Approved by OMB 3060-0678
Estimated Burden: up to 80 hours
April 2016

Federal Communications Commission

312 File Number: **SATMOD2018110800083**

Filing Description

Question	Response
Description	SpaceX NGSO Constellation. This form reflects a representative subset of the complete system technical data.Complete technical data is included in the databases attached.

Satellite Information

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	SpaceX Constellation
Estimated Lifetime of Satellite(s) From Date of Launch	5 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating Frequency Bands (11)

Nature of service	Description	Frequency Band(s)	Mode Type
Fixed-Satellite Service		12750.0 MHz -13250.0 MHz	Receive
Fixed-Satellite Service		14000.0 MHz -14500.0 MHz	Receive
Fixed-Satellite Service		27500.0 MHz -29100.0 MHz	Receive
Fixed-Satellite Service		29500.0 MHz -30000.0 MHz	Receive
Fixed-Satellite Service		13850.0 MHz -14000.0 MHz	Receive
Fixed-Satellite Service		10700.0 MHz -12700.0 MHz	Transmit
Fixed-Satellite Service		17800.0 MHz -18600.0 MHz	Transmit
Fixed-Satellite Service		18800.0 MHz -19300.0 MHz	Transmit
Fixed-Satellite Service		19700.0 MHz -20200.0 MHz	Transmit
Fixed-Satellite Service		12150.0 MHz -12250.0 MHz	Transmit
Fixed-Satellite Service		18550.0 MHz -18600.0 MHz	Transmit

Orbital Information For Non-Geostationary Satellites

Question	Response
Total Number of Satellites in the active constellation	116
Orbit Epoch Date	01/01/2015
Celestrial Reference Body	Earth

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	50
Inclination Angle	53.8 degrees
Right Ascension of Ascending Node	5.6 degrees
Argument of Perigee	0.0 degrees
Orbital Period	6420.0 seconds
Apogee	1110.0 km
Perigee	1110.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	0.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	352.8
2	345.6
3	338.4
4	331.2
5	324.0
6	316.8
7	309.6
8	302.4
9	295.2
10	288.0
11	280.8
12	273.6
13	266.4

14	259.2
15	252.0
16	244.8
17	237.6
18	230.4
19	223.2
20	216.0
21	208.8
22	201.6
23	194.4
24	187.2
25	180.0
26	172.8
27	165.6
28	158.4
29	151.2
30	144.0
31	136.8
32	129.6
33	122.4
34	115.2
35	108.0
36	100.8
37	93.6
38	86.4
39	79.2

40	72.0
41	64.8
42	57.6
43	50.4
44	43.2
45	36.0
46	28.8
47	21.6
48	14.4
49	7.2
50	0.0

Orbital Plane 2:

Question	Response
Number of Satellites in Plane	66
Inclination Angle	53.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5760.0 seconds
Apogee	550.0 km
Perigee	550.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	0.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	354.5

2	349.1
3	343.6
4	338.2
5	332.7
6	327.3
7	321.8
8	316.4
9	310.9
10	305.5
11	300.0
12	294.5
13	289.1
14	283.6
15	278.2
16	272.7
17	267.3
18	261.8
19	256.4
20	250.9
21	245.5
22	240.0
23	234.5
24	229.1
25	223.6
26	218.2
27	212.7

28	207.3
29	201.8
30	196.4
31	190.9
32	185.5
33	180.0
34	174.5
35	169.1
36	163.6
37	158.2
38	152.7
39	147.3
40	141.8
41	136.4
42	130.9
43	125.5
44	120.0
45	114.5
46	109.1
47	103.6
48	98.2
49	92.7
50	87.3
51	81.8
52	76.4
53	70.9

54	65.5
55	60.0
56	54.5
57	49.1
58	43.6
59	38.2
60	32.7
61	27.3
62	21.8
63	16.4
64	10.9
65	5.5
66	0.0

Receiving Beams 1:

Question	Response
Beam ID	RX1
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	37.1 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	9.8 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 2:

Question	Response
Beam ID	RX3
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 3:

Question	Response
Beam ID	RX4
Receive Beam Frequency	29500.0 MHz -30000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving

Beams 4:

Question	Response
Beam ID	RX5
Receive Beam Frequency	13850.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-29.3 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 5:

Question	Response
Beam ID	RX6
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	8.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 6:

Question	Response
Beam ID	RX7
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	8.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 7:

Question	Response

Beam ID	RX8
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 8:

Question	Response
Beam ID	RX9
Receive Beam Frequency	29500.0 MHz -30000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 9:

Question	Response
Beam ID	RX10
Receive Beam Frequency	13850.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-29.3 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 10:

Question	Response

Beam ID	RX11
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	8.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 11:

Question	Response
Beam ID	RX12
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	8.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 12:

Question	Response
Beam ID	RX13
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 13:

Question	Response

Beam ID	RX14
Receive Beam Frequency	29500.0 MHz -30000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 14:

Question	Response
Beam ID	RX16
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	8.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 15:

Question	Response
Beam ID	RX17
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	8.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 16:

Question	Response

Beam ID	RX18
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 17:

Question	Response
Beam ID	RX19
Receive Beam Frequency	29500.0 MHz -30000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	13.7 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 18:

Question	Response
Beam ID	RX20
Receive Beam Frequency	13850.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-29.3 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Channels (247)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
249	50.0	29625.0	Service Link
248	50.0	29575.0	Service Link
247	50.0	29525.0	Service Link
246	50.0	29075.0	Service Link
245	50.0	29025.0	Service Link
244	50.0	28975.0	Service Link
243	50.0	28925.0	Service Link
242	50.0	28875.0	Service Link
241	50.0	28825.0	Service Link
54	50.0	29625.0	Service Link
55	50.0	29675.0	Service Link
56	50.0	29725.0	Service Link
57	50.0	29775.0	Service Link
58	50.0	29825.0	Service Link
59	50.0	29875.0	Service Link
69	50.0	12975.0	Service Link
7	50.0	13125.0	Service Link
70	50.0	13025.0	Service Link
71	50.0	13075.0	Service Link
72	50.0	13125.0	Service Link
73	50.0	13175.0	Service Link
74	50.0	13225.0	Service Link
8	50.0	13175.0	Service Link
80	50.0	14275.0	Service Link

81	50.0	14325.0	Service Link
82	50.0	14375.0	Service Link
0	50.0	12775.0	Service Link
1	50.0	12825.0	Service Link
240	50.0	28775.0	Service Link
239	50.0	28725.0	Service Link
238	50.0	28675.0	Service Link
237	50.0	28625.0	Service Link
236	50.0	28575.0	Service Link
235	50.0	28525.0	Service Link
234	50.0	28475.0	Service Link
233	50.0	28425.0	Service Link
232	50.0	28375.0	Service Link
231	50.0	28325.0	Service Link
230	50.0	28275.0	Service Link
229	50.0	28225.0	Service Link
228	50.0	28175.0	Service Link
227	50.0	28125.0	Service Link
226	50.0	28075.0	Service Link
225	50.0	28025.0	Service Link
224	50.0	27975.0	Service Link
223	50.0	27925.0	Service Link
222	50.0	27875.0	Service Link
221	50.0	27825.0	Service Link
220	50.0	27775.0	Service Link
219	50.0	27725.0	Service Link

218	50.0	27675.0	Service Link
217	50.0	27625.0	Service Link
216	50.0	27575.0	Service Link
215	50.0	27525.0	Service Link
214	50.0	14475.0	Service Link
213	50.0	14425.0	Service Link
212	50.0	14375.0	Service Link
211	50.0	14325.0	Service Link
210	50.0	14275.0	Service Link
209	50.0	14225.0	Service Link
208	50.0	14175.0	Service Link
207	50.0	14125.0	Service Link
206	50.0	14075.0	Service Link
205	50.0	14025.0	Service Link
204	50.0	13225.0	Service Link
203	50.0	13175.0	Service Link
202	50.0	13125.0	Service Link
201	50.0	13075.0	Service Link
200	50.0	13025.0	Service Link
199	50.0	12975.0	Service Link
198	50.0	12925.0	Service Link
197	50.0	12875.0	Service Link
196	50.0	12825.0	Service Link
195	50.0	12775.0	Service Link
191	50.0	29975.0	Service Link
190	50.0	29925.0	Service Link

189	50.0	29875.0	Service Link
188	50.0	29825.0	Service Link
187	50.0	29775.0	Service Link
186	50.0	29725.0	Service Link
185	50.0	29675.0	Service Link
184	50.0	29625.0	Service Link
156	50.0	27825.0	Service Link
157	50.0	27875.0	Service Link
158	50.0	27925.0	Service Link
159	50.0	27975.0	Service Link
160	50.0	28025.0	Service Link
161	50.0	28075.0	Service Link
168	50.0	28425.0	Service Link
24	50.0	27725.0	Service Link
25	50.0	27775.0	Service Link
26	50.0	27825.0	Service Link
27	50.0	27875.0	Service Link
28	50.0	27925.0	Service Link
29	50.0	27975.0	Service Link
3	50.0	12925.0	Service Link
30	50.0	28025.0	Service Link
31	50.0	28075.0	Service Link
32	50.0	28125.0	Service Link
33	50.0	28175.0	Service Link
34	50.0	28225.0	Service Link
35	50.0	28275.0	Service Link

4	50.0	12975.0	Service Link
40	50.0	28525.0	Service Link
47	50.0	28875.0	Service Link
48	50.0	28925.0	Service Link
49	50.0	28975.0	Service Link
5	50.0	13025.0	Service Link
50	50.0	29025.0	Service Link
51	50.0	29075.0	Service Link
6	50.0	13075.0	Service Link
60	50.0	29925.0	Service Link
61	50.0	29975.0	Service Link
62	50.0	13875.0	TT&C
63	50.0	13925.0	TT&C
64	50.0	13975.0	TT&C
65	50.0	12775.0	Service Link
66	50.0	12825.0	Service Link
67	50.0	12875.0	Service Link
68	50.0	12925.0	Service Link
100	50.0	28275.0	Service Link
101	50.0	28325.0	Service Link
102	50.0	28375.0	Service Link
103	50.0	28425.0	Service Link
104	50.0	28475.0	Service Link
105	50.0	28525.0	Service Link
106	50.0	28575.0	Service Link
107	50.0	28625.0	Service Link

108	50.0	28675.0	Service Link
109	50.0	28725.0	Service Link
110	50.0	28775.0	Service Link
111	50.0	28825.0	Service Link
112	50.0	28875.0	Service Link
113	50.0	28925.0	Service Link
114	50.0	28975.0	Service Link
115	50.0	29025.0	Service Link
86	50.0	27575.0	Service Link
87	50.0	27675.0	Service Link
116	50.0	29075.0	Service Link
117	50.0	29525.0	Service Link
118	50.0	29575.0	Service Link
119	50.0	29625.0	Service Link
120	50.0	29675.0	Service Link
121	50.0	29725.0	Service Link
122	50.0	29775.0	Service Link
123	50.0	29825.0	Service Link
124	50.0	29875.0	Service Link
125	50.0	29925.0	Service Link
126	50.0	29975.0	Service Link
127	50.0	13875.0	TT&C
128	50.0	13925.0	TT&C
129	50.0	13975.0	TT&C
130	50.0	12775.0	Service Link
131	50.0	12825.0	Service Link

132	50.0	12875.0	Service Link
133	50.0	12925.0	Service Link
134	50.0	12975.0	Service Link
135	50.0	13025.0	Service Link
136	50.0	13075.0	Service Link
137	50.0	13125.0	Service Link
138	50.0	13175.0	Service Link
139	50.0	13225.0	Service Link
140	50.0	14025.0	Service Link
141	50.0	14075.0	Service Link
142	50.0	14125.0	Service Link
143	50.0	14175.0	Service Link
144	50.0	14225.0	Service Link
145	50.0	14275.0	Service Link
146	50.0	14325.0	Service Link
147	50.0	14375.0	Service Link
148	50.0	14425.0	Service Link
149	50.0	14475.0	Service Link
150	50.0	27525.0	Service Link
151	50.0	27575.0	Service Link
152	50.0	27625.0	Service Link
153	50.0	27675.0	Service Link
154	50.0	27725.0	Service Link
155	50.0	27775.0	Service Link
83	50.0	14425.0	Service Link
84	50.0	14475.0	Service Link

85	50.0	27525.0	Service Link
88	50.0	27675.0	Service Link
89	50.0	27725.0	Service Link
9	50.0	13225.0	Service Link
90	50.0	27775.0	Service Link
91	50.0	27825.0	Service Link
92	50.0	27875.0	Service Link
93	50.0	27925.0	Service Link
94	50.0	27975.0	Service Link
95	50.0	28025.0	Service Link
96	50.0	28075.0	Service Link
97	50.0	28125.0	Service Link
98	50.0	28175.0	Service Link
99	50.0	28225.0	Service Link
169	50.0	28475.0	Service Link
170	50.0	28525.0	Service Link
171	50.0	28575.0	Service Link
172	50.0	28625.0	Service Link
173	50.0	28675.0	Service Link
174	50.0	28725.0	Service Link
175	50.0	28775.0	Service Link
176	50.0	28825.0	Service Link
177	50.0	28875.0	Service Link
178	50.0	28925.0	Service Link
179	50.0	28975.0	Service Link
180	50.0	29025.0	Service Link

75	50.0	14025.0	Service Link
46	50.0	28825.0	Service Link
45	50.0	28775.0	Service Link
44	50.0	28725.0	Service Link
43	50.0	28675.0	Service Link
42	50.0	28625.0	Service Link
41	50.0	28575.0	Service Link
167	50.0	28375.0	Service Link
166	50.0	28325.0	Service Link
165	50.0	28275.0	Service Link
164	50.0	28225.0	Service Link
259	50.0	13975.0	TT&C
258	50.0	13925.0	TT&C
257	50.0	13875.0	TT&C
256	50.0	29975.0	Service Link
255	50.0	29925.0	Service Link
254	50.0	29875.0	Service Link
2	50.0	12875.0	Service Link
20	50.0	27525.0	Service Link
21	50.0	27575.0	Service Link
22	50.0	27625.0	Service Link
23	50.0	27675.0	Service Link
36	50.0	28325.0	Service Link
37	50.0	28375.0	Service Link
38	50.0	28425.0	Service Link
39	50.0	28475.0	Service Link

52	50.0	29525.0	Service Link
53	50.0	29575.0	Service Link
181	50.0	29075.0	Service Link
182	50.0	29525.0	Service Link
183	50.0	29575.0	Service Link
76	50.0	14075.0	Service Link
77	50.0	14125.0	Service Link
78	50.0	14175.0	Service Link
79	50.0	14225.0	Service Link
163	50.0	28175.0	Service Link
162	50.0	28125.0	Service Link
253	50.0	29825.0	Service Link
252	50.0	29775.0	Service Link
251	50.0	29725.0	Service Link
250	50.0	29675.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	TX1
Transmit Beam Frequency	10700.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	37.1 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-52.8 dBW/Hz
Max. Transmit EIRP	31.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-174.7	-173.0	-171.4	-170.0	-169.0	-146.0

Transmitting Beams 2:

Question	Response
Beam ID	TX2
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz

Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.1 dBW/Hz
Max. Transmit EIRP	36.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-158.0	-156.3	-154.7	-153.3	-152.4	-116.3

Transmitting Beams 3:

Question	Response
Beam ID	TX3
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees

Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.1 dBW/Hz
Max. Transmit EIRP	36.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-158.0	-156.3	-154.7	-153.3	-152.4	-116.3

Transmitting Beams 4:

Question	Response
Beam ID	TX4
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-60.0 dBW/Hz

Max. Transmit EIRP	23.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-168.9	-167.7	-166.6	-165.5	-164.6	-129.2

Transmitting Beams 5:

Question	Response
Beam ID	TX5
Transmit Beam Frequency	12150.0 MHz -12250.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-89.2 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-191.1	-189.4	-187.8	-186.4	-185.2	-179.0

Transmitting Beams 6:

Question	Response
Beam ID	TX7
Transmit Beam Frequency	10700.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	34.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-51.1 dBW/Hz
Max. Transmit EIRP	32.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-172.9	-171.2	-169.7	-168.3	-167.3	-146.0

Transmitting Beams 7:

Question	Response
Beam ID	TX8
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-44.3 dBW/Hz
Max. Transmit EIRP	39.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.2	-154.5	-153.0	-151.6	-150.6	-116.3

Transmitting Beams 8:

Question	Response
Beam ID	TX9
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz

Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-44.3 dBW/Hz
Max. Transmit EIRP	39.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.2	-154.5	-153.0	-151.6	-150.6	-116.3

Transmitting Beams 9:

Question	Response
Beam ID	TX10
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees

Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-57.2 dBW/Hz
Max. Transmit EIRP	26.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-168.9	-167.7	-166.6	-165.5	-164.6	-129.2

Transmitting Beams 10:

Question	Response
Beam ID	TX11
Transmit Beam Frequency	12150.0 MHz -12250.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-89.2 dBW/Hz

Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-191.1	-189.4	-187.8	-186.4	-185.2	-179.0

Transmitting Beams 11:

Question	Response
Beam ID	TX12
Transmit Beam Frequency	18550.0 MHz -18600.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	5.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-86.1 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-164.0	-162.3	-160.7	-159.3	-158.1	-151.9

Transmitting Beams 12:

Question	Response
Beam ID	TX14
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.1 dBW/Hz
Max. Transmit EIRP	36.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-158.0	-156.3	-154.7	-153.3	-152.4	-116.3

Transmitting Beams 13:

Question	Response
Beam ID	TX15
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.1 dBW/Hz
Max. Transmit EIRP	36.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-158.0	-156.3	-154.7	-153.3	-152.4	-116.3

Transmitting Beams 14:

Question	Response
Beam ID	TX16
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz

Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-60.0 dBW/Hz
Max. Transmit EIRP	23.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-168.9	-167.7	-166.6	-165.5	-164.6	-129.2

Transmitting Beams 15:

Question	Response
Beam ID	TX17
Transmit Beam Frequency	12150.0 MHz -12250.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees

Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-89.2 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-191.1	-189.4	-187.8	-186.4	-185.2	-179.0

Transmitting Beams 16:

Question	Response
Beam ID	TX18
Transmit Beam Frequency	18550.0 MHz -18600.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	5.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-86.1 dBW/Hz

Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-164.0	-162.3	-160.7	-159.3	-158.1	-151.9

Transmitting Beams 17:

Question	Response
Beam ID	TX19
Transmit Beam Frequency	10700.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	34.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-51.1 dBW/Hz
Max. Transmit EIRP	32.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-172.9	-171.2	-169.7	-168.3	-167.3	-146.0

Transmitting Beams 18:

Question	Response
Beam ID	TX20
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-44.3 dBW/Hz
Max. Transmit EIRP	39.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.2	-154.5	-153.0	-151.6	-150.6	-116.3

Transmitting Beams 19:

Question	Response
Beam ID	TX21
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-44.3 dBW/Hz
Max. Transmit EIRP	39.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.2	-154.5	-153.0	-151.6	-150.6	-116.3

Transmitting Beams 20:

Question	Response
Beam ID	TX22
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz

Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-57.2 dBW/Hz
Max. Transmit EIRP	26.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-168.9	-167.7	-166.6	-165.5	-164.6	-129.2

Transmitting Beams 21:

Question	Response
Beam ID	TX23
Transmit Beam Frequency	12150.0 MHz -12250.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees

Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-89.2 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-191.1	-189.4	-187.8	-186.4	-185.2	-179.0

Transmitting Beams 22:

Question	Response
Beam ID	TX24
Transmit Beam Frequency	18550.0 MHz -18600.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	5.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-86.1 dBW/Hz

Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-164.0	-162.3	-160.7	-159.3	-158.1	-151.9

Transmitting Channels (275)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
68	50.0	19825.0	Service Link
263	50.0	12025.0	Service Link
133	50.0	18525.0	Service Link
26	50.0	12025.0	Service Link
15	50.0	11475.0	Service Link
224	50.0	19725.0	Service Link
79	50.0	10725.0	Service Link
67	50.0	19775.0	Service Link
56	50.0	18825.0	Service Link
44	50.0	18025.0	Service Link
157	50.0	18575.0	TT&C
156	50.0	12225.0	TT&C
154	50.0	20175.0	Service Link
252	50.0	11475.0	Service Link
251	50.0	11425.0	Service Link
215	50.0	18875.0	Service Link
214	50.0	18825.0	Service Link
213	50.0	18575.0	Service Link
212	50.0	18525.0	Service Link
211	50.0	18475.0	Service Link
209	50.0	18375.0	Service Link
33	50.0	12375.0	Service Link
205	50.0	18175.0	Service Link
239	50.0	10825.0	Service Link

250	50.0	11375.0	Service Link
261	50.0	11925.0	Service Link
198	50.0	17825.0	Service Link
199	50.0	17875.0	Service Link
200	50.0	17925.0	Service Link
201	50.0	17975.0	Service Link
202	50.0	18025.0	Service Link
203	50.0	18075.0	Service Link
204	50.0	18125.0	Service Link
206	50.0	18225.0	Service Link
228	50.0	19925.0	Service Link
229	50.0	19975.0	Service Link
230	50.0	20025.0	Service Link
231	50.0	20075.0	Service Link
232	50.0	20125.0	Service Link
29	50.0	12175.0	Service Link
274	50.0	12575.0	Service Link
210	50.0	18425.0	Service Link
118	50.0	12675.0	Service Link
107	50.0	12125.0	Service Link
96	50.0	11575.0	Service Link
85	50.0	11025.0	Service Link
155	50.0	12175.0	TT&C
144	50.0	19275.0	Service Link
153	50.0	20125.0	Service Link
152	50.0	20075.0	Service Link

151	50.0	20025.0	Service Link
150	50.0	19975.0	Service Link
149	50.0	19925.0	Service Link
148	50.0	19875.0	Service Link
147	50.0	19825.0	Service Link
146	50.0	19775.0	Service Link
145	50.0	19725.0	Service Link
143	50.0	19225.0	Service Link
142	50.0	19175.0	Service Link
141	50.0	19125.0	Service Link
140	50.0	19075.0	Service Link
139	50.0	19025.0	Service Link
138	50.0	18975.0	Service Link
72	50.0	20025.0	Service Link
208	50.0	18325.0	Service Link
59	50.0	18975.0	Service Link
58	50.0	18925.0	Service Link
57	50.0	18875.0	Service Link
55	50.0	18575.0	Service Link
54	50.0	18525.0	Service Link
53	50.0	18475.0	Service Link
52	50.0	18425.0	Service Link
50	50.0	18325.0	Service Link
49	50.0	18275.0	Service Link
48	50.0	18225.0	Service Link
47	50.0	18175.0	Service Link

46	50.0	18125.0	Service Link
45	50.0	18075.0	Service Link
43	50.0	17975.0	Service Link
42	50.0	17925.0	Service Link
41	50.0	17875.0	Service Link
137	50.0	18925.0	Service Link
136	50.0	18875.0	Service Link
135	50.0	18825.0	Service Link
134	50.0	18575.0	Service Link
132	50.0	18475.0	Service Link
131	50.0	18425.0	Service Link
130	50.0	18375.0	Service Link
129	50.0	18325.0	Service Link
128	50.0	18275.0	Service Link
127	50.0	18225.0	Service Link
126	50.0	18175.0	Service Link
125	50.0	18125.0	Service Link
28	50.0	12125.0	Service Link
27	50.0	12075.0	Service Link
25	50.0	11975.0	Service Link
24	50.0	11925.0	Service Link
23	50.0	11875.0	Service Link
22	50.0	11825.0	Service Link
19	50.0	11675.0	Service Link
18	50.0	11625.0	Service Link
17	50.0	11575.0	Service Link

16	50.0	11525.0	Service Link
14	50.0	11425.0	Service Link
13	50.0	11375.0	Service Link
5	50.0	10975.0	Service Link
4	50.0	10925.0	Service Link
3	50.0	10875.0	Service Link
2	50.0	10825.0	Service Link
1	50.0	10775.0	Service Link
227	50.0	19875.0	Service Link
226	50.0	19825.0	Service Link
225	50.0	19775.0	Service Link
223	50.0	19275.0	Service Link
222	50.0	19225.0	Service Link
221	50.0	19175.0	Service Link
220	50.0	19125.0	Service Link
219	50.0	19075.0	Service Link
218	50.0	19025.0	Service Link
217	50.0	18975.0	Service Link
216	50.0	18925.0	Service Link
81	50.0	10825.0	Service Link
80	50.0	10775.0	Service Link
77	50.0	12225.0	TT&C
76	50.0	12175.0	TT&C
75	50.0	20175.0	Service Link
74	50.0	20125.0	Service Link
73	50.0	20075.0	Service Link

71	50.0	19975.0	Service Link
70	50.0	19925.0	Service Link
69	50.0	19875.0	Service Link
66	50.0	19725.0	Service Link
65	50.0	19275.0	Service Link
64	50.0	19225.0	Service Link
63	50.0	19175.0	Service Link
62	50.0	19125.0	Service Link
61	50.0	19075.0	Service Link
60	50.0	19025.0	Service Link
35	50.0	12475.0	Service Link
34	50.0	12425.0	Service Link
32	50.0	12325.0	Service Link
31	50.0	12275.0	Service Link
30	50.0	12225.0	Service Link
262	50.0	11975.0	Service Link
264	50.0	12075.0	Service Link
265	50.0	12125.0	Service Link
266	50.0	12175.0	Service Link
267	50.0	12225.0	Service Link
268	50.0	12275.0	Service Link
269	50.0	12325.0	Service Link
270	50.0	12375.0	Service Link
271	50.0	12425.0	Service Link
315	50.0	18575.0	TT&C
314	50.0	12225.0	TT&C

313	50.0	12175.0	TT&C
312	50.0	20175.0	Service Link
311	50.0	20125.0	Service Link
310	50.0	20075.0	Service Link
309	50.0	20025.0	Service Link
308	50.0	19975.0	Service Link
307	50.0	19925.0	Service Link
306	50.0	19875.0	Service Link
305	50.0	19825.0	Service Link
304	50.0	19775.0	Service Link
303	50.0	19725.0	Service Link
302	50.0	19275.0	Service Link
301	50.0	19225.0	Service Link
300	50.0	19175.0	Service Link
299	50.0	19125.0	Service Link
298	50.0	19075.0	Service Link
297	50.0	19025.0	Service Link
296	50.0	18975.0	Service Link
295	50.0	18925.0	Service Link
294	50.0	18875.0	Service Link
293	50.0	18825.0	Service Link
292	50.0	18575.0	Service Link
291	50.0	18525.0	Service Link
290	50.0	18475.0	Service Link
289	50.0	18425.0	Service Link
288	50.0	18375.0	Service Link

287	50.0	18325.0	Service Link
286	50.0	18275.0	Service Link
285	50.0	18225.0	Service Link
284	50.0	18175.0	Service Link
283	50.0	18125.0	Service Link
282	50.0	18075.0	Service Link
281	50.0	18025.0	Service Link
280	50.0	17975.0	Service Link
249	50.0	11325.0	Service Link
248	50.0	11275.0	Service Link
247	50.0	11225.0	Service Link
246	50.0	11175.0	Service Link
245	50.0	11125.0	Service Link
244	50.0	11075.0	Service Link
243	50.0	11025.0	Service Link
242	50.0	10975.0	Service Link
241	50.0	10925.0	Service Link
240	50.0	10875.0	Service Link
238	50.0	10775.0	Service Link
237	50.0	10725.0	Service Link
236	50.0	18575.0	TT&C
235	50.0	12225.0	TT&C
234	50.0	12175.0	TT&C
233	50.0	20175.0	Service Link
0	50.0	10725.0	Service Link
207	50.0	18275.0	Service Link

51	50.0	18375.0	Service Link
124	50.0	18075.0	Service Link
123	50.0	18025.0	Service Link
122	50.0	17975.0	Service Link
121	50.0	17925.0	Service Link
120	50.0	17875.0	Service Link
119	50.0	17825.0	Service Link
117	50.0	12625.0	Service Link
116	50.0	12575.0	Service Link
115	50.0	12525.0	Service Link
114	50.0	12475.0	Service Link
113	50.0	12425.0	Service Link
112	50.0	12375.0	Service Link
111	50.0	12325.0	Service Link
110	50.0	12275.0	Service Link
109	50.0	12225.0	Service Link
108	50.0	12175.0	Service Link
106	50.0	12075.0	Service Link
105	50.0	12025.0	Service Link
104	50.0	11975.0	Service Link
103	50.0	11925.0	Service Link
102	50.0	11875.0	Service Link
101	50.0	11825.0	Service Link
100	50.0	11775.0	Service Link
99	50.0	11725.0	Service Link
98	50.0	11675.0	Service Link

97	50.0	11625.0	Service Link
95	50.0	11525.0	Service Link
94	50.0	11475.0	Service Link
93	50.0	11425.0	Service Link
92	50.0	11375.0	Service Link
91	50.0	11325.0	Service Link
90	50.0	11275.0	Service Link
89	50.0	11225.0	Service Link
88	50.0	11175.0	Service Link
87	50.0	11125.0	Service Link
86	50.0	11075.0	Service Link
84	50.0	10975.0	Service Link
83	50.0	10925.0	Service Link
82	50.0	10875.0	Service Link
12	50.0	11325.0	Service Link
11	50.0	11275.0	Service Link
10	50.0	11225.0	Service Link
9	50.0	11175.0	Service Link
8	50.0	11125.0	Service Link
7	50.0	11075.0	Service Link
6	50.0	11025.0	Service Link
21	50.0	11775.0	Service Link
20	50.0	11725.0	Service Link
260	50.0	11875.0	Service Link
259	50.0	11825.0	Service Link
258	50.0	11775.0	Service Link

257	50.0	11725.0	Service Link
256	50.0	11675.0	Service Link
255	50.0	11625.0	Service Link
254	50.0	11575.0	Service Link
253	50.0	11525.0	Service Link
272	50.0	12475.0	Service Link
273	50.0	12525.0	Service Link
275	50.0	12625.0	Service Link
276	50.0	12675.0	Service Link
277	50.0	17825.0	Service Link
278	50.0	17875.0	Service Link
279	50.0	17925.0	Service Link
40	50.0	17825.0	Service Link
39	50.0	12675.0	Service Link
38	50.0	12625.0	Service Link
37	50.0	12575.0	Service Link
36	50.0	12525.0	Service Link

Certification Questions

Question	Response
Are the applicable service area coverage requirements of 25.143(b)(2)(ii) and (iii), or 25.144(a)(3)(i), or 25.145(c)(1) and (2), or 25.146(i)(1) and (2), or 25.148(c), or 25.225 met?	Yes
Are the applicable frequency tolerances of 25.202(e) and out-of-band emission limits of 25.202(f)(1),(2), and (3) met?	Yes
Are the cessation of emissions requirements of 25.207 met?	Yes
Are the applicable power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	Yes
For NGSO applications, are the applicable equivalent-power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?	Yes
Are the applicable full-frequency-reuse requirements of 25.210 met?	Yes
If the application is for a 17/24 GHz BSS space station, will it be operated at an offset location with full power and interference protection in accordance with 25.262(b)?	

Attachments

File Name	Beam	Field	Attachment Type	Description
technical_parameters.mdb		NGSO Antenna Gain Data	GIMS file (*.mdb)	Includes complete constellation technical parameters.
README.txt		NGSO Antenna Gain Data	Text file (*.txt)	Documentation for attached technical parameters MDB file.