



312 File Number: **SATMOD2022082200092**

Filing Description

Question	Response
Description	Galaxy 33 at 133 WL modification application

Satellite
Information

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	Galaxy 33
Estimated Lifetime of Satellite(s) From Date of Launch	20 Years
Will the space station(s) operate on a Common Carrier basis?	No

**Operating
Frequency
Bands (6)**

Nature of service	Description	Frequency Band(s)	Mode Type
Fixed-Satellite Service		5925.0 MHz -6425.0 MHz	Receive
Fixed-Satellite Service		11450.0 MHz -12200.0 MHz	Transmit
Fixed-Satellite Service		17700.0 MHz -20200.0 MHz	Transmit
Fixed-Satellite Service		3700.0 MHz -4200.0 MHz	Transmit
Fixed-Satellite Service		27500.0 MHz -30000.0 MHz	Receive
Fixed-Satellite Service		13750.0 MHz -14500.0 MHz	Receive

**Orbital
Information For
Geostationary
Satellites**

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	133.0 degrees
	Hemisphere of Orbital Longitude	W
Longitudinal Tolerance or East /West Station-Keeping	Toward West	0.05 degrees
	Toward East	0.05 degrees
Inclination Excursion or North /South Station-Keeping Tolerance	Inclination Excursion or North /South Station-Keeping Tolerance	0.05 degrees
Antenna Axis Attitude Accuracy	Roll	0.1 degrees
	Pitch	0.1 degrees
	Yaw	0.1 degrees

Receiving Beams 1:

Question	Response
Beam ID	CMD3
Receive Beam Frequency	6424.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	GLOBAL

Receiving Beams 2:

Question	Response
Beam ID	CMD1
Receive Beam Frequency	6424.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees

Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	GLOBAL

Receiving Beams 3:

Question	Response
Beam ID	CAHU
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	30.4 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	4.3 dB/K
Min. Saturation Flux Density	-101.3 dBW/m2
Max. Saturation Flux Density	-76.3 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	The United States including Alaska and Hawaii

Receiving

Beams 4:

Question	Response
Beam ID	CAVU
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	30.4 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	4.3 dB/K
Min. Saturation Flux Density	-101.3 dBW/m2
Max. Saturation Flux Density	-76.3 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	The United States including Alaska and Hawaii

**Receiving
Beams 5:**

Question	Response
Beam ID	KUHU
Receive Beam Frequency	13750.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	40.1 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	13.6 dB/K
Min. Saturation Flux Density	-106.1 dBW/m2
Max. Saturation Flux Density	-79.16 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Steerable

Receiving Beams 6:

Question	Response
Beam ID	KUVU
Receive Beam Frequency	13750.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	40.1 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	13.6 dB/K
Min. Saturation Flux Density	-106.1 dBW/m2
Max. Saturation Flux Density	-79.16 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Steerable

Receiving Beams 7:

Question	Response
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Beam ID	KARU
Receive Beam Frequency	27500.0 MHz -30000.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	46.4 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	16.7 dB/K
Min. Saturation Flux Density	-105.7 dBW/m2
Max. Saturation Flux Density	-82.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Steerable

Receiving Beams 8:

Question	Response
Beam ID	KALU
Receive Beam Frequency	27500.0 MHz -30000.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	46.4 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	16.7 dB/K
Min. Saturation Flux Density	-105.7 dBW/m2
Max. Saturation Flux Density	-82.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Steerable

Receiving Beams 9:

Question	Response
Beam ID	CMD2
Receive Beam Frequency	6424.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Beams 10:

Question	Response
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Beam ID	CMD4
Receive Beam Frequency	6421.0 MHz -6422.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	TC2 Global

Receiving Beams 11:

Question	Response
Beam ID	CMD5
Receive Beam Frequency	6421.0 MHz -6422.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.37 degrees
Polarization Switchable	Yes

Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	TC2 Global

Receiving Beams 12:

Question	Response
Beam ID	CMD6
Receive Beam Frequency	6421.0 MHz -6422.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-80.0 dBW/m2
Max. Saturation Flux Density	-79.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	TC2 Global

**Receiving
Channels (24)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CU21	36.0	6345.0	Service Link
CMD1	1.0	6424.5	TT&C
CMD2	1.0	6421.5	TT&C
CU01	125.0	5993.0	Service Link
CU02	125.0	6013.0	Service Link
CU22	36.0	6365.0	Service Link
CU23	43.0	6388.5	Service Link
CU24	36.0	6405.0	Service Link
CU03	125.0	6133.0	Service Link
CU04	125.0	6153.0	Service Link
CU15	36.0	6225.0	Service Link
KA02	550.0	29715.0	Service Link
CU19	36.0	6305.0	Service Link
KU04	225.0	14375.0	Service Link
KU01	450.0	14000.0	Service Link
KU02	225.0	14375.0	Service Link
KA01	2480.0	28750.0	Service Link
KA03	2480.0	28750.0	Service Link
CU18	36.0	6285.0	Service Link
KA04	550.0	29715.0	Service Link
KU03	450.0	14000.0	Service Link
CU16	36.0	6245.0	Service Link
CU17	36.0	6265.0	Service Link
CU20	36.0	6325.0	Service Link

Transmitting
Beams 1:

Question	Response
Beam ID	TLMA
Transmit Beam Frequency	4199.575 MHz -4199.925 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM1 LHCP

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
* (dBW/m ² /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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

Transmitting
Beams 2:

Question	Response
Beam ID	TLMB
Transmit Beam Frequency	4199.575 MHz -4199.925 MHz

Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM1 H

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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

Transmitting Beams 3:

Question	Response
Beam ID	TLMF
Transmit Beam Frequency	4198.575 MHz -4198.925 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees

Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 H

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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

Transmitting Beams 4:

Question	Response
Beam ID	UPC1
Transmit Beam Frequency	4199.925 MHz -4199.975 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-35.0 dBW/Hz

Max. Transmit EIRP	9.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	ULPC1

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):
4.0 kHz	-162.2	-162.1	-162.0	-161.9	-169.8	-161.0

Transmitting Beams 5:

Question	Response
Beam ID	CAHD
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	29.3 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-30.2 dBW/Hz
Max. Transmit EIRP	45.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Alaska and Hawaii

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):
4.0 kHz	-157.4	-157.3	-157.2	-157.1	-157.0	-156.2

Transmitting Beams 6:

Question	Response
Beam ID	CAVD
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	29.3 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-30.2 dBW/Hz
Max. Transmit EIRP	49.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	CONUS, Alaska and Hawaii

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):
4.0 kHz	-157.4	-157.3	-157.2	-157.1	-157.0	-156.2

Transmitting
Beams 7:

Question	Response
Beam ID	KUHD
Transmit Beam Frequency	11450.0 MHz -12200.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	39.35 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-24.2 dBW/Hz
Max. Transmit EIRP	59.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable

Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
* (dBW/m ² /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):
4.0 kHz	-151.5	-151.4	-151.2	-151.1	-151.0	-150.3

Transmitting
Beams 8:

Question	Response
Beam ID	KUVD
Transmit Beam Frequency	11450.0 MHz -12200.0 MHz

Beam Type	Steerable
Polarization	V
Peak Gain	39.35 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-24.2 dBW/Hz
Max. Transmit EIRP	59.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable

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):
4.0 kHz	-151.5	-151.4	-151.2	-151.1	-151.0	-150.3

Transmitting Beams 9:

Question	Response
Beam ID	KALD
Transmit Beam Frequency	17700.0 MHz -20200.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	43.5 dBi
Antenna Pointing Error	0.19 degrees

Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-25.7 dBW/Hz
Max. Transmit EIRP	61.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable

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	-129.0	-128.9	-128.8	-128.6	-128.5	-127.8

Transmitting Beams 10:

Question	Response
Beam ID	KARD
Transmit Beam Frequency	17700.0 MHz -20200.0 MHz
Beam Type	Steerable
Polarization	RHCP
Peak Gain	43.5 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-25.7 dBW/Hz

Max. Transmit EIRP	61.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable

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	-129.0	-128.9	-128.8	-128.6	-128.5	-127.8

Transmitting Beams 11:

Question	Response
Beam ID	TLMC
Transmit Beam Frequency	4199.575 MHz -4199.925 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM1 V

Max. Power Flux Density

Transmitting Beams 12:

	* 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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

Question	Response
Beam ID	TLME
Transmit Beam Frequency	4198.575 MHz -4198.925 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 LHCP

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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

Transmitting
Beams 13:

Question	Response
Beam ID	TLMD
Transmit Beam Frequency	4199.575 MHz -4199.925 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	9.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM1 V WCA

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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

Transmitting
Beams 14:

Question	Response
Beam ID	TLMG
Transmit Beam Frequency	4198.575 MHz -4198.925 MHz

Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 V

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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

Transmitting Beams 15:

Question	Response
Beam ID	TLMH
Transmit Beam Frequency	4198.575 MHz -4198.925 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees

Antenna Rotational Error	0.34 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-47.4 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM2 LHCP WCA

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):
4.0 kHz	-174.7	-174.6	-174.5	-174.4	-174.2	-173.5

**Transmitting
Channels (25)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
Ku04	225.0	12075.0	Service Link
CD23	43.0	4163.5	Service Link
CD24	36.0	4180.0	Service Link
CD02	125.0	3788.0	Service Link
CD15	36.0	4000.0	Service Link
CD19	36.0	4080.0	Service Link
CD18	36.0	4060.0	Service Link
TLM2	0.35	4198.75	TT&C
TLM1	0.35	4199.75	TT&C
CD21	36.0	4120.0	Service Link
CD20	36.0	4100.0	Service Link
CD04	125.0	3928.0	Service Link
Ku01	450.0	11700.0	Service Link
ULPC	0.025	4199.95	TT&C
Ku02	225.0	12075.0	Service Link
Ku03	450.0	11700.0	Service Link
Ka02	550.0	19915.0	Service Link
Ka03	2480.0	18950.0	Service Link
Ka04	550.0	19915.0	Service Link
CD03	125.0	3908.0	Service Link
CD16	36.0	4020.0	Service Link
CD17	36.0	4040.0	Service Link
CD01	125.0	3768.0	Service Link
CD22	36.0	4140.0	Service Link

Ka01	2480.0	18950.0	Service Link
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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?	N/A
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>G-33new July2022.mdb</u>		GSO Antenna Gain Contour Data	GIMS file (*. mdb)	