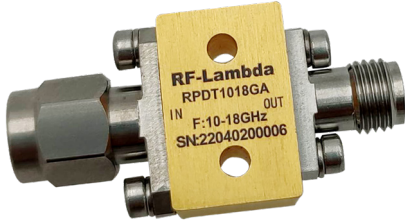


Wide Band Power Detector 10GHz-18GHz



Product Description

RPDT1018GA is a wide band coaxial power detector with a frequency range of 10 to 18GHz.

The max input power of the detector is 23dBm. The max VSWR of 1.5:1.

The working temperature of this product is between - 40°C and + 85°C.

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=+25°C)

| Parameter | Min | Typ | Max | Units |
|---------------------------|------------------------------------|-------------|-----|-------|
| Frequency Range | 10 | | 18 | GHz |
| VSWR | | 1.4 | 1.5 | : 1 |
| Tss | -25 | | | dBm |
| Sensitivity | | 0.5 | | mv/uW |
| Input Power | | | 23 | dBm |
| Output Polarity | | Positive(+) | | |
| Weight | | 0.03Max. | | lbs. |
| Input / Output Connectors | SMA-Male(Input)-SMA-Female(Output) | | | |
| Package | Epoxy Sealed (Standard) | | | |
| | Hermetically Sealed (Optional) | | | |

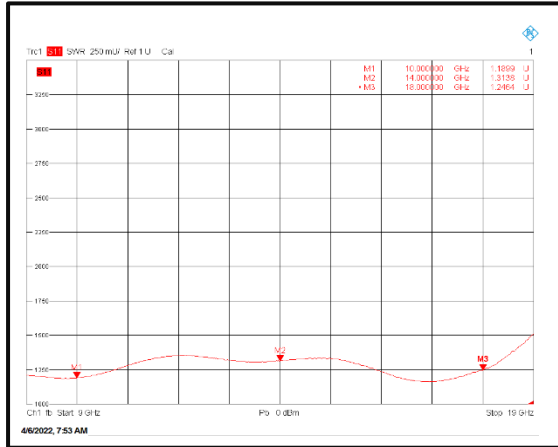
Environmental Specifications and Test Standards

| Parameter | Description |
|-----------------------------------|---|
| Operational Temperature | -40°C to +85°C (Case Temperature) |
| Storage Temperature | -50°C to +105°C |
| Thermal Shock | -40°C → +85°C (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 +85°C 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) |

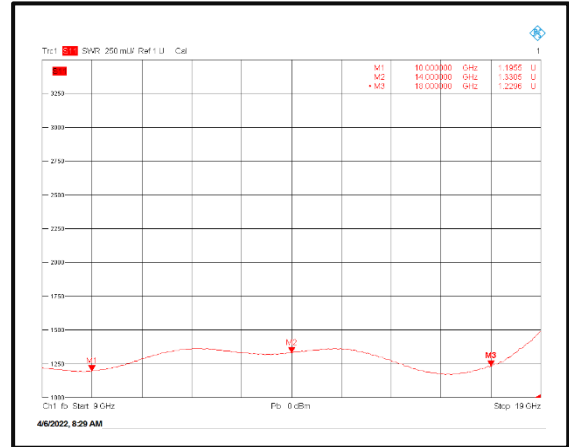
**For vibration testing details please see additional information section.

Typical Performance Plots

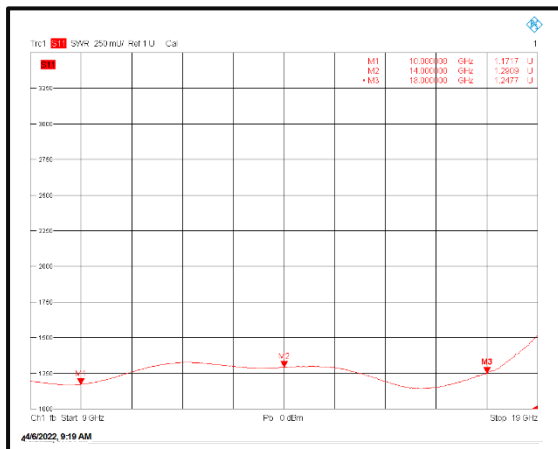
VSWR @+25°C



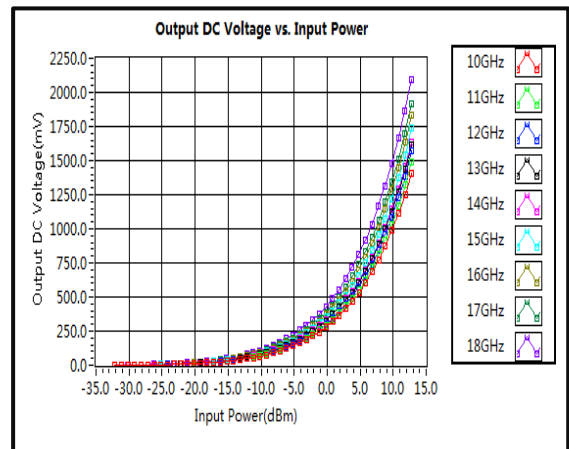
VSWR @-40°C



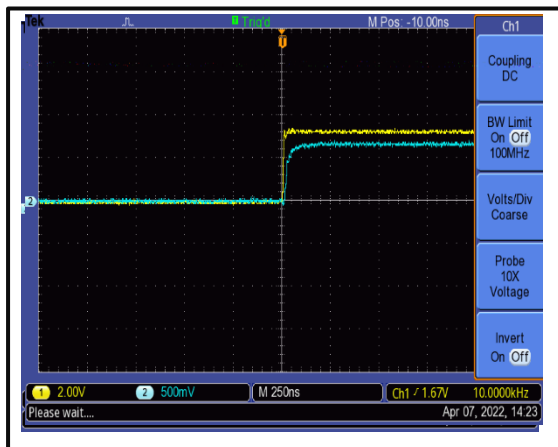
VSWR @+85°C



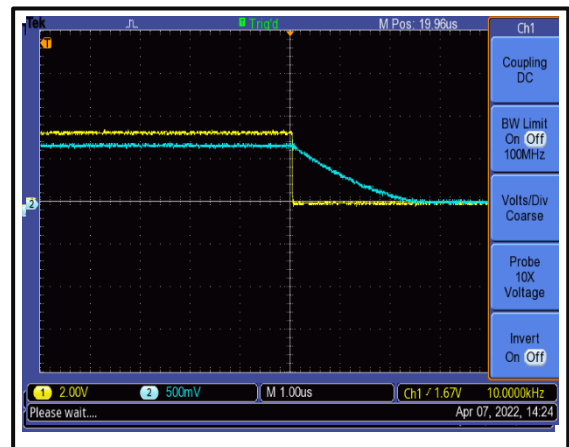
Output DC Voltage vs. Input Power



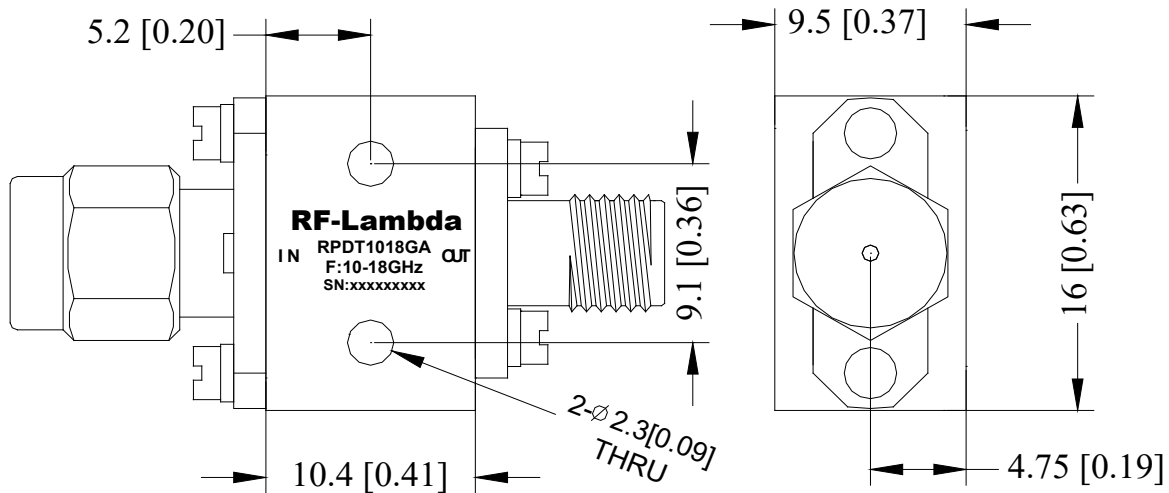
Rise Time



Fall Time

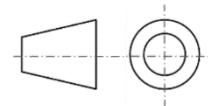


Outline Drawing



Notes:

1. Package Material: Aluminum
2. Finish: Gold
3. All dimensions are in millimeters [inches].
4. Housing Tolerances ± 0.1 [0.004] unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



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 |

Ordering Information

| Part Number | Modification | Description |
|-------------|---|----------------------------|
| RPDT1018GA | Input connector SMA-Male and Output connector SMA-Female | 10GHz-18GHz Power Detector |

Important Notice

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