

## Coaxial 30W 0° 8-Way Power Divider 1GHz-12.4GHz



### Product Description

RFLT8W1G12G is an 8-way power divider with a frequency range of 1 to 12.4GHz.

The forward power rating of this power divider is 30 W. The insertion loss is 3.5dB with a typical isolation of 18dB.

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

### Features

- High power handling up to 30W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss

### 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, TA = +25°C

| Parameter                 |               | Min | Typ                                       | Max  | Units |
|---------------------------|---------------|-----|-------------------------------------------|------|-------|
| Frequency Range           |               | 1   |                                           | 12.4 | GHz   |
| Nominal Splitter Loss     |               |     | 9                                         |      | dB    |
| Insertion Loss            |               |     | 3.5                                       | 3.8  | dB    |
| Isolation                 |               | 15  | 18                                        |      | dB    |
| Input VSWR                |               |     | 1.5                                       | 1.8  | : 1   |
| Output VSWR               |               |     | 1.3                                       | 1.5  | : 1   |
| Amplitude Imbalance       |               |     | ±0.5                                      | ±0.8 | dB    |
| Phase Imbalance           |               |     | ±6                                        | ±10  | deg   |
| Power Rating              | Forward Power |     | 30                                        |      | W     |
|                           | Reverse Power |     | 1                                         |      | W     |
|                           | Peak Power    |     | 300<br>(10% Duty Cycle, 1 us Pulse Width) |      | W     |
| Weight                    |               |     | 0.78 Max.                                 |      | lbs   |
| Impedance                 |               |     | 50                                        |      | Ω     |
| Input / Output Connectors |               |     | SMA-female(Input) - SMA-female(Output)    |      |       |
| Package                   |               |     | Epoxy Sealed (Standard)                   |      |       |
|                           |               |     | Hermetically Sealed (Optional)            |      |       |

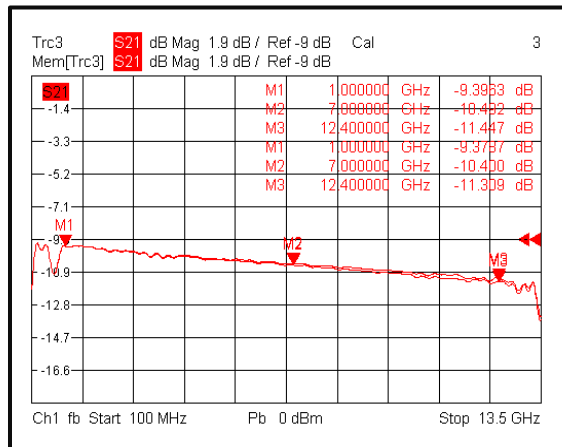
## Environmental Specifications and Test Standards

| Parameter                         | Description                                                                                                                                                                                                     |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational Temperature           | -40°C to +85°C<br>(Case Temperature)                                                                                                                                                                            |
| Storage Temperature               | -50°C to +105°C                                                                                                                                                                                                 |
| Thermal Shock                     | -40°C → +85°C<br>(5 Cycles / 10 hours)                                                                                                                                                                          |
| *Random Vibration                 | MIL-STD-202G<br>Table 214-I, Test Condition Letter C<br>1.5 Hours Per Axis                                                                                                                                      |
| 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                          | Standard: 30,000 Ft (Epoxy Sealed Controlled Environment)<br>Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)                                                                                             |
| Hermetically Sealed<br>(Optional) | MIL-STD-883 (For Hermetically Sealed Units)                                                                                                                                                                     |

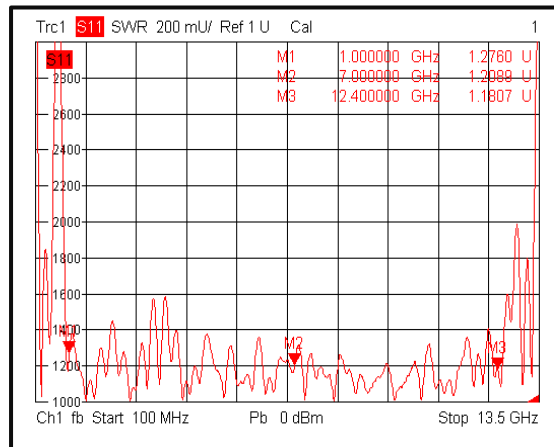
\*For vibration testing details please see additional information section.

Typical Performance Plots

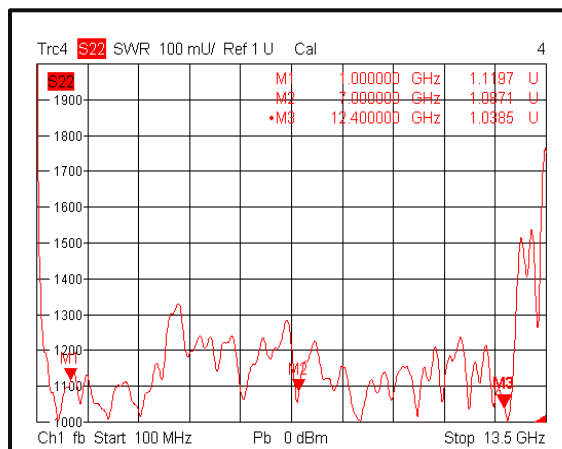
Loss & Amplitude Imbalance



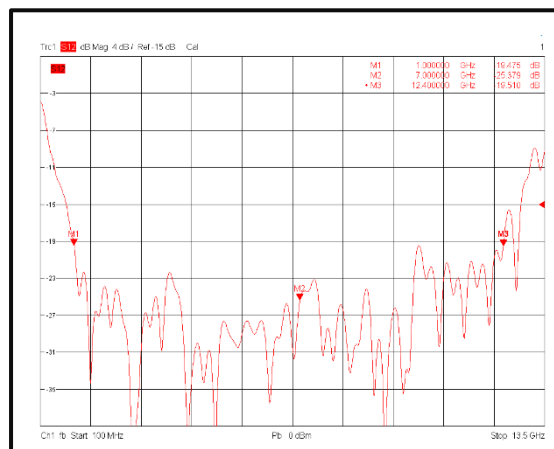
Input VSWR



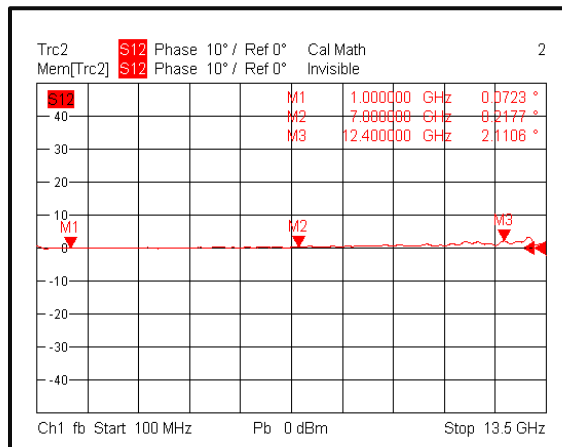
Output VSWR



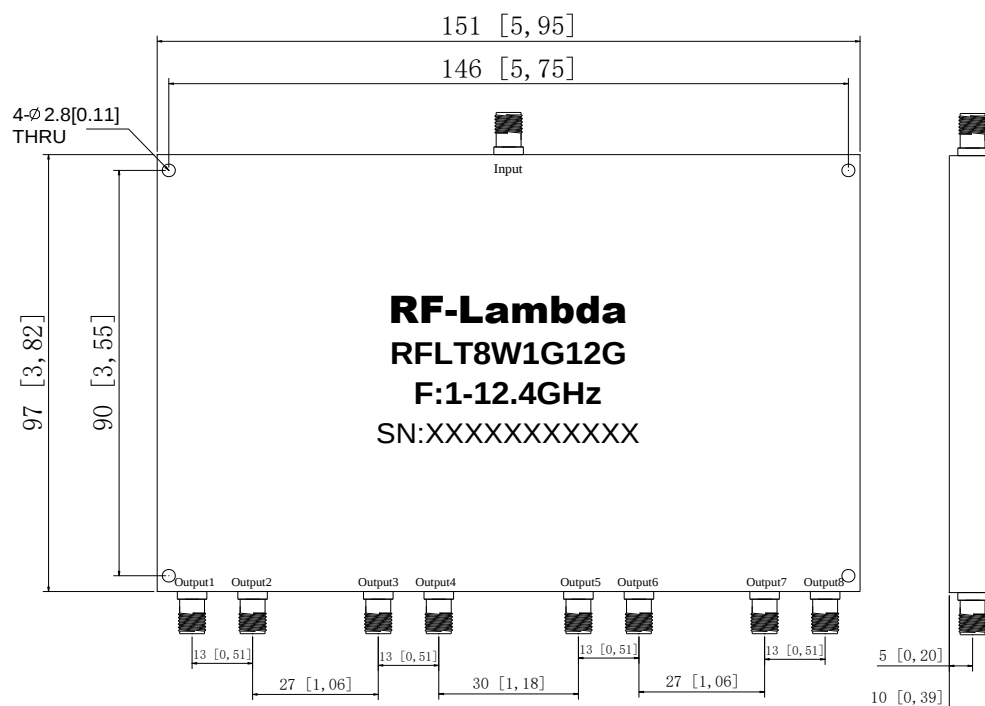
Isolation



Phase Imbalance

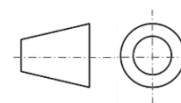


**Outline Drawing**



**Notes:**

1. Package Material: Aluminum
2. Finish: Blue Paint
3. All dimensions are in millimeters [inches].
4. Outline Tolerances  $\pm 0.5$  [0.02], Mounting Hole Tolerances  $\pm 0.2$  [0.008] unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



**Additional Information**

**Documentation**

Connector Torque Specifications

Random Vibration Test Standard

**Webpage**

[https://www.rflambda.com/pdf/Torque\\_Specifications.pdf](https://www.rflambda.com/pdf/Torque_Specifications.pdf)

[https://www.rflambda.com/pdf/rflambda\\_random\\_vibration\\_MIL-STD-202G.pdf](https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf)

**Ordering Information**

| Part Number | Modification | Description                      |
|-------------|--------------|----------------------------------|
| RFLT8W1G12G | Standard     | 1GHz-12.4GHz 8-Way Power Divider |

**Important Notice**

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