



312 File Number: **SATLOA2021110400145**

Filing Description

Question	Response
Description	Kuiper V-band NGSO System

**Satellite
Information**

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	Kuiper-V System
Estimated Lifetime of Satellite(s) From Date of Launch	7 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		14000.0 MHz -14500.0 MHz	Receive
Fixed-Satellite Service		12750.0 MHz -13250.0 MHz	Receive
Fixed-Satellite Service		12200.0 MHz -12700.0 MHz	Transmit
Fixed-Satellite Service		11700.0 MHz -12200.0 MHz	Transmit
Fixed-Satellite Service		10700.0 MHz -11700.0 MHz	Transmit
Fixed-Satellite Service		50400.0 MHz -51400.0 MHz	Receive
Fixed-Satellite Service		48200.0 MHz -50200.0 MHz	Receive
Fixed-Satellite Service		47200.0 MHz -48200.0 MHz	Receive
Fixed-Satellite Service		42000.0 MHz -42500.0 MHz	Transmit
Fixed-Satellite Service		40000.0 MHz -42000.0 MHz	Transmit
Fixed-Satellite Service		37500.0 MHz -40000.0 MHz	Transmit

**Orbital
Information For
Non-
Geostationary
Satellites**

Question	Response
Total Number of Satellites in the active constellation	199
Orbit Epoch Date	01/01/2022
Celestial Reference Body	Earth

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	56
Inclination Angle	33.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	5788.6 seconds
Apogee	590.0 km
Perigee	590.0 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	353.6
2	347.1
3	340.7
4	334.3
5	327.9
6	321.4
7	315.0
8	308.6
9	302.1
10	295.7
11	289.3
12	282.9
13	276.4

14	270.0
15	263.6
16	257.1
17	250.7
18	244.3
19	237.9
20	231.4
21	225.0
22	218.6
23	212.1
24	205.7
25	199.3
26	192.9
27	186.4
28	180.0
29	173.6
30	167.1
31	160.7
32	154.3
33	147.9
34	141.4
35	135.0
36	128.6
37	122.1
38	115.7
39	109.3

40	102.9
41	96.4
42	90.0
43	83.6
44	77.1
45	70.7
46	64.3
47	57.9
48	51.4
49	45.0
50	38.6
51	32.1
52	25.7
53	19.3
54	12.9
55	6.4
56	0.0

Orbital Plane 2:

Question	Response
Number of Satellites in Plane	72
Inclination Angle	42.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	5813.5 seconds
Apogee	610.0 km
Perigee	610.0 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	355.0
2	350.0
3	345.0
4	340.0
5	335.0
6	330.0
7	325.0
8	320.0
9	315.0
10	310.0
11	305.0
12	300.0
13	295.0
14	290.0
15	285.0
16	280.0
17	275.0
18	270.0
19	265.0
20	260.0
21	255.0

22	250.0
23	245.0
24	240.0
25	235.0
26	230.0
27	225.0
28	220.0
29	215.0
30	210.0
31	205.0
32	200.0
33	195.0
34	190.0
35	185.0
36	180.0
37	175.0
38	170.0
39	165.0
40	160.0
41	155.0
42	150.0
43	145.0
44	140.0
45	135.0
46	130.0
47	125.0

48	120.0
49	115.0
50	110.0
51	105.0
52	100.0
53	95.0
54	90.0
55	85.0
56	80.0
57	75.0
58	70.0
59	65.0
60	60.0
61	55.0
62	50.0
63	45.0
64	40.0
65	35.0
66	30.0
67	25.0
68	20.0
69	15.0
70	10.0
71	5.0
72	0.0

Orbital Plane 3:

Question	Response
Number of Satellites in Plane	68
Inclination Angle	51.9 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	5838.5 seconds
Apogee	630.0 km
Perigee	630.0 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	354.7
2	349.4
3	344.1
4	338.8
5	333.5
6	328.2
7	322.9
8	317.6
9	312.4
10	307.1
11	301.8
12	296.5
13	291.2
14	285.9

15	280.6
16	275.3
17	270.0
18	264.7
19	259.4
20	254.1
21	248.8
22	243.5
23	238.2
24	232.9
25	227.6
26	222.4
27	217.1
28	211.8
29	206.5
30	201.2
31	195.9
32	190.6
33	185.3
34	180.0
35	174.7
36	169.4
37	164.1
38	158.8
39	153.5
40	148.2

41	142.9
42	137.6
43	132.4
44	127.1
45	121.8
46	116.5
47	111.2
48	105.9
49	100.6
50	95.3
51	90.0
52	84.7
53	79.4
54	74.1
55	68.8
56	63.5
57	58.2
58	52.9
59	47.6
60	42.4
61	37.1
62	31.8
63	26.5
64	21.2
65	15.9
66	10.6

67	5.3
68	0.0

Orbital Plane 4:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	72.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	5851.0 seconds
Apogee	640.0 km
Perigee	640.0 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	0.0

Orbital Plane 5:

Question	Response
Number of Satellites in Plane	2
Inclination Angle	80.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	90.0 degrees
Orbital Period	5863.5 seconds
Apogee	650.0 km
Perigee	650.0 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	180.0
2	0.0

Receiving Beams 1:

Question	Response
Beam ID	RV2F
Receive Beam Frequency	48200.0 MHz -49200.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	43.2 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	16.1 dB/K
Min. Saturation Flux Density	-0.1 dBW/m ²
Max. Saturation Flux Density	0.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 2:

Question	Response
Beam ID	RV2E
Receive Beam Frequency	47200.0 MHz -48200.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	43.0 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	15.9 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	RV2G
Receive Beam Frequency	49200.0 MHz -50200.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	43.3 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	16.2 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	RV2H
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	43.7 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	16.6 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	RV3A
Receive Beam Frequency	47200.0 MHz -48200.0 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
G/T at Max. Gain Point	6.9 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	RV3B
Receive Beam Frequency	48200.0 MHz -49200.0 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
G/T at Max. Gain Point	6.9 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
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Beam ID	RV3C
Receive Beam Frequency	49200.0 MHz -50200.0 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
G/T at Max. Gain Point	6.9 dB/K
Min. Saturation Flux Density	-0.1 dBW/m ²
Max. Saturation Flux Density	0.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 8:

Question	Response
Beam ID	RV3D
Receive Beam Frequency	50400.0 MHz -51400.0 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
G/T at Max. Gain Point	6.9 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	RV3E
Receive Beam Frequency	47200.0 MHz -48200.0 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
G/T at Max. Gain Point	6.9 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
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Beam ID	RV3F
Receive Beam Frequency	48200.0 MHz -49200.0 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
G/T at Max. Gain Point	6.9 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	RV3G
Receive Beam Frequency	49200.0 MHz -50200.0 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
G/T at Max. Gain Point	6.9 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	RV3H
Receive Beam Frequency	50400.0 MHz -51400.0 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
G/T at Max. Gain Point	6.9 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
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Beam ID	RV4A
Receive Beam Frequency	47200.0 MHz -48200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.0 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	16.9 dB/K
Min. Saturation Flux Density	-0.1 dBW/m ²
Max. Saturation Flux Density	0.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 14:

Question	Response
Beam ID	RV4B
Receive Beam Frequency	48200.0 MHz -49200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.0 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	16.9 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	RV4C
Receive Beam Frequency	49200.0 MHz -50200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.0 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	16.9 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
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Beam ID	RV4D
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.0 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	16.9 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	RV4E
Receive Beam Frequency	47200.0 MHz -48200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.0 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	16.9 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	RV4F
Receive Beam Frequency	48200.0 MHz -49200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.0 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	16.9 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 19:

Question	Response
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Beam ID	RV4G
Receive Beam Frequency	49200.0 MHz -50200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.0 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	16.9 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 20:

Question	Response
Beam ID	RV4H
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.0 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	16.9 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 21:

Question	Response
Beam ID	RV5A
Receive Beam Frequency	47200.0 MHz -47300.0 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
G/T at Max. Gain Point	-22.1 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 22:

Question	Response
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Beam ID	RV5B
Receive Beam Frequency	47200.0 MHz -47300.0 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
G/T at Max. Gain Point	-22.1 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 23:

Question	Response
Beam ID	RK1A
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	32.0 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	5.9 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 24:**

Question	Response
Beam ID	RK1B
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	32.0 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	5.9 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 25:**

Question	Response
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Beam ID	RK1C
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	32.0 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	5.9 dB/K
Min. Saturation Flux Density	-0.1 dBW/m ²
Max. Saturation Flux Density	0.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 26:

Question	Response
Beam ID	RK1D
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	32.0 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	5.9 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 27:

Question	Response
Beam ID	RK2A
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	42.0 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	15.9 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 28:

Question	Response
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Beam ID	RK2B
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	42.0 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	15.9 dB/K
Min. Saturation Flux Density	-0.1 dBW/m ²
Max. Saturation Flux Density	0.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 29:

Question	Response
Beam ID	RK2C
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.0 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	15.9 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 30:**

Question	Response
Beam ID	RK2D
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.0 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	15.9 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 31:**

Question	Response
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Beam ID	RV1A
Receive Beam Frequency	47200.0 MHz -48200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	36.8 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	9.7 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 32:

Question	Response
Beam ID	RV1B
Receive Beam Frequency	48200.0 MHz -49200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	36.9 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 33:**

Question	Response
Beam ID	RV1C
Receive Beam Frequency	49200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	10.0 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 34:**

Question	Response
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Beam ID	RV1D
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	37.5 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	10.4 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 35:**

Question	Response
Beam ID	RV1E
Receive Beam Frequency	47200.0 MHz -48200.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	36.8 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	9.7 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 36:**

Question	Response
Beam ID	RV1F
Receive Beam Frequency	48200.0 MHz -49200.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	36.9 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 37:**

Question	Response
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Beam ID	RV1G
Receive Beam Frequency	49200.0 MHz -50200.0 MHz
Beam Type	Steerable
Polarization	LHCP
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	10.0 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 38:

Question	Response
Beam ID	RV1H
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	37.5 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	10.4 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 39:**

Question	Response
Beam ID	RV2A
Receive Beam Frequency	47200.0 MHz -48200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	43.0 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	15.9 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 40:**

Question	Response
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Beam ID	RV2B
Receive Beam Frequency	48200.0 MHz -49200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	43.2 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	16.1 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 41:

Question	Response
Beam ID	RV2C
Receive Beam Frequency	49200.0 MHz -50200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	43.3 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	16.2 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 42:**

Question	Response
Beam ID	RV2D
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	43.7 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	16.6 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 (44)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
R44	100.0	47250.0	TT&C
R43	10.0	47205.0	TT&C
R42	5.0	47202.5	TT&C
R41	1.0	47200.5	TT&C
R40	500.0	14250.0	Service Link
R39	500.0	13000.0	Service Link
R38	500.0	51150.0	Service Link
R30	500.0	51150.0	Feeder Link
R29	500.0	50650.0	Feeder Link
R28	500.0	49950.0	Feeder Link
R27	500.0	49450.0	Feeder Link
R26	500.0	48950.0	Feeder Link
R11	500.0	48450.0	Service Link
R12	500.0	48950.0	Service Link
R13	500.0	49450.0	Service Link
R14	500.0	49950.0	Service Link
R21	10.0	47205.0	TT&C
R20	5.0	47202.5	TT&C
R19	1.0	47200.5	TT&C
R31	500.0	47450.0	Service Link
R32	500.0	47950.0	Service Link
R33	500.0	48450.0	Service Link
R34	500.0	48950.0	Service Link
R35	500.0	49450.0	Service Link

R36	500.0	49950.0	Service Link
R37	500.0	50650.0	Service Link
R23	500.0	47450.0	Feeder Link
R24	500.0	47950.0	Feeder Link
R25	500.0	48450.0	Feeder Link
R10	500.0	47950.0	Service Link
R18	500.0	14250.0	Service Link
R9	500.0	47450.0	Service Link
R8	500.0	51150.0	Feeder Link
R7	500.0	50650.0	Feeder Link
R6	500.0	49950.0	Feeder Link
R5	500.0	49450.0	Feeder Link
R4	500.0	48950.0	Feeder Link
R3	500.0	48450.0	Feeder Link
R2	500.0	47950.0	Feeder Link
R1	500.0	47450.0	Feeder Link
R22	100.0	47250.0	TT&C
R15	500.0	50650.0	Service Link
R16	500.0	51150.0	Service Link
R17	500.0	13000.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	TV1A
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	34.8 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	-48.23 dBW/Hz
Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-144.7	-140.4	-131.1	-121.9	-120.7	-118.0

Transmitting Beams 2:

Question	Response
Beam ID	TV1B
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz

Beam Type	Steerable
Polarization	RHCP
Peak Gain	35.3 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-132.7	-128.4	-119.1	-110.0	-110.0	-110.0

Transmitting Beams 3:

Question	Response
Beam ID	TV1C
Transmit Beam Frequency	42000.0 MHz -42500.0 MHz
Beam Type	Steerable
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
Max. Transmit EIRP Density	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-132.7	-128.4	-119.1	-110.0	-110.0	-110.0

Transmitting Beams 4:

Question	Response
Beam ID	TV1D
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	34.8 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	-48.23 dBW/Hz

Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-144.7	-140.4	-131.1	-121.9	-120.7	-118.0

Transmitting Beams 5:

Question	Response
Beam ID	TV1E
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	35.3 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-132.7	-128.4	-119.1	-110.0	-110.0	-110.0

Transmitting Beams 6:

Question	Response
Beam ID	TV1F
Transmit Beam Frequency	42000.0 MHz -42500.0 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
Max. Transmit EIRP Density	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-132.7	-128.4	-119.1	-110.0	-110.0	-110.0

Transmitting Beams 7:

Question	Response
Beam ID	TV2A
Transmit Beam Frequency	37500.0 MHz -40000.0 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	-48.23 dBW/Hz
Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-152.4	-148.1	-140.3	-121.9	-120.7	-118.0

Transmitting Beams 8:

Question	Response
Beam ID	TV2B
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz

Beam Type	Steerable
Polarization	RHCP
Peak Gain	41.5 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-140.5	-136.1	-128.4	-110.0	-110.0	-110.0

Transmitting Beams 9:

Question	Response
Beam ID	TV2C
Transmit Beam Frequency	42000.0 MHz -42500.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	42.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-140.5	-136.1	-128.4	-110.0	-110.0	-110.0

Transmitting Beams 10:

Question	Response
Beam ID	TV2D
Transmit Beam Frequency	37500.0 MHz -40000.0 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	-48.23 dBW/Hz

Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-152.4	-148.1	-140.3	-121.9	-120.7	-118.0

Transmitting Beams 11:

Question	Response
Beam ID	TV2E
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	41.5 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-140.5	-136.1	-128.4	-110.0	-110.0	-110.0

Transmitting Beams 12:

Question	Response
Beam ID	TV2F
Transmit Beam Frequency	42000.0 MHz -42500.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	42.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-140.5	-136.1	-128.4	-110.0	-110.0	-110.0

Transmitting Beams 13:

Question	Response
Beam ID	TV3A
Transmit Beam Frequency	37500.0 MHz -40000.0 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	-48.23 dBW/Hz
Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-135.1	-130.8	-125.8	-122.0	-120.8	-118.0

Transmitting Beams 14:

Question	Response
Beam ID	TV3B
Transmit Beam Frequency	40000.0 MHz -42000.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-123.1	-118.8	-113.8	-110.0	-110.0	-110.0

Transmitting Beams 15:

Question	Response
Beam ID	TV3C
Transmit Beam Frequency	42000.0 MHz -42500.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-123.1	-118.8	-113.8	-110.0	-110.0	-110.0

Transmitting Beams 16:

Question	Response
Beam ID	TV3D
Transmit Beam Frequency	37500.0 MHz -40000.0 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	-48.23 dBW/Hz

Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-135.1	-130.8	-125.8	-122.0	-120.8	-118.0

Transmitting Beams 17:

Question	Response
Beam ID	TV3E
Transmit Beam Frequency	40000.0 MHz -42000.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-123.1	-118.8	-113.8	-110.0	-110.0	-110.0

Transmitting Beams 18:

Question	Response
Beam ID	TV3F
Transmit Beam Frequency	42000.0 MHz -42500.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-123.1	-118.8	-113.8	-110.0	-110.0	-110.0

Transmitting Beams 19:

Question	Response
Beam ID	TV4A
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.0 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	-48.23 dBW/Hz
Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-148.9	-144.6	-136.8	-122.0	-120.8	-118.0

Transmitting Beams 20:

Question	Response
Beam ID	TV4B
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz

Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²	(dBW/m ²
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-137.0	-132.6	-124.8	-110.0	-110.0	-110.0

Transmitting Beams 21:

Question	Response
Beam ID	TV4C
Transmit Beam Frequency	42000.0 MHz -42500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-137.0	-132.6	-124.8	-110.0	-110.0	-110.0

Transmitting Beams 22:

Question	Response
Beam ID	TV4D
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.0 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	-48.23 dBW/Hz

Max. Transmit EIRP	45.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-148.9	-144.6	-136.8	-122.0	-120.8	-118.0

Transmitting Beams 23:

Question	Response
Beam ID	TV4E
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	56.75 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-137.0	-132.6	-124.8	-110.0	-110.0	-110.0

Transmitting Beams 24:

Question	Response
Beam ID	TV4F
Transmit Beam Frequency	42000.0 MHz -42500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.0 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	-36.26 dBW/Hz
Max. Transmit EIRP	50.73 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-137.0	-132.6	-124.8	-110.0	-110.0	-110.0

Transmitting Beams 25:

Question	Response
Beam ID	TV5A
Transmit Beam Frequency	40000.0 MHz -40100.0 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	-45.59 dBW/Hz
Max. Transmit EIRP	34.41 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-123.8	-122.2	-120.7	-119.3	-118.1	-112.0

Transmitting Beams 26:

Question	Response
Beam ID	TV5B
Transmit Beam Frequency	40000.0 MHz -40100.0 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	-45.59 dBW/Hz
Max. Transmit EIRP	34.41 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-123.8	-122.2	-120.7	-119.3	-118.1	-112.0

Transmitting Beams 27:

Question	Response
Beam ID	TK1A
Transmit Beam Frequency	10700.0 MHz -11200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	32.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-140.6	-137.7	-134.0	-127.6	-120.9	-116.5

Transmitting Beams 28:

Question	Response
Beam ID	TK1B
Transmit Beam Frequency	11200.0 MHz -11700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	32.0 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	-45.0 dBW/Hz

Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-140.6	-137.7	-134.0	-127.6	-120.9	-116.5

Transmitting Beams 29:

Question	Response
Beam ID	TK2F
Transmit Beam Frequency	11200.0 MHz -11700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5° (dBW/m ²)	* 5° - 10° (dBW/m ²)	* 10° - 15° (dBW/m ²)	* 15° - 20° (dBW/m ²)	* 20° - 25° (dBW/m ²)	* 25° - 90° (dBW/m ²)
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0 MHz	-153.1	-150.2	-146.5	-141.4	-133.2	-116.5

Transmitting Beams 30:

Question	Response
Beam ID	TK2G
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

Information not provided.

Transmitting Beams 31:

Question	Response
Beam ID	TK2H
Transmit Beam Frequency	12200.0 MHz -12700.0 MHz

Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 1° (dBW/m ² /BW):	* 1° - 2° (dBW/m ² /BW):	* 2° - 3° (dBW/m ² /BW):	* 3° - 4° (dBW/m ² /BW):	* 4° - 5° (dBW/m ² /BW):
1.0 MHz	-154.8	-154.4	-154.0	-153.5	-153.1

Transmitting Beams 32:

Question	Response
Beam ID	TK1C
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	32.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

Information not provided.

Transmitting Beams 33:

Question	Response
Beam ID	TK1D
Transmit Beam Frequency	12200.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	32.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 1° (dbW/m ² /BW):	* 1° - 2° (dbW/m ² /BW):	* 2° - 3° (dbW/m ² /BW):	* 3° - 4° (dbW/m ² /BW):	* 4° - 5° (dbW/m ² /BW):
1.0 MHz	-142.3	-141.9	-141.5	-141.0	-140.6

Transmitting Beams 34:

Question	Response
Beam ID	TK1E
Transmit Beam Frequency	10700.0 MHz -11200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	32.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-140.6	-137.7	-134.0	-127.6	-120.9	-116.5

Transmitting Beams 35:

Question	Response
Beam ID	TK1F
Transmit Beam Frequency	11200.0 MHz -11700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	32.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 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	-140.6	-137.7	-134.0	-127.6	-120.9	-116.5

Transmitting Beams 36:

Question	Response
Beam ID	TK1G
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz

Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	32.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

Information not provided.

Transmitting Beams 37:

Question	Response
Beam ID	TK1H
Transmit Beam Frequency	12200.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	32.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 1° (dBW/m ² /BW):	* 1° - 2° (dBW/m ² /BW):	* 2° - 3° (dBW/m ² /BW):	* 3° - 4° (dBW/m ² /BW):	* 4° - 5° (dBW/m ² /BW):
1.0 MHz	-142.3	-141.9	-141.5	-141.0	-140.6

Transmitting Beams 38:

Question	Response
Beam ID	TK2A
Transmit Beam Frequency	10700.0 MHz -11200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	42.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

1.0	-153.1	-150.2	-146.5	-141.4	-133.2	-116.5
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MHz

Transmitting Beams 40:

Question	Response
Beam ID	TK2C
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	42.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

Information not provided.

Transmitting Beams 41:

Question	Response
Beam ID	TK2D
Transmit Beam Frequency	12200.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP

Peak Gain	42.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 1° (dBW/m ² /BW):	* 1° - 2° (dBW/m ² /BW):	* 2° - 3° (dBW/m ² /BW):	* 3° - 4° (dBW/m ² /BW):	* 4° - 5° (dBW/m ² /BW):
1.0 MHz	-154.8	-154.4	-154.0	-153.5	-153.1

Transmitting Beams 42:

Question	Response
Beam ID	TK2E
Transmit Beam Frequency	10700.0 MHz -11200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.0 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	-45.0 dBW/Hz
Max. Transmit EIRP	42.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)	(dBW/m ²)
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
1.0	-153.1	-150.2	-146.5	-141.4	-133.2	-116.5
MHz						

Transmitting Channels (56)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
T5	500.0	39750.0	Feeder Link
T4	500.0	39250.0	Feeder Link
T3	500.0	38750.0	Feeder Link
T2	500.0	38250.0	Feeder Link
T24	500.0	12450.0	Service Link
T1	500.0	37750.0	Feeder Link
T23	500.0	11950.0	Service Link
T22	500.0	11450.0	Service Link
T21	500.0	10950.0	Service Link
T20	500.0	42250.0	Service Link
T11	500.0	37750.0	Service Link
T45	500.0	40750.0	Service Link
T44	500.0	40250.0	Service Link
T43	500.0	39750.0	Service Link
T42	500.0	39250.0	Service Link
T41	500.0	38750.0	Service Link
T40	500.0	38250.0	Service Link
T37	500.0	41750.0	Feeder Link
T38	500.0	42250.0	Feeder Link
T39	500.0	37750.0	Service Link
T29	500.0	37750.0	Feeder Link
T30	500.0	38250.0	Feeder Link
T31	500.0	38750.0	Feeder Link
T32	500.0	39250.0	Feeder Link

T33	500.0	39750.0	Feeder Link
T56	100.0	40050.0	TT&C
T55	10.0	40005.0	TT&C
T54	5.0	40002.5	TT&C
T53	1.0	40000.5	TT&C
T46	500.0	41250.0	Service Link
T47	500.0	41750.0	Service Link
T48	500.0	42250.0	Service Link
T49	500.0	10950.0	Service Link
T9	500.0	41750.0	Feeder Link
T8	500.0	41250.0	Feeder Link
T7	500.0	40750.0	Feeder Link
T6	500.0	40250.0	Feeder Link
T27	10.0	40005.0	TT&C
T26	5.0	40002.5	TT&C
T25	1.0	40000.5	TT&C
T19	500.0	41750.0	Service Link
T18	500.0	41250.0	Service Link
T17	500.0	40750.0	Service Link
T16	500.0	40250.0	Service Link
T15	500.0	39750.0	Service Link
T14	500.0	39250.0	Service Link
T13	500.0	38750.0	Service Link
T12	500.0	38250.0	Service Link
T36	500.0	41250.0	Feeder Link
T35	500.0	40750.0	Feeder Link

T34	500.0	40250.0	Feeder Link
T52	500.0	12450.0	Service Link
T51	500.0	11950.0	Service Link
T50	500.0	11450.0	Service Link
T28	100.0	40050.0	TT&C
T10	500.0	42250.0	Feeder 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?	N/A
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
<u>KuiperV-GIMS.mdb</u>		NGSO Antenna Gain Data	GIMS file (*.mdb)	
