

Power Detector, 50 MHz to 5 GHz, SMA, Postive Output Slope

The FMPT1000 is a broadband Power Detector module that covers a frequency band from 50 MHz to 5000 MHz. Desirable performance features include a positive output slope with a true RMS response from 0.1 to 5 volts, 30 dB of dynamic range, and a fast pulse response of 7 μ sec typical. The 50 ohm detector design requires a single +5 volt power supply, can handle up to +15 dBm input power, and supports Female SMA connectors. The rugged compact package assembly operates over a -40°C to +85°C temperature range and is designed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude.

Electrical Specifications

Description	Min	Typ	Max	Unit
Frequency Range	50		5	GHz
VSWR		1.4:1	2:1	
Dynamic Range	27	30		dB
Output Voltage (RMS Response)				
Pin = +10 dBm @ 1000 MHz	4.85	4.95		V
Pin = -20 dBm @1000 MHz	0.05	0.15		V
Conversion Gain	6	6.3		V/Vrms
Deviation @25°C		± 0.25	± 0.5	dB
Deviation over OTR		± 0.25	± 0.5	dB
Response Time				
Pin = -25 - 0 dBm			7	us
Pin = 0 - +10 dBm	7		17	us
Output Current Sink	10	20		mA
Short Circuit Current			40	mA
Supply Quiescent Current		2	4	mA
Operating Temperature Range	-40		+85	deg C



Features:

- Frequency Range: 50 to 5000 MHz
- Dynamic Range: 30 dB
- True RMS Output Voltage Response: 0.1 to 5V
- Positive Output Slope
- Input VSWR: 1.4:1 typ
- Absolute Max RF Input Power: +15 dBm
- Pulse Reponse: 7 μ sec
- DC Power: +5V
- SMA Female Connectors
- Operating Temperature: -40°C to +85°C
- Guaranteed to meet MIL-STD-202 Environmental Conditions

Applications:

- Transmit/Receive Power Measurement
- Input Protection
- Return Loss Measurement
- RF Pulse Detection
- Radar
- Electronic Warfare
- Test and Measurement
- Wireless Signal Testing & Optimization
- Power Amplifier Linearization
- CW & Modulated Waveform Measurements

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Mechanical Specifications

Weight	0.087 lbs [39.46 g]
Connector 1	SMA Female
Connector 2	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 deg C

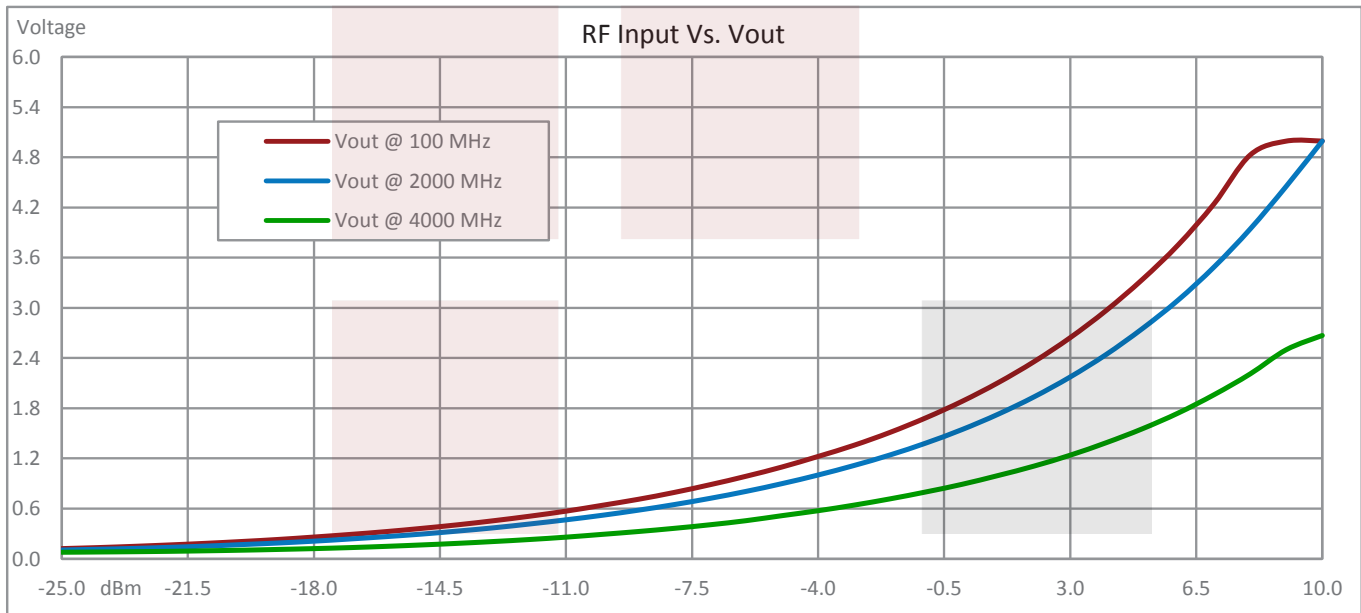
Humidity	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B

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

Plotted and Other Data

Notes:

Typical Performance Data



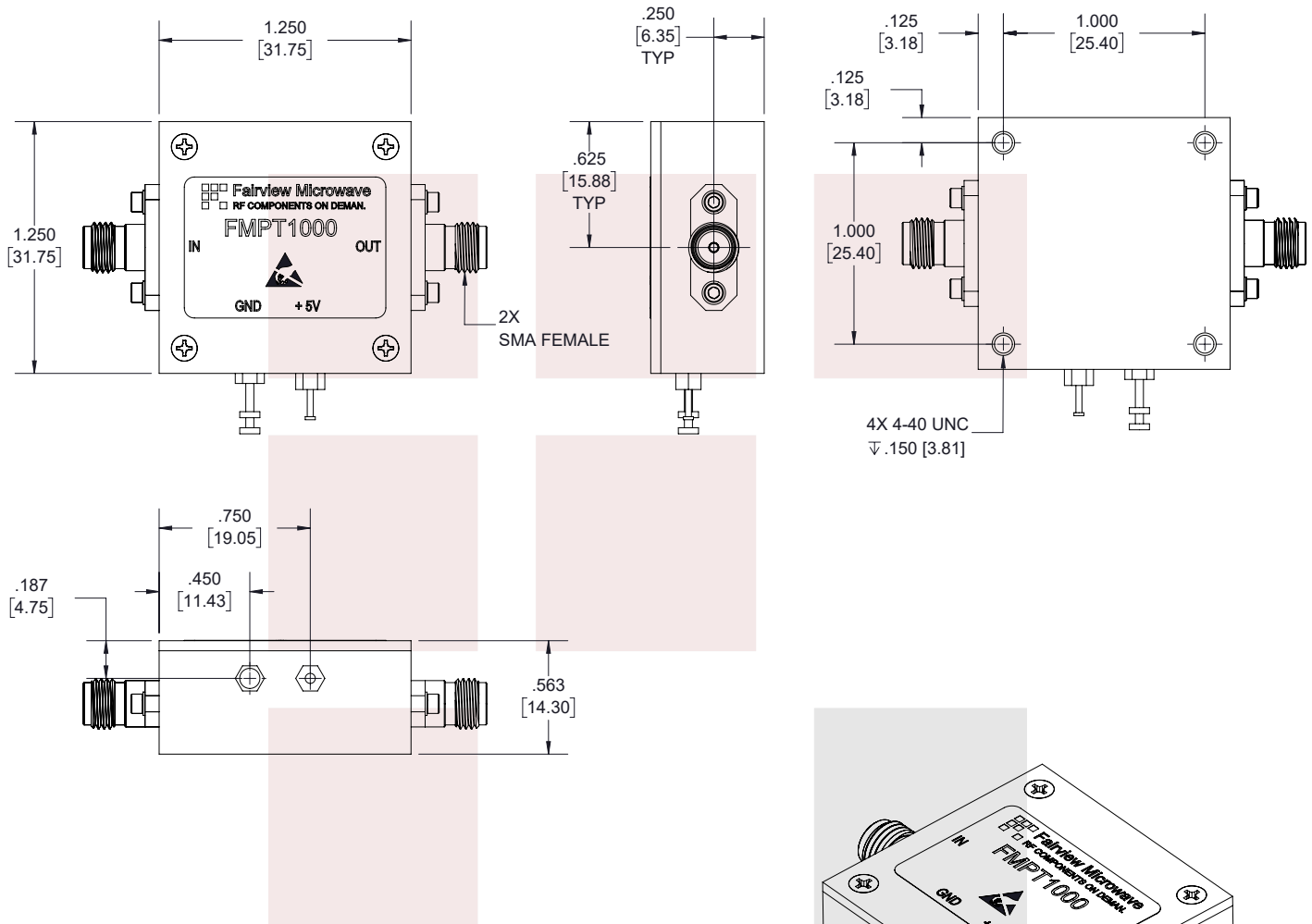
Power Detector, 50 MHz to 5 GHz, SMA, Postive Output Slope from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Power Detector, 50 MHz to 5 GHz, SMA, Postive Output Slope FMPT1000](#)

URL: <https://www.fairviewmicrowave.com/power-detector-sma-female-50-mhz-5-ghz-fmpt1000-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.





STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].						
TITLE Power Detector, 50 MHz to 5 GHz, SMA, Postive Output Slope		DWG NO FMPT1000	CAGE CODE 3FKR5					
CAD FILE	04/23/18	SHEET	1 OF 1	SCALE	N/A	SIZE	A	7361