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

Federal Communications Commission

312 File Number: **SATMOD2022090600100**

## Filing Description

| Question | Response |
|---|---|
| Description | SpaceX 1.6 / 2.4 GHz MSS System |

## Satellite Information

| Question | Response |
| --- | --- |
| Select Orbit Type | NGSO |
| Space Station or Satellite Network Name | SpaceX 1.6/2.4 GHz MSS System |
| Estimated Lifetime of Satellite(s) From Date of Launch | 5 Years |
| Will the space station(s) operate on a Common Carrier basis? | No |

## Operating Frequency Bands (3)

| Nature of service | Description | Frequency Band(s) | Mode Type |
|---|---|---|---|
| **Mobile-Satellite Service** | | 2020.0 MHz -2025.0 MHz | Receive |
| **Mobile-Satellite Service** | | 2483.5 MHz -2500.0 MHz | Transmit |
| **Mobile-Satellite Service** | | 1610.0 MHz -1617.775 MHz | Receive |

## Orbital Information For Non-Geostationary Satellites

| Question | Response |
| --- | --- |
| Total Number of Satellites in the active constellation | 1 |
| Orbit Epoch Date | 01/01/2015 |
| Celestrial Reference Body | Earth |

## Orbital Plane 1:

| Question | Response |
|---|---|
| Number of Satellites in Plane | 1 |
| Inclination Angle | 53.0 degrees |
| Right Ascension of Ascending Node | 0.0 degrees |
| Argument of Perigee | 0.0 degrees |
| Orbital Period | 5760.0 seconds |
| Apogee | 550.0 km |
| Perigee | 550.0 km |
| Active Service Arc Begin Angle with respect to Ascending Node | 0.0 degrees |
| Active Service Arc End Angle with respect to Ascending Node | 0.0 degrees |

### Mean Anomaly For Each Satellite

| Satellite Number | Mean Anomaly (degrees) at the Orbit Epoch Date |
|---|---|
| **1** | 0.0 |

## Receiving Beams 1:

| Question | Response |
|---|---|
| Beam ID | RX08 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 38.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 12.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 2:

| Question | Response |
|---|---|
| Beam ID | RX07 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 35.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |

| | |
|---|---|
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 9.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 3:

| Question | Response |
|---|---|
| Beam ID | RX06 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 32.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 6.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving

## Beams 4:

| Question | Response |
|---|---|
| Beam ID | RX05 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 29.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 3.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 5:

| Question | Response |
|---|---|
| Beam ID | RX04 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 38.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 12.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 6:

| Question | Response |
|---|---|
| Beam ID | RX03 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 35.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 9.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 7:

| Question | Response |
|---|---|

| | |
|---|---|
| Beam ID | RX02 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 32.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 6.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 8:

| Question | Response |
|---|---|
| Beam ID | RX01 |
| Receive Beam Frequency | 1610.0 MHz -1617.775 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 29.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 3.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 9:

| Question | Response |
|---|---|
| Beam ID | RX09 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 29.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 3.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 10:

| Question | Response |
|---|---|

| | |
|---|---|
| Beam ID | RX10 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 32.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 6.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 11:

| Question | Response |
|---|---|
| Beam ID | RX11 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 35.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 9.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 12:

| Question | Response |
|---|---|
| Beam ID | RX12 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | V |
| Peak Gain | 38.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 12.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 13:

| Question | Response |
|---|---|

| | |
|---|---|
| Beam ID | RX13 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 29.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 3.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 14:

| Question | Response |
|---|---|
| Beam ID | RX14 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 32.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |

| | |
|---|---|
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 6.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 15:

| Question | Response |
|---|---|
| Beam ID | RX15 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 35.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 9.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Beams 16:

| Question | Response |
|---|---|

| | |
|---|---|
| Beam ID | RX16 |
| Receive Beam Frequency | 2020.0 MHz -2025.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | H |
| Peak Gain | 38.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| G/T at Max. Gain Point | 12.5 dB/K |
| Min. Saturation Flux Density | -0.1 dBW/m2 |
| Max. Saturation Flux Density | 0.0 dBW/m2 |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## Receiving Channels (2)

| Channel ID | Channel Bandwidth (MHz) | Center Frequency s (MHz) | Feeder Link, Service Link or TT&C |
|---|---|---|---|
| **RX1** | 7.775 | 1613.8875 | Service Link |
| **RX2** | 5.0 | 2022.5 | Service Link |

## Transmitting Beams 1:

| Question | Response |
|---|---|
| Beam ID | TX08 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | LHCP |
| Peak Gain | 38.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -2.33 dBW/Hz |
| Max. Transmit EIRP | 69.8 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

### 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -79.4 | -78.2 | -76.6 | -75.2 | -74.0 | -67.7 |

## Transmitting Beams 2:

| Question | Response |
|---|---|
| Beam ID | TX07 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |

| | |
|---|---|
| Beam Type | Both Steerable and Shapeable |
| Polarization | LHCP |
| Peak Gain | 35.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -5.33 dBW/Hz |
| Max. Transmit EIRP | 66.8 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

### 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -82.4 | -81.2 | -79.6 | -78.2 | -77.0 | -70.7 |

## Transmitting Beams 3:

| Question | Response |
|---|---|
| Beam ID | TX06 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | LHCP |
| Peak Gain | 32.0 dBi |
| Antenna Pointing Error | 0.1 degrees |

| | |
|---|---|
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -8.26 dBW/Hz |
| Max. Transmit EIRP | 63.9 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

### 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -85.3 | -84.1 | -82.6 | -81.1 | -79.9 | -73.7 |

## Transmitting Beams 4:

| Question | Response |
|---|---|
| Beam ID | TX05 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | LHCP |
| Peak Gain | 29.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -11.33 dBW/Hz |

| | |
|---|---|
| Max. Transmit EIRP | 60.8 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

### 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -88.4 | -87.2 | -85.6 | -84.2 | -83.0 | -76.7 |

## Transmitting Beams 5:

| Question | Response |
|---|---|
| Beam ID | TX04 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | RHCP |
| Peak Gain | 38.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -2.33 dBW/Hz |
| Max. Transmit EIRP | 69.8 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

### 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -79.4 | -78.2 | -76.6 | -75.2 | -74.0 | -67.7 |

## Transmitting Beams 6:

| Question | Response |
|---|---|
| Beam ID | TX03 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | RHCP |
| Peak Gain | 35.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -5.33 dBW/Hz |
| Max. Transmit EIRP | 66.8 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

### 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -82.4 | -81.2 | -79.6 | -78.2 | -77.0 | -70.7 |

## Transmitting Beams 7:

| Question | Response |
|---|---|
| Beam ID | TX02 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |
| Beam Type | Both Steerable and Shapeable |
| Polarization | RHCP |
| Peak Gain | 32.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -8.26 dBW/Hz |
| Max. Transmit EIRP | 63.9 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

### 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -85.3 | -84.1 | -82.6 | -81.1 | -79.9 | -73.7 |

## Transmitting Beams 8:

| Question | Response |
|---|---|
| Beam ID | TX01 |
| Transmit Beam Frequency | 2483.5 MHz -2500.0 MHz |

| | |
|---|---|
| Beam Type | Both Steerable and Shapeable |
| Polarization | RHCP |
| Peak Gain | 29.0 dBi |
| Antenna Pointing Error | 0.1 degrees |
| Antenna Rotational Error | 0.1 degrees |
| Polarization Switchable | |
| Polarization Alignment Relative to the Equatorial Plane | 45.0 degrees |
| Max. Transmit EIRP Density | -11.33 dBW/Hz |
| Max. Transmit EIRP | 60.8 dBW |
| Co- or Cross Polar Mode | C |
| Service Area Description | Global |

## 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): |
|---|---|---|---|---|---|---|
| **1.0 MHz** | -88.4 | -87.2 | -85.6 | -84.2 | -83.0 | -76.7 |

## Transmitting Channels (1)

| Channel ID | Channel Bandwidth (MHz) | Center Frequency s (MHz) | Feeder Link, Service Link or TT&C |
|---|---|---|---|
| **TX1** | 16.5 | 2491.75 | 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? | Yes |
| 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? | |
| 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? | |
| 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 |
|---|---|---|---|
| SpaceX_MSS_RX01_RX05_RX09_RX13_0deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_RX01_RX05_RX09_RX13_35deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_RX02_RX06_RX10_RX14_0deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_RX02_RX06_RX10_RX14_35deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_RX03_RX07_RX11_RX15_0deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_RX03_RX07_RX11_RX15_35deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_RX04_RX08_RX12_RX16_0deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_TX01_TX05_0deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_TX01_TX05_35deg.gxt | | NGSO Antenna Gain Data | GXT file (*.gxt) |

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|---|---|---|
| SpaceX_MSS_TX02_TX06_0deg.gxt | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_TX02_TX06_35deg.gxt | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_RX04_RX08_RX12_RX16_35deg.gxt | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_TX03_TX07_0deg.gxt | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_TX03_TX07_35deg.gxt | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_TX04_TX08_0deg.gxt | NGSO Antenna Gain Data | GXT file (*.gxt) |
| SpaceX_MSS_TX04_TX08_35deg.gxt | NGSO Antenna Gain Data | GXT file (*.gxt) |