SST-7931531010-12-S1

Advanced

E-Band Transmitter, 71 to 86 GHz, +9 dBm P_{1dB}, 10 dB Gain

Description:

Model SST-7931531010-12-S1 is an E-Band integrated transmitter module. The transmitter has a typical conversion gain of 10 dB with an IF input signal in the frequency range of DC to 12 GHz to yield a typical output power of +12 dBm in the frequency range of 71 to 86 GHz. The transmitter includes an integrated X6 multiplier, which requires +7 dBm input power at the frequency range of 11.8 to 14.4 GHz. The LO and IF ports are both equipped with female SMA connectors and the RF port has a WR-12 waveguide with a UG-387/U flange.

Features:

- Compact Size
- Broad Operation Bandwidth
- Fully Integrated Module

Applications:

- 5G Systems
- Radar Systems
- Communication Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Output Frequency	71 GHz		86 GHz
Damaged RF Power		+15 dBm	
Output P_{1dB}		+9 dBm	
Output Psat		+12 dBm	
IF Input Frequency	DC		12 GHz
RF to IF Conversion Gain		10 dB	
LO Frequency	11.8 GHz		14.4 GHz
LO Input Power	+5 dBm	+7 dBm	+15 dBm
DC Voltage		+8 V_{DC}	+15 V_{DC}
DC Current		250 mA	
Output Return Loss		10 dB	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Port	WR-12 Waveguide with UG-387/U Flange
IF & LO Ports	SMA (F) & SMA (F)
Bias Port	Solder Pin
Housing Material	Aluminum
Weight	2 Oz
Finish	Gold Plated
Size	1.10” (W) x 1.80” (L) x 0.50” (H)
Outline	SR-SE

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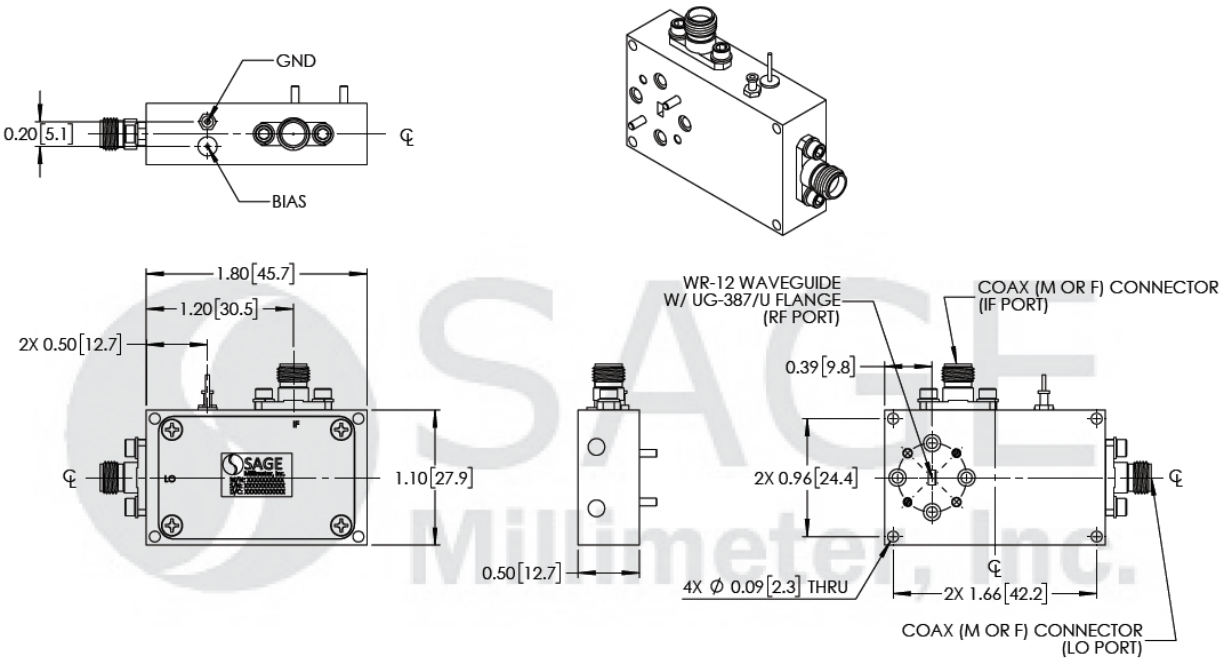
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical and electrical configurations are available under different model numbers.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed +50˚C. Use proper heatsink or fan if necessary.