

RPD Series

50 – 5000MHz RF Power Detector

Features

- Frequency Range: 50 - 5000MHz
- Dynamic Range: 30dB
- True RMS Response: 0.1 – 5V
- Output Slope: Positive
- Pulse Response: 7 μ s
- DC Power: 5V/2mA
- SMA Connector

Picture



Description

RPD-5501 is a 30dB Dynamic Range RMS RF Power Detector operates in wideband with frequency range from 50MHz to 5000MHz for CW and modulated waveform power measurements.

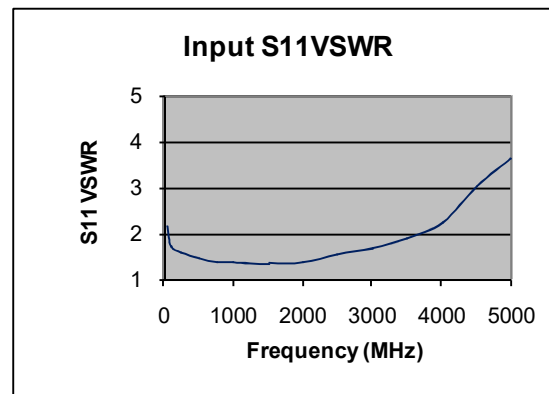
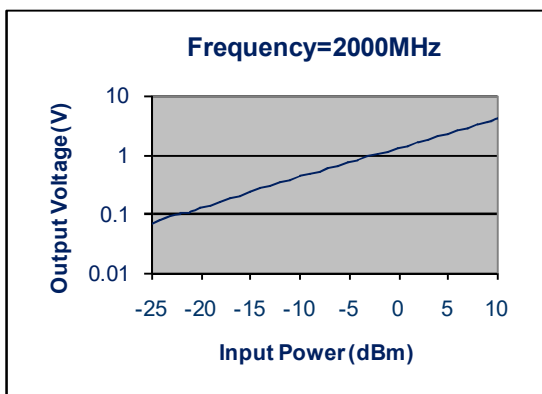
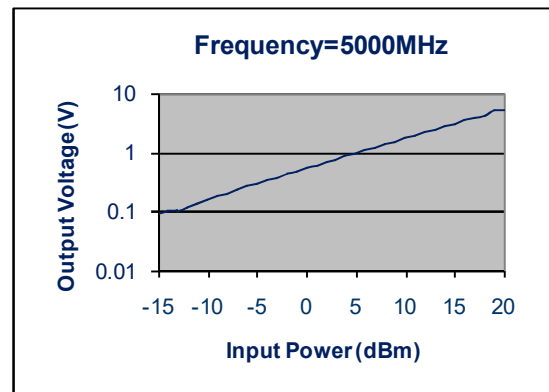
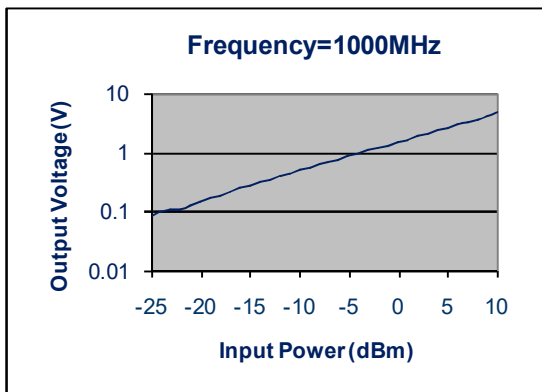
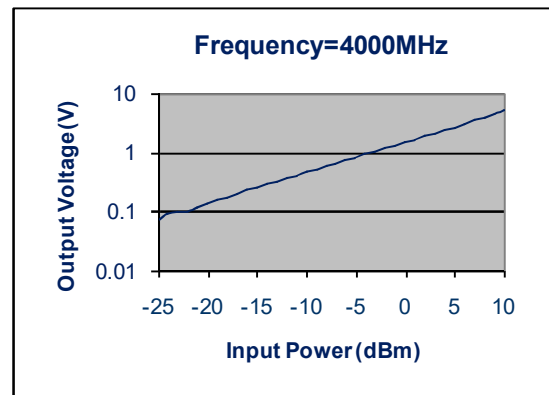
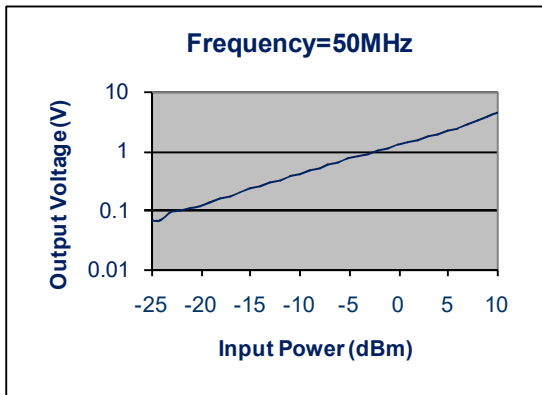
Electrical Specifications @ +25 °C, $Z_{in} = 50 \Omega$, DC Supply = +5V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	50		5000
Dynamic Range	dB	27	30	
Output Voltage (RMS Response)				
Pin= +10dBm @ 1000MHz	V	4.85	4.95	
Pin=-20dBm @ 1000MHz	V	0.05	0.15	
Conversion Gain	V/Vrms	6.0	6.3	
Deviation at +25°C	dB		+/-0.25	+/-0.5
Deviation v.s Temperature -40 °C to +85°C	dB		+/-0.25	+/-0.5
Pulse Response Time	μ s	7 max (Pin=-25 to 0dBm)		
	μ s	7 to 17 max (Pin=0 to +10dBm)		
Input VSWR @ 2000MHz			1.4:1	2.0:1
Output Current	mA	10	20	
Short Circuit Current	mA			40
DC Power Supply	V	4.5	5	5.5
Supply Quiescent Current	mA		2	4

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Typical Performance @ +25 °C



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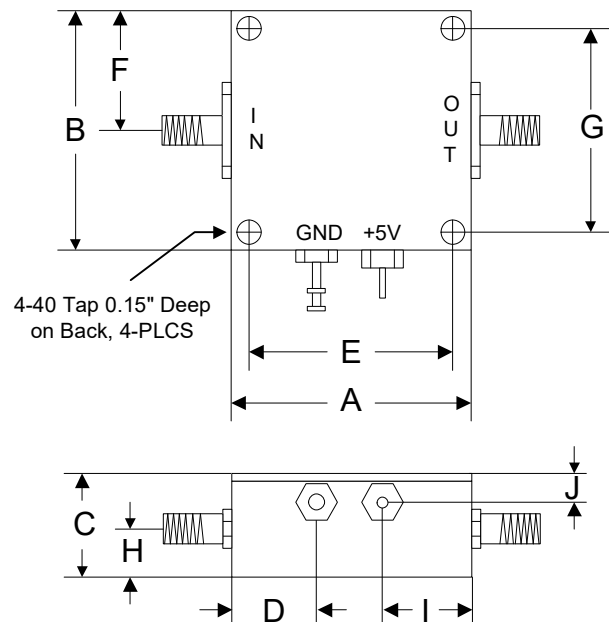
Absolute Maximum Ratings

Parameter	Absolute Maximum
RF/REF Input Power	+15dBm
Supply Voltage	+5.5V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline



	A	B	C	D	E	F	G	H	I	J
Inch	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187
mm	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76