Coaxial Power Detector
0.01GHz-18GHz

Product Description

The RPDT0018GA is a coaxial power detector with a frequency range of 0.01 to 18GHz.

The max input Power of the detector is 0.1W. The max VSWR of 1.8:1.

The working temperature of this product is between - 20℃ and + 55℃.

Features

- Wide Band
- High Sensitivity
- Low VSWR

Typical Applications

- Wireless Infrastructure
- Military and Aerospace Applications
- Test Instrumentation
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- TR Modules
- Research and Development
- Cellular Base Stations

Electrical Specifications (T_A=+25ºC)

Parameter	Min	Typ	Max	Units
Frequency Range	0.01		18	GHz
VSWR			1.8	: 1
Sensitivity		See Table		
Power			0.1	W
Polarity		Positive		
Weight		0.02		lbs.
Input / Output Connectors		SMA-Male/BNC-Female(Standard) N-Male/BNC-Female(Option)		
Package		Epoxy Sealed (Standard)		
		Hermetically Sealed (Optional)		

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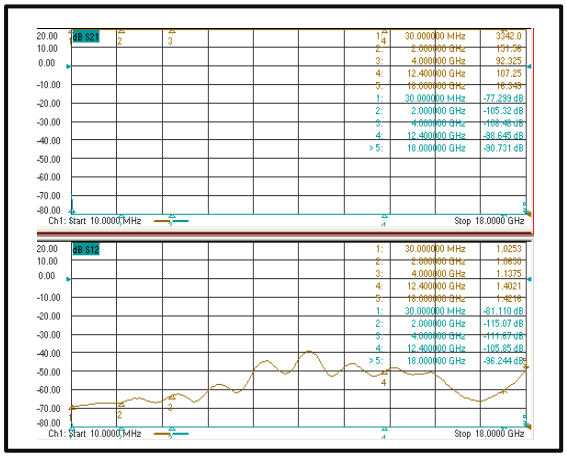
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20ºC to +55ºC (Case Temperature)
Storage Temperature	-55ºC to +125ºC
Thermal Shock	-20ºC → +55ºC (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85ºC for 72 Hours
Shock	1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883 (For Hermetically Sealed Units)

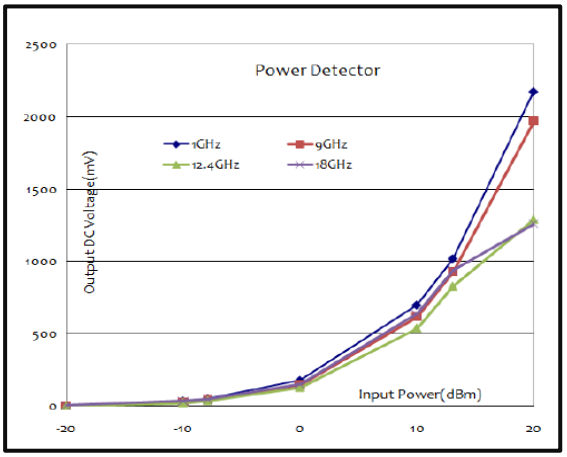
**For vibration testing details please see additional information section.

Typical Performance Plots

S21 & S12



Output DC Voltage vs. Input Power

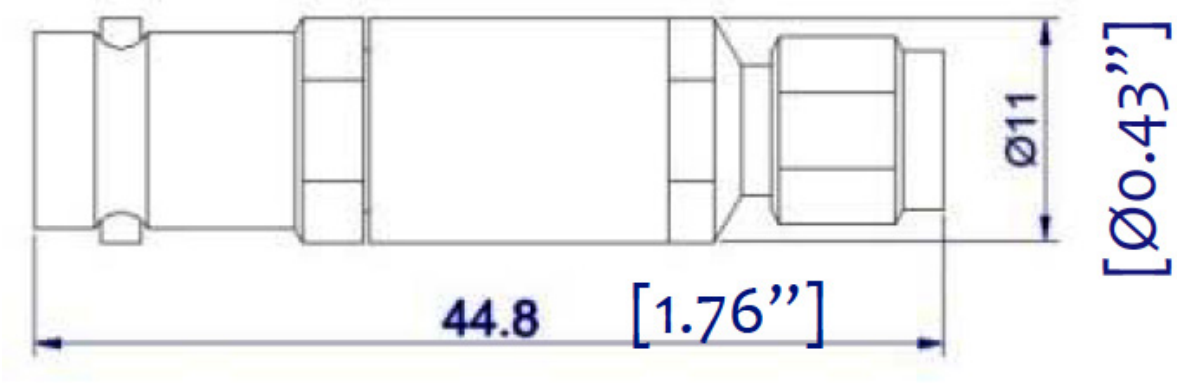


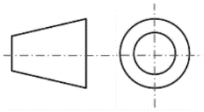
*Measured into 50 ohm load.

Frequency (GHz)	0.01	0.1	0.5	1	2	3	4	5	6	7	8
Sensitivity (mV/uW)	1.81	1.82	1.79	1.76	1.73	1.73	1.70	1.67	1.62	1.63	1.59
Frequency (GHz)	9	10	11	12	13	14	15	16	17	18	
Sensitivity (mV/uW)	1.58	1.53	1.50	1.53	1.52	1.57	1.55	1.53	1.55	1.60	

*Measured into high impedance load.

Outline Drawing





Notes:
1. Package Material: Aluminum / Copper
2. Finish: Nickel
3. All dimensions are in millimeters [inches].
4. Tolerances ±0.25 [0.01] unless otherwise specified.

Additional Information

Documentation	Webpage
ESD Policy	https://rflambda.com/pdf/rflambda_esd_control.pdf
Connector Torque Specifications	https://www.rflambda.com/pdf/Torque_Specifications.pdf
Random Vibration Test Standard	https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf

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Ordering Information

Part Number	Modification	Description
RPDT0018GA	SMA-Male/BNC-Female(Standard) N-Male/BNC-Female(Option)	0.01GHz-18GHz Power Detector

Important Notice

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