



312 File Number: **SATMOD2020032600028**

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## Filing Description

Question	Response
Description	IS-902 drifting to 309.9E.L._50.1W.L

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**Satellite  
Information**

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	Intelsat 902
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 (5)**

<b>Nature of service</b>	<b>Description</b>	<b>Frequency Band(s)</b>	<b>Mode Type</b>
<b>Fixed-Satellite Service</b>		11450.0 MHz -11700.0 MHz	Transmit
<b>Fixed-Satellite Service</b>		10950.0 MHz -11200.0 MHz	Transmit
<b>Fixed-Satellite Service</b>		3625.0 MHz -4200.0 MHz	Transmit
<b>Fixed-Satellite Service</b>		14000.0 MHz -14500.0 MHz	Receive
<b>Fixed-Satellite Service</b>		5850.0 MHz -6425.0 MHz	Receive

## Orbital Information For Geostationary Satellites

Section	Question	Response
<b>Orbital Longitude Information</b>	Orbital Longitude	50.0 degrees
	Hemisphere of Orbital Longitude	W
<b>Longitudinal Tolerance or East /West Station-Keeping</b>	Toward West	0.05 degrees
	Toward East	0.05 degrees
<b>Inclination Excursion or North /South Station-Keeping Tolerance</b>	Inclination Excursion or North /South Station-Keeping Tolerance	0.1 degrees
<b>Antenna Axis Attitude Accuracy</b>	Roll	0.1 degrees
	Pitch	0.1 degrees
	Yaw	0.1 degrees

## Receiving Beams 1:

Question	Response
Beam ID	CGLU
Receive Beam Frequency	6300.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	20.9 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.5 dB/K
Min. Saturation Flux Density	-89.8 dBW/m2
Max. Saturation Flux Density	-67.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global A Beam

## Receiving Beams 2:

Question	Response
Beam ID	CGRU
Receive Beam Frequency	6300.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	20.9 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees

Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-6.2 dB/K
Min. Saturation Flux Density	-90.5 dBW/m2
Max. Saturation Flux Density	-68.5 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Global B beam

### Receiving Beams 3:

Question	Response
Beam ID	CWLU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	25.5 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-2.2 dB/K
Min. Saturation Flux Density	-88.7 dBW/m2
Max. Saturation Flux Density	-66.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	West Hemi beam

### Receiving

## Beams 4:

Question	Response
Beam ID	CELU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	29.4 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	1.7 dB/K
Min. Saturation Flux Density	-89.9 dBW/m2
Max. Saturation Flux Density	-67.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	East Hemi Beam

## Receiving Beams 5:

Question	Response
Beam ID	CNRU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	32.9 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	4.3 dB/K
Min. Saturation Flux Density	-89.1 dBW/m2
Max. Saturation Flux Density	-67.1 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	North West Beam

**Receiving Beams 6:**

Question	Response
Beam ID	CSRU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	28.2 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	0.2 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-68.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	South West Beam

**Receiving Beams 7:**

Question	Response
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Beam ID	CMRU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	30.9 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	3.0 dB/K
Min. Saturation Flux Density	-90.1 dBW/m2
Max. Saturation Flux Density	-68.1 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Middle East Beam ME

**Receiving Beams 8:**

Question	Response
Beam ID	SERU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	31.6 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	3.0 dB/K
Min. Saturation Flux Density	-88.9 dBW/m2
Max. Saturation Flux Density	-66.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	South East Beam

**Receiving Beams 9:**

Question	Response
Beam ID	NERU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	32.4 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	4.0 dB/K
Min. Saturation Flux Density	-89.6 dBW/m2
Max. Saturation Flux Density	-67.6 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	North East Beam

**Receiving Beams 10:**

Question	Response
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Beam ID	CCRU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	28.7 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	0.3 dB/K
Min. Saturation Flux Density	-88.9 dBW/m2
Max. Saturation Flux Density	-66.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Combined East Beam

**Receiving Beams 11:**

Question	Response
Beam ID	K1HU
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	36.2 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
G/T at Max. Gain Point	8.8 dB/K
Min. Saturation Flux Density	-95.0 dBW/m2
Max. Saturation Flux Density	-73.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Spot 1 Steerable

**Receiving  
Beams 12:**

Question	Response
Beam ID	K2VU
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	8.6 dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
G/T at Max. Gain Point	8.6 dB/K
Min. Saturation Flux Density	-95.6 dBW/m2
Max. Saturation Flux Density	-73.6 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Spot 2

**Receiving  
Beams 13:**

Question	Response
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Beam ID	CMDG
Receive Beam Frequency	6173.2 MHz -6174.2 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-90.0 dBW/m2
Max. Saturation Flux Density	-89.9 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Command 1

**Receiving Beams 14:**

Question	Response
Beam ID	CMDB
Receive Beam Frequency	6175.8 MHz -6176.8 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No

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Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-99.0 dB/K
Min. Saturation Flux Density	-90.0 dBW/m <sup>2</sup>
Max. Saturation Flux Density	-89.9 dBW/m <sup>2</sup>
Co- or Cross Polar Mode	C
Service Area Description	Command 2

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## Receiving Channels (19)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
CU4	72.0	6130.0	Service Link
CU5	72.0	6220.0	Service Link
CU6	36.0	6280.0	Service Link
CU7	36.0	6320.0	Service Link
CU8	36.0	6360.0	Service Link
CU9	41.0	6402.5	Service Link
KU1	77.0	14042.0	Service Link
KU2	72.0	14125.0	Service Link
KU3	72.0	14205.0	Service Link
KU4	72.0	14295.0	Service Link
KU5	36.0	14355.0	Service Link
KU6	36.0	14395.0	Service Link
KU7	36.0	14435.0	Feeder Link
KU8	36.0	14475.0	Service Link
CMDB	1.0	6176.3	TT&C
CMDG	1.0	6173.7	TT&C
CU1	72.0	5890.0	Service Link
CU2	72.0	5970.0	Service Link
CU3	72.0	6050.0	Service Link

## Transmitting Beams 1:

Question	Response
Beam ID	CGLD
Transmit Beam Frequency	4075.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-40.0 dBW/Hz
Max. Transmit EIRP	35.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global - Gain contour attachment not provided pursuant to Section 25.114(c)(4)(vi)(A) of the FCC rules

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-167.3	-167.1	-167.0	-166.9	-166.8	-166.0

## Transmitting Beams 2:

Question	Response
Beam ID	CGRD



Transmit Beam Frequency	4075.0 MHz -4200.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-40.2 dBW/Hz
Max. Transmit EIRP	35.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global - Gain contour attachment not provided pursuant to Section 25.114(c)(4)(vi)(A) of the FCC rules

### Max. Power Flux Density

	* 0° - 5° (dBW/m <sup>2</sup> /BW):	* 5° - 10° (dBW/m <sup>2</sup> /BW):	* 10° - 15° (dBW/m <sup>2</sup> /BW):	* 15° - 20° (dBW/m <sup>2</sup> /BW):	* 20° - 25° (dBW/m <sup>2</sup> /BW):	* 25° - 90° (dBW/m <sup>2</sup> /BW):
<b>4.0 kHz</b>	-167.5	-167.3	-167.2	-167.1	-167.0	-166.2

### Transmitting Beams 3:

Question	Response
Beam ID	CWRD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz
Beam Type	Fixed
Polarization	RHCP

Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-34.5 dBW/Hz
Max. Transmit EIRP	41.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	West Hemi North, South America, Western Europe, Greenland, and Caribbean

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
* BW:	(dBW/m <sup>2</sup> ) /BW):	(dBW/m <sup>2</sup> ) /BW):	(dBW/m <sup>2</sup> ) /BW):	(dBW/m <sup>2</sup> ) /BW):	(dBW/m <sup>2</sup> ) /BW):	(dBW/m <sup>2</sup> ) /BW):
<b>4.0 kHz</b>	-161.8	-161.6	-161.5	-161.4	-161.3	-160.5

### Transmitting Beams 4:

Question	Response
Beam ID	CERD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-30.5 dBW/Hz
Max. Transmit EIRP	45.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	East Hemi West Africa, South Europe

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):
<b>4.0 kHz</b>	-157.8	-157.6	-157.5	-157.4	-157.3	-156.5

### Transmitting Beams 5:

Question	Response
Beam ID	CNLD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-33.8 dBW/Hz
Max. Transmit EIRP	41.8 dBW
Co- or Cross Polar Mode	C

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Service Area Description

North West Canada, CONUS, and Caribbean

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**Max. Power Flux Density**

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dbW/m <sup>2</sup> /BW):	(dbW/m <sup>2</sup> /BW):	(dbW/m <sup>2</sup> /BW):	(dbW/m <sup>2</sup> /BW):	(dbW/m <sup>2</sup> /BW):	(dbW/m <sup>2</sup> /BW):
<b>4.0 kHz</b>	-161.1	-160.9	-160.8	-160.7	-160.6	-159.8

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**Transmitting Beams 6:**

Question	Response
Beam ID	CSLD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-33.8 dBW/Hz
Max. Transmit EIRP	41.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	SW Mexico, South America, and Caribbean

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**Max. Power Flux Density**

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-161.1	-160.9	-160.8	-160.7	-160.6	-159.8

## Transmitting Beams 7:

Question	Response
Beam ID	CMLD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-32.5 dBW/Hz
Max. Transmit EIRP	43.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	ME Beam Greenland, and West Europe

## Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-159.8	-159.6	-159.5	-159.4	-159.3	-158.5

## Transmitting Beams 8:

Question	Response
Beam ID	SELD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-30.0 dBW/Hz
Max. Transmit EIRP	45.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	SE Beam South West Africa

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-157.3	-157.1	-157.0	-156.9	-156.8	-156.0

## Transmitting Beams 9:

Question	Response
Beam ID	NELD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz

Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-31.1 dBW/Hz
Max. Transmit EIRP	44.5 dBW
Co- or Cross Polar Mode	C
Service Area Description	NE Beam North Africa, and South Europe

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
* BW:	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):	(dBW/m <sup>2</sup> /BW):
<b>4.0 kHz</b>	-158.4	-158.2	-158.1	-158.0	-157.9	-157.1

### Transmitting Beams 10:

Question	Response
Beam ID	CCLD
Transmit Beam Frequency	3625.0 MHz -4075.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees

Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-28.0 dBW/Hz
Max. Transmit EIRP	47.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	CE beam Africa, and South Europe

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-155.3	-155.1	-155.0	-154.9	-154.8	-154.0

### Transmitting Beams 11:

Question	Response
Beam ID	K1VD
Transmit Beam Frequency	10950.0 MHz -11200.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-22.4 dBW/Hz



Max. Transmit EIRP	53.2 dBW
Co- or Cross Polar Mode	C
Service Area Description	Spot 1 CONUS, Canada, Mexico, Caribbean

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-149.7	-149.5	-149.4	-149.3	-149.2	-148.4

### Transmitting Beams 12:

Question	Response
Beam ID	K1VE
Transmit Beam Frequency	11450.0 MHz -11700.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-22.4 dBW/Hz
Max. Transmit EIRP	35.2 dBW
Co- or Cross Polar Mode	C
Service Area Description	Spot 1 CONUS, Canada, Mexico, Caribbean

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-149.7	-149.5	-149.4	-149.3	-149.2	-148.4

### Transmitting Beams 13:

Question	Response
Beam ID	K2HD
Transmit Beam Frequency	10950.0 MHz -11200.0 MHz
Beam Type	Steerable
Polarization	H
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	0.0 degrees
Max. Transmit EIRP Density	-22.3 dBW/Hz
Max. Transmit EIRP	53.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	Spot 2 CONUS, Canada, Caribbean

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):

<b>4.0</b>	-149.6	-149.4	-149.3	-149.2	-149.1	-148.3
<b>kHz</b>						

### Transmitting Beams 14:

Question	Response
Beam ID	TLMG
Transmit Beam Frequency	3947.25 MHz -3948.25 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-49.9 dBW/Hz
Max. Transmit EIRP	7.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	TM 3947.5 plus 3948.25

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>	(dBW/m <sup>2</sup>
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0</b>	-177.1	-177.0	-176.9	-176.8	-176.7	-175.9
<b>kHz</b>						

### Transmitting Beams 15:

Question	Response
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Beam ID	TLMB
Transmit Beam Frequency	3951.75 MHz -3952.75 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-50.2 dBW/Hz
Max. Transmit EIRP	6.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	TMB 3952.2 &3952.5

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )
* BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-177.4	-177.3	-177.2	-177.1	-177.0	-176.2

### Transmitting Beams 16:

Question	Response
Beam ID	UPKD
Transmit Beam Frequency	11197.987 MHz -11198.012 MHz
Beam Type	Fixed
Polarization	RHCP

Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-32.6 dBW/Hz
Max. Transmit EIRP	11.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	ULPC Ku 11198

### Max. Power Flux Density

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )	(dBW/m <sup>2</sup> )
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0 kHz</b>	-159.8	-159.7	-159.6	-159.6	-159.5	-158.6

### Transmitting Beams 17:

Question	Response
Beam ID	UPKC
Transmit Beam Frequency	11451.987 MHz -11452.012 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	

Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-32.6 dBW/Hz
Max. Transmit EIRP	11.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	Ku Beacon 11452

### Max. Power Flux Density

	* 0° - 5° (dBW/m <sup>2</sup> ) /BW:	* 5° - 10° (dBW/m <sup>2</sup> ) /BW:	* 10° - 15° (dBW/m <sup>2</sup> ) /BW:	* 15° - 20° (dBW/m <sup>2</sup> ) /BW:	* 20° - 25° (dBW/m <sup>2</sup> ) /BW:	* 25° - 90° (dBW/m <sup>2</sup> ) /BW:
<b>4.0 kHz</b>	-159.8	-159.7	-159.6	-159.5	-159.4	-158.6

### Transmitting Beams 18:

Question	Response
Beam ID	UPCC
Transmit Beam Frequency	3949.987 MHz -3950.012 MHz
Beam Type	Fixed
Polarization	V
Peak Gain	dBi
Antenna Pointing Error	0.19 degrees
Antenna Rotational Error	0.3 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	90.0 degrees
Max. Transmit EIRP Density	-37.4 dBW/Hz
Max. Transmit EIRP	6.6 dBW
Co- or Cross Polar Mode	C

**Max. Power Flux Density**

	* 0° - 5°	* 5° - 10°	* 10° - 15°	* 15° - 20°	* 20° - 25°	* 25° - 90°
*	(dbW/m <sup>2</sup> )	(dbW/m <sup>2</sup> )	(dbW/m <sup>2</sup> )	(dbW/m <sup>2</sup> )	(dbW/m <sup>2</sup> )	(dbW/m <sup>2</sup> )
BW:	/BW):	/BW):	/BW):	/BW):	/BW):	/BW):
<b>4.0</b>	-164.6	-164.5	-164.4	-164.3	-164.2	-164.2
<b>kHz</b>						

## Transmitting Channels (24)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
UPKC	0.025	11452.0	TT&C
UPKD	0.025	11198.0	TT&C
TLM1	0.5	3947.5	TT&C
TLM2	0.5	3948.0	TT&C
TLM3	0.5	3952.0	TT&C
TLM4	0.5	3952.5	TT&C
UPCC	0.025	3950.0	TT&C
CD1	72.0	3665.0	Service Link
CD2	72.0	3745.0	Service Link
CD3	72.0	3825.0	Service Link
CD4	72.0	3905.0	Service Link
CD5	72.0	3955.0	Service Link
CD6	36.0	4055.0	Service Link
CD7	36.0	4095.0	Service Link
CD8	36.0	4135.0	Service Link
CD9	41.0	4177.5	Service Link
KD1	77.0	10992.5	Service Link
KD2	72.0	11075.0	Service Link
KD3	72.0	11155.0	Service Link
KD4	72.0	11495.0	Service Link
KD5	36.0	11555.0	Service Link
KD6	36.0	11595.0	Service Link
KD7	36.0	11635.0	Service Link
KD8	36.0	11675.0	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?	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
<a href="#"><u>IS-902.mdb</u></a>		GSO Antenna Gain Contour Data	GIMS file (*.mdb)	