SFS-90311415-102FSF-N3

Advanced

W-Band Subharmonically Pumped Mixer, 90 to 100 GHz

Description:

Model SFS-90311415-102FSF-N3 is a W-Band subharmonically pumped mixer. The mixer is designed with high performance GaAs Schottky diodes and accepts an LO frequency at half the RF frequency to cover the frequency range from 90 to 100 GHz. With a low LO frequency range of 45 to 50 GHz, this mixer is well suited for low cost W band system solutions. The mixer provides 15 dB conversion loss, 15 dB RF to LO isolation, and 30 dB LO to IF isolation.

Features:

- Low LO Power Requirement
- Subharmonic Mixing
- Compact Package

Applications:

- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency	90 GHz		100 GHz
LO Frequency	45 GHz		50 GHz
IF Frequency	DC		5.0 GHz
LO Pumping Power		+15 dBm	
Conversion Loss		15 dB	
LO to IF Isolation		30 dB	
RF to LO Isolation		15 dB	
Combined RF and LO Power			+18 dBm
Specification Temperature		+25°C	
Operating Temperature	+0°C		+50°C

Mechanical Specifications:

Item	Specification
RF Port	WR-10 Waveguide with UG-387/U-M Flange
LO Port	2.4 mm (F)
IF Port	SMA (F)
Case Material	Aluminum
Finish	Gold Plated
Weight	1.0 Oz
Size	0.75”(W) x 0.95”(H) x 1.3”(L)
Outline	FS-NW

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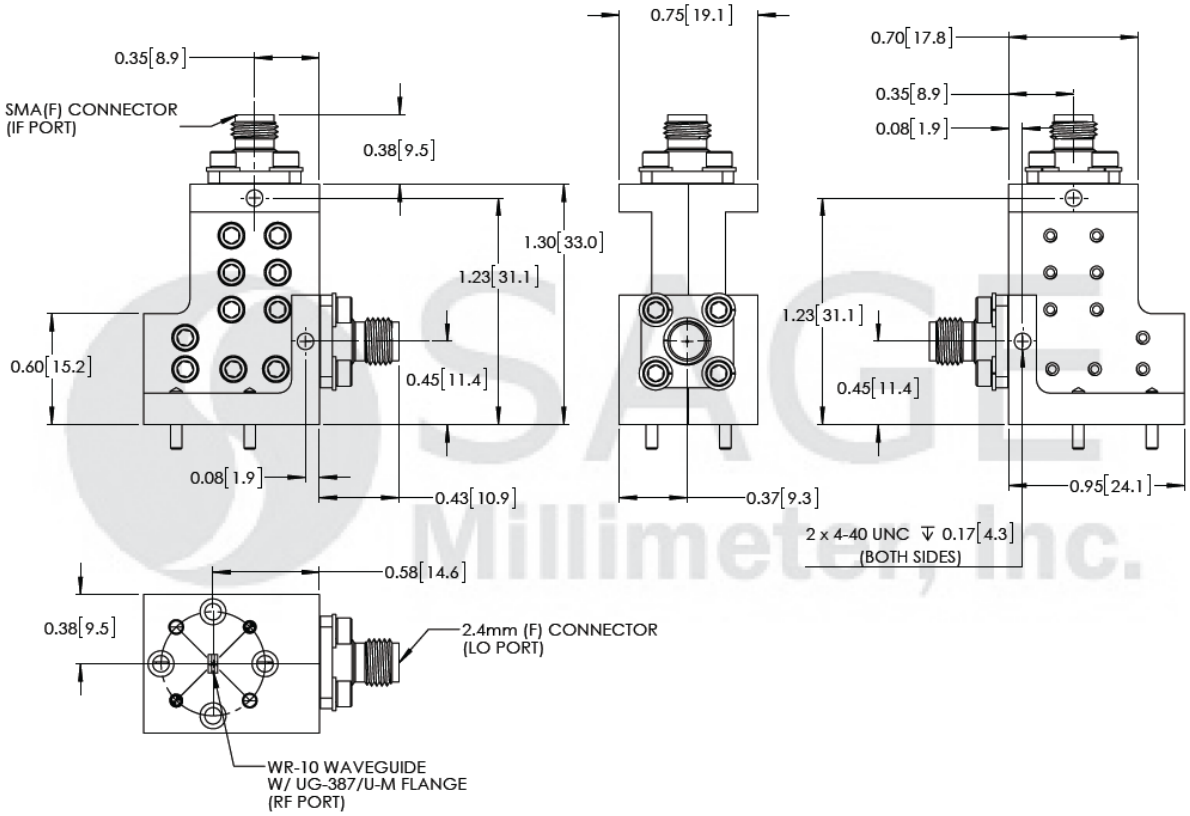
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The IF port of the mixer is DC coupled. Use DC block when connecting to other devices. **Any external bias voltage applied to the IF port will damage the mixer.**
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.