

## STZ-28-01

## Full Waveguide Band, Ka-Band Noise Source

**STZ-28-01** is a Ka-Band noise source that delivers a 16 dB nominal ENR with extreme flatness across the frequency range of 26.5 to 40 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           | 26.5 GHz                       |                                | 40 GHz                         |
| ENR                             | 15 dB                          | 16 dB                          |                                |
| ENR Flatness                    |                                | $\pm 1$ 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 <sub>DC</sub> /<br>50 mA | +28 V <sub>DC</sub> /<br>60 mA | +30 V <sub>DC</sub> /<br>75 mA |
| Specification Temperature       |                                | +25°C                          |                                |
| Case Temperature                | 0 °C                           |                                | +50 °C                         |

## Mechanical Specifications:

| Item                         | Specification                        |
|------------------------------|--------------------------------------|
| RF Output Port               | WR-28 Waveguide with UG-599/U Flange |
| Bias Port Connector Type     | BNC (F)                              |
| AM Modulation Connector Type | SMA (F)                              |
| Finish                       | Silver Plated and Black Paint        |
| Weight                       | 11.4 Oz                              |
| Size                         | 3.23" (L) x 1.97" (Ø)                |
| Outline                      | TZ-OA                                |

## 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

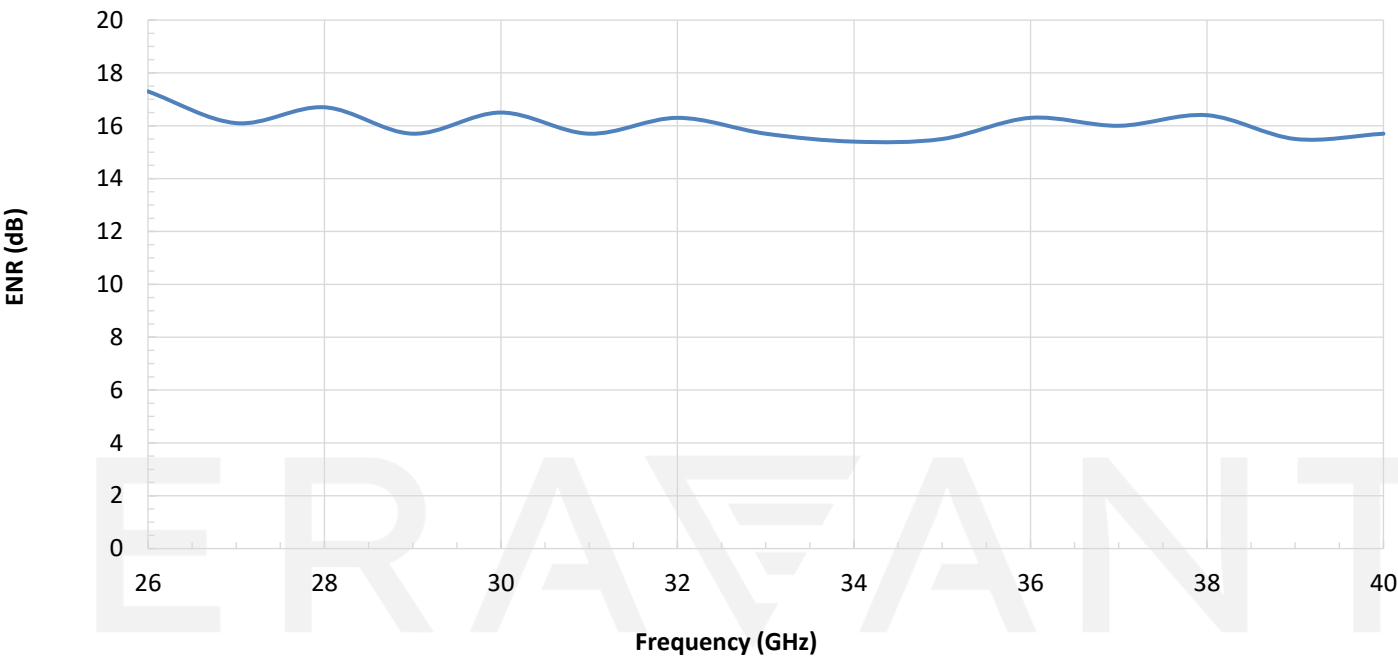
## SUPPLEMENTAL DETAILS



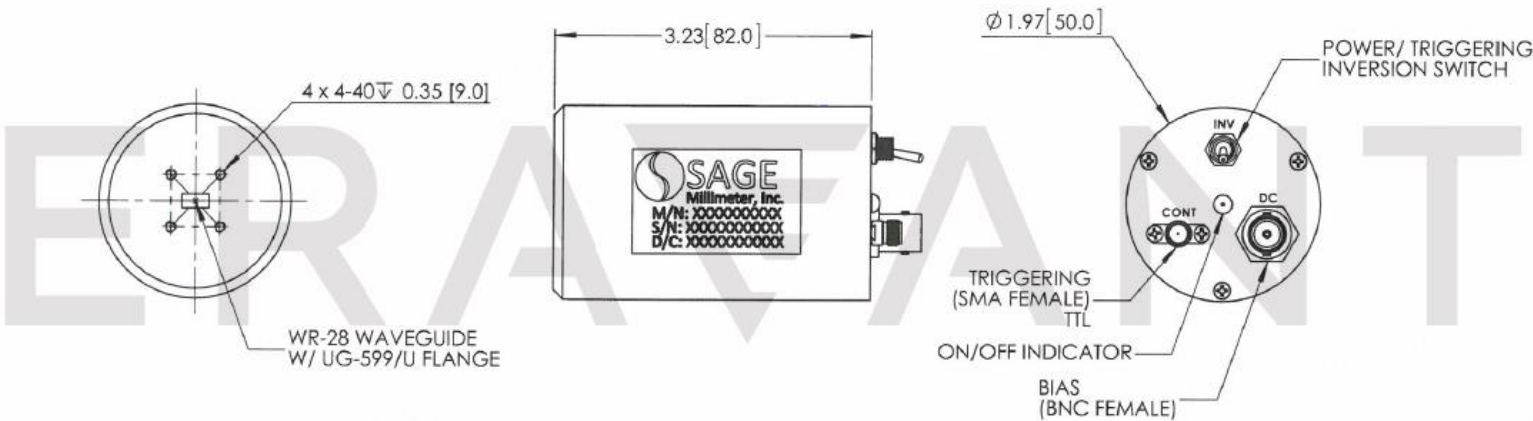
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Typical Performance vs. Frequency

$V_{DC} = +18\text{ V}$ ,  $I_{DC} = 50\text{ mA}$



**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.
- 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:  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm). Torque wrench model SCH-08008-S1 is highly recommended.

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