

Calibrated Noise Source Module With a Noise Output ENR of 15 dB, and a Voltage of +28 VDC, Operating From 10 MHz to 6 GHz With SMA

FMNG1002 is a coaxial packaged Noise Source module which operates over a wide frequency range from 10 MHz to 6 GHz. The design is calibrated in 1 GHz steps and is ideal for Noise Figure measurements and a variety of built-in test applications. This model operates at +28 Vdc and features an output ENR level of 15 dB min, typical flatness across the entire frequency band is +/- 2.0 dB, and excellent stability. Performance is specified over -55°C to +85°C with Noise Output Temperature Variation <0.01 dB/°C, Noise Output Variation <0.1 dB/%V. The rugged package design supports an output Female SMA connector with an EMI/RFI filter voltage pin and ground tab. Additionally, the model is designed to meet a variety of demanding MIL-STD-202F environmental test conditions including Humidity, Thermal Shock, and Vibration for added confidence for highly reliable operation.



Electrical Specifications

| Description | Min | Typ | Max | Units |
|-----------------------------------|-------------|--------|------|----------|
| Frequency Range | 0.01 | | 6 | GHz |
| Impedance | | 50 | | Ohms |
| Output ENR | 15 | | | dB |
| Flatness | | ±2 | | dB |
| VSWR | | 1.35:1 | | |
| Output Variation vs Input Voltage | | | 0.1 | dB/%V |
| Output Variation vs Temperature | | | 0.01 | dB/deg C |
| Bias Voltage 1 | 22 | 28 | 30 | Volts |
| Input Current 1 | | | 25 | mA |
| Calibration Points | 1 GHz Steps | | | |

Mechanical Specifications

| | |
|-------------------|----------------------|
| Size | |
| Length | 1.25 in [31.75 mm] |
| Width/Dia. | 0.75 in [19.05 mm] |
| Height | 0.5 in [12.7 mm] |
| Weight | 0.0625 lbs [28.35 g] |
| Package Type | Connectorized Module |
| Connectors | |
| DC Connector | Pin |
| Output Connector | SMA Female |

Environmental Specifications

| | |
|--------------------|--|
| Temperature | |
| Operating Range | -55 to +85 deg C |
| Storage Range | -65 to +125 deg C |
| Environment | |
| Humidity | MIL-STD-202F, Method 103, Cond B (96 hrs@95% R.H.) |
| Shock | MIL-STD-202F, Method 213, Cond B (100g, 6 msec) |

Features:

- 10 MHz to 6 GHz Frequency Range
- Output Noise ENR 15 dB min
- Flatness 2.0 dB typ
- 28 VDC Operation
- Small Size 1.25" by 0.75" by 0.50"
- Internal Voltage Regulation

Applications:

- Noise Figure Measurements
- Built-In Test equipment for signal strength calibrators and radar applications
- Automatic Test Equipment (ATE)
- Jamming
- Baseband Signal Simulation
- Additive White Gaussian Noise (AWGN) source for Error Rate Measurements
- Increase dynamic range of A/D Converters
- SATCOM for bit error rate (BER) and noise figure
- Can be used as a Jitter source.

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Vibration
 Altitude
 Temperature Cycle
 Thermal Shock
 ESD Sensitivity

MIL-STD-202F, Method 204, Cond B (0.6" 2x ampl or 15g)
 MIL-STD-202F, Method 105, Condition B (50,000 ft)
 MIL-STD-202F, Method 105C, Condition D (5 cycles)
 MIL-STD-202F, Method 107, Condition A (5 cycles)
 ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.

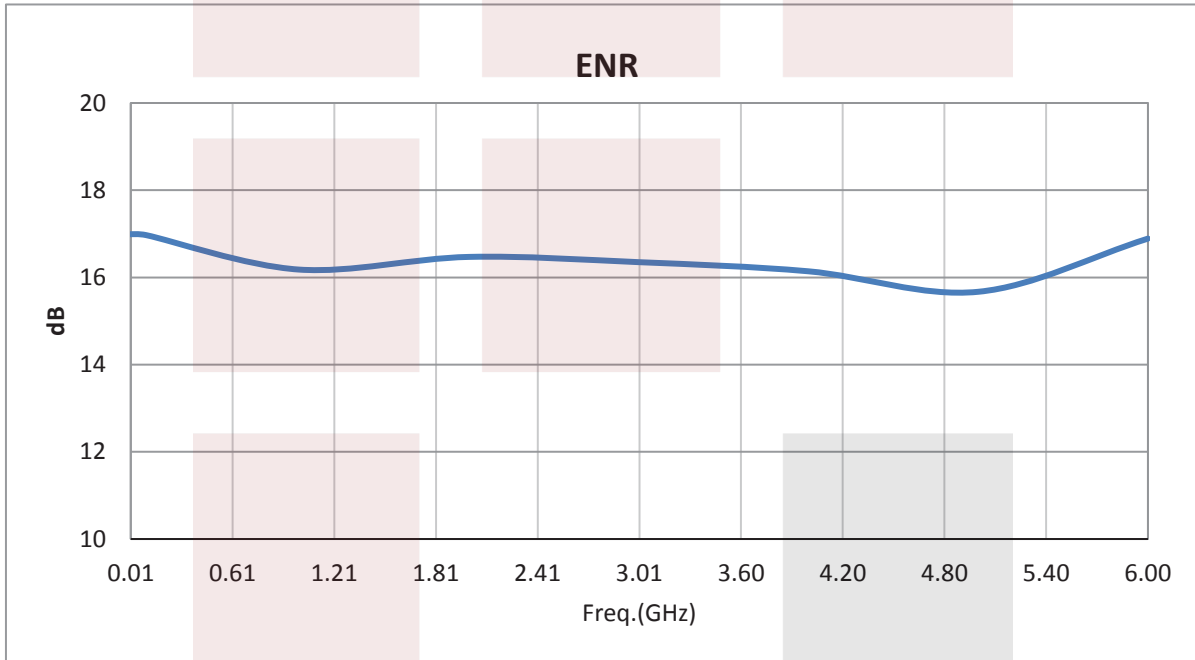


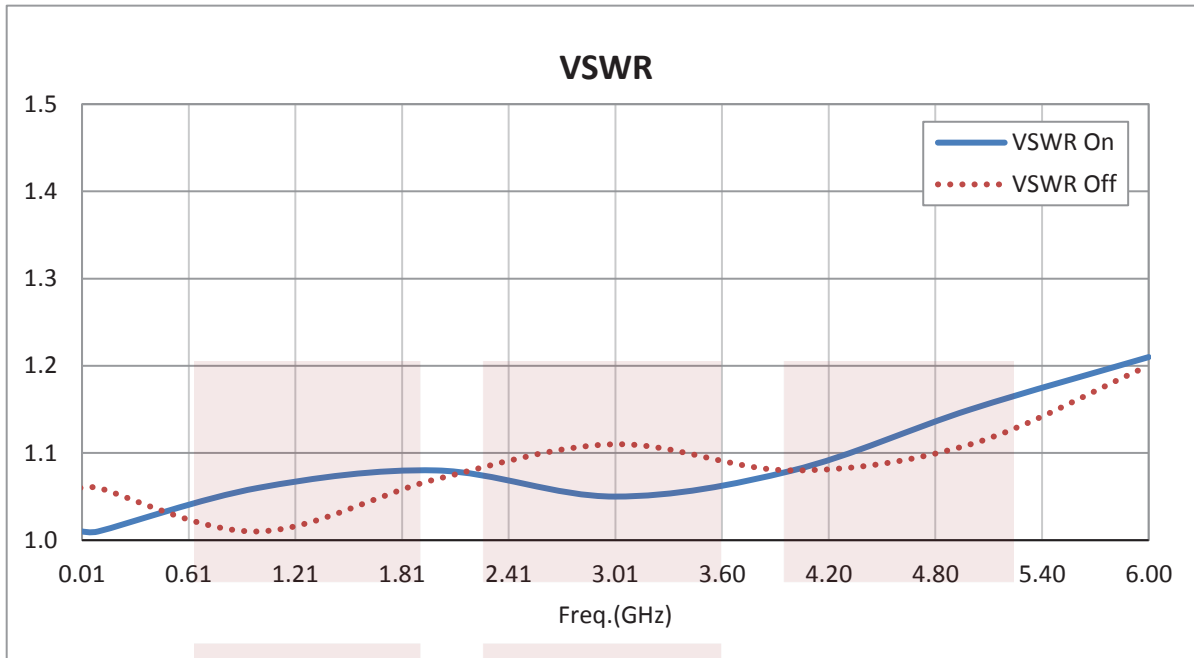
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



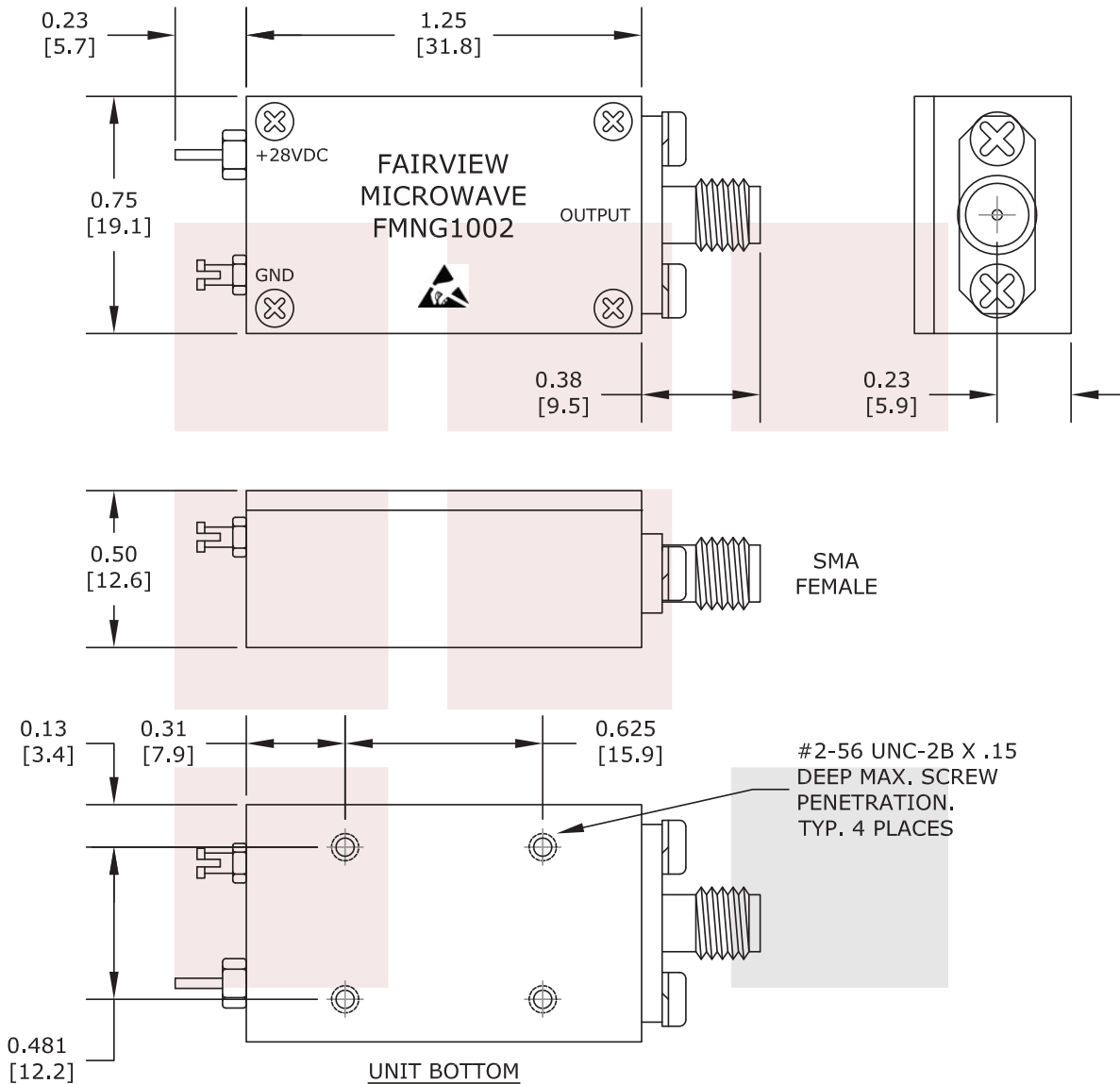


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Click the following link to obtain additional part information: [Calibrated Noise Source Module With a Noise Output ENR of 15 dB, and a Voltage of +28 VDC, Operating From 10 MHz to 6 GHz With SMA FMNG1002](https://www.fairviewmicrowave.com/calibrated-noise-source-enr-15-db-6-ghz-sma-fmng1002-p.aspx)

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| TITLE Calibrated Noise Source Module With a Noise Output ENR of 15 dB, and a Voltage of +28 VDC, Operating From 10 MHz to 6 GHz With SMA | | DWG NO FMNG1002 | | CAGE CODE 3FKR5 | |
| CAD FILE | 110915 | SHEET | SCALE | N/A | SIZE A 2233 |