

## STC-N12-15-S1-IDP-AN

### V-Band Full Waveguide Band Down-Converter

**STC-N12-15-S1-IDP-AN** is a V-Band down-converter that converts millimeter wave signals from a frequency range of 50 to 75 GHz to the baseband at 1.875 GHz. The down-converter requires 6.25 to 9.38 GHz at minimum 0 dBm input power as its LO. An internal diplexer is included resulting in a single connectorized port for LO and IF. 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	50 GHz		75 GHz
IF Frequency Output	10 MHz	1.875 GHz	2 GHz
LO Input Frequency	6.25 GHz		9.38 GHz
LO Power	0 dBm		+2 dBm
LO Damage Power			+20 dBm
Conversion Loss		12 dB	
Harmonic Suppression		20 dBc	
RF Input Power Damage Level			+5 dBm
Power Supply (AC Adapter Provided)	100 V <sub>AC</sub>		240 V <sub>AC</sub>
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

### Mechanical Specifications:

Item	Specification
RF Port	WR-15 Waveguide with UG-385/U-M 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-V-A-IDP

### ECCN

EAR99

### FEATURES

- Full Band Coverage

### APPLICATIONS

- Test Lab
- Instrumentations
- Auto Test Set
- [Anritsu MS2850A](#)

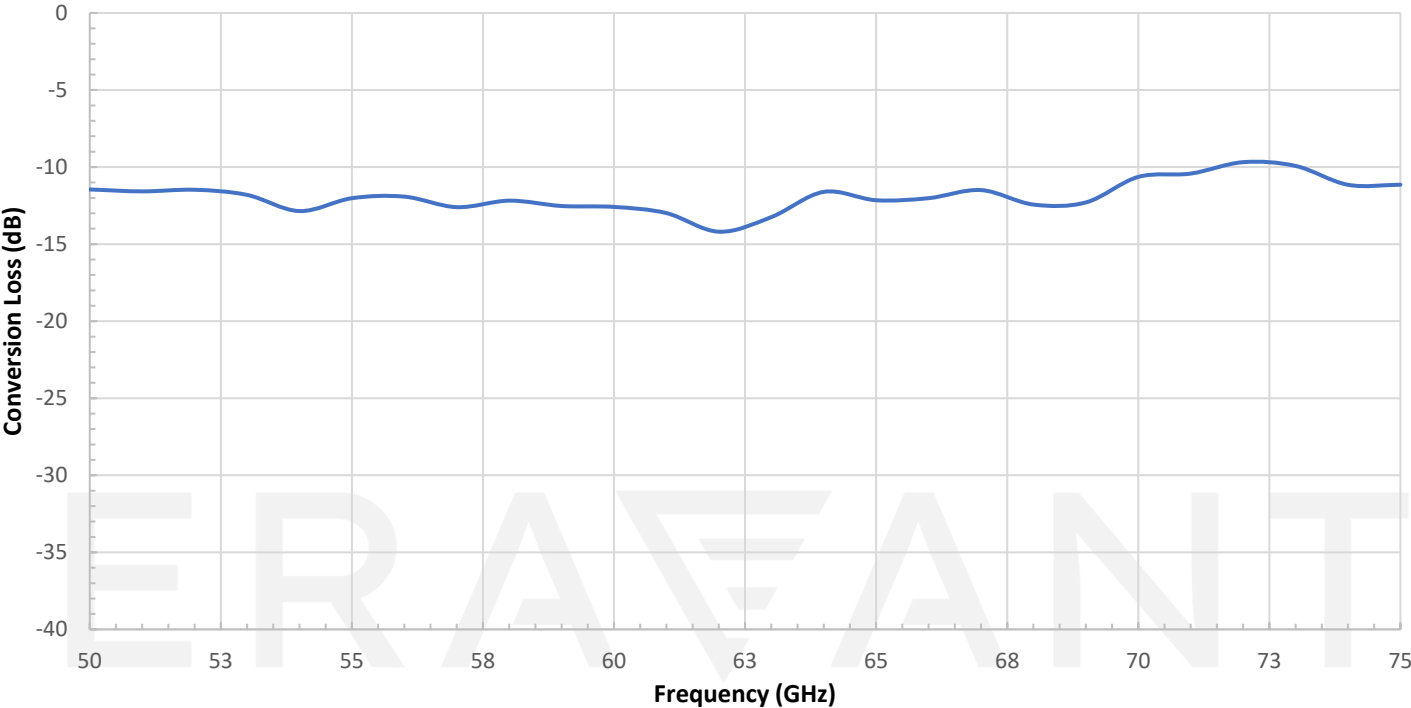
### SUPPLEMENTAL DETAILS



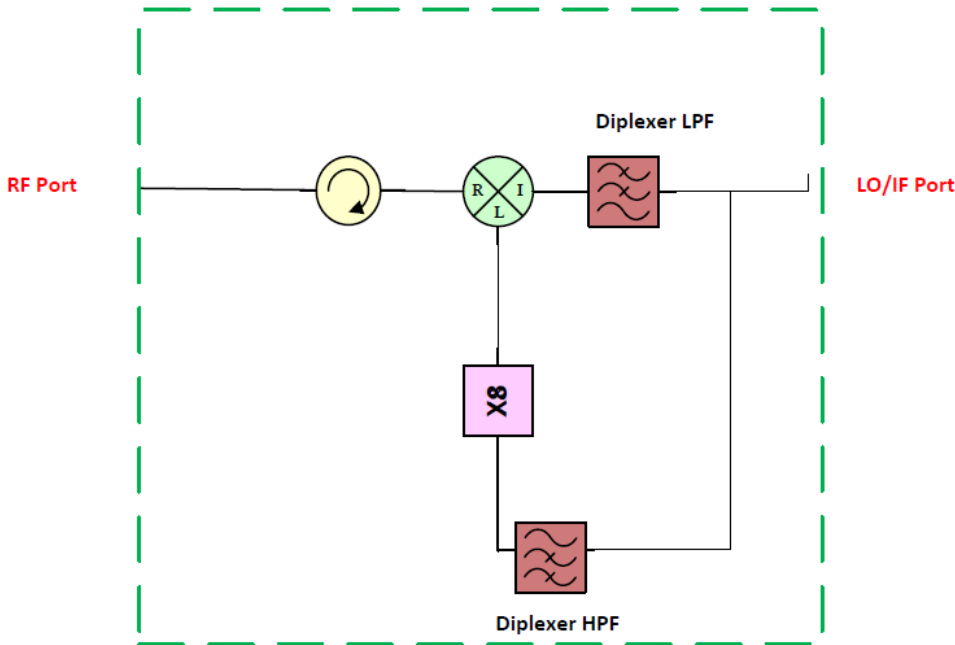
STC-N12-15-S1-IDP-AN

Conversion Loss vs. Frequency

IF=1.875 GHz, RF: -20 dBm; LO: +1 dBm

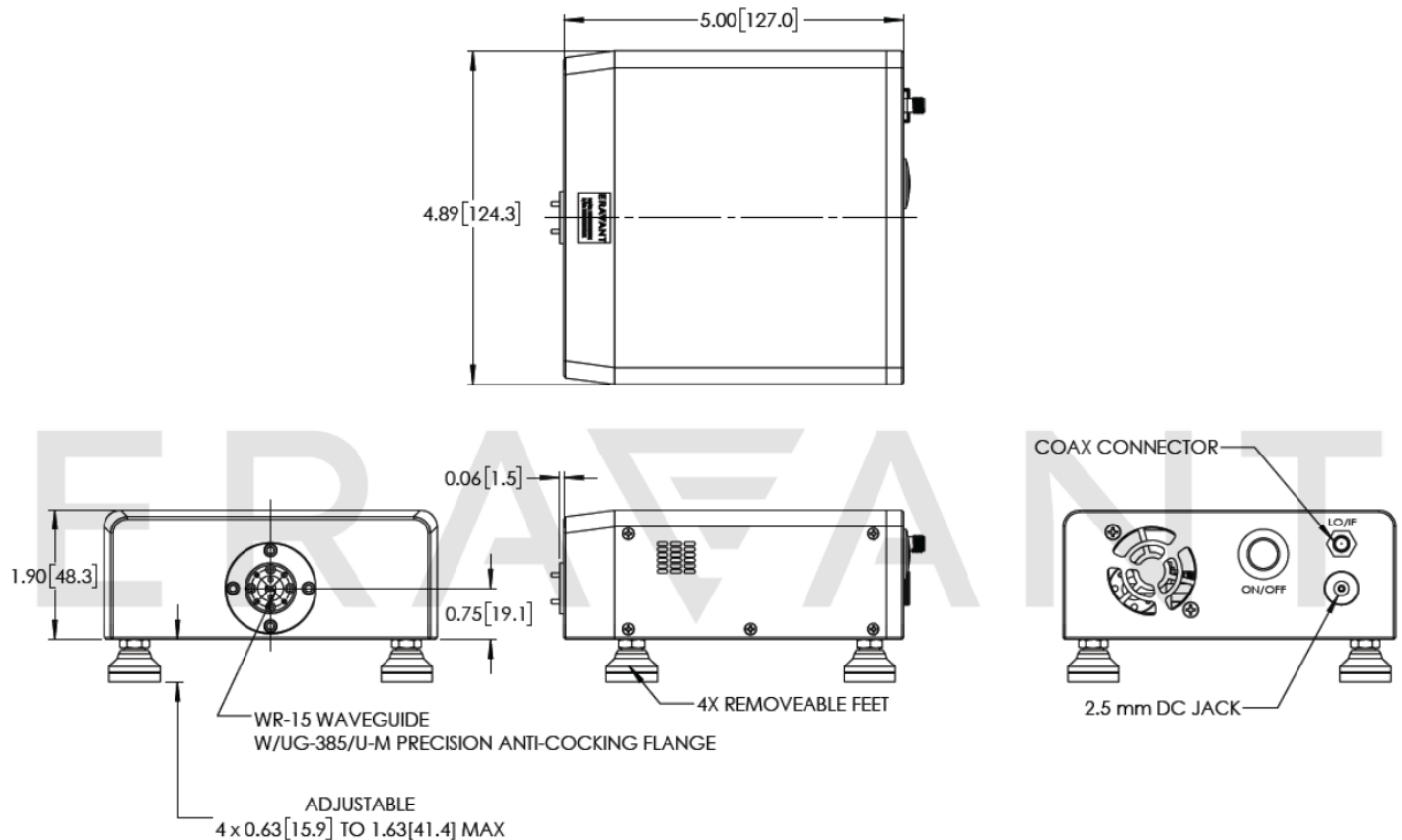


Simplified Block Diagram:



## STC-N12-15-S1-IDP-AN

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



### NOTE:

- The test 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.
- Eravant reserves the right to change the information presented without notice.

### CAUTION:

- 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,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. Eravant Torque wrench model [SCH-08008-S1](#) is highly recommended.

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MAKING MILLIMETERWAVE ACCESSIBLE