

WR-19 Waveguide Power Detector, U Band, 40 GHz to 60 GHz, Positive Output Voltage Polarity, UG-383/ U-M Flange

The FMMT3009 is a WR-19 Waveguide Power Detector, operating across the U Band from 40 GHz to 60 GHz. This 50 Ohm design features Positive Output Voltage Polarity. Impressive typical performance includes Video Sensitivity of 1100 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-383/U-M 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-19 Waveguide Power Detector
- 40 GHz to 60 GHz
- U Band
- Positive Output Voltage Polarity
- Voltage Sensitivity 1100 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-383/U-M
- 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	40		60	GHz
Voltage Sensitivity		1,100		mV/mW
RF Input Power			-20	dBm
Tangential Sensitivity		-50		dBm
Sensitivity Flatness		1.5		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	0.1 lbs [45.36 g]
Waveguide Size	WR-19
Flange Destination	UG-383/U-M
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:

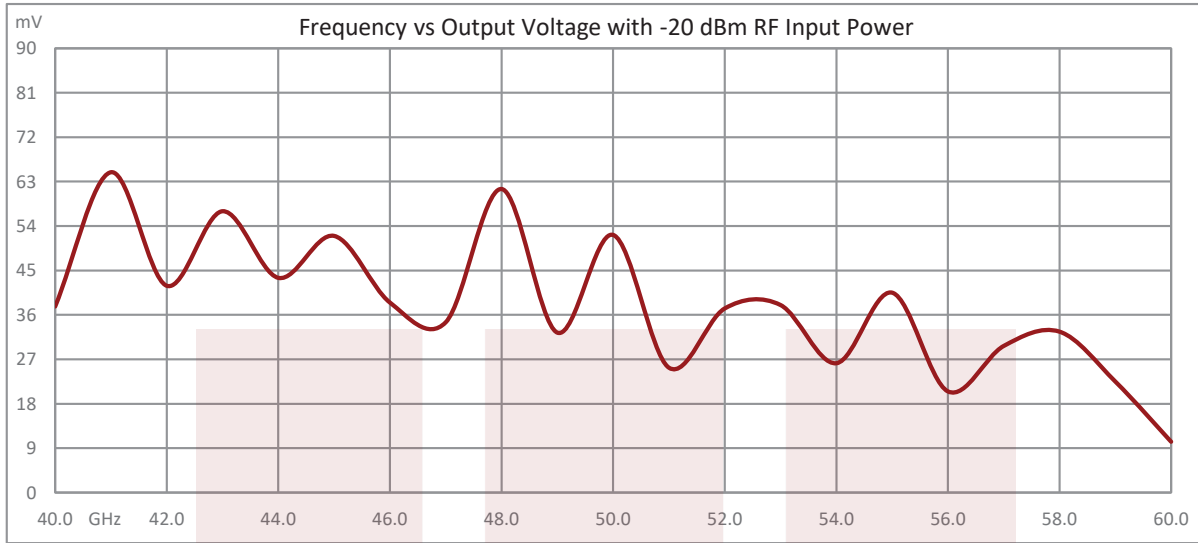
- Values at 25 °C, sea level

Applications:

- Military & Space
- R&D Labs
- Communicatoin Systems
- Radar Systems
- Microwave Radio Systems
- RF Wideband Front Ends
- Test Instrumentation

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Typical Performance Data



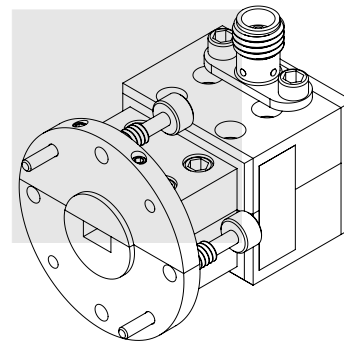
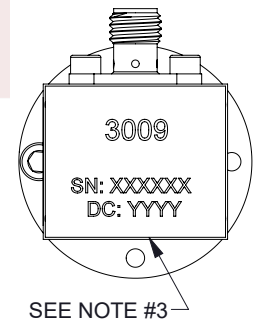
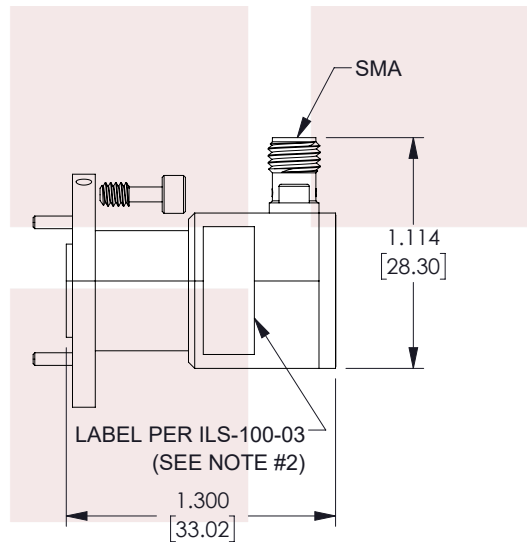
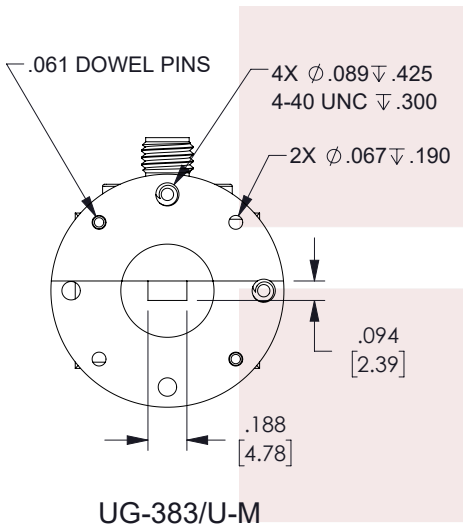
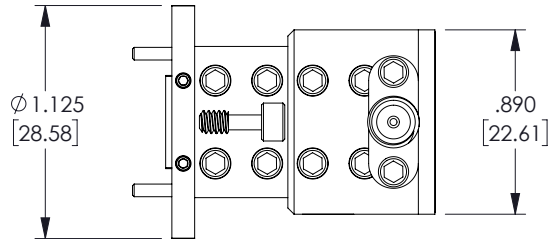
WR-19 Waveguide Power Detector, U Band, 40 GHz to 60 GHz, Positive Output Voltage Polarity, UG-383/U-M Flange from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [U Band WR-19 Waveguide Power Detector, U Band, 40 GHz to 60 GHz, Positive Output Voltage Polarity, UG-383/U-M Flange FMMT3009](#)

URL:

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



NOTES:

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

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TITLE

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

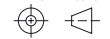
TOLERANCES:

.X = ±.2 [5.08] FRACTIONS ± 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



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY DMAY	ITEM NO. FMMT3009	REV A
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T-Rev.D