



# RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

## RPDT0018GB

### Ultra Wide Band Power Detector 0.01 - 18GHz



#### Features

- Ultra Wide Band
- High Sensitivity
- Low VSWR
- Customization Available upon Request

#### Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

#### Electrical Specifications, $T_A=25^\circ\text{C}$

| Parameter                 | Min.                  | Typ. | Max. | Min.  | Typ. | Max. | Units  |
|---------------------------|-----------------------|------|------|-------|------|------|--------|
| Frequency Range           | 0.01-12               |      |      | 12-18 |      |      | GHz    |
| VSWR                      |                       | 1.45 | 1.6  |       | 1.6  | 1.8  | : 1    |
| Tss                       | -45                   |      |      | -45   |      |      | dB m   |
| Sensitivity               | 0.5                   |      |      | 0.5   |      |      | mv/uw  |
| Input Power               |                       |      | 23   |       |      | 23   | dB m   |
| Output Polarity           | Positive (+)          |      |      |       |      |      |        |
| Weight                    | 0.35                  |      |      |       |      |      | ounces |
| Input / Output Connectors | SMA-Male / SMA-Female |      |      |       |      |      |        |
| Material                  | Aluminum              |      |      |       |      |      |        |
| Finish                    | Gold Plated           |      |      |       |      |      |        |

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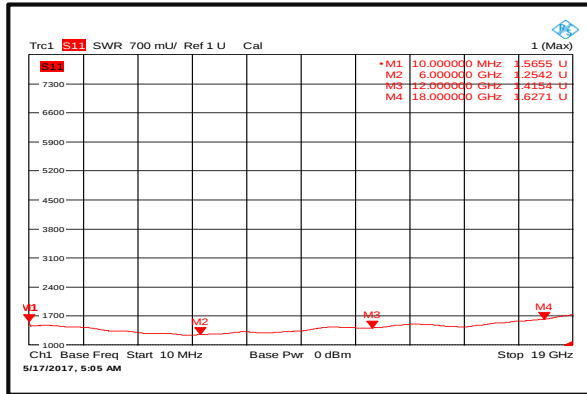
**Environmental Specifications and Test Standards**

| Parameter                        | Standard      | Description                                                                                                                                                                                                     |
|----------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Temperature          | MIL-STD-39016 | -45°C~+85°C                                                                                                                                                                                                     |
| Storage Temperature              |               | -55°C~+125°C                                                                                                                                                                                                    |
| Thermal Shock                    |               | 1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)                                                                                                                                                                       |
| Random Vibration                 |               | Acceleration Spectral Density 6 (m/s)<br>Total 92.6 RMS                                                                                                                                                         |
| Electrical & Temperature Burn In |               | Temperature +85°C for 72 Hours                                                                                                                                                                                  |
| Shock                            |               | 1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s<br>2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s<br>3. Total 18 times (6 directions, 3 repetitions per direction). |
| Altitude                         | MIL-STD-883   | Standard: 30,000 Ft (Epoxy Sealed Controlled Environment)<br>Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)                                                                                             |
| Hermetically Sealed (Optional)   |               | MIL-STD-883 (For Hermetically Sealed Units)                                                                                                                                                                     |

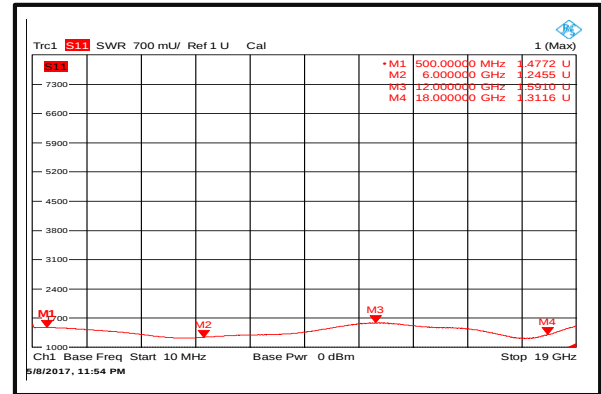


### Typical Performance Plots

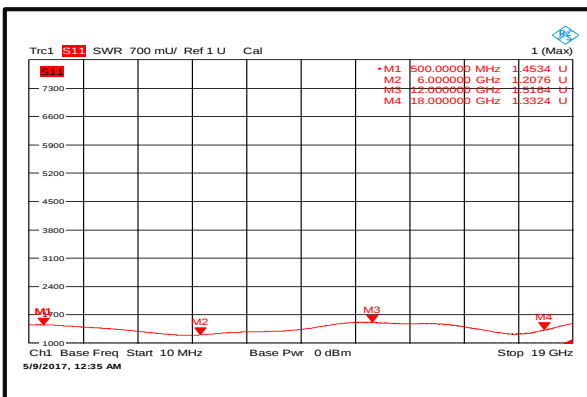
#### VSWR @+25°C



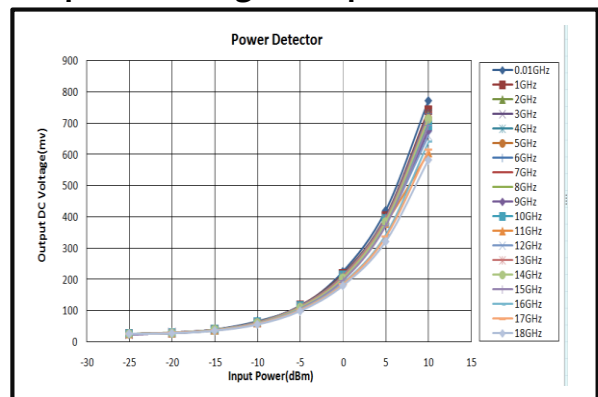
#### VSWR @-45°C



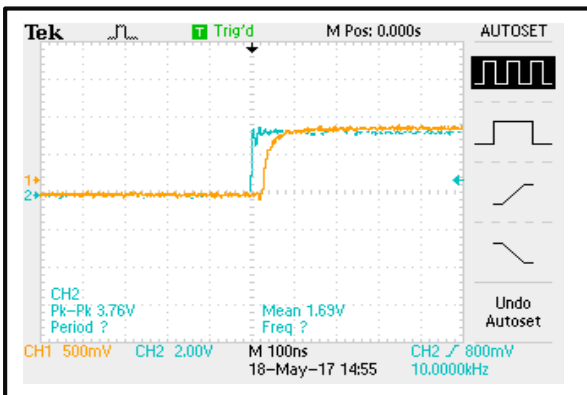
#### VSWR @+85°C



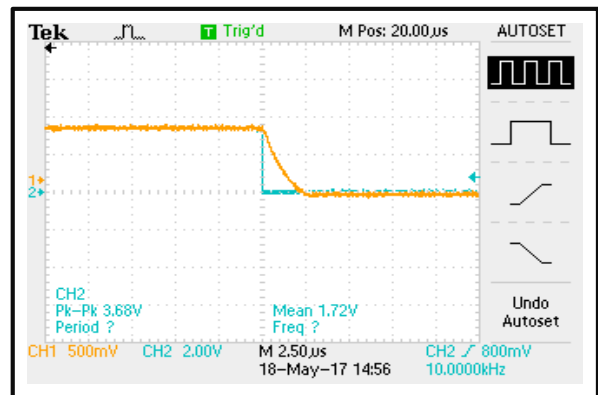
#### Output DC Voltage vs. Input Power



#### Rise Time



#### Fall Time





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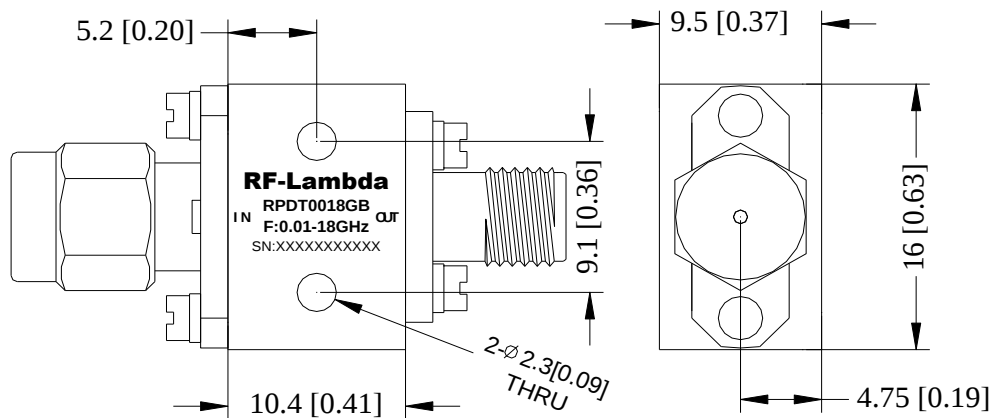
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### Outline Drawing:

All Dimensions in mm [inches]

Tolerance  $\pm 0.15$  [0.006]



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### Important Notice

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