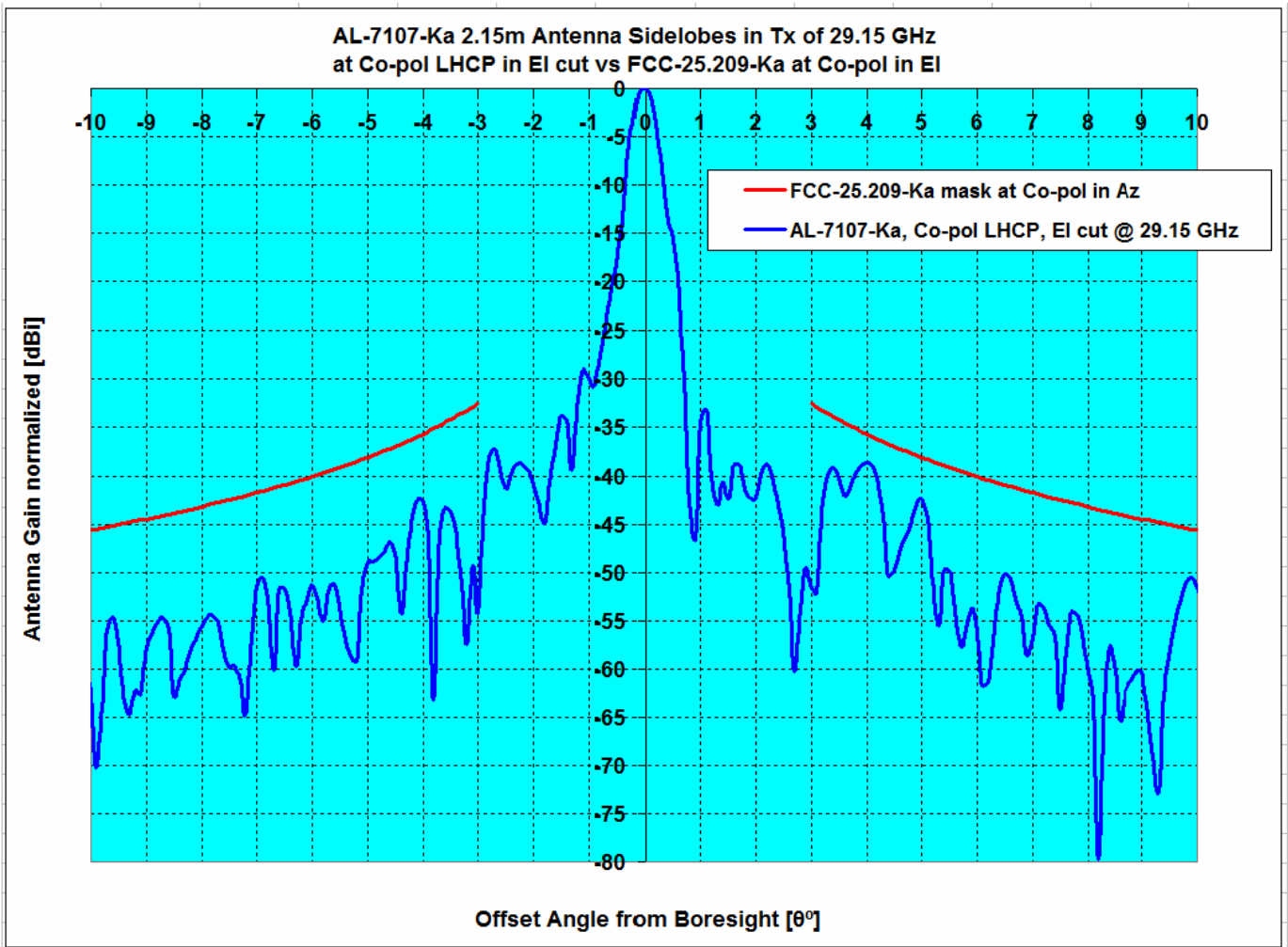
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , LHCP	29.15	52.63	-3.12	5.91	0.00%	5.71%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation LHCP



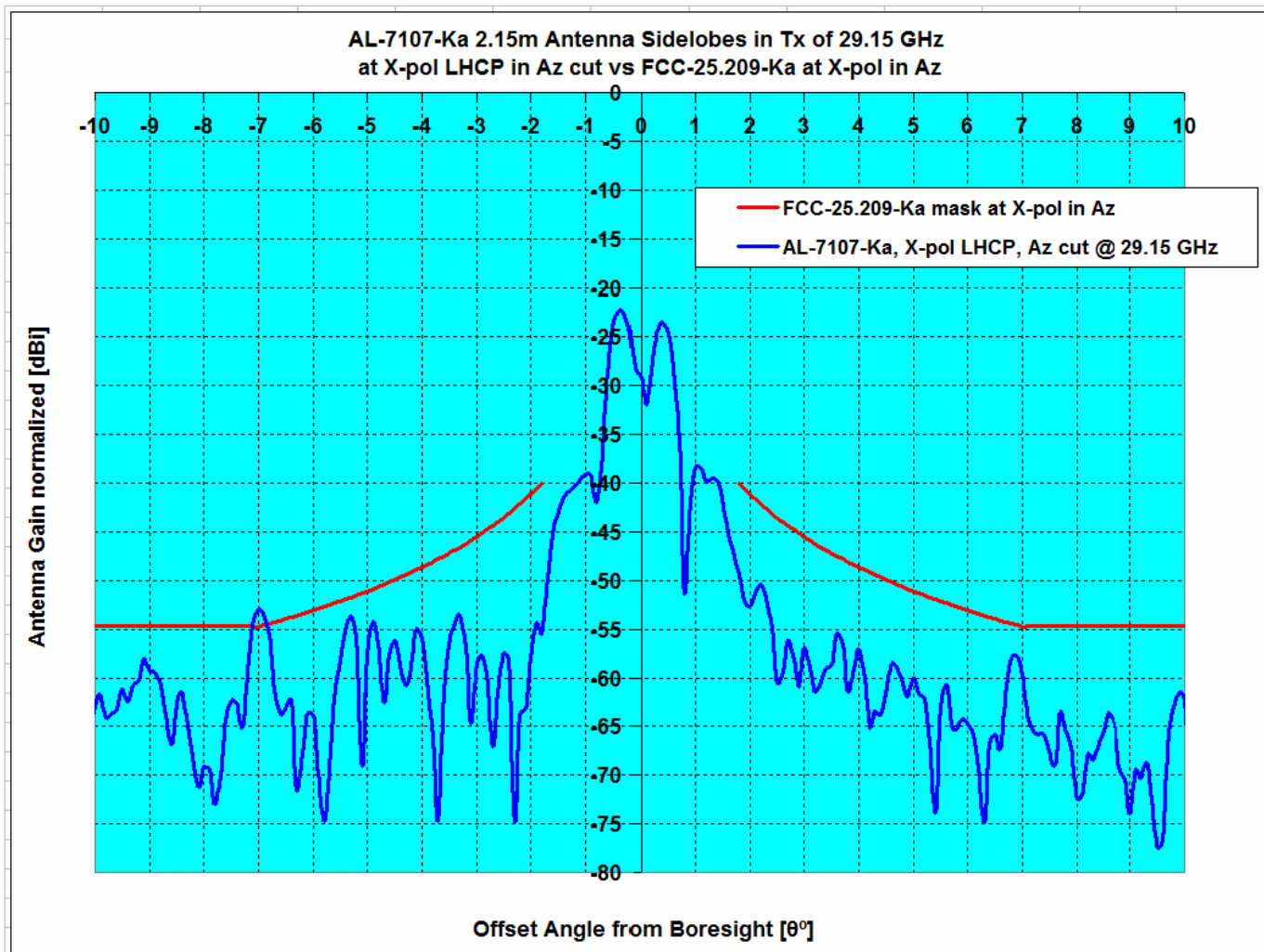
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , LHCP	29.15	52.63	-2.92	0.16	0.00%	0.37%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , LHCP	29.15	52.63	-2.92	0.16	0.00%	0.37%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, X-pol, Azimuth LHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7107-Ka	Az , LHCP	29.15	52.63	1.89	1.89	1.89%	1.20%

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

29.15 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-179.0	-25.9	0.0	-25.9
-178.0	-18.2	0.0	-18.2
-177.0	-20.5	0.0	-20.5
-176.0	-25.0	0.0	-25.0
-175.0	-27.4	0.0	-27.4
-174.0	-27.4	0.0	-27.4
-173.0	-26.9	0.0	-26.9
-172.0	-27.4	0.0	-27.4
-171.0	-23.9	0.0	-23.9
-170.0	-25.9	0.0	-25.9
-169.0	-18.2	0.0	-18.2
-168.0	-20.5	0.0	-20.5
-167.0	-25.0	0.0	-25.0
-166.0	-27.4	0.0	-27.4
-165.0	-27.4	0.0	-27.4
-164.0	-26.9	0.0	-26.9
-163.0	-27.4	0.0	-27.4
-162.0	-19.4	0.0	-19.4
-161.0	-20.8	0.0	-20.8
-160.0	-27.0	0.0	-27.0
-159.0	-26.0	0.0	-26.0
-158.0	-27.4	0.0	-27.4
-157.0	-19.8	0.0	-19.8
-156.0	-27.4	0.0	-27.4
-155.0	-27.4	0.0	-27.4
-154.0	-20.7	0.0	-20.7
-153.0	-22.6	0.0	-22.6
-152.0	-15.2	0.0	-15.2
-151.0	-19.3	0.0	-19.3
-150.0	-17.7	0.0	-17.7
-149.0	-27.4	0.0	-27.4
-148.0	-25.8	0.0	-25.8
-147.0	-24.5	0.0	-24.5
-146.0	-15.8	0.0	-15.8
-145.0	-15.5	0.0	-15.5
-144.0	-20.2	0.0	-20.2
-143.0	-20.2	0.0	-20.2
-142.0	-21.6	0.0	-21.6
-141.0	-20.2	0.0	-20.2
-140.0	-16.0	0.0	-16.0
-139.0	-20.2	0.0	-20.2
-138.0	-20.6	0.0	-20.6
-137.0	-20.5	0.0	-20.5
-136.0	-23.7	0.0	-23.7
-135.0	-15.0	0.0	-15.0
-134.0	-15.9	0.0	-15.9
-133.0	-27.4	0.0	-27.4
-132.0	-25.2	0.0	-25.2
-131.0	-22.1	0.0	-22.1
-130.0	-16.0	0.0	-16.0
-129.0	-16.1	0.0	-16.1
-128.0	-18.9	0.0	-18.9
-127.0	-15.9	0.0	-15.9
-126.0	-15.0	0.0	-15.0
-125.0	-22.5	0.0	-22.5
-124.0	-19.5	0.0	-19.5
-123.0	-20.8	0.0	-20.8
-122.0	-25.3	0.0	-25.3
-121.0	-20.6	0.0	-20.6
-120.0	-26.0	0.0	-26.0

29.15 GHz Antenna Pattern in Co-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	52.6		
1.0	15.7		
2.0	10.0	21.5	-11.5
3.0	9.1	17.1	-8.0
4.0	-4.1	13.9	-18.1
5.0	-10.4	11.5	-21.9
6.0	0.3	9.5	-9.2
7.0	-14.1	7.9	-21.9
8.0	-5.4	8.0	-13.4
9.0	-3.3	8.0	-11.3
10.0	-5.3	7.0	-12.3
11.0	-15.6	6.0	-21.5
12.0	-3.1	5.0	-8.1
13.0	-6.7	4.2	-10.9
14.0	-12.7	3.3	-16.0
15.0	-17.4	2.6	-20.0
16.0	-23.4	1.9	-25.3
17.0	-16.6	1.2	-17.9
18.0	-14.4	0.6	-15.0
19.0	-19.6	0.0	-19.6
20.0	-10.9	-0.5	-10.3
21.0	-15.4	-1.1	-14.3
22.0	-4.5	-1.6	-3.0
23.0	-3.7	-2.0	-1.7
24.0	-5.9	-2.5	-3.4
25.0	-11.3	-2.9	-8.3
26.0	-7.7	-3.4	-4.3
27.0	-7.5	-3.8	-3.7
28.0	-13.5	-4.2	-9.3
29.0	-8.8	-4.6	-4.3
30.0	-7.2	-4.9	-2.3
31.0	-5.8	-5.3	-0.5
32.0	-9.8	-5.6	-4.2
33.0	-5.0	-6.0	0.9
34.0	-10.9	-6.3	-4.6
35.0	-9.4	-6.6	-2.8
36.0	-5.1	-6.9	1.9
37.0	-6.4	-7.2	0.8
38.0	-9.6	-7.5	-2.1
39.0	-9.4	-7.8	-1.6
40.0	-9.6	-8.1	-1.5
41.0	-12.3	-8.3	-4.0
42.0	-11.1	-8.6	-2.5
43.0	-11.7	-8.8	-2.9
44.0	-9.0	-9.1	0.1
45.0	-9.2	-9.3	0.1
46.0	-9.5	-9.6	0.1
47.0	-7.6	-9.8	2.2
48.0	-14.1	-10.0	-4.1
49.0	-10.6	-10.0	-0.6
50.0	-13.3	-10.0	-3.3
51.0	-21.6	-10.0	-11.6
52.0	-16.7	-10.0	-6.7
53.0	-14.1	-10.0	-4.1
54.0	-16.3	-10.0	-6.3
55.0	-19.5	-10.0	-9.5
56.0	-26.5	-10.0	-16.5
57.0	-23.2	-10.0	-13.2
58.0	-19.6	-10.0	-9.6
59.0	-25.0	-10.0	-15.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-119.0	-26.2	0.0	-26.2
-118.0	-24.0	0.0	-24.0
-117.0	-26.3	0.0	-26.3
-116.0	-22.1	0.0	-22.1
-115.0	-27.4	0.0	-27.4
-114.0	-22.4	0.0	-22.4
-113.0	-17.6	0.0	-17.6
-112.0	-19.9	0.0	-19.9
-111.0	-17.4	0.0	-17.4
-110.0	-17.3	0.0	-17.3
-109.0	-27.4	0.0	-27.4
-108.0	-24.7	0.0	-24.7
-107.0	-25.2	0.0	-25.2
-106.0	-20.2	0.0	-20.2
-105.0	-20.5	0.0	-20.5
-104.0	-19.9	0.0	-19.9
-103.0	-20.1	0.0	-20.1
-102.0	-16.2	0.0	-16.2
-101.0	-23.3	0.0	-23.3
-100.0	-17.0	0.0	-17.0
-99.0	-20.0	0.0	-20.0
-98.0	-27.4	0.0	-27.4
-97.0	-23.7	0.0	-23.7
-96.0	-27.4	0.0	-27.4
-95.0	-19.7	0.0	-19.7
-94.0	-19.6	0.0	-19.6
-93.0	-22.6	0.0	-22.6
-92.0	-20.0	0.0	-20.0
-91.0	-18.8	0.0	-18.8
-90.0	-21.7	0.0	-21.7
-89.0	-27.2	0.0	-27.2
-88.0	-18.7	0.0	-18.7
-87.0	-15.9	0.0	-15.9
-86.0	-13.3	0.0	-13.3
-85.0	-13.3	-10.0	-3.3
-84.0	-15.3	-10.0	-5.3
-83.0	-20.2	-10.0	-10.2
-82.0	-20.2	-10.0	-10.2
-81.0	-12.7	-10.0	-2.7
-80.0	-12.8	-10.0	-2.8
-79.0	-10.3	-10.0	-0.3
-78.0	-9.3	-10.0	0.7
-77.0	-16.7	-10.0	-6.7
-76.0	-14.2	-10.0	-4.2
-75.0	-14.6	-10.0	-4.6
-74.0	-10.9	-10.0	-0.9
-73.0	-10.2	-10.0	-0.2
-72.0	-6.9	-10.0	3.1
-71.0	-6.7	-10.0	3.3
-70.0	-5.8	-10.0	4.2
-69.0	-6.8	-10.0	3.2
-68.0	-4.7	-10.0	5.3
-67.0	-4.6	-10.0	5.4
-66.0	-5.1	-10.0	4.9
-65.0	-6.4	-10.0	3.6
-64.0	-4.8	-10.0	5.2
-63.0	-6.9	-10.0	3.1
-62.0	-7.4	-10.0	2.6
-61.0	-9.4	-10.0	0.6
-60.0	-10.4	-10.0	-0.4
-59.0	-11.1	-10.0	-1.1
-58.0	-11.5	-10.0	-1.5
-57.0	-15.0	-10.0	-5.0

60.0	-22.4	-10.0	-12.4
61.0	-25.4	-10.0	-15.4
62.0	-24.5	-10.0	-14.5
63.0	-27.4	-10.0	-17.4
64.0	-18.1	-10.0	-8.1
65.0	-19.8	-10.0	-9.8
66.0	-27.4	-10.0	-17.4
67.0	-19.9	-10.0	-9.9
68.0	-25.1	-10.0	-15.1
69.0	-21.3	-10.0	-11.3
70.0	-20.3	-10.0	-10.3
71.0	-19.9	-10.0	-9.9
72.0	-16.1	-10.0	-6.1
73.0	-15.1	-10.0	-5.1
74.0	-17.3	-10.0	-7.3
75.0	-17.4	-10.0	-7.4
76.0	-19.9	-10.0	-9.9
77.0	-27.4	-10.0	-17.4
78.0	-20.4	-10.0	-10.4
79.0	-27.4	-10.0	-17.4
80.0	-21.5	-10.0	-11.5
81.0	-22.2	-10.0	-12.2
82.0	-23.5	-10.0	-13.5
83.0	-23.1	-10.0	-13.1
84.0	-26.5	-10.0	-16.5
85.0	-27.4	-10.0	-17.4
86.0	-25.4	0.0	-25.4
87.0	-21.5	0.0	-21.5
88.0	-19.6	0.0	-19.6
89.0	-25.7	0.0	-25.7
90.0	-18.6	0.0	-18.6
91.0	-25.0	0.0	-25.0
92.0	-26.8	0.0	-26.8
93.0	-27.4	0.0	-27.4
94.0	-18.2	0.0	-18.2
95.0	-25.1	0.0	-25.1
96.0	-22.6	0.0	-22.6
97.0	-24.3	0.0	-24.3
98.0	-25.3	0.0	-25.3
99.0	-27.3	0.0	-27.3
100.0	-19.9	0.0	-19.9
101.0	-21.8	0.0	-21.8
102.0	-24.4	0.0	-24.4
103.0	-22.8	0.0	-22.8
104.0	-22.2	0.0	-22.2
105.0	-19.6	0.0	-19.6
106.0	-24.5	0.0	-24.5
107.0	-23.1	0.0	-23.1
108.0	-23.4	0.0	-23.4
109.0	-24.9	0.0	-24.9
110.0	-23.0	0.0	-23.0
111.0	-24.6	0.0	-24.6
112.0	-19.7	0.0	-19.7
113.0	-24.1	0.0	-24.1
114.0	-25.2	0.0	-25.2
115.0	-22.9	0.0	-22.9
116.0	-23.2	0.0	-23.2
117.0	-27.1	0.0	-27.1
118.0	-25.0	0.0	-25.0
119.0	-27.0	0.0	-27.0
120.0	-27.4	0.0	-27.4
121.0	-26.7	0.0	-26.7
122.0	-21.1	0.0	-21.1

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -180° to +180° @ 1.0° increment

-56.0	-15.1	-10.0	-5.1
-55.0	-14.6	-10.0	-4.6
-54.0	-15.9	-10.0	-5.9
-53.0	-11.4	-10.0	-1.4
-52.0	-11.8	-10.0	-1.8
-51.0	-15.5	-10.0	-5.5
-50.0	-15.8	-10.0	-5.8
-49.0	-16.5	-10.0	-6.5
-48.0	-20.7	-10.0	-10.7
-47.0	-27.4	-9.8	-17.6
-46.0	-14.0	-9.6	-4.4
-45.0	-15.7	-9.3	-6.4
-44.0	-12.7	-9.1	-3.6
-43.0	-18.4	-8.8	-9.6
-42.0	-16.2	-8.6	-7.6
-41.0	-17.4	-8.3	-9.0
-40.0	-16.9	-8.1	-8.9
-39.0	-22.9	-7.8	-15.1
-38.0	-22.0	-7.5	-14.5
-37.0	-18.9	-7.2	-11.7
-36.0	-14.3	-6.9	-7.4
-35.0	-18.4	-6.6	-11.8
-34.0	-15.6	-6.3	-9.3
-33.0	-16.2	-6.0	-10.2
-32.0	-17.3	-5.6	-11.6
-31.0	-19.6	-5.3	-14.3
-30.0	-14.8	-4.9	-9.9
-29.0	-18.2	-4.6	-13.7
-28.0	-19.4	-4.2	-15.2
-27.0	-21.4	-3.8	-17.6
-26.0	-21.2	-3.4	-17.8
-25.0	-10.8	-2.9	-7.8
-24.0	-19.7	-2.5	-17.2
-23.0	-18.1	-2.0	-16.1
-22.0	-19.3	-1.6	-17.8
-21.0	-19.3	-1.1	-18.2
-20.0	-18.0	-0.5	-17.5
-19.0	-20.8	0.0	-20.8
-18.0	-19.2	0.6	-19.8
-17.0	-18.9	1.2	-20.2
-16.0	-8.8	1.9	-10.7
-15.0	-22.5	2.6	-25.1
-14.0	-12.8	3.3	-16.2
-13.0	-10.9	4.2	-15.1
-12.0	-12.0	5.0	-17.1
-11.0	-6.4	6.0	-12.4
-10.0	-3.1	7.0	-10.1
-9.0	-8.1	8.0	-16.1
-8.0	-7.7	8.0	-15.7
-7.0	-2.7	7.9	-10.5
-6.0	0.8	9.5	-8.8
-5.0	-8.5	11.5	-20.0
-4.0	-5.6	13.9	-19.6
-3.0	7.9	17.1	-9.2
-2.0	4.7	21.5	-16.7
-1.0	17.2		
0.0	52.6		

123.0	-25.5	0.0	-25.5
124.0	-22.2	0.0	-22.2
125.0	-19.5	0.0	-19.5
126.0	-27.4	0.0	-27.4
127.0	-24.9	0.0	-24.9
128.0	-21.7	0.0	-21.7
129.0	-25.5	0.0	-25.5
130.0	-21.6	0.0	-21.6
131.0	-26.1	0.0	-26.1
132.0	-27.4	0.0	-27.4
133.0	-27.4	0.0	-27.4
134.0	-25.8	0.0	-25.8
135.0	-27.1	0.0	-27.1
136.0	-26.9	0.0	-26.9
137.0	-27.4	0.0	-27.4
138.0	-21.9	0.0	-21.9
139.0	-24.9	0.0	-24.9
140.0	-22.5	0.0	-22.5
141.0	-20.8	0.0	-20.8
142.0	-27.4	0.0	-27.4
143.0	-25.8	0.0	-25.8
144.0	-27.4	0.0	-27.4
145.0	-27.4	0.0	-27.4
146.0	-24.8	0.0	-24.8
147.0	-23.5	0.0	-23.5
148.0	-27.4	0.0	-27.4
149.0	-23.6	0.0	-23.6
150.0	-23.9	0.0	-23.9
151.0	-27.1	0.0	-27.1
152.0	-26.7	0.0	-26.7
153.0	-22.1	0.0	-22.1
154.0	-27.4	0.0	-27.4
155.0	-18.6	0.0	-18.6
156.0	-27.4	0.0	-27.4
157.0	-27.4	0.0	-27.4
158.0	-27.4	0.0	-27.4
159.0	-25.5	0.0	-25.5
160.0	-25.5	0.0	-25.5
161.0	-20.0	0.0	-20.0
162.0	-26.2	0.0	-26.2
163.0	-20.2	0.0	-20.2
164.0	-24.1	0.0	-24.1
165.0	-27.4	0.0	-27.4
166.0	-24.5	0.0	-24.5
167.0	-27.4	0.0	-27.4
168.0	-27.4	0.0	-27.4
169.0	-27.4	0.0	-27.4
170.0	-27.0	0.0	-27.0
171.0	-26.5	0.0	-26.5
172.0	-27.4	0.0	-27.4
173.0	-27.4	0.0	-27.4
174.0	-22.7	0.0	-22.7
175.0	-24.8	0.0	-24.8
176.0	-23.7	0.0	-23.7
177.0	-27.4	0.0	-27.4
178.0	-27.4	0.0	-27.4
179.0	-23.9	0.0	-23.9

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.15 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-0.6	7.0	-7.6
-9.9	0.3	7.1	-6.8
-9.8	0.3	7.2	-6.9
-9.7	-0.9	7.3	-8.3
-9.6	-2.9	7.4	-10.3
-9.5	-4.9	7.6	-12.5
-9.4	-5.2	7.7	-12.9
-9.3	-7.7	7.8	-15.5
-9.2	-14.0	8.0	-22.0
-9.1	-9.9	8.0	-17.9
-9.0	-5.1	8.0	-13.1
-8.9	-4.5	8.0	-12.5
-8.8	-8.0	8.0	-16.0
-8.7	-14.3	8.0	-22.3
-8.6	-10.8	8.0	-18.8
-8.5	-5.9	8.0	-13.9
-8.4	-4.6	8.0	-12.6
-8.3	-7.4	8.0	-15.4
-8.2	-8.6	8.0	-16.6
-8.1	-9.0	8.0	-17.0
-8.0	-8.1	8.0	-16.1
-7.9	-5.5	8.0	-13.5
-7.8	-1.8	8.0	-9.8
-7.7	0.2	8.0	-7.8
-7.6	0.9	8.0	-7.1
-7.5	0.5	8.0	-7.5
-7.4	1.0	8.0	-7.0
-7.3	1.8	8.0	-6.2
-7.2	0.6	8.0	-7.4
-7.1	-4.9	8.0	-12.9
-7.0	-7.0	7.9	-14.9
-6.9	2.9	8.0	-5.1
-6.8	4.5	8.2	-3.6
-6.7	3.3	8.3	-5.1
-6.6	-1.4	8.5	-9.9
-6.5	1.7	8.7	-7.0
-6.4	3.5	8.8	-5.3
-6.3	3.9	9.0	-5.2
-6.2	3.8	9.2	-5.4
-6.1	3.7	9.4	-5.7
-6.0	2.4	9.5	-7.1
-5.9	-2.3	9.7	-12.1
-5.8	-12.0	9.9	-21.9
-5.7	-11.6	10.1	-21.7
-5.6	-14.6	10.3	-24.9
-5.5	-11.1	10.5	-21.6
-5.4	-14.2	10.7	-24.9
-5.3	-1.1	10.9	-12.0
-5.2	1.1	11.1	-10.0
-5.1	-1.5	11.3	-12.8
-5.0	-3.2	11.5	-14.7
-4.9	3.2	11.7	-8.5
-4.8	4.4	12.0	-7.6
-4.7	1.6	12.2	-10.6
-4.6	-5.3	12.4	-17.8
-4.5	0.6	12.7	-12.0
-4.4	6.2	12.9	-6.7
-4.3	7.0	13.2	-6.1
-4.2	2.6	13.4	-10.8
-4.1	-15.4	13.7	-29.1

29.15 GHz Antenna Pattern in Co-pol Az RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.8		
0.1	52.1		
0.2	49.5		
0.3	45.1		
0.4	40.0		
0.5	35.5		
0.6	29.5		
0.7	29.6		
0.8	30.4		
0.9	27.5		
1.0	16.6		
1.1	17.2		
1.2	13.8		
1.3	11.1		
1.4	16.2		
1.5	14.7	24.6	-9.9
1.6	16.2	23.9	-7.7
1.7	17.9	23.2	-5.4
1.8	15.7	22.6	-6.9
1.9	10.4	22.0	-11.6
2.0	9.5	21.5	-12.0
2.1	5.3	20.9	-15.6
2.2	1.1	20.4	-19.3
2.3	4.7	20.0	-15.3
2.4	6.2	19.5	-13.3
2.5	7.4	19.1	-11.7
2.6	5.2	18.6	-13.4
2.7	0.1	18.2	-18.1
2.8	5.1	17.8	-12.7
2.9	7.0	17.4	-10.4
3.0	9.4	17.1	-7.7
3.1	9.7	16.7	-7.0
3.2	7.8	16.4	-8.6
3.3	-0.1	16.0	-16.2
3.4	-15.6	15.7	-31.3
3.5	-4.3	15.4	-19.7
3.6	2.9	15.1	-12.2
3.7	4.4	14.8	-10.4
3.8	2.0	14.5	-12.5
3.9	-6.2	14.2	-20.5
4.0	-7.7	13.9	-21.6
4.1	-1.3	13.7	-15.0
4.2	2.6	13.4	-10.8
4.3	3.0	13.2	-10.1
4.4	2.7	12.9	-10.2
4.5	1.9	12.7	-10.8
4.6	-0.8	12.4	-13.2
4.7	-9.6	12.2	-21.8
4.8	-4.0	12.0	-16.0
4.9	-7.7	11.7	-19.4
5.0	-8.2	11.5	-19.7
5.1	-3.4	11.3	-14.7
5.2	-5.4	11.1	-16.5
5.3	-3.8	10.9	-14.7
5.4	0.5	10.7	-10.2
5.5	1.5	10.5	-9.0
5.6	-0.4	10.3	-10.7
5.7	-4.5	10.1	-14.6
5.8	-12.0	9.9	-21.9
5.9	-4.9	9.7	-14.6

Orbit Communication Systems Ltd.

AL AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	0.7	13.9	-13.2
-3.9	7.8	14.2	-6.5
-3.8	11.0	14.5	-3.5
-3.7	11.0	14.8	-3.8
-3.6	6.6	15.1	-8.5
-3.5	0.4	15.4	-15.0
-3.4	5.7	15.7	-10.0
-3.3	5.0	16.0	-11.0
-3.2	0.5	16.4	-15.8
-3.1	5.9	16.7	-10.8
-3.0	7.1	17.1	-10.0
-2.9	7.6	17.4	-9.8
-2.8	11.6	17.8	-6.2
-2.7	13.1	18.2	-5.1
-2.6	11.1	18.6	-7.5
-2.5	5.0	19.1	-14.0
-2.4	-2.4	19.5	-21.9
-2.3	0.2	20.0	-19.8
-2.2	4.2	20.4	-16.3
-2.1	1.1	20.9	-19.8
-2.0	6.1	21.5	-15.4
-1.9	11.3	22.0	-10.7
-1.8	9.9	22.6	-12.7
-1.7	3.5	23.2	-19.7
-1.6	6.7	23.9	-17.2
-1.5	4.8	24.6	-19.8
-1.4	14.5		
-1.3	19.0		
-1.2	19.5		
-1.1	18.9		
-1.0	16.0		
-0.9	6.8		
-0.8	18.4		
-0.7	18.4		
-0.6	19.7		
-0.5	32.4		
-0.4	40.3		
-0.3	46.3		
-0.2	50.3		
-0.1	52.3		
0.0	52.8		

6.0	-0.5	9.5	-10.1
6.1	0.9	9.4	-8.5
6.2	2.2	9.2	-7.0
6.3	1.8	9.0	-7.2
6.4	0.2	8.8	-8.7
6.5	1.2	8.7	-7.5
6.6	3.2	8.5	-5.3
6.7	2.6	8.3	-5.8
6.8	0.6	8.2	-7.6
6.9	-3.0	8.0	-11.1
7.0	-14.4	7.9	-22.3
7.1	-4.2	8.0	-12.2
7.2	-1.5	8.0	-9.5
7.3	-3.0	8.0	-11.0
7.4	-6.5	8.0	-14.5
7.5	-5.2	8.0	-13.2
7.6	-4.1	8.0	-12.1
7.7	-1.8	8.0	-9.8
7.8	-3.3	8.0	-11.3
7.9	-6.7	8.0	-14.7
8.0	-13.7	8.0	-21.7
8.1	-5.8	8.0	-13.8
8.2	-6.5	8.0	-14.5
8.3	-5.4	8.0	-13.4
8.4	-4.3	8.0	-12.3
8.5	-6.0	8.0	-14.0
8.6	-11.0	8.0	-19.0
8.7	-20.2	8.0	-28.2
8.8	-15.9	8.0	-23.9
8.9	-8.1	8.0	-16.1
9.0	-5.2	8.0	-13.2
9.1	-8.4	8.0	-16.4
9.2	-10.2	8.0	-18.2
9.3	-6.5	7.8	-14.3
9.4	-3.6	7.7	-11.3
9.5	-3.7	7.6	-11.3
9.6	-4.8	7.4	-12.2
9.7	-6.5	7.3	-13.8
9.8	-9.0	7.2	-16.2
9.9	-11.9	7.1	-19.0
10.0	-7.7	7.0	-14.7

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -30° to +30° @ 0.5° increment

29.15 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-30.0	-7.6	-4.9	-2.7
-29.5	-9.3	-4.7	-4.5
-29.0	-9.0	-4.6	-4.5
-28.5	-7.4	-4.4	-3.1
-28.0	-9.3	-4.2	-5.1
-27.5	-13.4	-4.0	-9.4
-27.0	-12.8	-3.8	-9.1
-26.5	-12.4	-3.6	-8.8
-26.0	-7.6	-3.4	-4.2
-25.5	-7.8	-3.2	-4.7
-25.0	-13.4	-2.9	-10.4
-24.5	-5.6	-2.7	-2.8
-24.0	-8.2	-2.5	-5.7
-23.5	-14.3	-2.3	-12.0
-23.0	-14.6	-2.0	-12.5
-22.5	-18.2	-1.8	-16.4
-22.0	-16.2	-1.6	-14.6
-21.5	-6.2	-1.3	-4.9
-21.0	-6.2	-1.1	-5.1
-20.5	-6.1	-0.8	-5.3
-20.0	-2.2	-0.5	-1.7
-19.5	-0.5	-0.3	-0.3
-19.0	-0.5	0.0	-0.5
-18.5	-2.6	0.3	-2.9
-18.0	-5.4	0.6	-6.0
-17.5	-12.2	0.9	-13.1
-17.0	-11.4	1.2	-12.6
-16.5	-11.3	1.6	-12.8
-16.0	-19.4	1.9	-21.3
-15.5	-11.4	2.2	-13.6
-15.0	-4.8	2.6	-7.4
-14.5	-10.5	3.0	-13.5
-14.0	-4.3	3.3	-7.7
-13.5	-9.2	3.7	-12.9
-13.0	-6.5	4.2	-10.6
-12.5	-4.3	4.6	-8.9
-12.0	-15.5	5.0	-20.5
-11.5	-5.2	5.5	-10.7
-11.0	-6.8	6.0	-12.8
-10.5	-6.6	6.5	-13.1
-10.0	-9.6	7.0	-16.6
-9.5	-4.5	7.6	-12.1
-9.0	-5.3	8.1	-13.4
-8.5	-10.2	8.8	-19.0
-8.0	-2.9	9.4	-12.4
-7.5	-7.3	10.1	-17.4
-7.0	1.0	10.9	-9.8
-6.5	1.0	11.7	-10.7
-6.0	1.3	12.5	-11.2
-5.5	-0.8	13.5	-14.3
-5.0	3.8	14.5	-10.7
-4.5	4.6	15.7	-11.0
-4.0	10.0	16.9	-6.9
-3.5	8.8	18.4	-9.6
-3.0	-1.5		
-2.5	11.3		
-2.0	11.7		
-1.5	18.8		
-1.0	22.6		
-0.5	34.4		
0.0	52.6		

29.15 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.6		
0.5	37.1		
1.0	18.1		
1.5	10.2		
2.0	10.3		
2.5	6.9		
3.0	1.1		
3.5	12.4	18.4	-6.0
4.0	14.0	16.9	-2.9
4.5	2.9	15.7	-12.8
5.0	10.3	14.5	-4.3
5.5	2.8	13.5	-10.7
6.0	-3.4	12.5	-16.0
6.5	2.4	11.7	-9.3
7.0	-4.1	10.9	-15.0
7.5	-11.7	10.1	-21.8
8.0	-7.8	9.4	-17.2
8.5	-7.8	8.8	-16.5
9.0	-7.6	8.1	-15.7
9.5	-5.3	7.6	-12.9
10.0	1.0	7.0	-6.0
10.5	-8.9	6.5	-15.3
11.0	-5.1	6.0	-11.0
11.5	-6.7	5.5	-12.1
12.0	-10.0	5.0	-15.0
12.5	-2.5	4.6	-7.1
13.0	-3.9	4.2	-8.1
13.5	-8.1	3.7	-11.8
14.0	-19.9	3.3	-23.2
14.5	-14.1	3.0	-17.0
15.0	-12.9	2.6	-15.5
15.5	-23.7	2.2	-25.9
16.0	-25.9	1.9	-27.8
16.5	-11.2	1.6	-12.8
17.0	-14.8	1.2	-16.1
17.5	-15.9	0.9	-16.8
18.0	-12.5	0.6	-13.2
18.5	-11.1	0.3	-11.4
19.0	-26.4	0.0	-26.5
19.5	-10.5	-0.3	-10.3
20.0	-15.3	-0.5	-14.8
20.5	-15.6	-0.8	-14.8
21.0	-14.4	-1.1	-13.4
21.5	-16.2	-1.3	-14.8
22.0	-16.7	-1.6	-15.2
22.5	-14.3	-1.8	-12.5
23.0	-18.5	-2.0	-16.4
23.5	-15.9	-2.3	-13.6
24.0	-20.1	-2.5	-17.6
24.5	-26.6	-2.7	-23.9
25.0	-22.3	-2.9	-19.3
25.5	-20.3	-3.2	-17.2
26.0	-21.3	-3.4	-17.9
26.5	-18.1	-3.6	-14.5
27.0	-19.6	-3.8	-15.8
27.5	-20.4	-4.0	-16.4
28.0	-22.4	-4.2	-18.3
28.5	-23.5	-4.4	-19.2
29.0	-22.5	-4.6	-17.9
29.5	-21.3	-4.7	-16.5
30.0	-18.5	-4.9	-13.6

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

29.15 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
-10.0	-3.3	7.0	-10.3
-9.9	-4.4	7.1	-11.5
-9.8	-3.0	7.2	-10.2
-9.7	-0.4	7.3	-7.7
-9.6	0.3	7.4	-7.2
-9.5	-3.4	7.6	-11.0
-9.4	-10.7	7.7	-18.4
-9.3	-6.7	7.8	-14.5
-9.2	-7.8	7.9	-15.7
-9.1	-18.8	8.0	-26.9
-9.0	-7.4	8.1	-15.5
-8.9	-6.0	8.3	-14.3
-8.8	-8.7	8.4	-17.1
-8.7	-1.9	8.5	-10.4
-8.6	0.3	8.6	-8.4
-8.5	-1.6	8.8	-10.3
-8.4	-9.7	8.9	-18.6
-8.3	-18.5	9.0	-27.6
-8.2	-13.1	9.2	-22.3
-8.1	-11.2	9.3	-20.4
-8.0	-6.3	9.4	-15.7
-7.9	-4.0	9.6	-13.6
-7.8	-1.9	9.7	-11.6
-7.7	-1.2	9.8	-11.0
-7.6	-4.6	10.0	-14.6
-7.5	-16.5	10.1	-26.6
-7.4	-13.3	10.3	-23.5
-7.3	-14.6	10.4	-25.0
-7.2	-18.3	10.6	-28.9
-7.1	-8.4	10.7	-19.1
-7.0	-1.1	10.9	-12.0
-6.9	1.7	11.0	-9.3
-6.8	0.6	11.2	-10.6
-6.7	-2.9	11.3	-14.2
-6.6	-0.3	11.5	-11.8
-6.5	1.4	11.7	-10.3
-6.4	-0.8	11.8	-12.7
-6.3	-7.1	12.0	-19.2
-6.2	-4.2	12.2	-16.3
-6.1	-1.9	12.4	-14.3
-6.0	0.3	12.5	-12.3
-5.9	0.8	12.7	-12.0
-5.8	-2.4	12.9	-15.3
-5.7	-1.2	13.1	-14.3
-5.6	0.9	13.3	-12.4
-5.5	-1.2	13.5	-14.6
-5.4	-6.9	13.7	-20.6
-5.3	-5.7	13.9	-19.6
-5.2	-4.6	14.1	-18.7
-5.1	-0.9	14.3	-15.2
-5.0	1.8	14.5	-12.8
-4.9	2.9	14.7	-11.8
-4.8	1.8	15.0	-13.2
-4.7	2.1	15.2	-13.1
-4.6	3.9	15.4	-11.5
-4.5	3.3	15.7	-12.3
-4.4	-0.5	15.9	-16.4
-4.3	2.1	16.2	-14.0
-4.2	7.1	16.4	-9.3
-4.1	8.9	16.7	-7.8

29.15 GHz Antenna Pattern in Co-pol EI RHCP

Angle Degrees	Gain dBi	Mask dBi	Over Mask dB
0.0	52.8		
0.1	52.0		
0.2	49.4		
0.3	44.9		
0.4	40.5		
0.5	37.4		
0.6	32.8		
0.7	20.2		
0.8	20.0		
0.9	17.8		
1.0	15.9		
1.1	18.4		
1.2	13.8		
1.3	6.6		
1.4	9.9		
1.5	6.3		
1.6	12.1		
1.7	12.2		
1.8	10.0		
1.9	11.6		
2.0	12.6		
2.1	13.7		
2.2	14.1		
2.3	13.3		
2.4	12.1		
2.5	8.9		
2.6	0.2		
2.7	-0.8		
2.8	-1.3		
2.9	-2.3		
3.0	0.1		
3.1	-0.3		
3.2	8.4		
3.3	11.8		
3.4	12.3		
3.5	11.0	18.4	-7.4
3.6	9.2	18.1	-8.9
3.7	11.0	17.8	-6.8
3.8	13.0	17.5	-4.5
3.9	13.2	17.2	-4.0
4.0	13.0	16.9	-3.9
4.1	12.3	16.7	-4.3
4.2	9.3	16.4	-7.1
4.3	1.3	16.2	-14.9
4.4	2.1	15.9	-13.9
4.5	3.2	15.7	-12.4
4.6	4.4	15.4	-11.1
4.7	5.5	15.2	-9.7
4.8	6.1	15.0	-8.9
4.9	9.0	14.7	-5.7
5.0	9.5	14.5	-5.0
5.1	7.3	14.3	-7.0
5.2	-1.8	14.1	-15.9
5.3	-5.5	13.9	-19.4
5.4	-1.0	13.7	-14.6
5.5	-3.5	13.5	-16.9
5.6	-6.9	13.3	-20.2
5.7	-11.7	13.1	-24.8
5.8	-6.6	12.9	-19.5
5.9	-6.7	12.7	-19.4

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
 Co-pol Elevation RHCP, -10° to +10° @ 0.1° increment

-4.0	8.6	16.9	-8.3
-3.9	5.5	17.2	-11.7
-3.8	-10.7	17.5	-28.2
-3.7	4.8	17.8	-13.0
-3.6	8.2	18.1	-9.8
-3.5	8.0	18.4	-10.4
-3.4	6.7		
-3.3	2.0		
-3.2	-7.6		
-3.1	4.0		
-3.0	0.9		
-2.9	6.5		
-2.8	13.5		
-2.7	14.7		
-2.6	12.7		
-2.5	10.2		
-2.4	13.5		
-2.3	14.5		
-2.2	14.4		
-2.1	13.6		
-2.0	10.8		
-1.9	7.1		
-1.8	5.9		
-1.7	9.3		
-1.6	16.0		
-1.5	19.4		
-1.4	19.7		
-1.3	13.8		
-1.2	17.5		
-1.1	22.7		
-1.0	22.5		
-0.9	20.9		
-0.8	24.4		
-0.7	28.0		
-0.6	31.0		
-0.5	32.7		
-0.4	38.2		
-0.3	45.4		
-0.2	50.0		
-0.1	52.3		
0.0	52.8		

6.0	-11.2	12.5	-23.7
6.1	-11.2	12.4	-23.5
6.2	-9.0	12.2	-21.2
6.3	-2.4	12.0	-14.4
6.4	1.3	11.8	-10.6
6.5	2.0	11.7	-9.6
6.6	0.3	11.5	-11.2
6.7	-1.8	11.3	-13.1
6.8	-4.7	11.2	-15.8
6.9	-10.5	11.0	-21.5
7.0	-3.9	10.9	-14.8
7.1	-0.2	10.7	-10.9
7.2	0.0	10.6	-10.5
7.3	-1.1	10.4	-11.5
7.4	-4.5	10.3	-14.8
7.5	-14.5	10.1	-24.7
7.6	-4.3	10.0	-14.3
7.7	-2.1	9.8	-11.9
7.8	-1.6	9.7	-11.3
7.9	-2.3	9.6	-11.9
8.0	-4.1	9.4	-13.5
8.1	-8.0	9.3	-17.3
8.2	-7.7	9.2	-16.8
8.3	-4.6	9.0	-13.7
8.4	-5.7	8.9	-14.6
8.5	-9.0	8.8	-17.8
8.6	-7.2	8.6	-15.8
8.7	-5.2	8.5	-13.8
8.8	-6.9	8.4	-15.3
8.9	-9.5	8.3	-17.8
9.0	-13.3	8.1	-21.5
9.1	-13.3	8.0	-21.3
9.2	-8.8	7.9	-16.7
9.3	-9.2	7.8	-17.0
9.4	-7.8	7.7	-15.5
9.5	-2.8	7.6	-10.3
9.6	0.3	7.4	-7.1
9.7	2.8	7.3	-4.5
9.8	3.2	7.2	-4.1
9.9	3.2	7.1	-3.9
10.0	0.6	7.0	-6.4

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

29.15 GHz Antenna Pattern in X-pol Az RHCP

Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
-10.0	-8.3	-2.0	-6.3
-9.9	-9.1	-2.0	-7.1
-9.8	-8.2	-2.0	-6.2
-9.7	-7.6	-2.0	-5.6
-9.6	-6.4	-2.0	-4.4
-9.5	-5.9	-2.0	-3.9
-9.4	-4.5	-2.0	-2.5
-9.3	-4.0	-2.0	-2.0
-9.2	-4.4	-2.0	-2.4
-9.1	-6.7	-2.0	-4.7
-9.0	-9.4	-2.0	-7.4
-8.9	-12.6	-2.0	-10.6
-8.8	-13.0	-2.0	-11.0
-8.7	-12.2	-2.0	-10.2
-8.6	-12.6	-2.0	-10.6
-8.5	-11.1	-2.0	-9.1
-8.4	-8.3	-2.0	-6.3
-8.3	-5.8	-2.0	-3.8
-8.2	-6.4	-2.0	-4.4
-8.1	-8.6	-2.0	-6.6
-8.0	-13.5	-2.0	-11.5
-7.9	-10.7	-2.0	-8.7
-7.8	-8.3	-2.0	-6.3
-7.7	-6.8	-2.0	-4.8
-7.6	-9.2	-2.0	-7.2
-7.5	-8.0	-2.0	-6.0
-7.4	-4.0	-2.0	-2.0
-7.3	-2.8	-2.0	-0.8
-7.2	-3.7	-2.0	-1.7
-7.1	-1.7	-2.0	0.3
-7.0	-0.7	-2.1	1.4
-6.9	-0.6	-2.0	1.4
-6.8	-2.2	-1.8	-0.4
-6.7	-4.6	-1.7	-2.9
-6.6	-4.2	-1.5	-2.7
-6.5	-1.7	-1.3	-0.4
-6.4	-1.5	-1.2	-0.4
-6.3	-3.9	-1.0	-2.9
-6.2	-9.4	-0.8	-8.6
-6.1	-21.5	-0.6	-20.8
-6.0	-14.5	-0.5	-14.1
-5.9	-15.6	-0.3	-15.3
-5.8	-10.2	-0.1	-10.1
-5.7	-7.3	0.1	-7.4
-5.6	-5.6	0.3	-5.9
-5.5	-11.7	0.5	-12.2
-5.4	-17.1	0.7	-17.8
-5.3	-8.1	0.9	-9.0
-5.2	-6.5	1.1	-7.6
-5.1	-15.0	1.3	-16.3
-5.0	-6.9	1.5	-8.4
-4.9	-1.8	1.7	-3.5
-4.8	-0.6	2.0	-2.6
-4.7	-2.2	2.2	-4.4
-4.6	-10.8	2.4	-13.2
-4.5	-15.9	2.7	-18.6
-4.4	-6.1	2.9	-9.0
-4.3	0.2	3.2	-3.0
-4.2	2.9	3.4	-0.6
-4.1	2.5	3.7	-1.2

29.15 GHz Antenna Pattern in X-pol Az RHCP

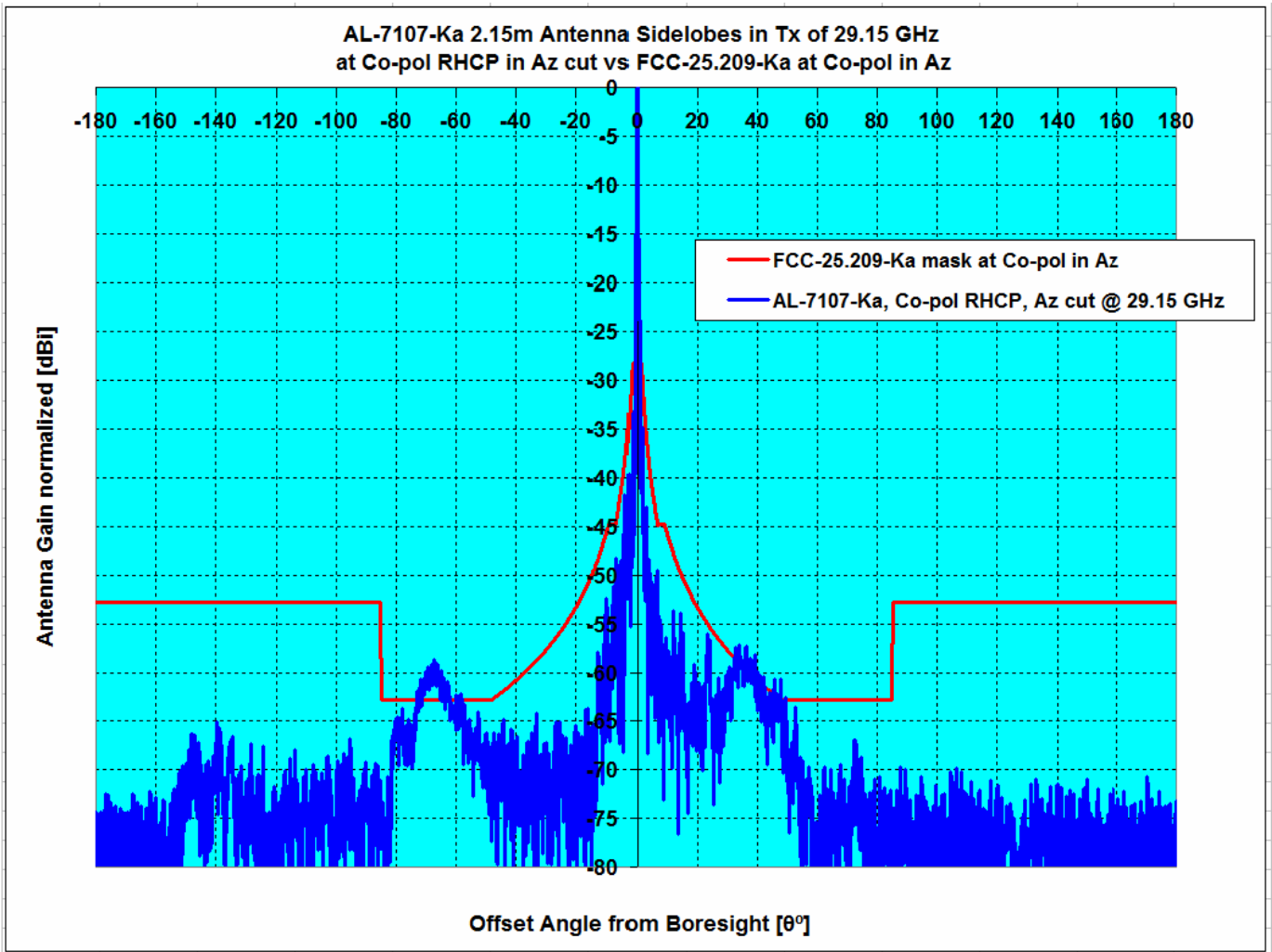
Angle	Gain	Mask	Over Mask
Degrees	dBi	dBi	dB
0.0	27.0		
0.1	25.2		
0.2	30.7		
0.3	32.9		
0.4	32.9		
0.5	30.6		
0.6	25.6		
0.7	19.5		
0.8	12.4		
0.9	2.2		
1.0	12.6		
1.1	12.2		
1.2	6.8		
1.3	7.0		
1.4	8.4		
1.5	8.4		
1.6	7.1		
1.7	2.9		
1.8	-9.5	12.6	-22.1
1.9	-8.6	12.0	-20.6
2.0	-10.9	11.5	-22.4
2.1	-5.3	10.9	-16.2
2.2	-3.0	10.4	-13.4
2.3	-1.9	10.0	-11.9
2.4	-2.3	9.5	-11.8
2.5	-4.0	9.1	-13.0
2.6	-1.5	8.6	-10.2
2.7	1.5	8.2	-6.7
2.8	2.1	7.8	-5.8
2.9	-1.4	7.4	-8.8
3.0	-6.7	7.1	-13.8
3.1	-6.6	6.7	-13.3
3.2	-9.0	6.4	-15.4
3.3	-15.3	6.0	-21.3
3.4	-26.9	5.7	-32.6
3.5	-16.8	5.4	-22.2
3.6	-18.3	5.1	-23.4
3.7	-11.1	4.8	-15.9
3.8	-12.2	4.5	-16.7
3.9	-22.3	4.2	-26.5
4.0	-8.7	3.9	-12.6
4.1	-3.5	3.7	-7.1
4.2	-4.9	3.4	-8.3
4.3	-5.8	3.2	-8.9
4.4	-4.7	2.9	-7.6
4.5	-4.6	2.7	-7.3
4.6	-10.0	2.4	-12.4
4.7	-17.0	2.2	-19.2
4.8	-17.3	2.0	-19.3
4.9	-16.0	1.7	-17.8
5.0	-13.1	1.5	-14.6
5.1	-11.2	1.3	-12.5
5.2	-10.8	1.1	-11.9
5.3	-5.5	0.9	-6.4
5.4	-4.1	0.7	-4.8
5.5	-5.9	0.5	-6.4
5.6	-9.5	0.3	-9.8
5.7	-15.7	0.1	-15.8
5.8	-21.3	-0.1	-21.2
5.9	-15.3	-0.3	-15.0

Orbit Communication Systems Ltd.
AL-7107-Ka, 2.15 m Antenna, Pattern Data Table
X-pol Azimuth RHCP, -10° to +10° @ 0.1° increment

-4.0	-2.4	3.9	-6.4
-3.9	-9.7	4.2	-14.0
-3.8	-1.3	4.5	-5.8
-3.7	-1.5	4.8	-6.3
-3.6	-8.4	5.1	-13.5
-3.5	-8.4	5.4	-13.8
-3.4	-8.8	5.7	-14.5
-3.3	-25.0	6.0	-31.0
-3.2	-7.7	6.4	-14.1
-3.1	-8.3	6.7	-15.0
-3.0	-20.3	7.1	-27.3
-2.9	-4.5	7.4	-12.0
-2.8	-2.2	7.8	-10.0
-2.7	-5.8	8.2	-14.0
-2.6	-21.5	8.6	-30.1
-2.5	-11.9	9.1	-21.0
-2.4	-1.9	9.5	-11.4
-2.3	3.4	10.0	-6.6
-2.2	4.5	10.4	-6.0
-2.1	3.6	10.9	-7.3
-2.0	1.2	11.5	-10.3
-1.9	-8.5	12.0	-20.5
-1.8	2.8	12.6	-9.9
-1.7	8.9		
-1.6	11.0		
-1.5	11.5		
-1.4	11.1		
-1.3	7.3		
-1.2	7.7		
-1.1	14.0		
-1.0	16.0		
-0.9	17.1		
-0.8	20.5		
-0.7	25.0		
-0.6	28.2		
-0.5	29.2		
-0.4	27.3		
-0.3	17.7		
-0.2	25.0		
-0.1	28.3		
0.0	27.0		

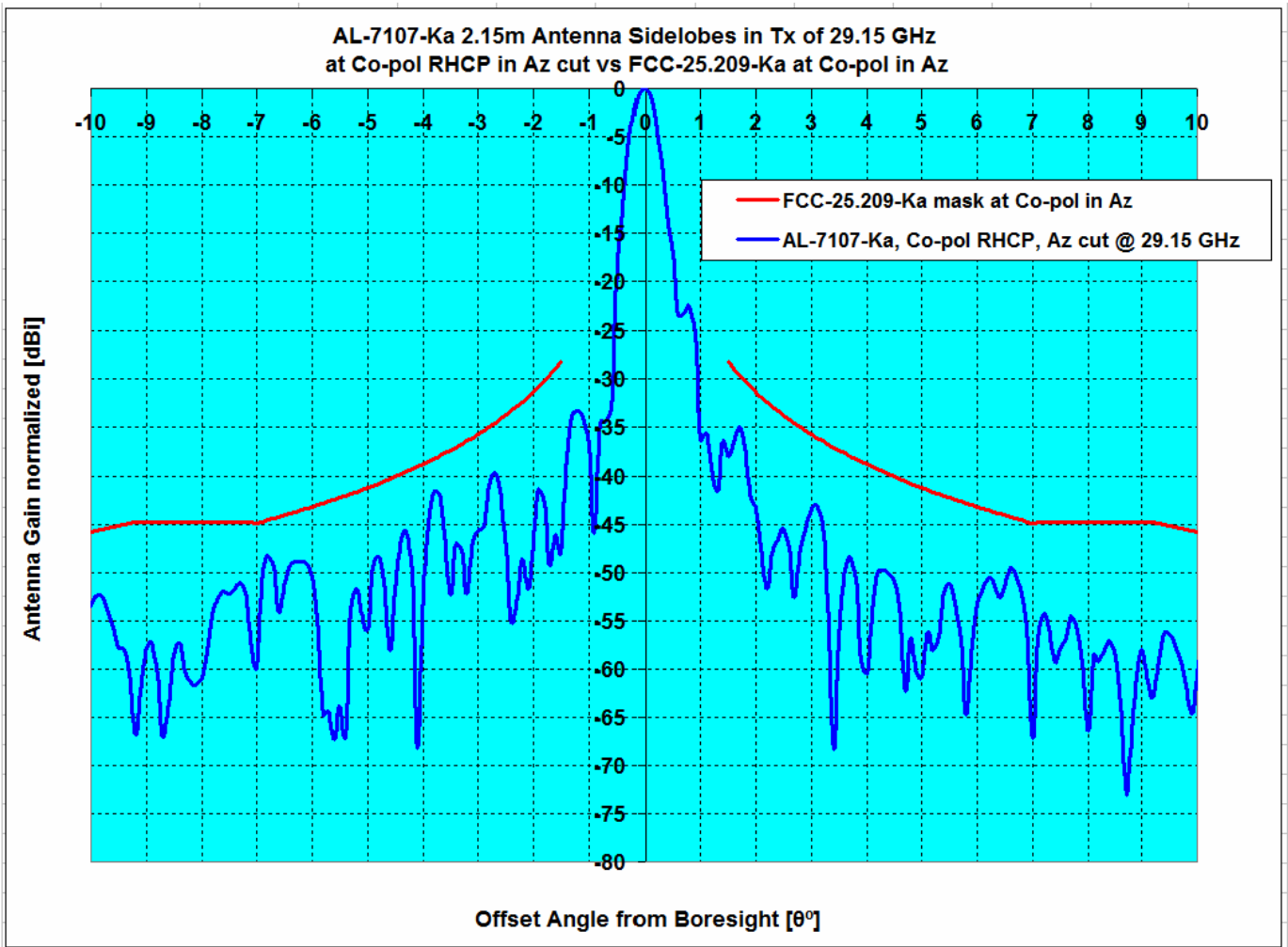
6.0	-13.5	-0.5	-13.0
6.1	-10.5	-0.6	-9.9
6.2	-7.2	-0.8	-6.4
6.3	-7.2	-1.0	-6.2
6.4	-8.3	-1.2	-7.1
6.5	-6.8	-1.3	-5.5
6.6	-4.7	-1.5	-3.2
6.7	-4.1	-1.7	-2.5
6.8	-4.3	-1.8	-2.5
6.9	-7.2	-2.0	-5.2
7.0	-10.1	-2.1	-8.0
7.1	-15.4	-2.0	-13.4
7.2	-17.5	-2.0	-15.5
7.3	-25.5	-2.0	-23.5
7.4	-22.7	-2.0	-20.7
7.5	-14.2	-2.0	-12.2
7.6	-9.4	-2.0	-7.4
7.7	-8.8	-2.0	-6.8
7.8	-14.8	-2.0	-12.8
7.9	-17.2	-2.0	-15.2
8.0	-9.8	-2.0	-7.8
8.1	-11.2	-2.0	-9.2
8.2	-14.2	-2.0	-12.2
8.3	-17.6	-2.0	-15.6
8.4	-14.6	-2.0	-12.6
8.5	-11.6	-2.0	-9.6
8.6	-11.2	-2.0	-9.2
8.7	-11.6	-2.0	-9.6
8.8	-12.0	-2.0	-10.0
8.9	-10.5	-2.0	-8.5
9.0	-9.7	-2.0	-7.7
9.1	-13.5	-2.0	-11.5
9.2	-10.9	-2.0	-8.9
9.3	-11.3	-2.0	-9.3
9.4	-13.4	-2.0	-11.4
9.5	-21.7	-2.0	-19.7
9.6	-23.6	-2.0	-21.6
9.7	-22.0	-2.0	-20.0
9.8	-19.0	-2.0	-17.0
9.9	-12.0	-2.0	-10.0
10.0	-11.9	-2.0	-9.9

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth RHCP



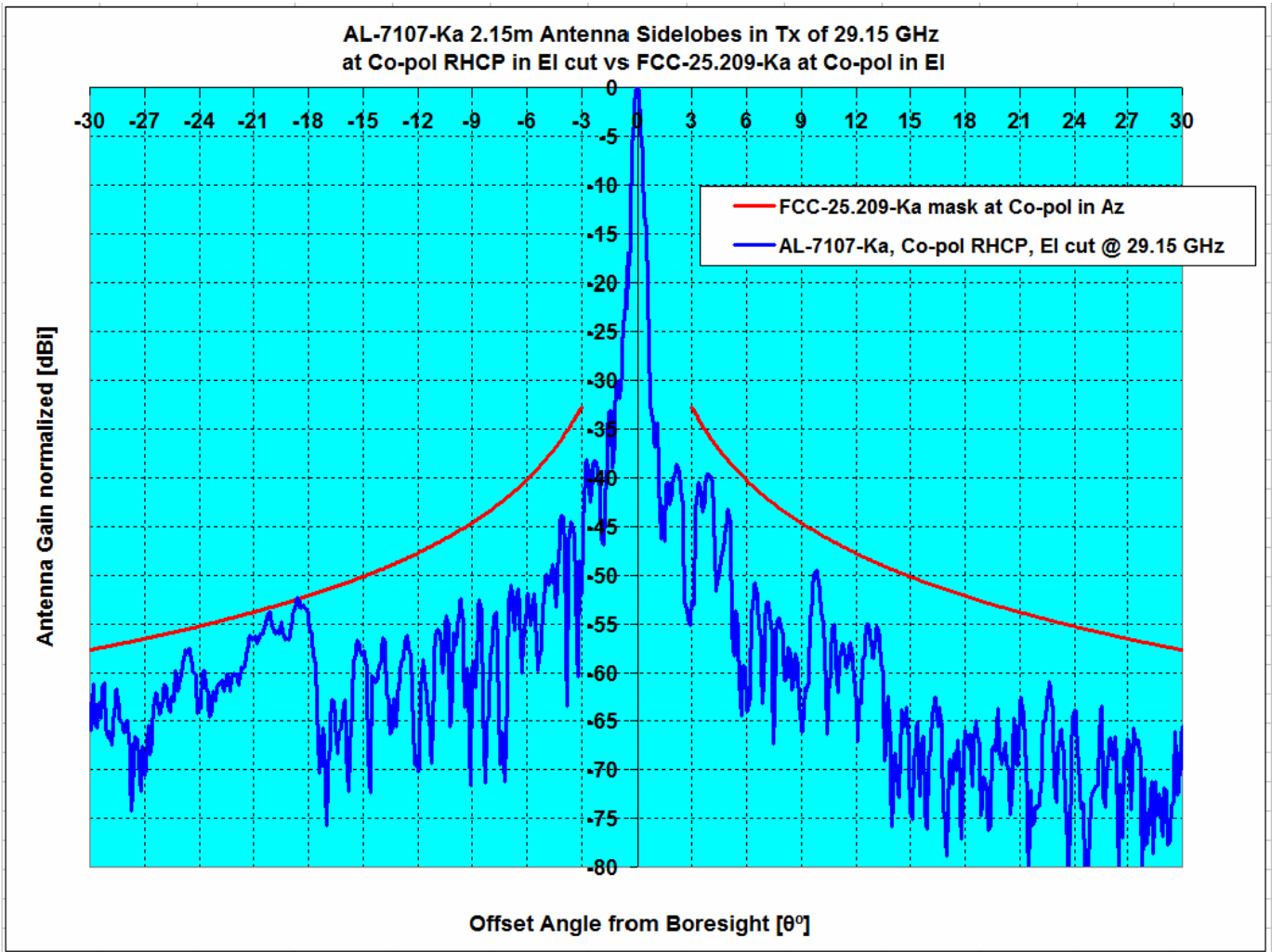
Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , RHCP	29.15	52.77	-3.52	4.12	0.00%	4.65%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Azimuth RHCP

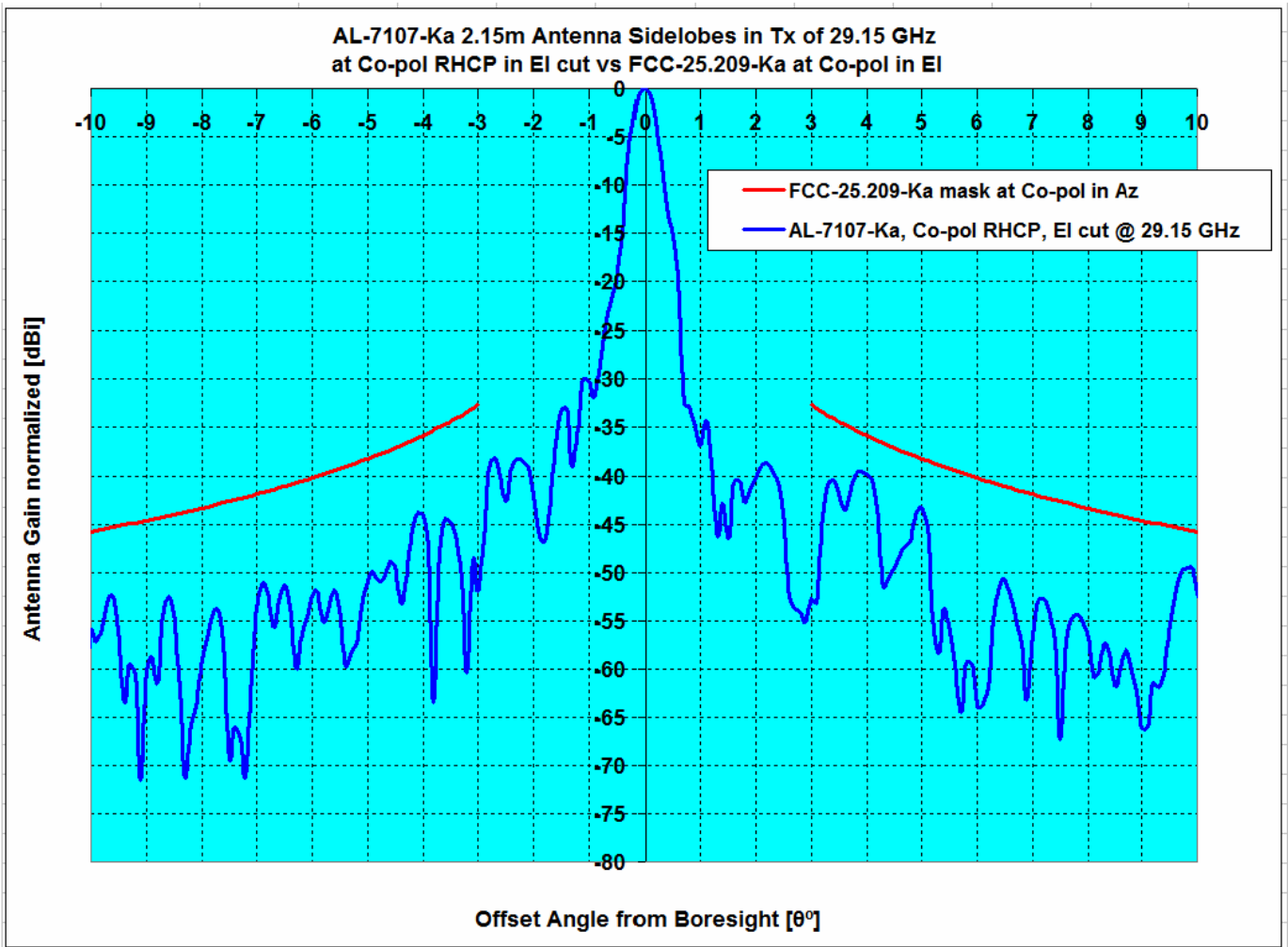


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.5°≤θ≤7°	7°≤θ≤180°	1.5°≤θ≤7°	7°≤θ≤180°
FCC-25.209-Ka, Co-pol Az, vs AL-7107-Ka	Az , RHCP	29.15	52.77	-3.52	4.12	0.00%	4.65%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, Co-pol, Elevation RHCP

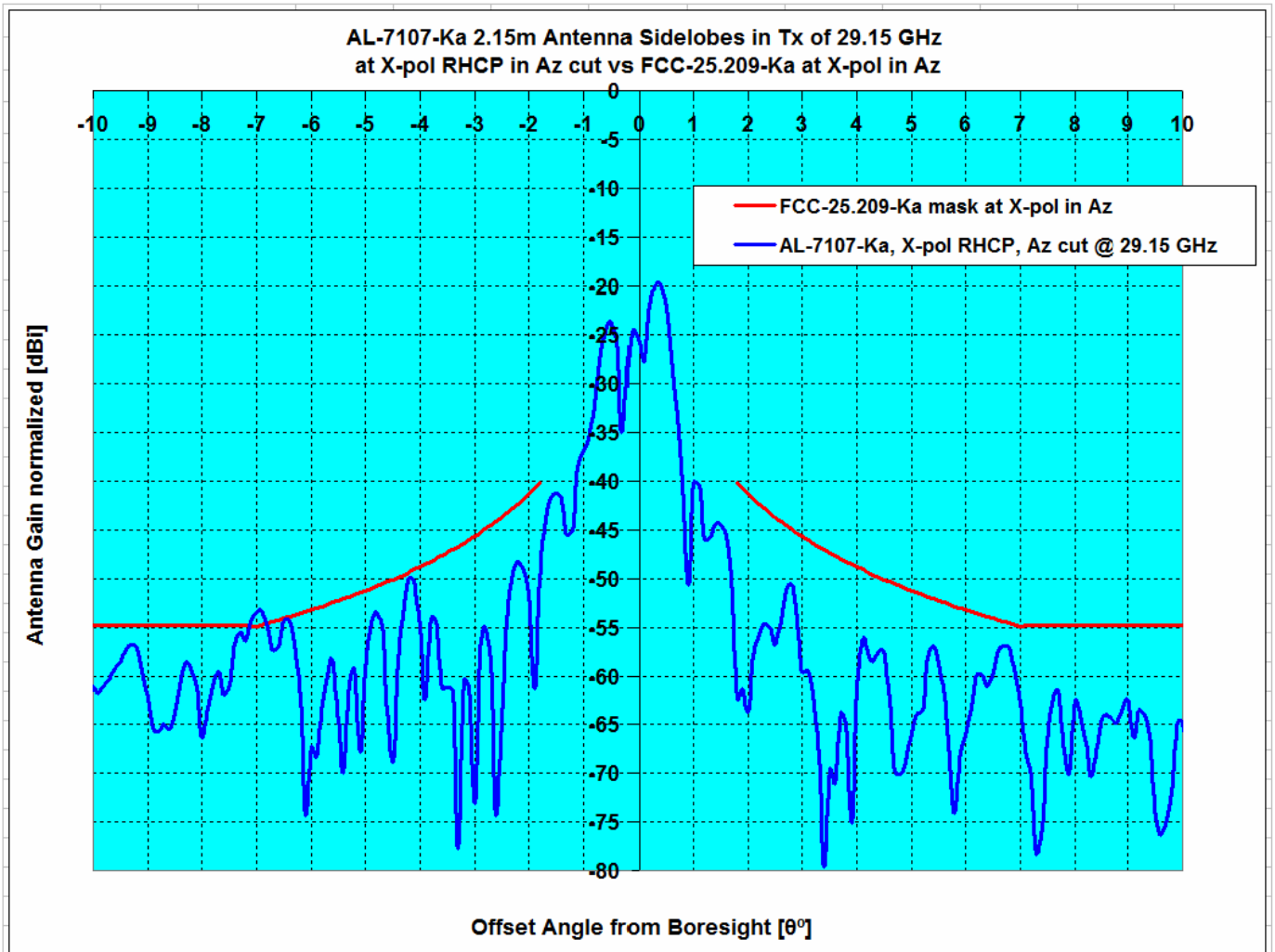


Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				3°≤θ≤7°	7°≤θ≤30°	3°≤θ≤7°	7°≤θ≤30°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI , RHCP	29.15	52.77	-3.94	0.16	0.00%	0.18%



Description	Plane, CirP Type	Frequency GHz	Ant. Gain dBi	Peak Excursions dB		Over Mask %	
				3° ≤ θ ≤ 7°	7° ≤ θ ≤ 30°	3° ≤ θ ≤ 7°	7° ≤ θ ≤ 30°
FCC-25.209-Ka, Co-pol EI, vs AL-7107-Ka	EI, RHCP	29.15	52.77	-3.94	0.16	0.00%	0.18%

Orbit Communication Systems Ltd.
 AL-7107-Ka, 2.15 m Antenna, Pattern, X-pol, Azimuth RHCP



Description	Plane, CirP	Frequency	Ant. Gain	Peak Excursions dB		Over Mask %	
				1.8°≤θ≤7°	1.8°≤θ≤9.2°	1.8°≤θ≤7°	1.8°≤θ≤9.2°
Pattern Rule vs Antenna System	Type	GHz	dBi				
FCC-25.209-Ka, X-pol Az, vs AL-7107-Ka	Az , RHCP	29.15	52.77	1.40	1.40	1.89%	1.81%