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

312 File Number: **SATAMD2021081800105**

Filing Description

Question	Response
Description	SpaceX Gen2 System Rev

Satellite Information

Question	Response
Select Orbit Type	NGSO
Space Station or Satellite Network Name	SpaceX Gen2 System
Estimated Lifetime of Satellite(s) From Date of Launch	5 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating Frequency Bands (11)

Nature of service	Description	Frequency Band(s)	Mode Type
Fixed-Satellite Service		13850.0 MHz -14000.0 MHz	Receive
Fixed-Satellite Service		81000.0 MHz -86000.0 MHz	Receive
Fixed-Satellite Service		29500.0 MHz -30000.0 MHz	Receive
Fixed-Satellite Service		27500.0 MHz -29100.0 MHz	Receive
Fixed-Satellite Service		14000.0 MHz -14500.0 MHz	Receive
Fixed-Satellite Service		12750.0 MHz -13250.0 MHz	Receive
Fixed-Satellite Service		71000.0 MHz -76000.0 MHz	Transmit
Fixed-Satellite Service		19700.0 MHz -20200.0 MHz	Transmit
Fixed-Satellite Service		18800.0 MHz -19300.0 MHz	Transmit
Fixed-Satellite Service		17800.0 MHz -18600.0 MHz	Transmit
Fixed-Satellite Service		10700.0 MHz -12750.0 MHz	Transmit

Orbital Information For Non-Geostationary Satellites

Question	Response
Total Number of Satellites in the active constellation	9
Orbit Epoch Date	01/01/2015
Celestrial Reference Body	Earth

Orbital Plane 1:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	148.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5820.0 seconds
Apogee	604.0 km
Perigee	604.0 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 2:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	115.7 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5820.0 seconds
Apogee	614.0 km
Perigee	614.0 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 3:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	53.0 degrees
Right Ascension of Ascending Node	340.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5460.0 seconds
Apogee	340.0 km
Perigee	340.0 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	90.0

Orbital Plane 4:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	46.0 degrees
Right Ascension of Ascending Node	340.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5460.0 seconds
Apogee	345.0 km
Perigee	345.0 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	90.0

Orbital Plane 5:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	38.0 degrees
Right Ascension of Ascending Node	340.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5460.0 seconds
Apogee	350.0 km
Perigee	350.0 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	90.0

Question	Response

Orbital Plane 6:

Number of Satellites in Plane	1
Inclination Angle	96.9 degrees
Right Ascension of Ascending Node	341.2 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5460.0 seconds
Apogee	360.0 km
Perigee	360.0 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	90.0

Orbital Plane 7:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	53.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5700.0 seconds
Apogee	525.0 km
Perigee	525.0 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 8:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	43.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5700.0 seconds
Apogee	530.0 km
Perigee	530.0 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 9:

Question	Response
Number of Satellites in Plane	1
Inclination Angle	33.0 degrees
Right Ascension of Ascending Node	0.0 degrees
Argument of Perigee	0.0 degrees
Orbital Period	5700.0 seconds
Apogee	535.0 km
Perigee	535.0 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

Receiving Beams 1:

Question	Response
Beam ID	Rx1
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	34.9 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	9.5 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 2:

Question	Response
Beam ID	Rx2
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	34.9 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	9.5 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	Rx3
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.9 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	19.5 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	Rx4
Receive Beam Frequency	12750.0 MHz -13250.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.9 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	19.5 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	Rx5
Receive Beam Frequency	13850.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-22.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 6:

Question	Response
Beam ID	Rx6
Receive Beam Frequency	13850.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-22.4 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 7:

Question	Response
Beam ID	Rx7
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	10.3 dB/K
Min. Saturation Flux Density	-0.1 dBW/m2
Max. Saturation Flux Density	0.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 8:

Question	Response
Beam ID	Rx8
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	35.7 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees

	Polarization Switchable	
	Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
	G/T at Max. Gain Point	10.3 dB/K
	Min. Saturation Flux Density	-0.1 dBW/m2
	Max. Saturation Flux Density	0.0 dBW/m2
	Co- or Cross Polar Mode	C
	Service Area Description	Global
Receiving Beams 9:	**Question**	**Response**
	Beam ID	Rx9
	Receive Beam Frequency	14000.0 MHz -14500.0 MHz
	Beam Type	Both Steerable and Shapeable
	Polarization	RHCP
	Peak Gain	45.7 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	20.3 dB/K
	Min. Saturation Flux Density	-0.1 dBW/m2
	Max. Saturation Flux Density	0.0 dBW/m2
	Co- or Cross Polar Mode	C
	Service Area Description	Global
Receiving Beams 10:	**Question**	**Response**
	Beam ID	Rx10
	Receive Beam Frequency	14000.0 MHz -14500.0 MHz
	Beam Type	Both Steerable and Shapeable
	Polarization	LHCP
	Peak Gain	45.7 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	20.3 dB/K
	Min. Saturation Flux Density	-0.1 dBW/m2
	Max. Saturation Flux Density	0.0 dBW/m2
	Co- or Cross Polar Mode	C
	Service Area Description	Global

Receiving Beams 11:

Question	Response
Beam ID	Rx11
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	38.3 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	12.9 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	Rx12
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	38.3 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	12.9 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
Beam ID	Rx13
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	48.3 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	22.9 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 14:

Question	Response
Beam ID	Rx14
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	48.3 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	22.9 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	Rx15
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	38.3 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	12.9 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
Beam ID	Rx16
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	38.3 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	12.9 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	Rx17
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	48.3 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	22.9 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	Rx18
Receive Beam Frequency	27500.0 MHz -29100.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	48.3 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	22.9 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**
	Beam ID	Rx19
	Receive Beam Frequency	29500.0 MHz -30000.0 MHz
	Beam Type	Both Steerable and Shapeable
	Polarization	RHCP
	Peak Gain	38.3 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	12.9 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	Rx20
	Receive Beam Frequency	29500.0 MHz -30000.0 MHz
	Beam Type	Both Steerable and Shapeable
	Polarization	LHCP
	Peak Gain	38.3 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	12.9 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	**Question**	**Response**

Beams 21:

Beam ID	Rx21
Receive Beam Frequency	29500.0 MHz -30000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	48.3 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	22.9 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 22:

Question	Response
Beam ID	Rx22
Receive Beam Frequency	29500.0 MHz -30000.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	48.3 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	22.9 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 23:

Question	Response
Beam ID	Rx23
Receive Beam Frequency	29500.0 MHz -30000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	38.3 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	12.9 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	Rx24
	Receive Beam Frequency	29500.0 MHz -30000.0 MHz
	Beam Type	Steerable
	Polarization	LHCP
	Peak Gain	38.3 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	12.9 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**
	Beam ID	Rx25
	Receive Beam Frequency	29500.0 MHz -30000.0 MHz
	Beam Type	Steerable
	Polarization	RHCP
	Peak Gain	48.3 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	22.9 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 26:	**Question**	**Response**
	Beam ID	Rx26
		29500.0 MHz -30000.0

Receive Beam Frequency	MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	48.3 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	22.9 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	Rx27
Receive Beam Frequency	81000.0 MHz -86000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	43.1 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	17.7 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 28:

Question	Response
Beam ID	Rx28
Receive Beam Frequency	81000.0 MHz -86000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	43.1 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	17.7 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 29:

Question	Response
Beam ID	Rx29
Receive Beam Frequency	81000.0 MHz -86000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	53.1 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	27.7 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 30:

Question	Response
Beam ID	Rx30
Receive Beam Frequency	81000.0 MHz -86000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	53.1 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	27.7 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 Channels (30)

Channel ID	Channel Bandwidth (MHz)	Center Frequencys(MHz)	Feeder Link, Service Link or TT&C
Rx01	500.0	13000.0	Service Link
Rx02	500.0	13000.0	Service Link
Rx03	500.0	13000.0	Service Link
Rx04	500.0	13000.0	Service Link
Rx05	150.0	13925.0	TT&C
Rx06	150.0	13925.0	TT&C
Rx07	500.0	14250.0	Service Link
Rx08	500.0	14250.0	Service Link
Rx09	500.0	14250.0	Service Link
Rx10	500.0	14250.0	Service Link
Rx21	500.0	29750.0	Service Link
Rx22	500.0	29750.0	Service Link
Rx23	500.0	29750.0	Service Link
Rx27	5000.0	83500.0	Service Link
Rx26	500.0	29750.0	Service Link
Rx25	500.0	29750.0	Service Link
Rx24	500.0	29750.0	Service Link
Rx11	1600.0	28300.0	Service Link
Rx12	1600.0	28300.0	Service Link
Rx13	1600.0	28300.0	Service Link
Rx14	1600.0	28300.0	Service Link
Rx15	1600.0	28300.0	Service Link

Rx16	1600.0	28300.0	Service Link
Rx17	1600.0	28300.0	Service Link
Rx18	1600.0	28300.0	Service Link
Rx19	500.0	29750.0	Service Link
Rx20	500.0	29750.0	Service Link
Rx28	5000.0	83500.0	Service Link
Rx29	5000.0	83500.0	Service Link
Rx30	5000.0	83500.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	Tx1
Transmit Beam Frequency	10700.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	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	-47.9 dBW/Hz
Max. Transmit EIRP	45.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-165.3	-161.3	-155.9	-147.6	-140.1	-140.1

Transmitting Beams 2:

Question	Response
Beam ID	Tx2
Transmit Beam Frequency	10700.0 MHz -12700.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	34.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.9 dBW/Hz
Max. Transmit EIRP	45.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-165.3	-161.3	-155.9	-147.6	-140.1	-140.1

Transmitting Beams 3:

Question	Response
Beam ID	Tx3
Transmit Beam Frequency	10700.0 MHz -12700.0 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	-47.9 dBW/Hz
Max. Transmit EIRP	45.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-177.8	-173.8	-168.4	-159.9	-140.1	-140.1

Transmitting Beams 4:

Question	Response
Beam ID	Tx4
Transmit Beam Frequency	10700.0 MHz -12700.0 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	-47.9 dBW/Hz

Max. Transmit EIRP	45.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-177.8	-173.8	-168.4	-159.9	-140.1	-140.1

Transmitting Beams 5:

Question	Response
Beam ID	Tx5
Transmit Beam Frequency	12150.0 MHz -12250.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-85.0 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-184.2	-182.1	-180.2	-178.6	-177.2	-170.6

Transmitting Beams 6:

Question	Response
Beam ID	Tx6
Transmit Beam Frequency	12150.0 MHz -12250.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	3.0 dBi
Antenna Pointing Error	0.1 degrees

Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-85.0 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
4.0 kHz	-184.2	-182.1	-180.2	-178.6	-177.2	-170.6

Transmitting Beams 7:

Question	Response
Beam ID	Tx7
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	34.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	43.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-144.0	-140.1	-134.7	-126.2	-113.3	-113.3

Transmitting Beams 8:

Question	Response
Beam ID	Tx8
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz

Beam Type	Steerable
Polarization	LHCP
Peak Gain	34.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	43.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-144.0	-140.1	-134.7	-126.2	-113.3	-113.3

Transmitting Beams 9:

Question	Response
Beam ID	Tx9
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	34.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	46.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):

1.0 MHz	-141.0	-137.1	-131.7	-123.2	-110.3	-110.3

Transmitting Beams 10:

Question	Response
Beam ID	Tx10
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	34.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	46.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-141.0	-137.1	-131.7	-123.2	-110.3	-110.3

Transmitting Beams 11:

Question	Response
Beam ID	Tx11
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	44.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	43.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.5	-152.6	-147.2	-138.7	-113.3	-113.3

Transmitting Beams 12:

Question	Response
Beam ID	Tx12
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	44.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	43.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.5	-152.6	-147.2	-138.7	-113.3	-113.3

Transmitting Beams 13:

Question	Response
Beam ID	Tx13
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	46.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-153.5	-149.6	-144.2	-135.7	-110.3	-110.3

Transmitting Beams 14:

Question	Response
Beam ID	Tx14
Transmit Beam Frequency	17800.0 MHz -18600.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	46.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-153.5	-149.6	-144.2	-135.7	-110.3	-110.3

Transmitting Beams 15:

Question	Response
Beam ID	Tx15
Transmit Beam Frequency	18550.0 MHz -18600.0 MHz
Beam Type	Fixed
Polarization	RHCP

Peak Gain	5.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-80.0 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-155.2	-153.1	-151.2	-149.6	-148.2	-141.6

Transmitting Beams 16:

Question	Response
Beam ID	Tx16
Transmit Beam Frequency	18550.0 MHz -18600.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	5.0 dBi
Antenna Pointing Error	0.1 degrees
Antenna Rotational Error	0.1 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-80.0 dBW/Hz
Max. Transmit EIRP	0.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-155.2	-153.1	-151.2	-149.6	-148.2	-141.6

Transmitting

Question	Response
Beam ID	Tx17

Beams 17:

Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	34.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	41.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-144.0	-140.1	-134.7	-126.2	-113.3	-113.3

Transmitting Beams 18:

Question	Response
Beam ID	Tx18
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	34.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	41.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):

1.0 MHz	-144.0	-140.1	-134.7	-126.2	-113.3	-113.3

Transmitting Beams 19:

Question	Response
Beam ID	Tx19
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	34.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-141.0	-137.1	-131.7	-123.2	-110.3	-110.3

Transmitting Beams 20:

Question	Response
Beam ID	Tx20
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	34.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-141.0	-137.1	-131.7	-123.2	-110.3	-110.3

Transmitting Beams 21:

Question	Response
Beam ID	Tx21
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	44.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	41.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.5	-152.6	-147.2	-138.7	-113.3	-113.3

Transmitting Beams 22:

Question	Response
Beam ID	Tx22
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	44.5 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	-45.1 dBW/Hz
Max. Transmit EIRP	41.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-156.5	-152.6	-147.2	-138.7	-113.3	-113.3

Transmitting Beams 23:

Question	Response
Beam ID	Tx23
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-153.5	-149.6	-144.2	-135.7	-110.3	-110.3

Transmitting Beams 24:

Question	Response
Beam ID	Tx24
Transmit Beam Frequency	18800.0 MHz -19300.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP

Peak Gain	44.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-153.5	-149.6	-144.2	-135.7	-110.3	-110.3

Transmitting Beams 25:

Question	Response
Beam ID	Tx25
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	34.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-141.0	-137.1	-131.7	-123.2	-110.3	-110.3

Question	Response

Transmitting Beams 26:

Beam ID	Tx26
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	34.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-141.0	-137.1	-131.7	-123.2	-110.3	-110.3

Transmitting Beams 27:

Question	Response
Beam ID	Tx27
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	RHCP
Peak Gain	44.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 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°

* BW:	(dbW/m^2 /BW):	(dbW/m^2 /BW):	(dbW/m^2 /BW):	(dbW/m^2 /BW):	(dbW/m^2 /BW):	(dbW/m^2 /BW):
1.0 MHz	-153.5	-149.6	-144.2	-135.7	-110.3	-110.3

Transmitting Beams 28:

Question	Response
Beam ID	Tx28
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz
Beam Type	Both Steerable and Shapeable
Polarization	LHCP
Peak Gain	44.5 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	-42.1 dBW/Hz
Max. Transmit EIRP	44.9 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-153.5	-149.6	-144.2	-135.7	-110.3	-110.3

Transmitting Beams 29:

Question	Response
Beam ID	Tx29
Transmit Beam Frequency	71000.0 MHz -76000.0 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	-37.8 dBW/Hz
Max. Transmit EIRP	59.2 dBW

Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-146.1	-142.1	-136.8	-128.2	-106.0	-106.0

Transmitting Beams 30:

Question	Response
Beam ID	Tx30
Transmit Beam Frequency	71000.0 MHz -76000.0 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	-37.8 dBW/Hz
Max. Transmit EIRP	59.2 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-146.1	-142.1	-136.8	-128.2	-106.0	-106.0

Transmitting Beams 31:

Question	Response
Beam ID	Tx31
Transmit Beam Frequency	71000.0 MHz -76000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	52.0 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	-37.8 dBW/Hz
Max. Transmit EIRP	59.2 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-158.6	-154.6	-149.3	-140.7	-106.0	-106.0

Transmitting Beams 32:

Question	Response
Beam ID	Tx32
Transmit Beam Frequency	71000.0 MHz -76000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	52.0 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	-37.8 dBW/Hz
Max. Transmit EIRP	59.2 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global

Max. Power Flux Density

* BW:	* 0° - 5° (dbW/m^2 /BW):	* 5° - 10° (dbW/m^2 /BW):	* 10° - 15° (dbW/m^2 /BW):	* 15° - 20° (dbW/m^2 /BW):	* 20° - 25° (dbW/m^2 /BW):	* 25° - 90° (dbW/m^2 /BW):
1.0 MHz	-158.6	-154.6	-149.3	-140.7	-106.0	-106.0

Transmitting Channels (32)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s(MHz)	Feeder Link, Service Link or TT&C
Tx32	5000.0	73500.0	Service Link
Tx31	5000.0	73500.0	Service Link
Tx30	5000.0	73500.0	Service Link
Tx29	5000.0	73500.0	Service Link
Tx28	500.0	19950.0	Service Link
Tx27	500.0	19950.0	Service Link
Tx21	500.0	19050.0	Service Link
Tx20	500.0	19050.0	Service Link
Tx8	800.0	18200.0	Service Link
Tx1	2000.0	11700.0	Service Link
Tx2	2000.0	11700.0	Service Link
Tx3	2000.0	11700.0	Service Link
Tx4	2000.0	11700.0	Service Link
Tx5	100.0	12200.0	TT&C
Tx6	100.0	12200.0	TT&C
Tx7	800.0	18200.0	Service Link
Tx9	800.0	18200.0	Service Link
Tx10	800.0	18200.0	Service Link
Tx11	800.0	18200.0	Service Link
Tx12	800.0	18200.0	Service Link
Tx13	800.0	18200.0	Service Link
Tx14	800.0	18200.0	Service Link

Tx15	50.0	18575.0	TT&C
Tx16	50.0	18575.0	TT&C
Tx17	500.0	19050.0	Service Link
Tx18	500.0	19050.0	Service Link
Tx19	500.0	19050.0	Service Link
Tx22	500.0	19050.0	Service Link
Tx23	500.0	19050.0	Service Link
Tx24	500.0	19050.0	Service Link
Tx25	500.0	19950.0	Service Link
Tx26	500.0	19950.0	Service Link

Certification Questions

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

Attachments

File Name	Beam	Field	Attachment Type	Description
Gen2 Rev Technical_Parameters.mdb		NGSO Antenna Gain Data	GIMS file (*.mdb)	