



312 File Number: **SATMOD2019042200031**

Filing Description

Question	Response
Description	Intelsat 904 move to 29.5 W.L _330.5 EL

**Satellite
Information**

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	Intelsat 904
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)**

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

**Orbital
Information For
Geostationary
Satellites**

Section	Question	Response
Orbital Longitude Information	Orbital Longitude	30.0 degrees
	Hemisphere of Orbital Longitude	W
Longitudinal Tolerance or East /West Station-Keeping	Toward West	0.5 degrees
	Toward East	0.5 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	S2VU
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	V
Peak Gain	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	8.7 dB/K
Min. Saturation Flux Density	-92.6 dBW/m2
Max. Saturation Flux Density	-74.6 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Steerable Spot beam. May be pointed toward any visible location on the earth

Receiving Beams 2:

Question	Response
Beam ID	CGRU
Receive Beam Frequency	6300.0 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	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	-5.6 dB/K
Min. Saturation Flux Density	-92.0 dBW/m2
Max. Saturation Flux Density	-70.0 dBW/m2
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

Receiving Beams 3:

Question	Response
Beam ID	CGLU
Receive Beam Frequency	6300.0 MHz -6425.0 MHz
Beam Type	Fixed
Polarization	LHCP
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
G/T at Max. Gain Point	-6.3 dB/K
Min. Saturation Flux Density	-91.5 dBW/m2
Max. Saturation Flux Density	-69.5 dBW/m2

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

Receiving Beams 4:

Question	Response
Beam ID	SERU
Receive Beam Frequency	5850.0 MHz -6300.0 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
G/T at Max. Gain Point	3.3 dB/K
Min. Saturation Flux Density	-92.8 dBW/m2
Max. Saturation Flux Density	-70.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Malaysia, South East Asia

Receiving Beams 5:

Question	Response
Beam ID	S1HU
Receive Beam Frequency	14000.0 MHz -14500.0 MHz
Beam Type	Steerable
Polarization	H

Peak Gain	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	8.7 dB/K
Min. Saturation Flux Density	-92.0 dBW/m2
Max. Saturation Flux Density	-74.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Steerable Spot beam. May be pointed toward any visible location on the earth

Receiving Beams 6:

Question	Response
Beam ID	EHLU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed
Polarization	LHCP
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
G/T at Max. Gain Point	1.6 dB/K
Min. Saturation Flux Density	-93.4 dBW/m2
Max. Saturation Flux Density	-71.4 dBW/m2

Co- or Cross Polar Mode	C
Service Area Description	India, Thailand, China

Receiving Beams 7:

Question	Response
Beam ID	NERU
Receive Beam Frequency	5850.0 MHz -6300.0 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
G/T at Max. Gain Point	3.7 dB/K
Min. Saturation Flux Density	-93.2 dBW/m2
Max. Saturation Flux Density	-71.2 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	India, South East Asia, China, West Australia

Receiving Beams 8:

Question	Response
Beam ID	CMDG
Receive Beam Frequency	6173.22 MHz -6174.18 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	Global - Gain contour attachment not provided pursuant to Section 25.114(c)(4)(vi)(A) of the FCC rules

Receiving Beams 9:

Question	Response
Beam ID	NWRU
Receive Beam Frequency	5850.0 MHz -6300.0 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
G/T at Max. Gain Point	5.4 dB/K
Min. Saturation Flux Density	-92.0 dBW/m2

Max. Saturation Flux Density	-70.0 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Western Europe

Receiving Beams 10:

Question	Response
Beam ID	SWRU
Receive Beam Frequency	5850.0 MHz -6300.0 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
G/T at Max. Gain Point	-0.9 dB/K
Min. Saturation Flux Density	-92.7 dBW/m2
Max. Saturation Flux Density	-70.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Southern Africa

Receiving Beams 11:

Question	Response
Beam ID	WHLU
Receive Beam Frequency	5850.0 MHz -6300.0 MHz
Beam Type	Fixed

Polarization	LHCP
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
G/T at Max. Gain Point	-2.6 dB/K
Min. Saturation Flux Density	-92.4 dBW/m2
Max. Saturation Flux Density	-70.4 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Africa and Europe

Receiving Beams 12:

Question	Response
Beam ID	CMDB
Receive Beam Frequency	6175.82 MHz -6176.78 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	Global - Gain contour attachment not provided pursuant to Section 25.114(c)(4)(vi)(A) of the FCC rules

Receiving Beams 13:

Question	Response
Beam ID	MERU
Receive Beam Frequency	5850.0 MHz -6300.0 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
G/T at Max. Gain Point	1.9 dB/K
Min. Saturation Flux Density	-92.8 dBW/m2
Max. Saturation Flux Density	-70.8 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Middle East

Receiving Beams 14:

Question	Response
Beam ID	CERU
Receive Beam Frequency	5850.0 MHz -6300.0 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
G/T at Max. Gain Point	0.2 dB/K
Min. Saturation Flux Density	-92.7 dBW/m2
Max. Saturation Flux Density	-70.7 dBW/m2
Co- or Cross Polar Mode	C
Service Area Description	Malaysia, India, Thailand, Sumatra

Receiving Channels (19)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
SKU4	72.0	14295.0	Service Link
CU4	72.0	6130.0	Service Link
CU5	72.0	6220.0	Service Link
CU6	36.0	6280.0	Service Link
SKU5	36.0	14355.0	Service Link
SKU6	36.0	14395.0	Service Link
SKU7	36.0	14435.0	Service Link
CU3	72.0	6050.0	Service Link
CU1	72.0	5890.0	Service Link
SKU1	77.0	14042.5	Service Link
CMG1	0.96	6173.7	TT&C
CMB1	0.96	6176.3	TT&C
SKU2	72.0	14125.0	Service Link
CU2	72.0	5970.0	Service Link
SKU8	36.0	14475.0	Service Link
CGU1	36.0	6320.0	Service Link
CGU2	36.0	6360.0	Service Link
CGU3	41.0	6402.5	Service Link
SKU3	72.0	14205.0	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	0.34 degrees
Polarization Switchable	No
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-39.9 dBW/Hz
Max. Transmit EIRP	35.7 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 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	-167.2	-167.0	-166.9	-166.8	-166.7	-165.9

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	-40.3 dBW/Hz
Max. Transmit EIRP	35.3 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 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	-167.6	-167.4	-167.3	-167.2	-167.1	-166.3

Transmitting Beams 3:

Question	Response
Beam ID	WHRD
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	-37.6 dBW/Hz
Max. Transmit EIRP	41.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Africa and Europe

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	-164.9	-164.7	-164.6	-164.5	-164.4	-163.6

Transmitting Beams 4:

Question	Response
Beam ID	EHRD
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	-33.3 dBW/Hz
Max. Transmit EIRP	45.3 dBW
Co- or Cross Polar Mode	C
Service Area Description	India, Thailand, China

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	-160.6	-160.4	-160.3	-160.2	-160.1	-159.3

Transmitting Beams 5:

Question	Response
Beam ID	NWLD
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	-37.0 dBW/Hz
Max. Transmit EIRP	41.6 dBW

Co- or Cross Polar Mode	C
Service Area Description	Western Europe

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	-164.1	-164.0	-163.9	-163.8	-163.0

Transmitting Beams 6:

Question	Response
Beam ID	SWLD
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	-36.4 dBW/Hz
Max. Transmit EIRP	42.2 dBW
Co- or Cross Polar Mode	C
Service Area Description	Southern Africa

Max. Power Flux Density

Transmitting
Beams 7:

	* 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	-163.7	-163.5	-163.4	-163.3	-136.2	-162.4

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	-35.0 dBW/Hz
Max. Transmit EIRP	43.6 dBW
Co- or Cross Polar Mode	C
Service Area Description	Malaysia, South East Asia

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	-162.3	-162.1	-162.0	-161.9	-161.8	-161.0

Transmitting
Beams 8:

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	-30.9 dBW/Hz
Max. Transmit EIRP	47.7 dBW
Co- or Cross Polar Mode	C
Service Area Description	India, South East Asia, China

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	-158.2	-158.0	-157.9	-157.8	-157.7	-156.9

Transmitting
Beams 9:

Question	Response
Beam ID	TLMB
Transmit Beam Frequency	3947.365 MHz -3952.635 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	-49.0 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global-Telemetry

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	-176.2	-176.1	-176.0	-175.9	-175.8	-175.0

Transmitting Beams 10:

Question	Response
Beam ID	TLMG
Transmit Beam Frequency	3947.365 MHz -3952.635 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	-49.0 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global-Telemetry

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	-176.2	-176.1	-176.0	-175.9	-175.8	-175.0

Transmitting Beams 11:

Question	Response
Beam ID	UPKC
Transmit Beam Frequency	11197.98 MHz -11198.02 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	-33.0 dBW/Hz

Max. Transmit EIRP	11.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global-Beacon

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	-160.2	-160.1	-160.0	-159.9	-159.8	-159.0

Transmitting Beams 12:

Question	Response
Beam ID	UPCV
Transmit Beam Frequency	3949.98 MHz -3950.02 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	-35.0 dBW/Hz
Max. Transmit EIRP	8.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Global-Beacon

Max. Power Flux Density

Transmitting Beams 13:

	* 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	-176.2	-176.1	-176.0	-175.9	-175.8	-175.0

Question	Response
Beam ID	S2HD
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	-24.8 dBW/Hz
Max. Transmit EIRP	53.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable Spot beam-may be pointed toward any visible location on the earth

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	-152.1	-151.9	-151.8	-151.7	-151.6	-150.8

Transmitting
Beams 14:

Question	Response
Beam ID	S2HE
Transmit Beam Frequency	11450.0 MHz -11700.0 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	-21.8 dBW/Hz
Max. Transmit EIRP	53.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable Spot beam. May be pointed toward any visible location on the earth

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	-149.1	-148.9	-148.8	-148.7	-148.6	-147.8

Transmitting
Beams 15:

Question	Response
Beam ID	S1VE
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	-22.5 dBW/Hz
Max. Transmit EIRP	53.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable Spot beam. May be pointed toward any visible location on the earth

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	-149.7	-149.5	-149.4	-149.3	-149.2	-148.4

Transmitting Beams 16:

Question	Response
Beam ID	S1VD
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	-25.5 dBW/Hz
Max. Transmit EIRP	53.1 dBW
Co- or Cross Polar Mode	C
Service Area Description	Steerable Spot beam-may be pointed toward any visible location on the earth

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	-152.8	-152.6	-152.5	-152.4	-152.3	-151.5

Transmitting Beams 17:

Question	Response
Beam ID	UPKD
Transmit Beam Frequency	11451.98 MHz -11452.02 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	-33.0 dBW/Hz
Max. Transmit EIRP	11.0 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	-160.2	-160.1	-160.0	-159.9	-159.8	-159.0

Transmitting Beams 18:

Question	Response
Beam ID	MELD
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	-34.8 dBW/Hz
Max. Transmit EIRP	43.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Middle East

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	-162.1	-161.9	-161.8	-161.7	-161.6	-160.8

Transmitting Beams 19:

Question	Response
Beam ID	CELD
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	0.34 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	44.8 dBW
Co- or Cross Polar Mode	C
Service Area Description	Malaysia, South East Asia

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	-161.1	-160.9	-160.8	-160.7	-160.6	-159.8
kHz						

**Transmitting
Channels (24)**

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
BNCC	0.025	3950.0	TT&C
CD03	72.0	3825.0	Service Link
CD04	72.0	3905.0	Service Link
CGD1	36.0	4095.0	Service Link
CGD2	36.0	4135.0	Service Link
CGD3	41.0	4177.5	Service Link
KD01	77.0	10992.5	Service Link
KD02	72.0	11075.0	Service Link
KD03	72.0	11155.0	Service Link
CD05	72.0	3995.0	Service Link
CD06	36.0	4055.0	Service Link
KD04	72.0	11495.0	Service Link
KD05	36.0	11555.0	Service Link
KD06	36.0	11595.0	Service Link
CD02	72.0	3745.0	Service Link
CD01	72.0	3665.0	Service Link
BCK1	0.025	11198.0	TT&C
KD07	36.0	11635.0	Service Link
BCK2	0.025	11452.0	TT&C
TLM4	0.5	3952.5	TT&C
TLM3	0.5	3948.0	TT&C
TLM2	0.5	3952.0	TT&C
TLM1	0.5	3947.5	TT&C
KD08	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
<u>IS-904.mdb</u>		GSO Antenna Gain Contour Data	GIMS file (*.mdb)	