



312 File Number: **SATLOA2017022400021**

Filing Description

Question	Response
Description	Application for MEV-1

**Satellite
Information**

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	MEV-1
Estimated Lifetime of Satellite(s) From Date of Launch	15 Years
Will the space station(s) operate on a Common Carrier basis?	No

Operating Frequency Bands (4)

Nature of service	Description	Frequency Band(s)	Mode Type
Other Satellite Service (please specify)	TT&C associated with mission extension services.	13750.0 MHz -14500.0 MHz	Receive
Other Satellite Service (please specify)	TT&C associated with mission extension services.	3700.0 MHz -4200.0 MHz	Transmit
Other Satellite Service (please specify)	TT&C associated with mission extension services.	11450.0 MHz -12250.0 MHz	Transmit
Other Satellite Service (please specify)	TT&C associated with mission extension services.	5925.0 MHz -6425.0 MHz	Receive

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	0.0 degrees
	Hemisphere of Orbital Longitude	E
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	0.06 degrees
	Pitch	0.06 degrees
	Yaw	0.1 degrees

Receiving Beams 1:

Question	Response
Beam ID	BUCB
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	9.5 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.06 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-20.3 dB/K
Min. Saturation Flux Density	-1.0 dBW/m ²
Max. Saturation Flux Density	0.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	Global coverage.

Receiving Beams 2:

Question	Response
Beam ID	BUKU
Receive Beam Frequency	13750.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	9.5 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.06 degrees

Polarization Switchable

Polarization Alignment Relative to the Equatorial Plane 45.0 degrees

G/T at Max. Gain Point -22.0 dB/K

Min. Saturation Flux Density -1.0 dBW/m²

Max. Saturation Flux Density 0.0 dBW/m²

Co- or Cross Polar Mode C

Service Area Description Global coverage.

**Receiving
Channels (2)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CUBC	1.0	6175.0	TT&C
CUKU	1.0	14125.0	TT&C

Transmitting Beams 1:

Question	Response
Beam ID	BDCB
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Steerable
Polarization	LHCP
Peak Gain	9.5 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.06 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-35.69 dBW/Hz
Max. Transmit EIRP	17.32 dBW
Co- or Cross Polar Mode	C
Service Area Description	Entire visible Earth coverage from GSO. See Technical Appendix.

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	-165.2	-165.1	-165.0	-164.9	-164.8	-164.5

Transmitting Beams 2:

Question	Response
Beam ID	BDKU
Transmit Beam Frequency	11450.0 MHz -12250.0 MHz

Beam Type	Steerable
Polarization	LHCP
Peak Gain	9.5 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.06 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-37.56 dBW/Hz
Max. Transmit EIRP	15.45 dBW
Co- or Cross Polar Mode	C
Service Area Description	Entire visible Earth coverage from GSO. See Technical Appendix.

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	-165.3	-165.2	-165.1	-165.0	-164.8	-164.5

Transmitting Channels (4)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CHCB	2.0	3950.0	TT&C
CLCB	0.2	3950.0	TT&C
CLKU	0.2	11950.0	TT&C
CMCB	0.4	3950.0	TT&C

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?	
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

Information not provided.