

## Form 312 Schedule S (GSO example) screenshots

### S1. Satellite Information

Not Yet Approved by OMB  
 Estimated Time Per Response: 0.5-80 hrs  
 April 2024  
 OMB Control Number 3060-0678

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≡

**Satellite**  
DRAFT-SAT-MOD-20240320-00076

...
Schedule S Review
Form 312
Schedule S Instructions
Save Record

File Number

i

Call Sign

### S1. Satellite Information

a. Space Station or Satellite Network Name

b. Orbit Type

e. Application Description

c. Estimated Operational Lifetime of Space Station(s) From Date of Launch (yrs)

d. Will the space station(s) operate on a Common Carrier basis?

Schedule S Review
Form 312
Schedule S Instructions
Save Record

S2. Operating Frequency Bands (2)

S3. GSO Orbital Information (1)

S4. Earth-to-Space (Receive) Beams (1)

S5. Space-to-Earth (Transmit) Beams (1)

S6. Space-to-Space (Receive) Beams

S7. Space-to-Space (Transmit) Beams

S8. Attachments (5)

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⚙
-

Actions on selected rows...
v

New

	a. Type of Service ▲	b. If a. is Other, provide a service description	c. Satellite Frequency Band (MHz)	d. Satellite Frequency (Lower Band Edge) (MHz)	e. Satellite Frequency (Upper Band Edge) (MHz)
<input type="checkbox"/>	FSS		11700 - 12500	11700	
<input type="checkbox"/>	FSS		29500 - 30000	29500	

## S2. Operating Frequency Bands

[<](#) [≡](#) Operating Frequency Band  
DRAFT-SAT-MOD-20240320-00076 [...](#) [Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#)

Form 312 Number  [i](#)

Call Sign

File Number  [i](#)

## S2. Operating Frequency Bands

a. Type of Service  [Q](#) [i](#)

b. If a. is Other, provide a service description

c. Satellite Frequency Band (MHz)  [Q](#) [i](#)

If your Frequency Band is not listed, click the magnifying glass and select "Other" to manually enter the Frequency Band.

f. Direction of Transmission  [v](#)

g. Non Conforming Indicator

d. Satellite Frequency (Lower Band Edge) (MHz)

e. Satellite Frequency (Upper Band Edge) (MHz)

[Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#)



### S3. GSO Orbital Information

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### S3. GSO Orbital Information

a. Orbital Longitude (°)	<input type="text" value="179"/>	g. Maximum Orbital Eccentricity	<input type="text" value="0.9"/>
b. Hemisphere of Orbital Longitude (E/W)	<input type="text" value="West"/>	h. Antenna Axis Attitude Accuracy: Roll (°)	<input type="text" value="2"/>
c. East/West Station-Keeping Range: Toward East (°)	<input type="text" value="0.1"/>	i. Antenna Axis Attitude Accuracy: Pitch (°)	<input type="text" value="2"/>
d. East/West Station-Keeping Range: Toward West (°)	<input type="text" value="0.1"/>	j. Antenna Axis Attitude Accuracy: Yaw (°)	<input type="text" value="2"/>
e. North/South Station-Keeping Range: Toward North (°)	<input type="text" value="0.1"/>		
f. North/South Station-Keeping Range: Toward South (°)	<input type="text" value="0.1"/>		

## S4. Earth-to-Space (Receive) Beams

File Number  ⓘ

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### S4. Earth-to-Space (Receive) Beams

\* a. Beam ID

\* b. Beam Frequency (Lower Band Edge) (MHz)

\* c. Beam Frequency (Upper Band Edge) (MHz)

\* d. Polarization  ⓘ

\* e. Can the space station vary the channel bandwidth with on-board processing?

f. Is this a command beam? (Check box if Yes)

g. Is the beam shapeable? (Check box if Yes)

h. Is the beam steerable? (Check box if Yes)

i. Is the beam fed into transponders? (Check box if Yes)

\* j. Maximum G/T (dB/K)

n. Beam Peak Flux Density at Command Threshold (dBW/m<sup>2</sup>)

o. Peak Isotropic Antenna Gain (dBi)

p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)

q. Antenna Pointing Error (°)

r. Antenna Rotational Error (°)

s. Will a GIMS container file containing all antenna contour data be provided?

t. Under what rules will the associated antenna contours be submitted? ⓘ

u. Provide a list of each orbital plane in which this antenna beam is used.

v. Are all space stations in the NGSO constellation identical?

k. Minimum G/T (dB/K)

l. Maximum Saturation Flux Density (dBW/m<sup>2</sup>)

m. Minimum Saturation Flux Density (dBW/m<sup>2</sup>)

w. What information will be provided with the predicted antenna gain contours?

Please click the "Save Record" button to generate a table to enter the associated channel information under the "x. Receive Channels" tab, and to attach the required §25.114(c)(4)(vi) or §25.114(c)(4)(vii) documentation under the "z. Beam Attachments" tab.

## S4x. Receive Channels

< Channel ID 25 ... [Return to Beam Information](#) [Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#) ↑

⊗ There are error/errors on the form or missing mandatory fields, go through the tabs to correct the data before finalizing the Schedule S. ×

File Number  ⓘ

Call Sign

### x. Channels

Beam ID  ⓘ

Beam Frequency Band (MHz)

\* (i) Channel ID

(ii) Channel Bandwidth (MHz)

\* (iii) Center Frequency (MHz)

Based on the center frequency for this channel, the channel will not fit within the associated Beam Frequency Band.

(iv) Channel Frequency (Lower Band Edge) (MHz)

(v) Channel Frequency (Upper Band Edge) (MHz)

\* (vi) Channel Type

[Return to Beam Information](#) [Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#)

## S4z. Beam Attachments

< ☰ Attachments  
New record ... [Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

File Number  Call Sign

### Attachments

Beam ID

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

Direction of Transmission

(i) Document Type

(ii) If Document Type is "Other", provide short description

(iii) File Name [Click to add...](#)

[Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

## S5. Space-to-Earth (Transmit) Beams

Space to Earth Transmit b2
Return to Main Menu
Clone Beam
Schedule S Instructions
Clone Beam with Channels/PFDs
Create Channels in Bulk
Save Record
Delete Record

File Number

Call Sign

### S5. Space-to-Earth (Transmit) Beams

* a. Beam ID	<input type="text" value="b2"/>	n. Beam Peak Flux Density at Command Threshold (dBW/m <sup>2</sup> )	<input type="text"/>
* b. Beam Frequency (Lower Band Edge) (MHz)	<input type="text" value="19800"/>	o. Peak Isotropic Antenna Gain (dBi)	<input type="text" value="56"/>
* c. Beam Frequency (Upper Band Edge) (MHz)	<input type="text" value="19900"/>	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)	<input type="text" value="47"/>
* d. Polarization	<input type="text" value="RHCP"/>	q. Antenna Pointing Error (°)	<input type="text" value="0.5"/>
e. Can the space station vary the channel bandwidth with on-board processing?	<input type="text" value="No"/>	r. Antenna Rotational Error (°)	<input type="text" value="0.5"/>
f. Is this a command beam? (Check box if Yes)	<input type="checkbox"/>	s. Will a GIMS container file containing all antenna contour data be provided?	<input type="text" value="No"/>
g. Is the beam shapeable? (Check box if Yes)	<input checked="" type="checkbox"/>	t. Under what rules will the associated antenna contours be submitted?	<input type="text"/>
h. Is the beam steerable? (Check box if Yes)	<input checked="" type="checkbox"/>	u. Provide a list of each orbital plane in which this antenna beam is used.	<input type="text"/>
i. Is the beam fed into transponders? (Check box if Yes)	<input checked="" type="checkbox"/>	v. Are all space stations in the NGSO constellation identical?	<input type="text" value="-- None --"/>
⓪ * j. Maximum Transmit EIRP Density (dBW/Ref BW)	<input type="text" value="34"/>	w. What information will be provided with the predicted antenna gain contours?	<input type="text" value="-- None --"/>
* k. Maximum Transmit EIRP (dBW)	<input type="text" value="35"/>		
l. Minimum Cross-Polar Isolation within Service Area (dB)	<input type="text" value="40"/>		
m. Minimum Saturation Flux Density (dBW/m <sup>2</sup> )	<input type="text"/>		

Please click the "Save Record" button to generate a table to enter the associated channel information under the "x. Transmit Channels" tab, the maximum power-flux density information under the "y. Max. Power-Flux Densities" tab, and to attach the required §25.114(c)(4)(vi) or §25.114(c)(4)(vii) documentation under the "z. Beam Attachments" tab.

Return to Main Menu
Clone Beam
Schedule S Instructions
Clone Beam with Channels/PFDs
Create Channels in Bulk
Save Record
Delete Record

x. Transmit Channels (1)
y. Max. Power-Flux Densities (1)
z. Beam Attachments (1)

(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)
ch2	50	19850	19825	19875



## S5x. Transmit Channels

< ≡ Channel ch2 ... [Return to Beam Information](#) [Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#) ↑ ↓

File Number  ⓘ

Call Sign

### x. Channels

Beam ID  ⓘ  
Beam Frequency Band (MHz)

\* (i) Channel ID   
\* (ii) Channel Bandwidth (MHz)   
\* (iii) Center Frequency (MHz)   
(iv) Channel Frequency (Lower Band Edge) (MHz)   
(v) Channel Frequency (Upper Band Edge) (MHz)   
\* (vi) Channel Type

[Return to Beam Information](#) [Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#)

## S5y. Max. Power-Flux Densities

< ≡ Power Flux Density 4 kHz ... [Return to Beam Information](#) [Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#) ↑ ↓

File Number DRAFT-SAT-MOD-20240320-00076 ⓘ

Call Sign

### y. Max. Power-Flux Densities

Beam ID b2 ⓘ

Beam Frequency Band (MHz) 19800 - 19900

(i) Beam Sub-Frequency (Lower Band Edge) (MHz)

19850

(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)

19870

Enter the applicable maximum power flux density (PFD) values for the transmit beam. Enter all associated data in the displayed fields. Power Flux Density values must be between -1000.0 and -50.0 dBW/m<sup>2</sup>/BW.

a.) Bandwidth: From the drop down list, select a reference bandwidth of 4 kHz, 1 MHz or 200 MHz appropriate to the transmission band, as specified in Section 25.208.

b.) For all satellite services and frequency bands covered and not covered by the following two cases, provide the maximum PFD values at angles of arrival of 0-2°, 2-5°, 5-15°, 15-20°, 20-25° and 25-90° above the horizon in dBW/m<sup>2</sup>/BW.

c.) For NGSO/FSS sharing with MVDDS in the 12200-12700 MHz frequency band, provide the maximum PFD values at angles of arrival of 0-2°, and 2-5° above the horizon in dBW/m<sup>2</sup>/BW.

d.) For DBS or 17/24 GHz BSS, and/or service within any portion of the 17300-17800 MHz frequency band, provide the maximum PFD values in each of the Southeastern, Northeastern, Western and Other geographic regions in dBW/m<sup>2</sup>/BW, as defined in § 25.208(w).

#### Reference Bandwidth

(iii) Reference Bandwidth (BW) 4 kHz ▼

### Angles of Arrival PFD

(iv) 0-2° (dBW/m <sup>2</sup> /BW)	<input type="text"/>	-100
(v) 2-5° (dBW/m <sup>2</sup> /BW)	<input type="text"/>	-105
(vi) 5-15° (dBW/m <sup>2</sup> /BW)	<input type="text"/>	-106
(vii) 15-20° (dBW/m <sup>2</sup> /BW)	<input type="text"/>	-107
(viii) 20-25° (dBW/m <sup>2</sup> /BW)	<input type="text"/>	-108
(ix) 25-90° (dBW/m <sup>2</sup> /BW)	<input type="text"/>	-109

### Geographic Region PFD

(x) Southeastern Region (dBW/m <sup>2</sup> /BW)	<input type="text"/>
(xi) Northeastern Region (dBW/m <sup>2</sup> /BW)	<input type="text"/>
(xii) Western Region (dBW/m <sup>2</sup> /BW)	<input type="text"/>
(xiii) Other Region (dBW/m <sup>2</sup> /BW)	<input type="text"/>

### Energy Dispersal Bandwidth

(xiv) Energy Dispersal Bandwidth (kHz)	<input type="text"/>	40
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[Return to Beam Information](#) [Return to Main Menu](#) [Schedule S Instructions](#) [Save Record](#) [Delete Record](#)

## S5z. Beam Attachments

[<](#) [≡](#) Attachments  
New record ... [Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

File Number

Call Sign

### Attachments

Beam ID

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

(i) Document Type

(ii) If Document Type is "Other", provide short description

Direction of Transmission

(iii) File Name [Click to add...](#)

[Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

## S6. Space-to-Space (receive) Beams

File Number



Call Sign

### S6. Space-to-Space (Receive) Beams

* a. Beam ID	<input type="text"/>	n. Beam Peak Flux Density at Command Threshold (dBW/m <sup>2</sup> )	<input type="text"/>
* b. Beam Frequency (Lower Band Edge) (MHz)	<input type="text"/>	o. Peak Isotropic Antenna Gain (dBi)	<input type="text"/>
* c. Beam Frequency (Upper Band Edge) (MHz)	<input type="text"/>	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)	<input type="text"/>
* d. Polarization	<input type="text"/>	q. Antenna Pointing Error (°)	<input type="text"/>
* e. Can the space station vary the channel bandwidth with on-board processing?	<input type="text" value="-- None --"/>	r. Antenna Rotational Error (°)	<input type="text"/>
f. Is this a command beam? (Check box if Yes)	<input type="checkbox"/>	s. Will a GIMS container file containing all antenna contour data be provided?	<input type="text" value="-- None --"/>
g. Is the beam shapeable? (Check box if Yes)	<input type="checkbox"/>	t. Under what rules will the associated antenna contours be submitted?	<input type="text" value=""/>
h. Is the beam steerable? (Check box if Yes)	<input type="checkbox"/>	u. Provide a list of each orbital plane in which this antenna beam is used.	<input type="text"/>
i. Is the beam fed into transponders? (Check box if Yes)	<input type="checkbox"/>	v. Are all space stations in the NGSO constellation identical?	<input type="text" value="-- None --"/>
* j. Maximum G/T (dB/K)	<input type="text"/>		

k. Minimum G/T (dB/K)

l. Maximum Saturation Flux Density (dBW/m<sup>2</sup>)

m. Minimum Saturation Flux Density (dBW/m<sup>2</sup>)

w. What information will be provided with the predicted antenna gain contours?

Please click the "Save Record" button to generate a table to enter the associated channel information under the "x. Receive Channels" tab, and to attach the required §25.114(c)(4)(vi) or §25.114(c)(4)(vii) documentation under the "z. Beam Attachments" tab.

[Schedule S Instructions](#) [Save Record](#)

### S6x. Receive Channel

< Channel New record ... [Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

File Number

Call Sign

### x. Channels

Beam ID  ⓘ

Beam Frequency Band (MHz)

(i) Channel ID

(ii) Channel Bandwidth (MHz)

(iii) Center Frequency (MHz)

(iv) Channel Frequency (Lower Band Edge) (MHz)

(v) Channel Frequency (Upper Band Edge) (MHz)

(vi) Channel Type

(vii) Point of Communication

[Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

## S6z. Attachments

[<](#) [☰ Attachments](#)  
New record ... [Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

File Number

Call Sign

### Attachments

Beam ID

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

(i) Document Type

(ii) If Document Type is "Other", provide short description

Direction of Transmission

(iii) File Name [Click to add...](#)

[Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

# S7. Space-to-Space (Transmit) Beam

File Number  ⓘ

Call Sign

## S7. Space-to-Space (Transmit) Beams

- \* a. Beam ID
- \* b. Beam Frequency (Lower Band Edge) (MHz)
- \* c. Beam Frequency (Upper Band Edge) (MHz)
- \* d. Polarization  🔍
- \* e. Can the space station vary the channel bandwidth with on-board processing?  ▼
- f. Is this a command beam? (Check box if Yes)
- g. Is the beam shapeable? (Check box if Yes)
- h. Is the beam steerable? (Check box if Yes)
- i. Is the beam fed into transponders? (Check box if Yes)
- \* j. Maximum Transmit EIRP Density (dBW/Ref BW)
- \* k. Maximum Transmit EIRP (dBW)
- l. Minimum Saturation Flux Density (dBW/m<sup>2</sup>)
- m. Beam Peak Flux Density at Command Threshold (dBW/m<sup>2</sup>)

- \* o. Peak Isotropic Antenna Gain (dBi)
- \* p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)
- q. Antenna Pointing Error (°)
- r. Antenna Rotational Error (°)
- s. Will a GIMS container file containing all antenna contour data be provided?  ▼
- t. Under what rules will the associated antenna contours be submitted? 🔒
- u. Provide a list of each orbital plane in which this antenna beam is used.
- v. Are all space stations in the NGSO constellation identical?
- w. What information will be provided with the predicted antenna gain contours?

Please click the "Save Record" button to generate a table to enter the associated channel information under the "x. Transmit Channels" tab, the maximum power-flux density information under the "y. Max. Power-Flux Densities" tab, and to attach the required §25.114(c)(4)(vi) or §25.114(c)(4)(vii) documentation under the "z. Beam Attachments" tab.



## S7x. Transmit Channels

[<](#) [≡](#) Channel  
New record ... [Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

File Number

Call Sign

### x. Channels

Beam ID  ⓘ

Beam Frequency Band (MHz)

(i) Channel ID

(ii) Channel Bandwidth (MHz)

(iii) Center Frequency (MHz)

(iv) Channel Frequency (Lower Band Edge) (MHz)

(v) Channel Frequency (Upper Band Edge) (MHz)

(vi) Channel Type

(vii) Point of Communication

[Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

## S7y. Max. Power-Flux Densities

[←](#) [≡](#) Power Flux Density  
New record ... [Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

File Number

Call Sign

### y. Max. Power-Flux Densities

Beam ID  ⓘ

Beam Frequency Band (MHz) -

(i) Beam Sub-Frequency (Lower Band Edge) (MHz)

(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)

Enter the applicable maximum power flux density (PFD) values for the transmit beam. Enter all associated data in the displayed fields. Power Flux Density values must be between -1000.0 and -50.0 dBW/m<sup>2</sup>/BW.

a.) Bandwidth: From the drop down list, select a reference bandwidth of 4 kHz, 1 MHz or 200 MHz appropriate to the transmission band, as specified in Section 25.208.

b.) For all satellite services and frequency bands covered and not covered by the following two cases, provide the maximum PFD values at angles of arrival of 0-2°, 2-5°, 5-15°, 15-20°, 20-25° and 25-90° above the horizon in dBW/m<sup>2</sup>/BW.

c.) For NGSO/FSS sharing with MVDDS in the 12200-12700 MHz frequency band, provide the maximum PFD values at angles of arrival of 0-2°, and 2-5° above the horizon in dBW/m<sup>2</sup>/BW.

d.) For DBS or 17/24 GHz BSS, and/or service within any portion of the 17300-17800 MHz frequency band, provide the maximum PFD values in each of the Southeastern, Northeastern, Western and Other geographic regions in dBW/m<sup>2</sup>/BW, as defined in § 25.208(w).

#### Reference Bandwidth

\* (iii) Reference Bandwidth (BW)

**Angles of Arrival PFD**

(iv) 0-2° (dBW/m<sup>2</sup>/BW)

(v) 2-5° (dBW/m<sup>2</sup>/BW)

(vi) 5-15° (dBW/m<sup>2</sup>/BW)

(vii) 15-20° (dBW/m<sup>2</sup>/BW)

(viii) 20-25° (dBW/m<sup>2</sup>/BW)

(ix) 25-90° (dBW/m<sup>2</sup>/BW)

**Geographic Region PFD**

(x) Southeastern Region  
(dBW/m<sup>2</sup>/BW)

(xi) Northeastern Region  
(dBW/m<sup>2</sup>/BW)

(xii) Western Region (dBW/m<sup>2</sup>/BW)

(xiii) Other Region (dBW/m<sup>2</sup>/BW)

**Energy Dispersal Bandwidth**

(xiv) Energy Dispersal Bandwidth  
(kHz)

[Return to Beam Information](#)

[Schedule S Instructions](#)

[Save Record](#)

## S7z. Beam Attachments

[←](#) **Attachments**  
New record ... [Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

File Number

Call Sign

### Attachments

Beam ID

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

(i) Document Type

(ii) If Document Type is "Other", provide short description

Direction of Transmission

(iii) File Name [Click to add...](#)

[Return to Beam Information](#) [Schedule S Instructions](#) [Save Record](#)

## S8. Attachments

File Number  [ⓘ](#)

Call Sign

### Attachments

Beam ID  [🔍](#)

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

(i) Document Type

(ii) If Document Type is "Other", provide short description

Direction of Transmission

(iii) File Name [Click to add...](#)