



312 File Number: **SESLFS2021052100824**

---

## Filing Description

Question	Response
Description	Kacific-1 Satellite at 150 degrees E.L.

---

**Satellite  
Information**

Question	Response
Select Orbit Type	GSO
Space Station or Satellite Network Name	Kacific-1
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 (4)

Nature of service	Description	Frequency Band(s)	Mode Type
<b>Fixed-Satellite Service</b>		19700.0 MHz -20200.0 MHz	Transmit
<b>Fixed-Satellite Service</b>		20050.0 MHz -20125.0 MHz	Transmit
<b>Fixed-Satellite Service</b>		29600.0 MHz -29700.0 MHz	Receive
<b>Fixed-Satellite Service</b>		29750.0 MHz -29800.0 MHz	Receive

## Orbital Information For Geostationary Satellites

Section	Question	Response
<b>Orbital Longitude Information</b>	Orbital Longitude	150.0 degrees
	Hemisphere of Orbital Longitude	E
<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	0.05 degrees
	Pitch	0.05 degrees
	Yaw	0.05 degrees

## Receiving Beams 1:

Question	Response
Beam ID	B27R
Receive Beam Frequency	29750.0 MHz -29800.0 MHz
Beam Type	Fixed
Polarization	RHCP
Peak Gain	47.6 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.05 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	18.8 dB/K
Min. Saturation Flux Density	-96.8 dBW/m <sup>2</sup>
Max. Saturation Flux Density	-76.8 dBW/m <sup>2</sup>
Co- or Cross Polar Mode	C
Service Area Description	Commonwealth of the Northern Mariana Islands (ITU Code: MRA)

## Receiving Beams 2:

Question	Response
Beam ID	B51R
Receive Beam Frequency	29600.0 MHz -29700.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	47.4 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.05 degrees

---

Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
G/T at Max. Gain Point	18.8 dB/K
Min. Saturation Flux Density	-96.8 dBW/m <sup>2</sup>
Max. Saturation Flux Density	-76.8 dBW/m <sup>2</sup>
Co- or Cross Polar Mode	C
Service Area Description	American Samoa (ITU Code: SMA)

---

**Receiving Channels (2)**

<b>Channel ID</b>	<b>Channel Bandwidth (MHz)</b>	<b>Center Frequency s (MHz)</b>	<b>Feeder Link, Service Link or TT&amp;C</b>
<b>C51</b>	100.0	29650.0	Service Link
<b>C27</b>	50.0	29775.0	Service Link

## Transmitting Beams 1:

Question	Response
Beam ID	B27T
Transmit Beam Frequency	20050.0 MHz -20125.0 MHz
Beam Type	Fixed
Polarization	LHCP
Peak Gain	43.4 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.05 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-25.5 dBW/Hz
Max. Transmit EIRP	53.0 dBW
Co- or Cross Polar Mode	C
Service Area Description	Commonwealth of the Northern Mariana Islands (ITU Code: MRA)

### 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>1.0 MHz</b>	-148.7	-148.6	-148.5	-148.4	-148.3	-127.6

## Transmitting Beams 2:

Question	Response
Beam ID	B51T
Transmit Beam Frequency	19700.0 MHz -20200.0 MHz



Beam Type	Fixed
Polarization	RHCP
Peak Gain	46.1 dBi
Antenna Pointing Error	0.05 degrees
Antenna Rotational Error	0.05 degrees
Polarization Switchable	
Polarization Alignment Relative to the Equatorial Plane	45.0 degrees
Max. Transmit EIRP Density	-26.1 dBW/Hz
Max. Transmit EIRP	60.4 dBW
Co- or Cross Polar Mode	C
Service Area Description	American Samoa (ITU Code: SMA)

### 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):
<b>1.0 MHz</b>	-149.3	-149.2	-149.1	-149.0	-148.9	-128.5

## Transmitting Channels (3)

Channel ID	Channel Bandwidth (MHz)	Center Frequency s (MHz)	Feeder Link, Service Link or TT&C
C51b	500.0	19950.0	Service Link
C27	75.0	20087.5	Service Link
C51a	150.0	19875.0	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?	No
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><a href="#">Kacific-1 GIMS Database.mdb</a></u>		GSO Antenna Gain Contour Data	GIMS file (*.mdb)	

---