



312 File Number: **SATMOD2017020200011**

Filing Description

Question	Response
Description	This Schedule S is submitted in support of the modification application of SES Americom, Inc. seeking authority to operate the C-band transponders on AMC-2 at 84.85W.L.

Satellite Information

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	AMC-2
Estimated Lifetime of Satellite(s) From Date of Launch	21 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		14000.0 MHz -14500.0 MHz	Receive
Fixed-Satellite Service		11700.0 MHz -12200.0 MHz	Transmit
Direct-to-Home in the Fixed-Satellite Service		11700.0 MHz -12200.0 MHz	Transmit
Fixed-Satellite Service		5925.0 MHz -6425.0 MHz	Receive
Fixed-Satellite Service		3700.0 MHz -4200.0 MHz	Transmit

Orbital Information For Geostationary Satellites

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	85.0 degrees
	Hemisphere of Orbital Longitude	W
Longitudinal Tolerance or East /West Station-Keeping	Toward West	0.1 degrees
	Toward East	0.1 degrees
Inclination Excursion or North /South Station-Keeping Tolerance	Inclination Excursion or North /South Station-Keeping Tolerance	3.66 degrees
Antenna Axis Attitude Accuracy	Roll	0.06 degrees
	Pitch	0.06 degrees
	Yaw	0.22 degrees

Receiving Beams 1:

Question	Response
Beam ID	KRV
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	34.2 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	6.8 dB/K
Min. Saturation Flux Density	-99.4 dBW/m ²
Max. Saturation Flux Density	-81.4 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

Receiving Beams 2:

Question	Response
Beam ID	KRH
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	34.2 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	7.8 dB/K
Min. Saturation Flux Density	-100.4 dBW/m2
Max. Saturation Flux Density	-82.4 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

Receiving Beams 3:

Question	Response
Beam ID	CRH
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	33.1 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	5.8 dB/K
Min. Saturation Flux Density	-102.8 dBW/m2
Max. Saturation Flux Density	-81.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

Receiving Beams 4:

Question	Response
Beam ID	CRV
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	31.9 dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	4.1 dB/K
Min. Saturation Flux Density	-101.1 dBW/m ²
Max. Saturation Flux Density	-80.1 dBW/m ²
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

Receiving Beams 5:

Question	Response
Beam ID	GBLR
Receive Beam Frequency	5925.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes

Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	-17.5 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-69.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global

Receiving Channels (48)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CR20	36.0	6325.0	Service Link
CR19	36.0	6305.0	Service Link
CR18	36.0	6285.0	Service Link
CR17	36.0	6265.0	Service Link
CR15	36.0	6225.0	Service Link
CR14	36.0	6205.0	Service Link
CR13	36.0	6185.0	Service Link
KR12	36.0	14240.0	Service Link
KR11	36.0	14220.0	Service Link
KR10	36.0	14200.0	Service Link
TC	0.8	6423.5	TT&C
KR03	36.0	14060.0	Service Link
CR10	36.0	6125.0	Service Link
KR09	36.0	14180.0	Service Link
KR08	36.0	14160.0	Service Link
KR18	36.0	14360.0	Service Link
KR17	36.0	14340.0	Service Link
KR16	36.0	14320.0	Service Link
KR15	36.0	14300.0	Service Link
KR14	36.0	14280.0	Service Link
CR06	36.0	6045.0	Service Link
CR05	36.0	6025.0	Service Link
CR03	36.0	5985.0	Service Link
KR20	36.0	14400.0	Service Link

KR19	36.0	14380.0	Service Link
CR24	36.0	6405.0	Service Link
CR23	36.0	6385.0	Service Link
CR22	36.0	6365.0	Service Link
KR07	36.0	14140.0	Service Link
KR06	36.0	14120.0	Service Link
KR05	36.0	14100.0	Service Link
KR04	36.0	14080.0	Service Link
CR21	36.0	6345.0	Service Link
CR16	36.0	6245.0	Service Link
KR21	36.0	14420.0	Service Link
CR09	36.0	6105.0	Service Link
CR08	36.0	6085.0	Service Link
CR07	36.0	6065.0	Service Link
KR13	36.0	14260.0	Service Link
CR04	36.0	6005.0	Service Link
CR02	36.0	5965.0	Service Link
KR02	36.0	14040.0	Service Link
CR01	36.0	5945.0	Service Link
CR12	36.0	6165.0	Service Link
CR11	36.0	6145.0	Service Link
KR24	36.0	14480.0	Service Link
KR23	36.0	14460.0	Service Link
KR22	36.0	14440.0	Service Link

Transmitting Beams 1:

Question	Response
Beam ID	KTV
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-24.47 dBW/Hz
Max. Transmit EIRP	50.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

Max. Power Flux Density

Information not provided.

Transmitting Beams 2:

Question	Response
Beam ID	KTH
Transmit Beam Frequency	11700.0 MHz -12200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-23.27 dBW/Hz
Max. Transmit EIRP	51.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

Max. Power Flux Density

Information not provided.

Transmitting Beams 3:

Question	Response
Beam ID	CTV
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-32.67 dBW/Hz
Max. Transmit EIRP	42.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

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	-164.2	-163.9	-163.5	-162.7	-161.5	-158.7

Transmitting Beams 4:

Question	Response
Beam ID	CTH
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-33.97 dBW/Hz
Max. Transmit EIRP	40.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	North America, Hawaii, and the Caribbean

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	-163.7	-163.5	-163.2	-162.8	-162.6	-160.0

Transmitting Beams 5:

Question	Response
Beam ID	GBTH
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-47.98 dBW/Hz
Max. Transmit EIRP	6.0 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°
*	(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	-176.0	-175.9	-175.8	-175.7	-175.6	-174.8

Transmitting Beams 6:

Question	Response
Beam ID	GBTV
Transmit Beam Frequency	3700.0 MHz -4200.0 MHz

Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.15 degrees
Antenna Rotational Error	0.0 degrees
Polarization Switchable	Yes
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-47.98 dBW/Hz
Max. Transmit EIRP	6.0 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°
*	(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	-176.0	-175.9	-175.8	-175.7	-175.6	-174.8

Transmitting Channels (51)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
KT18	36.0	12060.0	Service Link
KT17	36.0	12040.0	Service Link
KT16	36.0	12020.0	Service Link
KT15	36.0	12000.0	Service Link
KT14	36.0	11980.0	Service Link
CT20	36.0	4100.0	Service Link
CT19	36.0	4080.0	Service Link
CT05	36.0	3800.0	Service Link
TM1	0.3	3700.5	TT&C
KT11	36.0	11920.0	Service Link
KT10	36.0	11900.0	Service Link
KT09	36.0	11880.0	Service Link
KT08	36.0	11860.0	Service Link
CT09	36.0	3880.0	Service Link
CT08	36.0	3860.0	Service Link
CT07	36.0	3840.0	Service Link
KT20	36.0	12100.0	Service Link
KT19	36.0	12080.0	Service Link
KT03	36.0	11760.0	Service Link
KT02	36.0	11740.0	Service Link
KT01	36.0	11720.0	Service Link
CT24	36.0	4180.0	Service Link
CT23	36.0	4160.0	Service Link
KT24	36.0	12180.0	Service Link

KT06	36.0	11820.0	Service Link
KT05	36.0	11800.0	Service Link
KT04	36.0	11780.0	Service Link
CT03	36.0	3760.0	Service Link
KT12	36.0	11940.0	Service Link
CT13	36.0	3960.0	Service Link
CT12	36.0	3940.0	Service Link
CT11	36.0	3920.0	Service Link
CT10	36.0	3900.0	Service Link
TM2	0.3	4199.5	TT&C
CT01	36.0	3720.0	Service Link
CT04	36.0	3780.0	Service Link
CT02	36.0	3740.0	Service Link
KT13	36.0	11960.0	Service Link
CT18	36.0	4060.0	Service Link
CT17	36.0	4040.0	Service Link
CT16	36.0	4020.0	Service Link
CT15	36.0	4000.0	Service Link
CT14	36.0	3980.0	Service Link
CT06	36.0	3820.0	Service Link
TM3	0.3	12198.0	TT&C
KT21	36.0	12120.0	Service Link
KT07	36.0	11840.0	Service Link
KT23	36.0	12160.0	Service Link
CT22	36.0	4140.0	Service Link
CT21	36.0	4120.0	Service Link

KT22

36.0

12140.0

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>AMC-2 CRH.gxt</u>	CRH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>AMC-2 CRV.gxt</u>	CRV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>AMC-2 CTV.gxt</u>	CTV	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>AMC-2 CTH.gxt</u>	CTH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>25.114. (c).(4). (vi).(A).txt</u>	GBLR	GSO Antenna Gain Contour Data	Text file (*.txt)	The contour at 8 dB below peak falls entirely beyond the edge of the visible Earth
<u>25.114. (c).(4). (vi).(A).txt</u>	GBTV	GSO Antenna Gain Contour Data	Text file (*.txt)	The contour at 8 dB below peak falls entirely beyond the edge of the visible Earth
<u>25.114. (c).(4). (vi).(A).txt</u>	GBTH	GSO Antenna Gain Contour Data	Text file (*.txt)	The contour at 8 dB below peak falls entirely beyond the edge of the visible Earth
<u>AMC-2 KTH.gxt</u>	KTH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	
<u>AMC-2 KRH.gxt</u>	KRH	GSO Antenna Gain Contour Data	GXT file (*.gxt)	

<u>AMC-2</u> <u>KRV.gxt</u>	KRV	GSO Antenna Gain Contour Data	GXT file (*. gxt)
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<u>AMC-2</u> <u>KTV.gxt</u>	KTV	GSO Antenna Gain Contour Data	GXT file (*. gxt)
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