



312 File Number: **SATPPL2021110400146**

Filing Description

Question	Response
Description	This document specifies the technical parameters for the Intelsat MEO Constellation seeking U.S. market access.

Satellite Information

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	Intelsat MEO Constellation
Estimated Lifetime of Satellite(s) From Date of Launch	10 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating Frequency Bands (5)

Nature of service	Description	Frequency Band(s)	Mode Type
Fixed-Satellite Service		50400.0 MHz -51400.0 MHz	Receive
Fixed-Satellite Service		47200.0 MHz -50200.0 MHz	Receive
Fixed-Satellite Service		37500.0 MHz -42000.0 MHz	Transmit
Fixed-Satellite Service		14000.0 MHz -14500.0 MHz	Receive
Fixed-Satellite Service		12750.0 MHz -13250.0 MHz	Receive

**Orbital
Information For
Non-
Geostationary
Satellites**

Question	Response
Total Number of Satellites in the active constellation	216
Orbit Epoch Date	01/01/2022
Celestial Reference Body	Earth

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	89.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	120.0
2	150.0
3	180.0
4	210.0
5	240.0
6	270.0
7	300.0
8	330.0
9	360.0
10	30.0
11	60.0
12	90.0

Orbital Plane 2:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	89.0 degrees
Right Ascension of Ascending Node	30.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	270.0
2	300.0
3	330.0
4	360.0
5	210.0
6	180.0
7	150.0
8	120.0
9	30.0
10	60.0
11	90.0
12	240.0

Orbital Plane 3:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	89.0 degrees
Right Ascension of Ascending Node	60.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	60.0
3	90.0
4	120.0
5	150.0
6	180.0
7	210.0
8	240.0
9	360.0
10	330.0
11	300.0

12	270.0
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Orbital Plane 4:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	89.0 degrees
Right Ascension of Ascending Node	90.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	210.0
2	180.0
3	150.0
4	120.0
5	90.0
6	60.0
7	30.0
8	240.0
9	270.0
10	300.0

11	330.0
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12	360.0
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Orbital Plane 5:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	89.0 degrees
Right Ascension of Ascending Node	120.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	60.0
3	90.0
4	120.0
5	150.0
6	180.0
7	210.0
8	240.0
9	270.0

10	360.0
11	330.0
12	300.0

Orbital Plane 6:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	89.0 degrees
Right Ascension of Ascending Node	150.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	120.0
2	90.0
3	60.0
4	30.0
5	150.0
6	180.0
7	210.0
8	240.0

9	270.0
10	300.0
11	330.0
12	360.0

Orbital Plane 7:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	62.9 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	60.0
3	90.0
4	120.0
5	150.0
6	180.0
7	210.0

8	240.0
9	270.0
10	300.0
11	330.0
12	360.0

Orbital Plane 8:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	62.9 degrees
Right Ascension of Ascending Node	30.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	360.0
2	330.0
3	300.0
4	270.0
5	210.0
6	210.0

7	180.0
8	150.0
9	120.0
10	90.0
11	60.0
12	30.0

Orbital Plane 9:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	62.9 degrees
Right Ascension of Ascending Node	60.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	60.0
2	90.0
3	120.0
4	150.0
5	180.0

6	210.0
7	240.0
8	270.0
9	300.0
10	330.0
11	360.0
12	30.0

Orbital Plane 10:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	62.9 degrees
Right Ascension of Ascending Node	90.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	360.0
2	330.0
3	300.0
4	270.0

5	240.0
6	210.0
7	180.0
8	150.0
9	120.0
10	90.0
11	60.0
12	30.0

Orbital Plane 11:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	62.9 degrees
Right Ascension of Ascending Node	120.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	60.0
3	90.0

4	120.0
5	150.0
6	180.0
7	210.0
8	240.0
9	270.0
10	300.0
11	330.0
12	360.0

Orbital Plane 12:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	62.9 degrees
Right Ascension of Ascending Node	150.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	150.0
2	180.0

3	210.0
4	240.0
5	270.0
6	300.0
7	330.0
8	360.0
9	30.0
10	60.0
11	90.0
12	120.0

Orbital Plane 13:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	47.0 degrees
Right Ascension of Ascending Node	15.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	60.0

2	90.0
3	120.0
4	150.0
5	180.0
6	210.0
7	240.0
8	270.0
9	300.0
10	330.0
11	360.0
12	30.0

Orbital Plane 14:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	47.0 degrees
Right Ascension of Ascending Node	45.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
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1	360.0
2	300.0
3	300.0
4	270.0
5	240.0
6	210.0
7	180.0
8	150.0
9	120.0
10	90.0
11	60.0
12	30.0

Orbital Plane 15:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	47.0 degrees
Right Ascension of Ascending Node	75.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	270.0
2	300.0
3	330.0
4	360.0
5	240.0
6	210.0
7	180.0
8	150.0
9	30.0
10	60.0
11	90.0
12	120.0

Orbital Plane 16:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	47.0 degrees
Right Ascension of Ascending Node	105.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	150.0
2	180.0
3	210.0
4	240.0
5	270.0
6	300.0
7	330.0
8	360.0
9	30.0
10	60.0
11	90.0
12	120.0

Orbital Plane 17:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	47.0 degrees
Right Ascension of Ascending Node	135.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	360.0
2	330.0
3	300.0
4	270.0
5	240.0
6	210.0
7	180.0
8	150.0
9	120.0
10	90.0
11	60.0
12	30.0

Orbital Plane 18:

Question	Response
Number of Satellites in Plane	12
Inclination Angle	47.0 degrees
Right Ascension of Ascending Node	165.0 degrees
Argument of Perigee	30.0 degrees
Orbital Period	18242.0 seconds
Apogee	8600.0 km
Perigee	8600.0 km
Active Service Arc Begin Angle with respect to Ascending Node	0.0 degrees
Active Service Arc End Angle with respect to Ascending Node	35.0 degrees

Mean Anomaly For Each Satellite

Satellite Number	Mean Anomaly (degrees) at the Orbit Epoch Date
1	30.0
2	60.0
3	90.0
4	120.0
5	150.0
6	180.0
7	210.0
8	240.0
9	270.0
10	300.0
11	330.0
12	360.0

Receiving Beams 1:

Question	Response
Beam ID	K1HU
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	H
Peak Gain	32.5 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	8.0 dB/K
Min. Saturation Flux Density	-100.0 dBW/m ²
Max. Saturation Flux Density	-70.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Visible earth user

Receiving Beams 2:

Question	Response
Beam ID	K1VU
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	V
Peak Gain	32.5 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	8.0 dB/K
Min. Saturation Flux Density	-100.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Visible earth user

Receiving Beams 3:

Question	Response
Beam ID	K2HU
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	H
Peak Gain	33.3 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	8.0 dB/K
Min. Saturation Flux Density	-100.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Visible earth user

Receiving

Beams 4:

Question	Response
Beam ID	K2VU
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	V
Peak Gain	33.3 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	8.0 dB/K
Min. Saturation Flux Density	-100.0 dBW/m ²
Max. Saturation Flux Density	-70.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Visible earth user

Receiving Beams 5:

Question	Response
Beam ID	G2RU
Receive Beam Frequency	47200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	14.2 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 2

Receiving Beams 6:

Question	Response
Beam ID	G2LU
Receive Beam Frequency	47200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	14.2 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 2

Receiving Beams 7:

Question	Response
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Beam ID	G1RU
Receive Beam Frequency	47200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	14.2 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 1

Receiving Beams 8:

Question	Response
Beam ID	G1LU
Receive Beam Frequency	47200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	14.2 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth , gateway 1

Receiving Beams 9:

Question	Response
Beam ID	G3RU
Receive Beam Frequency	47200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	14.2 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 3 HO

Receiving Beams 10:

Question	Response
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Beam ID	G3LU
Receive Beam Frequency	47200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	14.2 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 3 HO

Receiving Beams 11:

Question	Response
Beam ID	G5RU
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	44.4 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	14.6 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 5

**Receiving
Beams 12:**

Question	Response
Beam ID	G5LU
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	44.4 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	14.6 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 5

**Receiving
Beams 13:**

Question	Response
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Beam ID	V3RU
Receive Beam Frequency	48200.0 MHz -50200.0 MHz
Beam Type	Steerable
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	14.2 dB/K
Min. Saturation Flux Density	-100.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Visible earth user

Receiving Beams 14:

Question	Response
Beam ID	V3LU
Receive Beam Frequency	48200.0 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	14.2 dB/K
Min. Saturation Flux Density	-100.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Visible earth user

Receiving Beams 15:

Question	Response
Beam ID	G4RU
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	44.4 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	14.6 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 4

Receiving Beams 16:

Question	Response
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Beam ID	G4LU
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	44.4 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	14.6 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 4

Receiving Beams 17:

Question	Response
Beam ID	G6RU
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	44.4 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	14.6 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 6

Receiving Beams 18:

Question	Response
Beam ID	G6LU
Receive Beam Frequency	50400.0 MHz -51400.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	44.4 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	14.6 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-60.0 dBW/m2
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 6

Receiving Channels (28)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
UV10	125.0	49387.5	Service Link
UV11	125.0	49512.5	Service Link
UV12	125.0	49637.5	Service Link
UV13	125.0	49762.5	Service Link
UV09	125.0	49626.2	Service Link
UV14	125.0	49887.5	Service Link
UV15	125.0	50012.5	Service Link
UV16	125.0	50137.5	Service Link
VU04	1000.0	50900.0	Feeder Link
KU03	125.0	14312.5	Service Link
KU04	125.0	14437.5	Service Link
KU08	125.0	13187.5	Service Link
KU07	125.0	13062.5	Service Link
KU05	125.0	12812.5	Service Link
VU03	1000.0	49700.0	Service Link
KU06	125.0	12937.5	Service Link
KU02	125.0	14187.5	Service Link
KU01	125.0	14062.5	Service Link
VU01	1000.0	47700.0	Feeder Link
UV08	125.0	49137.5	Service Link
UV07	125.0	49012.5	Service Link
UV06	125.0	48887.5	Service Link
UV05	125.0	48762.5	Service Link
UV04	125.0	48637.5	Service Link

UV03	125.0	48512.5	Service Link
UV02	125.0	48387.5	Service Link
UV01	125.0	48262.5	Service Link
VU02	1000.0	48700.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	VULD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.6 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	-39.5 dBW/Hz
Max. Transmit EIRP	47.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible earth user 1

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2

Transmitting Beams 2:

Question	Response
Beam ID	VURD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz

Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	42.6 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	-39.5 dBW/Hz
Max. Transmit EIRP	47.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible Earth user 1

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2

Transmitting Beams 3:

Question	Response
Beam ID	V1LD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	42.1 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	-39.5 dBW/Hz
Max. Transmit EIRP	50.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 1

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2

Transmitting Beams 4:

Question	Response
Beam ID	V1RD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	42.6 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	-39.5 dBW/Hz

Max. Transmit EIRP	50.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 1

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2

Transmitting Beams 5:

Question	Response
Beam ID	V5LD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	42.1 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	-26.0 dBW/Hz
Max. Transmit EIRP	64.0 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Beams 6:

Question	Response
Beam ID	V5RD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	42.1 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	-26.0 dBW/Hz
Max. Transmit EIRP	64.0 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Beams 7:

Question	Response
Beam ID	V6LD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	42.1 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	-26.0 dBW/Hz
Max. Transmit EIRP	64.0 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Beams 8:

Question	Response
Beam ID	V6RD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz

Beam Type	Steerable
Polarization	RHCP
Peak Gain	42.1 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	-26.0 dBW/Hz
Max. Transmit EIRP	64.0 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Beams 9:

Question	Response
Beam ID	V7LD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	42.1 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	-26.0 dBW/Hz
Max. Transmit EIRP	64.0 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Beams 10:

Question	Response
Beam ID	V2LD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	42.1 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	-39.5 dBW/Hz

Max. Transmit EIRP	50.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 2

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2

Transmitting Beams 11:

Question	Response
Beam ID	V2RD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	42.1 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	-39.5 dBW/Hz
Max. Transmit EIRP	50.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway2

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2

Transmitting Beams 12:

Question	Response
Beam ID	V3LD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	42.1 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	-39.5 dBW/Hz
Max. Transmit EIRP	50.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 3 (HO)

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2
MHz						

Transmitting Beams 13:

Question	Response
Beam ID	V3RD
Transmit Beam Frequency	37500.0 MHz -40000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	42.1 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	-39.5 dBW/Hz
Max. Transmit EIRP	50.5 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway 3 (HO)

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	-132.4	-131.7	-131.1	-131.1	-130.5	-129.2
MHz						

Transmitting Beams 14:

Question	Response
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Beam ID	V4LD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	42.6 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	-26.0 dBW/Hz
Max. Transmit EIRP	61.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible earth several users

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Beams 15:

Question	Response
Beam ID	V4RD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP

Peak Gain	42.6 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	-26.0 dBW/Hz
Max. Transmit EIRP	61.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Visible earth several users

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Beams 16:

Question	Response
Beam ID	V7RD
Transmit Beam Frequency	40000.0 MHz -42000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	42.1 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	-26.0 dBW/Hz
Max. Transmit EIRP	64.0 dBW
Co- or Cross Polar Mode	X
Service Area Description	Visible earth gateway

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	-118.9	-118.2	-117.6	-117.6	-117.0	-115.7

Transmitting Channels (13)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
UD09	500.0	41750.0	Service Link
UD08	500.0	41250.0	Service Link
UD07	500.0	40750.0	Service Link
UD06	500.0	40250.0	Service Link
UD05	500.0	39750.0	Service Link
UD02	500.0	38250.0	Service Link
UD03	500.0	38750.0	Service Link
UD04	500.0	39250.0	Service Link
GD04	1000.0	41500.0	Service Link
GD03	1000.0	40500.0	Service Link
GD02	1000.0	39000.0	Service Link
GD01	1000.0	38000.0	Service Link
UD01	500.0	37750.0	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?	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>New MEO NGSO.mdb</u>		NGSO Antenna Gain Data	GIMS file (*. mdb)	