

WR-12 Waveguide Power Detector, E Band, 60 GHz to 90 GHz, Positive Output Voltage Polarity, UG-387/U Flange

The FMMT3011 is a WR-12 Waveguide Power Detector, operating across the E Band from 60 GHz to 90 GHz. This 50 Ohm design features Positive Output Voltage Polarity. Impressive typical performance includes Video Sensitivity of 800 mV/mW with +/- 2dB flatness, Tangential Sensitivity of -50 dBm, Input Dynamic Range of -55 dBm to +10 dBm, and Detection Speed Rise Time of 5 nsec. Maximum input power handling is +17 dBm. The rugged and small size Brass package design is gold plated and supports a UG-387/U waveguide flange pattern at RF input and output ports. The DC output port uses an SMA Female connector. The module operates across a temperature range from 0°C to +50°C.



Features:

- WR-12 Waveguide Power Detector
- 60 GHz to 90 GHz
- Ka Band
- Positive Output Voltage Polarity
- Voltage Sensitivity 800 mV/mW
- Sensitivity Flatness +/- 2dB typ
- Tangential Sensitivity -50 dBm typ
- Input Dynamic Range -55 dBm to +10 dBm
- Detection Speed Rise Time 5 nsec typ
- Max RF Input Power +17 dBm
- 50 Ohm Design
- RF Input and Output Waveguide Flange UG-387/U
- SMA Female DC Output Port
- Operational Temperature Range -0°C to +50°C
- Rugged and Compact Brass Gold Plated Package Design

Electrical Specifications

Description	Min	Typ	Max	Unit
Frequency Range	60		90	GHz
Voltage Sensitivity		1,100		mV/mW
RF Input Power			+17	dBm
Tangential Sensitivity		-50		dBm
Sensitivity Flatness		2		dB
Dynamic Range	-55		+10	dBm
Output Voltage Polarity		Positive		
RF Input Power for Square Law Region			-20	dBm
Video Bandwidth		1		GHz
RF Input Power applied for testing		-20		dBm
Detection Speed, Rise Time		5		ns

Mechanical Specifications

Temperature	
Operating Range	0 to +50 deg C
Size	
Length	1.104 in [28.04 mm]
Width	0.89 in [22.61 mm]
Height	1.114 in [28.3 mm]
Weight	0.15 lbs [68.04 g]
Waveguide Size	WR-12
Flange Destination	UG-387/U
Flange Type	Round Cover
DC Connector	SMA Female
Material and Plating	Brass, Gold

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

Plotted and Other Data

Notes:

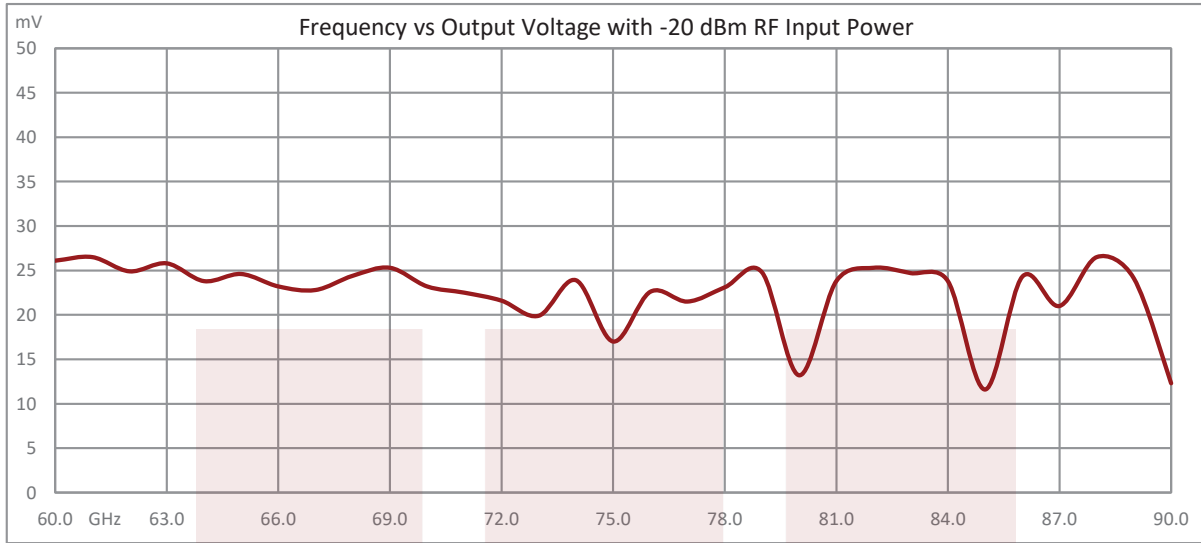
- Values at 25 °C, sea level

Applications:

- Test & Measurement
- Military & Commercial Communications
- Military Electronic Systems
- Research & Development

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Typical Performance Data



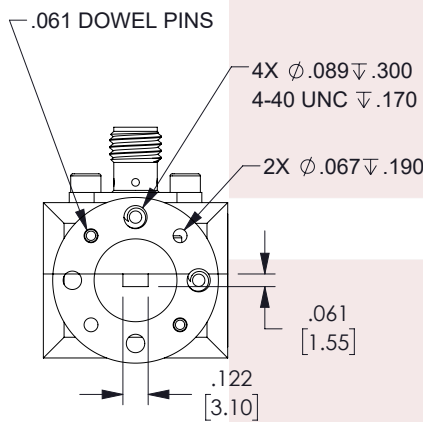
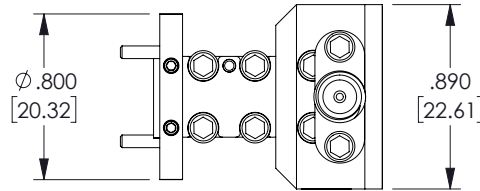
WR-12 Waveguide Power Detector, E Band, 60 GHz to 90 GHz, Positive Output Voltage Polarity, UG-387/U Flange from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [E Band WR-15 Waveguide Power Detector, V Band, 50 GHz to 75 GHz, Positive Output Voltage Polarity, UG-385/U Flange FMMT3011](#)

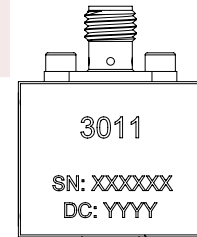
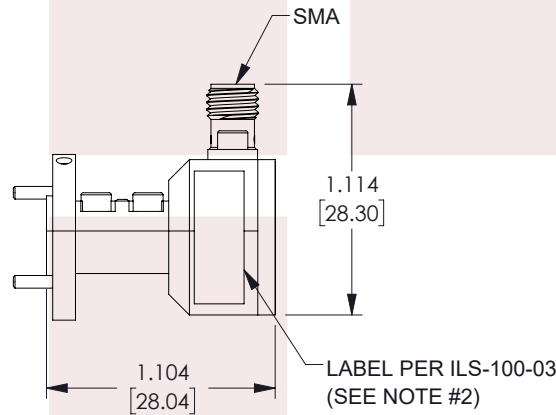
URL:

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	8/16/2022	TGALLA



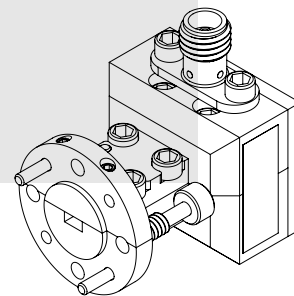
UG-387/U



SEE NOTE #3

NOTES:

1. MATERIAL: 1/2 HARD BRASS
2. LABEL PER ILS-100-03. FOR INTERNAL REFERENCE ONLY. LABEL LOCATION FOR REFERENCE ONLY.
3. SERIAL NUMBER AND DATE CODE EX: SN: 5XZY2U, DC: 2232



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TITLE

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

TOLERANCES:

.X = ±.2 [5.08] FRACTIONS
.XX = ±.02 [.51] ± 1/32
.XXX = ±.005 [.13] ANGLES ± 1°

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



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SHEET 1 OF 1

SCALE N/A

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SIZE A	CAGE CODE 3FKR5	DRAWN BY DMAY	ITEM NO. FMMT3011	REV A
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T-Rev.D