Approved by OMB 3060-0678
Estimated Burden: up to 80 hours
April 2016

Federal Communications Commission

312 File Number: **SATLOA2022060700058**

## Filing Description

| Question | Response |
|---|---|
| Description | Galaxy 36 replacing Galaxy 28 at 89 degree W.L. |

## Satellite Information

| Question | Response |
| --- | --- |
| Select Orbit Type | GSO |
| Space Station or Satellite Network Name | Galaxy 36 |
| 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 (6)

| Nature of service | Description | Frequency Band(s) | Mode Type |
|---|---|---|---|
| **Fixed-Satellite Service** | | 13750.0 MHz -14500.0 MHz | Receive |
| **Fixed-Satellite Service** | | 11700.0 MHz -12450.0 MHz | Transmit |
| **Fixed-Satellite Service** | | 10700.0 MHz -11200.0 MHz | Transmit |
| **Fixed-Satellite Service** | | 12750.0 MHz -13250.0 MHz | Receive |
| **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 | 89.0 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 | CMD4 |
| Receive Beam Frequency | 6424.0 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 | -99.0 dB/K |
| Min. Saturation Flux Density | -81.0 dBW/m2 |
| Max. Saturation Flux Density | -80.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | CMD 2 Tunable with 100 kHz step (5925-6425 MHz) |

## Receiving Beams 2:

| Question | Response |
|---|---|
| Beam ID | CMD3 |
| Receive Beam Frequency | 6421.5 MHz -6422.5 MHz |
| Beam Type | Fixed |
| Polarization | V |
| 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 | 90.0 degrees |
| G/T at Max. Gain Point | -99.0 dB/K |
| Min. Saturation Flux Density | -81.0 dBW/m2 |
| Max. Saturation Flux Density | -80.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | CM1 Tunable with 100 kHz step (5925-6425 MHz) |

## Receiving Beams 3:

| Question | Response |
|---|---|
| Beam ID | CMD2 |
| Receive Beam Frequency | 6421.5 MHz -6422.5 MHz |
| Beam Type | Fixed |
| Polarization | H |
| 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 | 0.0 degrees |
| G/T at Max. Gain Point | -99.0 dB/K |
| Min. Saturation Flux Density | -81.0 dBW/m2 |
| Max. Saturation Flux Density | -80.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | CM1 Tunable with 100 kHz step (5925-6425 MHz) |

## Receiving Beams 4:

| Question | Response |
|---|---|
| Beam ID | CMD1 |
| Receive Beam Frequency | 6421.5 MHz -6422.5 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 | -99.0 dB/K |
| Min. Saturation Flux Density | -81.0 dBW/m2 |
| Max. Saturation Flux Density | -80.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | CM1 Tunable with 100 kHz step (5925-6425 MHz) |

## Receiving Beams 5:

| Question | Response |
|---|---|
| Beam ID | CWVU |
| Receive Beam Frequency | 5925.0 MHz -6425.0 MHz |
| Beam Type | Steerable |
| Polarization | V |
| Peak Gain | 30.25 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |

| | |
|---|---|
| Polarization Switchable | No |
| Polarization Alignment Relative to the Equatorial Plane | 90.0 degrees |
| G/T at Max. Gain Point | 4.62 dB/K |
| Min. Saturation Flux Density | -102.0 dBW/m2 |
| Max. Saturation Flux Density | -77.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Western Arc . North America including Alaska and Hawaii; Central America; and the Caribbean. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south. |

## Receiving Beams 6:

| Question | Response |
|---|---|
| Beam ID | CWHU |
| Receive Beam Frequency | 5925.0 MHz -6425.0 MHz |
| Beam Type | Steerable |
| Polarization | H |
| Peak Gain | 30.25 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | No |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 0.0 degrees |
| G/T at Max. Gain Point | 4.62 dB/K |
| Min. Saturation Flux Density | -102.0 dBW/m2 |
| Max. Saturation Flux Density | -77.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Western Arc . North America including Alaska and Hawaii; Central America; and the Caribbean. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south |

## Receiving Beams 7:

| Question | Response |
|---|---|
| Beam ID | CHHU |
| Receive Beam Frequency | 5925.0 MHz -6425.0 MHz |
| Beam Type | Steerable |
| Polarization | H |
| Peak Gain | 30.25 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | No |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 0.0 degrees |
| G/T at Max. Gain Point | 30.25 dB/K |
| Min. Saturation Flux Density | -102.0 dBW/m2 |
| Max. Saturation Flux Density | -77.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Hemi Beam. North America including Alaska and Hawaii; Central America; the Caribbean; South America and Western Europe. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south. |

## Receiving Beams 8:

| Question | Response |
|---|---|
| Beam ID | CHVU |
| Receive Beam Frequency | 5925.0 MHz -6425.0 MHz |
| Beam Type | Steerable |
| Polarization | V |
| Peak Gain | 30.25 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | No |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 90.0 degrees |
| G/T at Max. Gain Point | 4.62 dB/K |
| Min. Saturation Flux Density | -102.0 dBW/m2 |
| Max. Saturation Flux Density | -77.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Hemi Beam. North America including Alaska and Hawaii; Central America; the Caribbean; South America and Western Europe. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south. |

## Receiving Beams 9:

| Question | Response |
|---|---|
| Beam ID | CMD5 |
| Receive Beam Frequency | 6424.0 MHz -6425.0 MHz |
| Beam Type | Fixed |
| Polarization | H |
| 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 | 0.0 degrees |
| G/T at Max. Gain Point | -99.0 dB/K |

| | |
|---|---|
| Min. Saturation Flux Density | -89.0 dBW/m2 |
| Max. Saturation Flux Density | -80.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | CMD 2 Tunable with 100 kHz step (5925-6425 MHz) |

## Receiving Beams 10:

| Question | Response |
|---|---|
| Beam ID | CMD6 |
| Receive Beam Frequency | 6424.0 MHz -6425.0 MHz |
| Beam Type | Fixed |
| Polarization | V |
| 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 | 90.0 degrees |
| G/T at Max. Gain Point | -99.0 dB/K |
| Min. Saturation Flux Density | -89.0 dBW/m2 |
| Max. Saturation Flux Density | -80.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | CMD 2 Tunable with 100 kHz step (5925-6425 MHz) |

## Receiving Beams 11:

| Question | Response |
|---|---|
| Beam ID | KUHU |
| Receive Beam Frequency | 12750.0 MHz -13250.0 MHz |

| | |
|---|---|
| Beam Type | Fixed |
| Polarization | H |
| Peak Gain | 29.07 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 | 2.08 dB/K |
| Min. Saturation Flux Density | -91.0 dBW/m2 |
| Max. Saturation Flux Density | -66.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Contiguous United States; Central America; and Caribbean |

## Receiving Beams 12:

| Question | Response |
|---|---|
| Beam ID | KUVU |
| Receive Beam Frequency | 12750.0 MHz -13250.0 MHz |
| Beam Type | Fixed |
| Polarization | V |
| Peak Gain | 29.07 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 | 2.08 dB/K |
| Min. Saturation Flux Density | -91.0 dBW/m2 |

| | |
|---|---|
| Max. Saturation Flux Density | -66.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Contiguous United States; Central America; and Caribbean |

## Receiving Beams 13:

| Question | Response |
|---|---|
| Beam ID | K1HU |
| Receive Beam Frequency | 13750.0 MHz -14500.0 MHz |
| Beam Type | Fixed |
| Polarization | H |
| Peak Gain | 29.07 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 | 2.08 dB/K |
| Min. Saturation Flux Density | -91.0 dBW/m2 |
| Max. Saturation Flux Density | -66.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Contiguous United States; Central America; and Caribbean |

## Receiving Beams 14:

| Question | Response |
|---|---|
| Beam ID | K1VU |
| Receive Beam Frequency | 13750.0 MHz -14500.0 MHz |
| Beam Type | Fixed |

| | |
|---|---|
| Polarization | V |
| Peak Gain | 29.07 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 | 2.08 dB/K |
| Min. Saturation Flux Density | -91.0 dBW/m2 |
| Max. Saturation Flux Density | -66.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Contiguous United States; Central America; and Caribbean |

## Receiving Channels (18)

| Channel ID | Channel Bandwidth (MHz) | Center Frequency s (MHz) | Feeder Link, Service Link or TT&C |
|---|---|---|---|
| **CM02** | 1.0 | 6424.5 | TT&C |
| **CU06** | 36.0 | 6345.0 | Service Link |
| **CU03** | 36.0 | 6225.0 | Service Link |
| **CU02** | 126.0 | 6130.0 | Service Link |
| **KU01** | 356.0 | 13047.0 | Service Link |
| **KU02** | 662.0 | 14118.0 | Service Link |
| **CU07** | 43.0 | 6388.5 | Service Link |
| **CU11** | 36.0 | 6285.0 | Service Link |
| **CU01** | 126.0 | 5990.0 | Service Link |
| **CU08** | 126.0 | 6010.0 | Service Link |
| **CU09** | 126.0 | 6150.0 | Service Link |
| **CU04** | 36.0 | 6265.0 | Service Link |
| **CU05** | 36.0 | 6305.0 | Service Link |
| **CU14** | 36.0 | 6405.0 | Service Link |
| **CU13** | 36.0 | 6365.0 | Service Link |
| **CU12** | 36.0 | 6325.0 | Service Link |
| **CU10** | 36.0 | 6245.0 | Service Link |
| **CM01** | 1.0 | 6422.0 | TT&C |

## Transmitting Beams 1:

| Question | Response |
|---|---|
| Beam ID | UPC1 |
| Transmit Beam Frequency | 4199.937 MHz -4199.963 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 |
| Max. Transmit EIRP Density | -35.0 dBW/Hz |
| Max. Transmit EIRP | 9.0 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | ULPC |

### Max. Power Flux Density

| * BW: | * 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** | -162.2 | -162.1 | -162.0 | -161.9 | -161.8 | -161.0 |

## Transmitting Beams 2:

| Question | Response |
|---|---|
| Beam ID | TLMB |
| Transmit Beam Frequency | 4197.325 MHz -4197.675 MHz |

| | |
|---|---|
| Beam Type | Fixed |
| Polarization | H |
| Peak Gain | dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | Yes |
| Polarization Alignment Relative to the Equatorial Plane | 0.0 degrees |
| Max. Transmit EIRP Density | -47.4 dBW/Hz |
| Max. Transmit EIRP | 8.0 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | TM1 |

### Max. Power Flux Density

| * BW: | * 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** | -174.7 | -174.6 | -174.5 | -174.4 | -174.2 | -173.5 |

## Transmitting Beams 3:

| Question | Response |
|---|---|
| Beam ID | TLMF |
| Transmit Beam Frequency | 4198.825 MHz -4199.175 MHz |
| Beam Type | Fixed |
| Polarization | V |
| 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 | 90.0 degrees |
| Max. Transmit EIRP Density | -47.4 dBW/Hz |
| Max. Transmit EIRP | 8.0 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | TM2 |

### Max. Power Flux Density

| * BW: | * 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** | -174.7 | -174.6 | -174.5 | -174.4 | -174.2 | -173.5 |

## Transmitting Beams 4:

| Question | Response |
|---|---|
| Beam ID | TLMA |
| Transmit Beam Frequency | 4197.325 MHz -4197.75 MHz |
| Beam Type | Fixed |
| Polarization | LHCP |
| Peak Gain | dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | Yes |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -47.4 dBW/Hz |

| | |
|---|---|
| Max. Transmit EIRP | 8.0 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | TM1 |

### Max. Power Flux Density

| * BW: | * 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** | -174.7 | -174.6 | -174.5 | -174.4 | -174.2 | -173.5 |

## Transmitting Beams 5:

| Question | Response |
|---|---|
| Beam ID | TLMC |
| Transmit Beam Frequency | 4197.325 MHz -4197.675 MHz |
| Beam Type | Fixed |
| Polarization | V |
| Peak Gain | dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | Yes |
| Polarization Alignment Relative to the Equatorial Plane | 90.0 degrees |
| Max. Transmit EIRP Density | -47.4 dBW/Hz |
| Max. Transmit EIRP | 8.0 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | TM1 |

### Max. Power Flux Density

| * BW: | * 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** | -174.7 | -174.6 | -174.5 | -174.4 | -174.5 | -173.5 |

## Transmitting Beams 6:

| Question | Response |
|---|---|
| Beam ID | CWVD |
| Transmit Beam Frequency | 3700.0 MHz -4200.0 MHz |
| Beam Type | Steerable |
| Polarization | V |
| Peak Gain | 28.98 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | No |
| Polarization Alignment Relative to the Equatorial Plane | 90.0 degrees |
| Max. Transmit EIRP Density | -29.3 dBW/Hz |
| Max. Transmit EIRP | 46.3 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Western Arc . North America including Alaska and Hawaii; Central America; and the Caribbean. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south |

### Max. Power Flux Density

| * BW: | * 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** | -156.5 | -156.4 | -156.3 | -156.2 | -156.1 | -155.3 |

## Transmitting Beams 7:

| Question | Response |
|---|---|
| Beam ID | CWHD |
| Transmit Beam Frequency | 3700.0 MHz -4200.0 MHz |
| Beam Type | Steerable |
| Polarization | H |
| Peak Gain | 28.98 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | No |
| Polarization Alignment Relative to the Equatorial Plane | 0.0 degrees |
| Max. Transmit EIRP Density | -29.3 dBW/Hz |
| Max. Transmit EIRP | 46.3 dBW |
| Co- or Cross Polar Mode | C |

| | |
|---|---|
| Service Area Description | Western Arc . North America including Alaska and Hawaii; Central America; and the Caribbean. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south |

### Max. Power Flux Density

| * BW: | * 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** | -156.5 | -156.4 | -156.3 | -156.2 | -156.1 | -155.3 |

## Transmitting Beams 8:

| Question | Response |
|---|---|
| Beam ID | CHHD |
| Transmit Beam Frequency | 3700.0 MHz -4200.0 MHz |
| Beam Type | Steerable |
| Polarization | H |
| Peak Gain | 28.98 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.03 degrees |
| Polarization Switchable | No |
| Polarization Alignment Relative to the Equatorial Plane | 0.0 degrees |

| | |
|---|---|
| Max. Transmit EIRP Density | -29.3 dBW/Hz |
| Max. Transmit EIRP | 46.3 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Hemi Beam. North America including Alaska and Hawaii; Central America; the Caribbean; South America and Western Europe. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south. |

### Max. Power Flux Density

| * BW: | * 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** | -156.5 | -156.4 | -156.3 | -156.2 | -156.1 | -155.3 |

## Transmitting Beams 9:

| Question | Response |
|---|---|
| Beam ID | CHVD |
| Transmit Beam Frequency | 3700.0 MHz -4200.0 MHz |
| Beam Type | Steerable |
| Polarization | V |
| Peak Gain | 28.98 dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |

| | |
|---|---|
| Polarization Switchable | No |
| Polarization Alignment Relative to the Equatorial Plane | 90.0 degrees |
| Max. Transmit EIRP Density | -29.3 dBW/Hz |
| Max. Transmit EIRP | 46.3 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Hemi Beam. North America including Alaska and Hawaii; Central America; the Caribbean; South America and Western Europe. This Reflector has a RPM of plus minus 10 degree east-west and plus minus 8 degree north-south. |

### Max. Power Flux Density

| * BW: | * 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** | -156.5 | -156.4 | -156.3 | -156.2 | -156.1 | -155.3 |

## Transmitting Beams 10:

| Question | Response |
|---|---|
| Beam ID | TLME |
| Transmit Beam Frequency | 4198.825 MHz -4199.175 MHz |
| Beam Type | Fixed |
| Polarization | H |

| | |
|---|---|
| Peak Gain | dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | Yes |
| Polarization Alignment Relative to the Equatorial Plane | 0.0 degrees |
| Max. Transmit EIRP Density | -47.4 dBW/Hz |
| Max. Transmit EIRP | 8.0 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | TM2 |

### Max. Power Flux Density

| * BW: | * 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** | -174.7 | -174.6 | -174.5 | -174.4 | -174.2 | -173.5 |

## Transmitting Beams 11:

| Question | Response |
|---|---|
| Beam ID | TLMD |
| Transmit Beam Frequency | 4198.825 MHz -4199.175 MHz |
| Beam Type | Fixed |
| Polarization | LHCP |
| Peak Gain | dBi |
| Antenna Pointing Error | 0.19 degrees |
| Antenna Rotational Error | 0.34 degrees |
| Polarization Switchable | Yes |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -47.4 dBW/Hz |
| Max. Transmit EIRP | 8.0 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | TM2 |

### Max. Power Flux Density

| * BW: | * 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** | -174.7 | -174.6 | -174.5 | -174.4 | -174.2 | -173.5 |

## Transmitting Beams 12:

| Question | Response |
|---|---|
| Beam ID | KUHD |
| Transmit Beam Frequency | 10700.0 MHz -11200.0 MHz |
| Beam Type | Fixed |
| Polarization | H |
| Peak Gain | 27.67 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 |
| Max. Transmit EIRP Density | -36.4 dBW/Hz |
| Max. Transmit EIRP | 49.14 dBW |
| Co- or Cross Polar Mode | C |

| | |
|---|---|
| Service Area Description | Ku band wide beam |

### Max. Power Flux Density

| * BW: | * 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** | -163.6 | -163.5 | -163.4 | -163.3 | -163.2 | -162.4 |

## Transmitting Beams 13:

| Question | Response |
|---|---|
| Beam ID | KUVD |
| Transmit Beam Frequency | 10700.0 MHz -11200.0 MHz |
| Beam Type | Fixed |
| Polarization | V |
| Peak Gain | 27.67 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 |
| Max. Transmit EIRP Density | -36.4 dBW/Hz |
| Max. Transmit EIRP | 49.14 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Ku-band wide beam |

### Max. Power Flux Density

| * BW: | * 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** | -163.6 | -163.5 | -163.4 | -163.3 | -163.2 | -162.4 |

## Transmitting Beams 14:

| Question | Response |
|---|---|
| Beam ID | K1HD |
| Transmit Beam Frequency | 11700.0 MHz -12450.0 MHz |
| Beam Type | Fixed |
| Polarization | H |
| Peak Gain | 27.67 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 |
| Max. Transmit EIRP Density | -36.4 dBW/Hz |
| Max. Transmit EIRP | 49.14 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Ku band wide beam |

### Max. Power Flux Density

| * BW: | * 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** | -163.6 | -163.5 | -163.4 | -163.3 | -163.2 | -162.4 |

## Transmitting Beams 15:

| Question | Response |
|---|---|
| Beam ID | K1VD |
| Transmit Beam Frequency | 11700.0 MHz -12450.0 MHz |
| Beam Type | Fixed |
| Polarization | V |
| Peak Gain | 27.67 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 |
| Max. Transmit EIRP Density | -36.4 dBW/Hz |
| Max. Transmit EIRP | 49.14 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Ku band wide beam |

### Max. Power Flux Density

| * BW: | * 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** | -163.6 | -163.5 | -163.4 | -163.3 | -163.2 | -162.4 |

## Transmitting Channels (19)

| Channel ID | Channel Bandwidth (MHz) | Center Frequency s (MHz) | Feeder Link, Service Link or TT&C |
|---|---|---|---|
| **CD14** | 36.0 | 4180.0 | Service Link |
| **CD13** | 36.0 | 4140.0 | Service Link |
| **CD03** | 36.0 | 4000.0 | Service Link |
| **CD04** | 36.0 | 4040.0 | Service Link |
| **CD08** | 126.0 | 3785.0 | Service Link |
| **CD01** | 126.0 | 3765.0 | Service Link |
| **CD06** | 36.0 | 4120.0 | Service Link |
| **CD05** | 36.0 | 4080.0 | Service Link |
| **CD12** | 36.0 | 4100.0 | Service Link |
| **ULPC** | 0.025 | 4199.95 | Service Link |
| **CD07** | 43.0 | 4163.5 | Service Link |
| **TLMA** | 0.35 | 4197.5 | TT&C |
| **KU02** | 662.0 | 12068.0 | Service Link |
| **KU01** | 356.0 | 10997.0 | Service Link |
| **TLMD** | 0.35 | 4199.0 | TT&C |
| **CD02** | 126.0 | 3905.0 | Service Link |
| **CD09** | 126.0 | 3925.0 | Service Link |
| **CD10** | 36.0 | 4020.0 | Service Link |
| **CD11** | 36.0 | 4060.0 | 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 |
|---|---|---|---|---|
| g-36.mdb | | GSO Antenna Gain Contour Data | GIMS file (*. mdb) | |
| new at 45. mdb | | GSO Antenna Gain Contour Data | GIMS file (*. mdb) | |