

STZ-08-01

Full Waveguide Band, F-Band Noise Source

STZ-08-01 is an F-Band noise source that delivers a 14 dB nominal ENR with extreme flatness across the frequency range of 90 to 140 GHz. The noise source can work in either CW or pulse AM mode by applying a TTL triggering signal via a female SMA connector. This feature can also be used in automatic test systems to remotely turn the noise source on and off. In addition, a toggle switch (power/triggering inversion switch) is provided to turn the noise source on and off manually. A Calibration Certificate for ENR values will be included.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Input Frequency Range	90 GHz		140 GHz
ENR	12 dB	14 dB	
ENR Flatness		± 2.0 dB	
Temperature Stability		0.01 dB/°C	
Long Term Temperature Stability		0.05 dB/day	
AM Modulation Trigger		TTL	
AM Modulation Rate		1.0 kHz	
DC Bias	+18 V _{DC} / 50 mA	+28 V _{DC} / 60 mA	+30 V _{DC} / 75 mA
Specification Temperature		+25°C	
Case Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
RF Output Port	WR-08 Waveguide with UG-387/U-M Flange
Bias Port Connector Type	BNC (F)
AM Modulation Connector Type	SMA (F)
Finish	Silver Plated and Black Paint
Weight	7.0 Oz
Size	1.97" (L) x 1.97" (Ø)
Outline	TZ-OF

ECCN

EAR99

FEATURES

- Full Waveguide Band Operation
- TTL or Manual On and Off Switches
- CW or Pulsed AM Operation Modes
- Precision Calibrated and Flat ENR

APPLICATIONS

- Test Labs
- Instrumentations
- Radiometric Systems

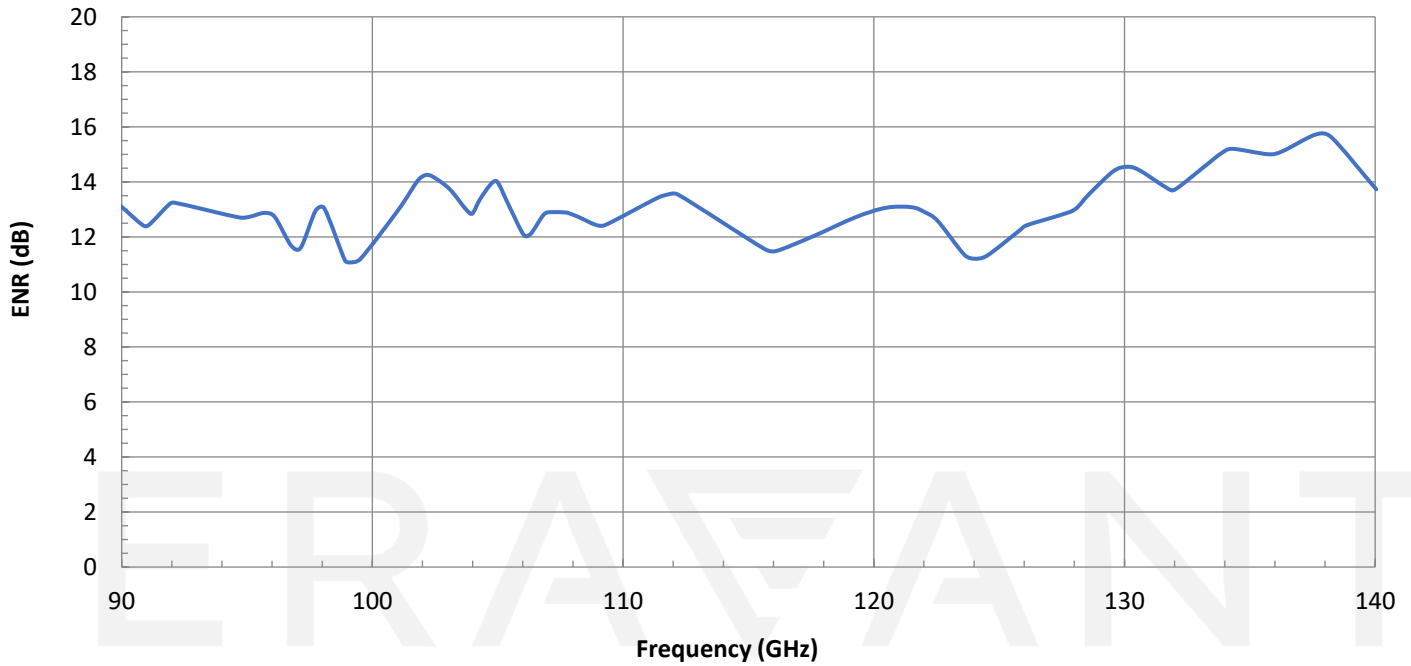
SUPPLEMENTAL DETAILS



STZ-08-01

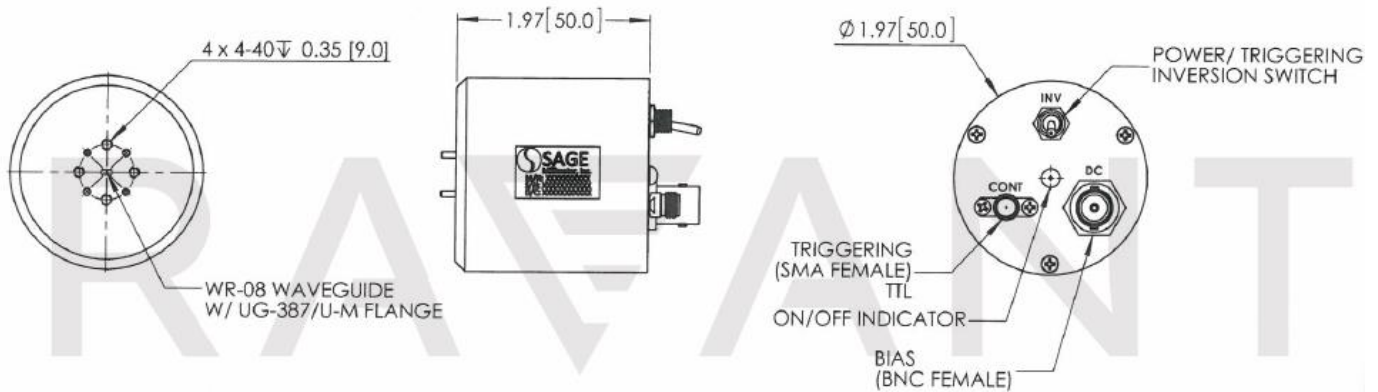
Typical ENR vs. Frequency

$V_{DC} = +28\text{ V}$, $I_{DC} = 60\text{ mA}$



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



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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.
- The **Triggering Port** (female SMA connector) of the noise source is provided to turn the noise source on the off via a TTL control signal any time the **Bias** is applied. The switching frequency is limited to 1 kHz.
- The **Power/Triggering Inversion Switch** of the noise is provided to manually turn the noise source on and off any time the **Bias** is applied. When the switch is in the “ON” position, the LED light will be illuminated.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum rating will damage the device.
- 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.

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