STC-N15-12-S1-IDP

E-Band Full Waveguide Band Down-Converter

STC-N15-12-S1-IDP is a E-Band down-converter that converts millimeter wave signals from a frequency range of 60 to 90 GHz to the baseband at 1.875 GHz. The down-converter requires 5 to 7.5 GHz at +10 dBm input power as its LO. An internal diplexer is included resulting in a single connectorized port for LO and IF configured for compatible spectrum analyzers, such as Anritsu's MS2850A. The down-converter has low harmonic levels and excellent gain flatness, making it a good candidate to extend low frequency test equipment for millimeter wave testing purposes.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Input Frequency	60 GHz		90 GHz
IF Frequency Output	10 MHz	1.875 GHz	2 GHz
LO Input Frequency	5 GHz		7.5 GHz
LO Power	+10 dBm		+12 dBm
LO Damage Power			+20 dBm
Conversion Loss		15 dB	
Harmonic Suppression		25 dBc	30 dBc
RF Input Power Damage Level			+5 dBm
Power Supply (AC Adapter Provided)	100 V_{AC}		240 V_{AC}
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Port	WR-12 Waveguide with UG-387/U Precision Anti-Cocking Flange
LO/IF Port	SMA (F)
DC Bias Port	2.5 mm DC Jack (AC-to-DC power converter included)
DC Bias Switch	On-Off Latching Switch with Indicator Light
Enclosure Material	Black Anodized Aluminum
Weight	2.3 lbs
Size	4.89" (W) x 5.00" (L) x 1.90" (H)
Outline	TC-E-A-IDP

ECCN

EAR99

FEATURES

- Full Band Coverage

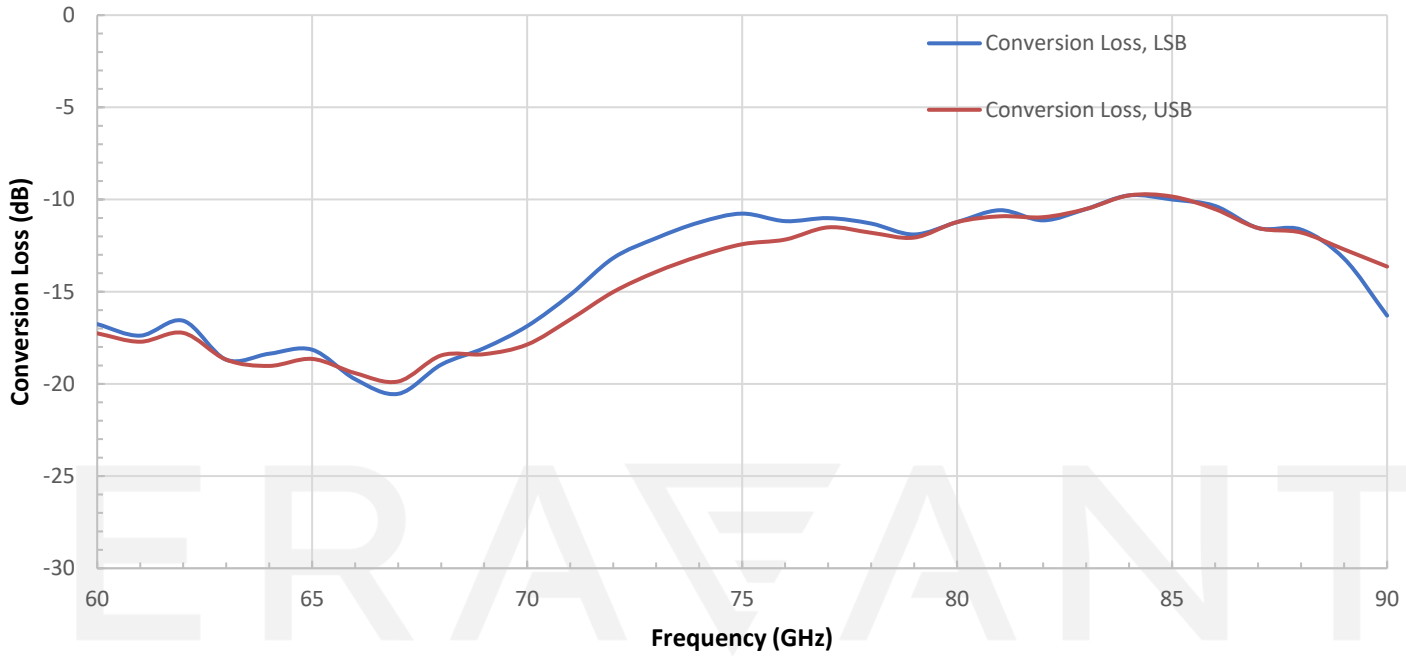
APPLICATIONS

- Test Lab
- Instrumentations
- Auto Test Set
- Anritsu MS2850A

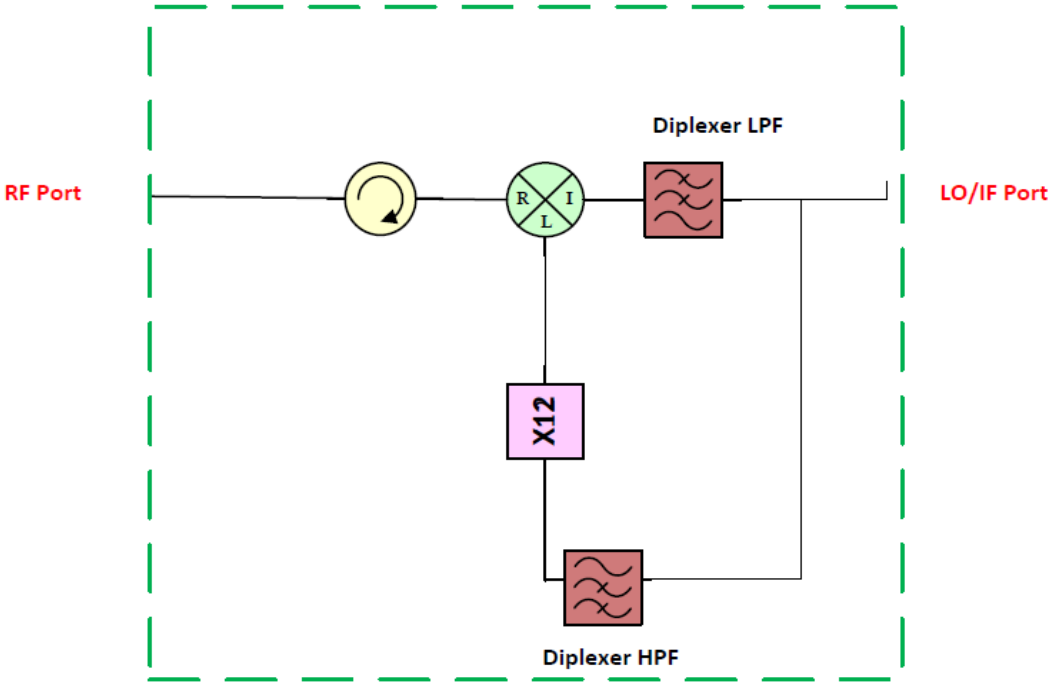
SUPPLEMENTAL DETAILS

Conversion Loss vs. Frequency

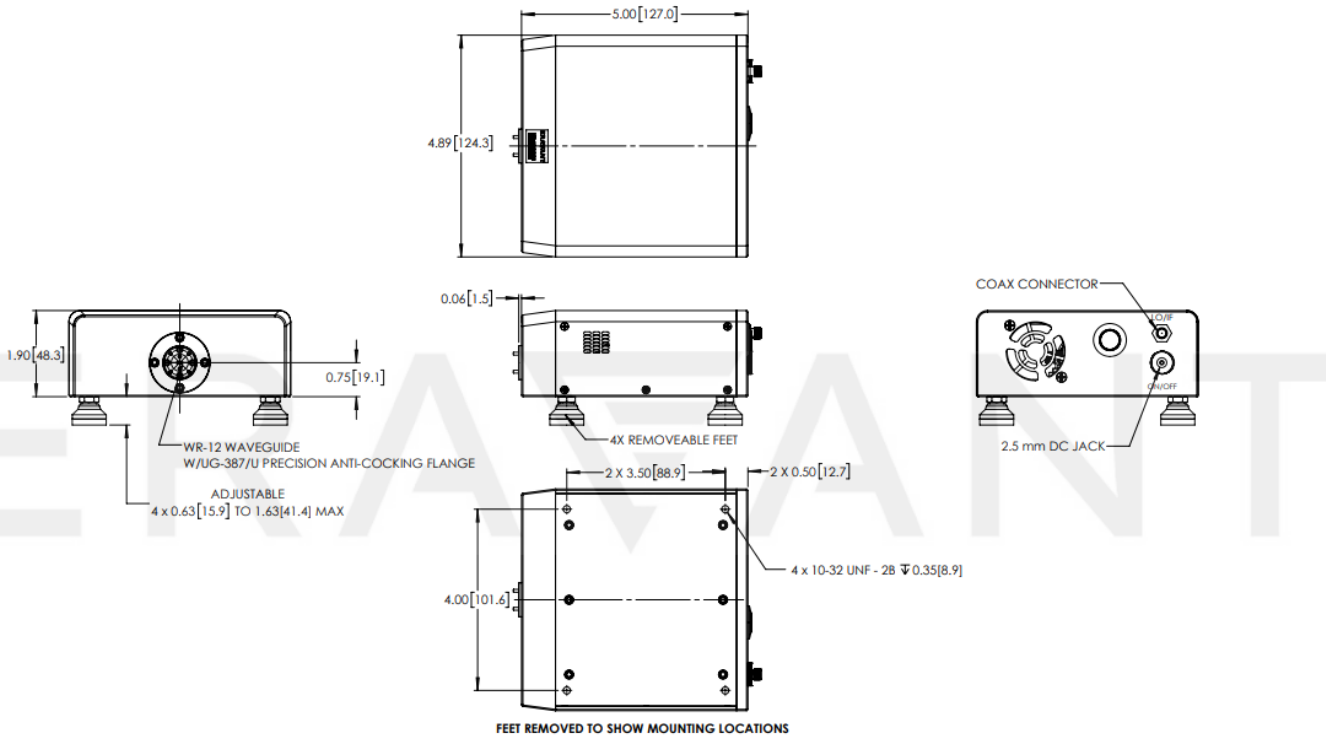
RF: -20 dBm; IF: 1.875 GHz



Simplified Block Diagram:



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



NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- 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.