

Precision Calibrated, Output Isolator WR-15 Waveguide Noise Source Module, Output ENR of 15 dB, +28 VDC, 50 GHz to 75 GHz

The FMWNS2003 is a V Band waveguide Noise Source module with output Isolator that operates over the full frequency range of 50 GHz to 75 GHz. The benefit of the output Isolator results in improved output port matching for more accurate measurements as well as protection of the noise diode from incident RF power. The microstrip assembly incorporates a millimeter wave noise diode screened for superior noise characteristics that results in highly stable and reliable performance. This module can be used in built-in test and laboratory applications, and can replace outdated gas tube noise sources. Additional applications include noise figure measurements, millimeter wave radiometers, automotive radar, and reserach and development in mm-wave broadband wireless communication systems. The design operates at +28 Vdc with an output ENR level of 15 dB min and a noise output variation of < 0.01 dB/°C, < 0.1 dB/%V. Maximum Flatness across the frequency band is +/- 2.5 dB and output VSWR is 1.3:1 with the isolator. Operating temperature range is 0°C to +85°C. The rugged package supports a WR-15 waveguide interface and a BNC connector for the DC voltage supply.



Features:

- WR-15 Waveguide Noise Source with Ouput Isolator
- U Band Frequency Range: 50 GHz to 75 GHz
- Output ENR Level: 15 dB min
- Noise Output Variation: < 0.01 dB/oC , < 0.1 dB/%V
- Flatness +/- 2.5 dB max
- DC Voltage: +28 Vdc
- 0°C to +85°C Operating Temperature
- VSWR: 1.3:1 Max

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	50		75	GHz
Impedance		50		Ohms
Output ENR	15			dB
Flatness			±2.5	dB
VSWR			1.6:1	
Supply Voltage Sensitivity			0.1	dB/%V
Thermal Sensitivity			0.01	dB/°C
Bias Voltage 1		28		Volts
Input Current 1			30	mA

Mechanical Specifications

Package Type Connectorized Module

Environmental Specifications

Temperature

Operating Range 0 to +85 °C

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

Plotted and Other Data

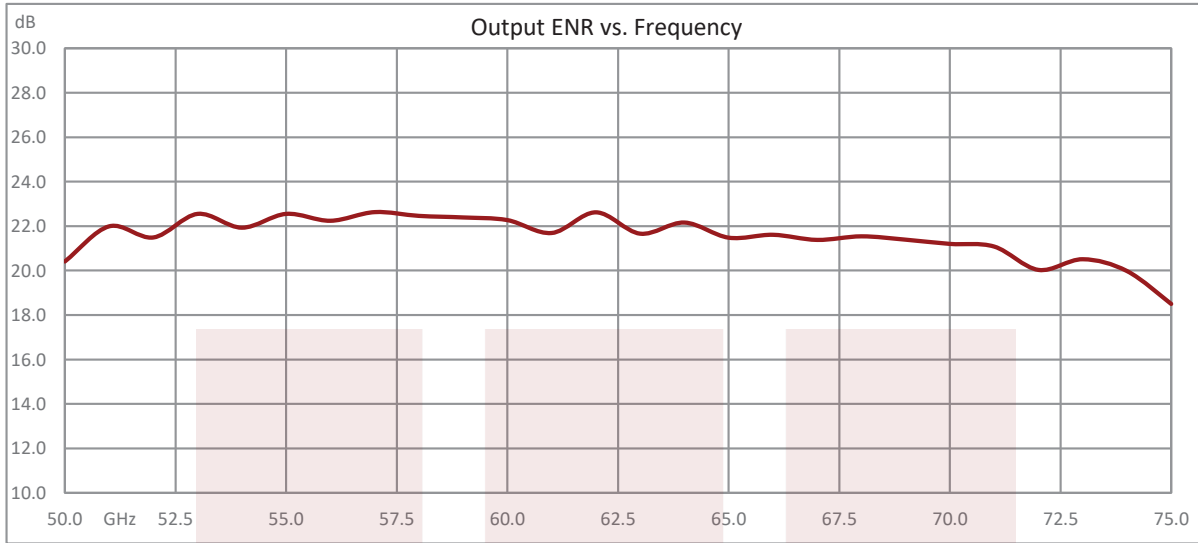
Notes:

Applications:

- Noise Figure Test & Measurement
- Built-In Test Applications
- Laboratory Applications
- mm-Wave Radiometers
- Automotive Radar
- R&D for Broadband mm-Wave Wireless Communication Systems

Fairview Microwave
301 Leora Ln., Suite 100
Lewisville, TX 75056
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Typical Performance Data



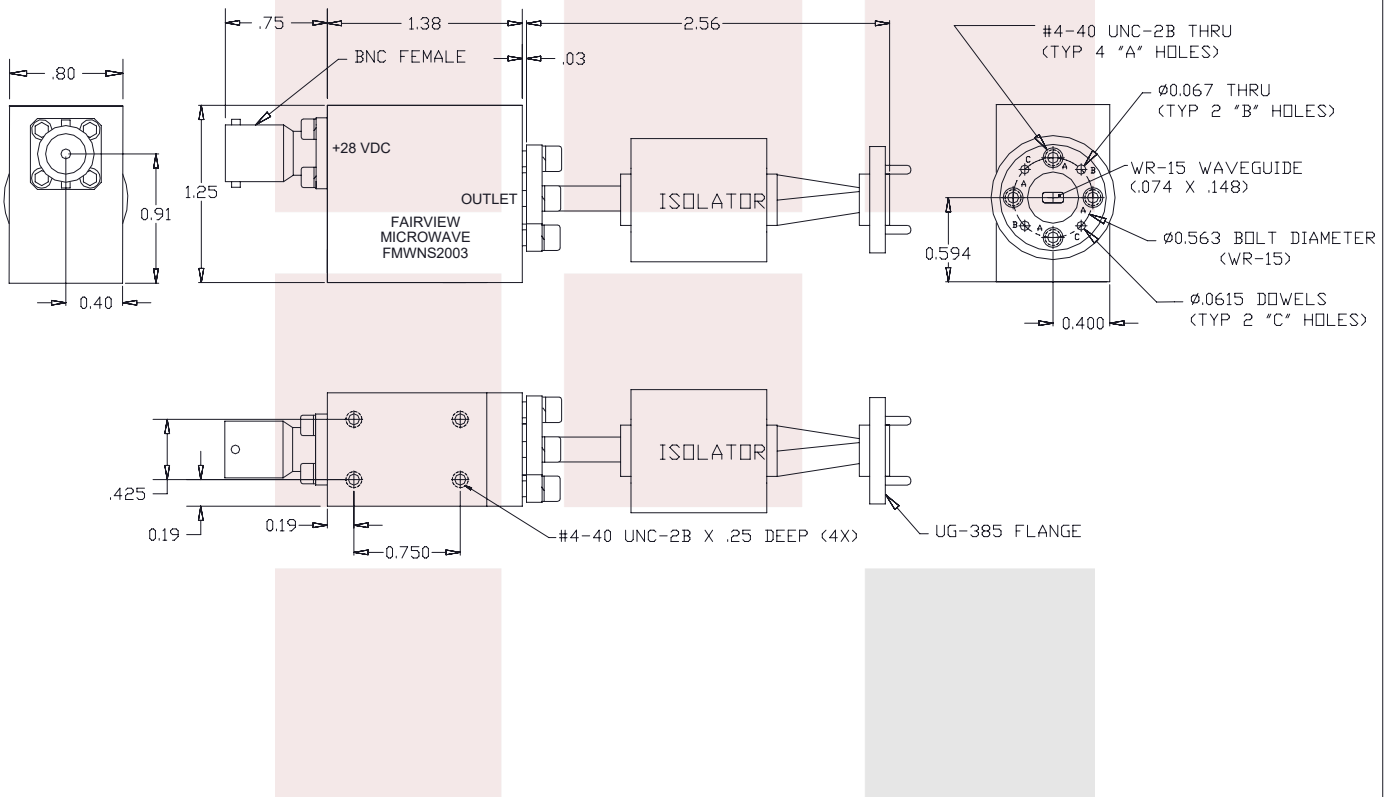
Precision Calibrated, Output Isolator WR-15 Waveguide Noise Source Module, Output ENR of 15 dB, +28 VDC, 50 GHz to 75 GHz from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

Click the following link to obtain additional part information: [Precision Calibrated, Output Isolator WR-15 Waveguide Noise Source Module, Output ENR of 15 dB, +28 VDC, 50 GHz to 75 GHz FMWNS2003](#)

URL: <https://www.fairviewmicrowave.com/wr-15-precision-waveguide-calibrated-noise-source-enr-15-db-75-ghz-fm-wns2003-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	02/19/2020	TGALLA



THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

TITLE
Precision Calibrated, Output Isolator WR-15
Waveguide Noise Source Module, Output ENR of 15
dB, +28 VDC, 50 GHz to 75 GHz

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

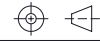
TOLERANCES:

.X = ±.2 [.51] FRACTIONS ± 1/32
.XX = ±.02 [.51] ANGLES ± 1°
.XXX = ±.005 [.13]

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0
12 [305] < L ≤ 60 [1524] = +2 [51] / -0
60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
300 [7620] < L = +5%L / -0

THIRD-ANGLE PROJECTION



THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF FAIRVIEW MICROWAVE CORPORATION. ALL RIGHTS RESERVED.

SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY DZINN	ITEM NO. FMWNS2003	REV A
-----------	--------------------	-------------------	-----------------------	----------

T-Rev.D