



312 File Number: **SATMOD2016100300096**

Filing Description

Question	Response
Description	E117WB Satellite Network

**Satellite
Information**

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	E117WB
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 (2)

Nature of service	Description	Frequency Band(s)	Mode Type
Fixed-Satellite Service		11450.0 MHz -11700.0 MHz	Transmit
Fixed-Satellite Service		13750.0 MHz -14000.0 MHz	Receive

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	117.0 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	0.1 degrees
Antenna Axis Attitude Accuracy	Roll	0.1 degrees
	Pitch	0.1 degrees
	Yaw	0.1 degrees

Receiving Beams 1:

Question	Response
Beam ID	K1UH
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	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	11.4 dB/K
Min. Saturation Flux Density	-94.0 dBW/m2
Max. Saturation Flux Density	-72.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

Receiving Beams 2:

Question	Response
Beam ID	K1UV
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	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	11.4 dB/K
Min. Saturation Flux Density	-94.0 dBW/m2
Max. Saturation Flux Density	-72.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

Receiving Beams 3:

Question	Response
Beam ID	K5UH
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	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	11.0 dB/K
Min. Saturation Flux Density	-94.0 dBW/m2
Max. Saturation Flux Density	-72.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

Receiving

Beams 4:

Question	Response
Beam ID	K5UV
Receive Beam Frequency	13750.0 MHz -14000.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	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	11.0 dB/K
Min. Saturation Flux Density	-94.0 dBW/m ²
Max. Saturation Flux Density	-72.0 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

**Receiving
Channels (5)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
U04	54.0	13900.0	Service Link
U03	36.0	13850.0	Service Link
U02	36.0	13810.0	Service Link
U01	36.0	13770.0	Service Link
U05	54.0	13960.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	K1DH
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	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
Max. Transmit EIRP Density	-20.0 dBW/Hz
Max. Transmit EIRP	55.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

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	-164.3	-163.1	-162.0	-161.9	-161.8	-146.3

Transmitting Beams 2:

Question	Response
Beam ID	K1DV
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz

Beam Type	Fixed
Polarization	V
Peak Gain	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
Max. Transmit EIRP Density	-20.0 dBW/Hz
Max. Transmit EIRP	55.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

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):
4.0 kHz	-164.3	-163.1	-162.0	-161.9	-161.8	-146.3

Transmitting Beams 3:

Question	Response
Beam ID	K5DH
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	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
Max. Transmit EIRP Density	-20.0 dBW/Hz
Max. Transmit EIRP	54.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

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	-161.3	-159.1	-154.5	-150.8	-148.5	-146.4

Transmitting Beams 4:

Question	Response
Beam ID	K5DV
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	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
Max. Transmit EIRP Density	-20.0 dBW/Hz

Max. Transmit EIRP	54.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	-8 dB contour

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	-161.3	-159.1	-154.5	-150.8	-148.5	-146.4
kHz						

Transmitting Channels (5)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
D01	36.0	11480.0	Service Link
D04	54.0	11610.0	Service Link
D03	36.0	11560.0	Service Link
D02	36.0	11520.0	Service Link
D05	54.0	11670.0	Service Link

Certification Questions

Question	Response
<p>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?</p>	<p>N/A</p>
<p>Are the applicable frequency tolerances of 25.202(e) and out-of-band emission limits of 25.202(f)(1),(2), and (3) met?</p>	<p>Yes</p>
<p>Are the cessation of emissions requirements of 25.207 met?</p>	<p>Yes</p>
<p>Are the applicable power-flux-density limits of 25.208 met, and is the appropriate technical showing provided within the application?</p>	<p>Yes</p>
<p>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?</p>	<p>N/A</p>
<p>Are the applicable full-frequency-reuse requirements of 25.210 met?</p>	<p>Yes</p>
<p>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)?</p>	

Attachments

File Name	Beam	Field	Attachment Type	Description
<u>E117WB</u> <u>GIMSDB.mdb</u>		GSO Antenna Gain Contour Data	GIMS file (*. mdb)	E117WB GIMS Database
