SFH-KFSFSF-A3-R

Ka-Band Harmonic Mixer, Keysight Spectrum Analyzer

SFH-KFSFSF-A3-R is a Ka-Band balanced harmonic mixer that is specially designed for use with Keysight's spectrum analyzer series. The mixer employs high performance, GaAs Schottky flip chip diodes and a balanced configuration to produce a superior RF performance. With an IF range of DC to 1.3 GHz, the harmonic mixer uses the harmonic number 8 of a 3.0 to 6.1 GHz LO at +16 dBm to translate 26.5 to 40 GHz. The harmonic mixer has a typical conversion loss of 30 dB.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency	26.5 GHz		40 GHz
LO Frequency	3.0 GHz		6.1 GHz
IF Range	DC		1.3 GHz
RF Power		-20 dBm	+19 dBm
LO Power		+16 dBm	+19 dBm
Combined Damage RF and LO Power			+20 dBm
Harmonic Number		8	
Conversion Loss		30 dB	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
RF Port	K(F)
LO Port	SMA (F)
IF Port	SMA (F)
Case Material	Brass
Finish	Gold Plated
Weight	5.6 Oz
Outline	FH-A2-R

ECCN

EAR99

FEATURES

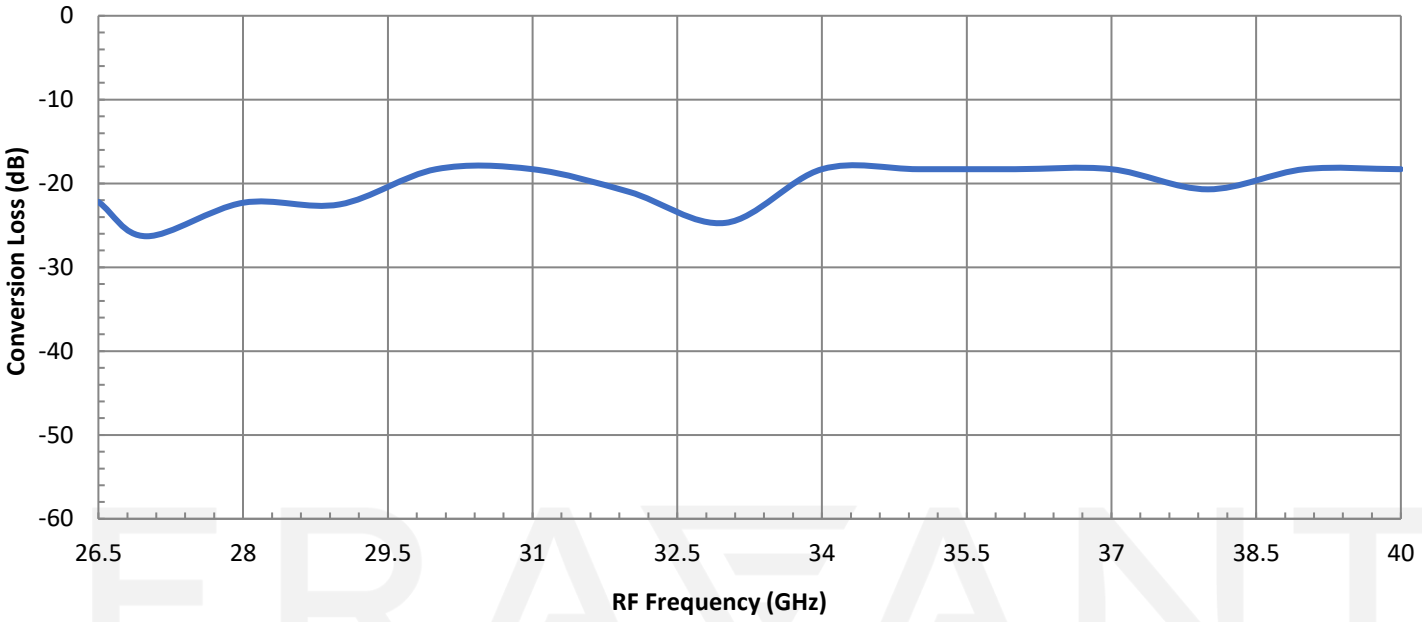
- Full Waveguide Band Operation
- No External Bias Required
- Even Harmonic Detection
- Calibrated for 8th Harmonic Detection

APPLICATIONS

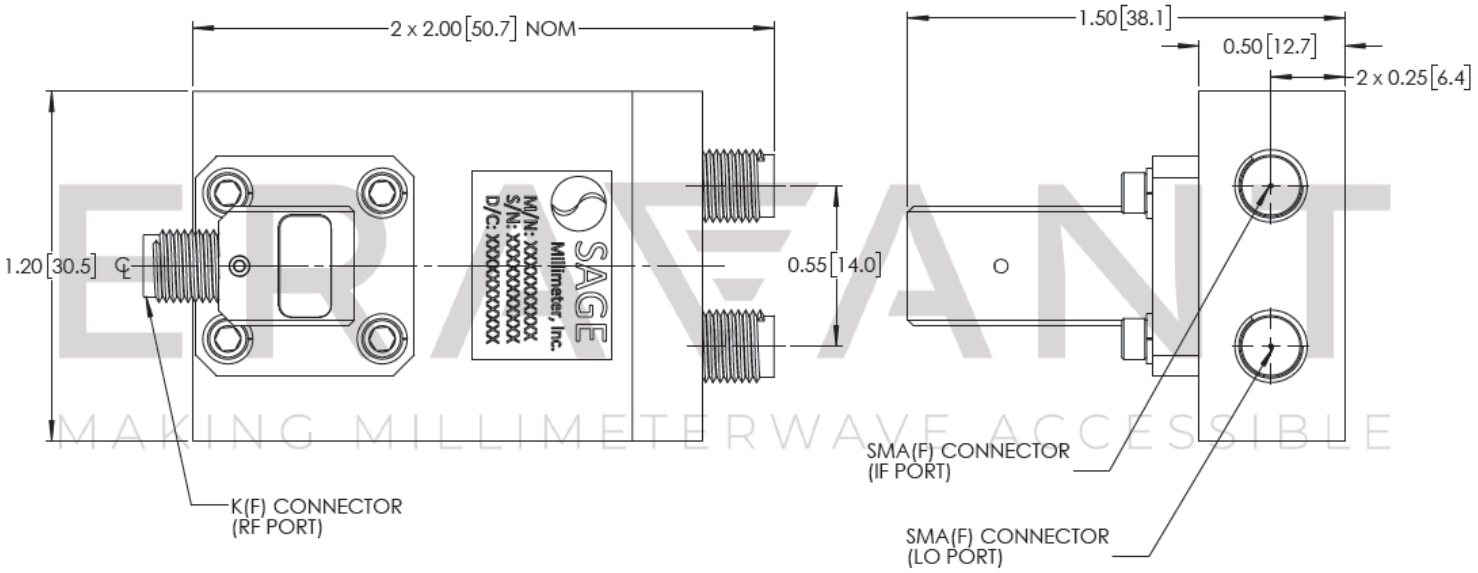
- Keysight Spectrum Analyzers
- Frequency Meters
- Phase Locked Loops

SUPPLEMENTAL DETAILS

Typical Conversion Loss vs Frequency



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



NOTE:

- Data provided is collected from a sample lot. Actual data may vary slightly from unit to unit.
- All testing is performed under +25 °C room temperature.
- The harmonic mixer is for small signal detection. The recommended the RF power range is -10 dBm or below.
- The harmonic mixer work in any even harmonics of LO to yield the IF frequency in the range of DC to 1.3 GHz with different conversion loss
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings of the mixer will damage the device.
- Any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- The mixer is a static sensitive device. Always follow ESD rules when working with the mixer.
- Eravant recommends the use of ESD wrist and ankle straps, grounded ESD dissipative surfaces, and air ionizers when handling the device
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.

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