



### Coaxial 100W 30dB Directional Coupler 0.7 - 3GHz



#### Features

- High power handling up to 100 W
- Ultra Wide band operation
- High isolation within operational band
- Low Insertion Loss
- High peak to average handling capability

#### Typical Applications

- Stable performance over temperature
- Aerospace and military applications
- LMDS multi-carrier operation

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

| Parameters                     |         | Min.       | Typ.      | Max.      | Units  |
|--------------------------------|---------|------------|-----------|-----------|--------|
| Frequency Range                |         | 0.7        |           | 3         | GHz    |
| Nominal Coupling               |         | 29         | 30        | 31        | dB     |
| Frequency Sensitivity          |         |            | $\pm 0.7$ | $\pm 1.0$ | dB     |
| Directivity                    |         | 20         | 22        |           | dB     |
| Insertion Loss (Excl Coupling) |         |            |           | 0.4       | dB     |
| Insertion Loss (True)          |         |            | 0.35      | 0.4       | dB     |
| VSWR Primary                   |         |            | 1.2       | 1.25      | :1     |
| VSWR Secondary                 |         |            | 1.2       | 1.25      | :1     |
| Power Rating                   | Average | 100        |           |           | W      |
|                                | Peak    | 3          |           |           | KW     |
| Impedance                      |         | 50         |           |           | Ohms   |
| Weight                         |         | 9.52       |           |           | Ounces |
| Input / Output Connectors      |         | N-Female   |           |           |        |
| Material                       |         | Aluminum   |           |           |        |
| Finish                         |         | Blue Paint |           |           |        |

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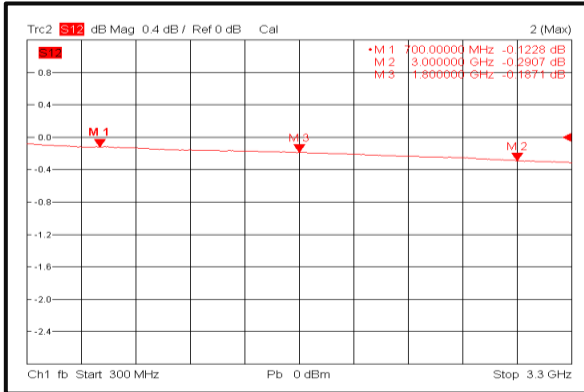
**Environmental Specifications and Test Standards**

| 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                         |               | 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   | MIL-STD-883 (For Hermetically Sealed Units)   |

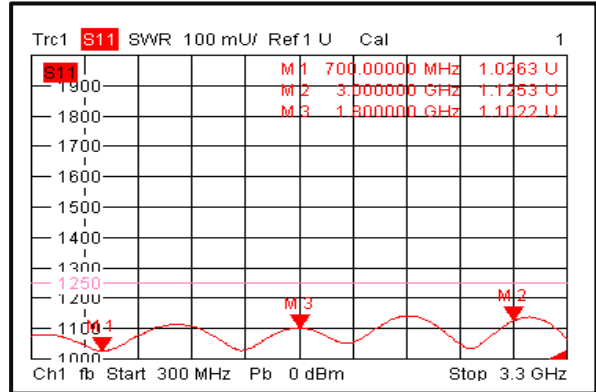


**Typical Performance Plots**

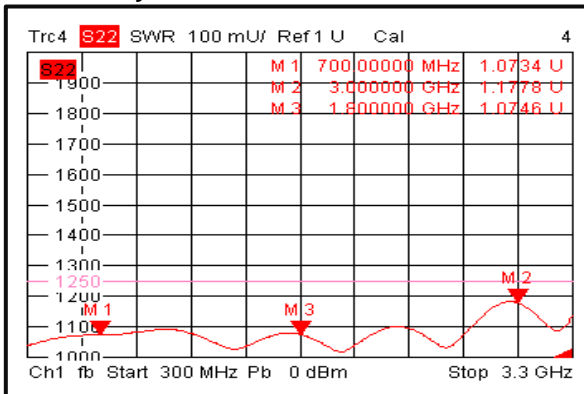
**Insertion Loss**



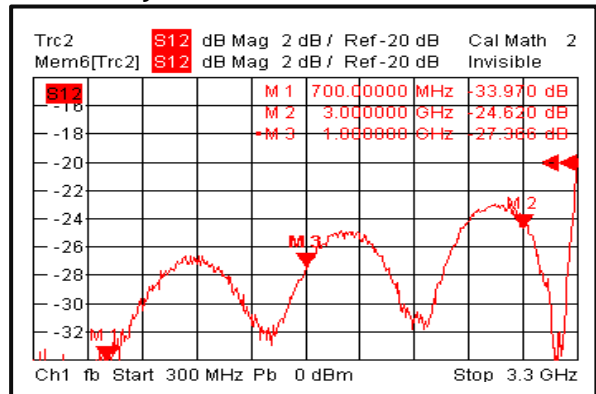
**Primary VSWR**



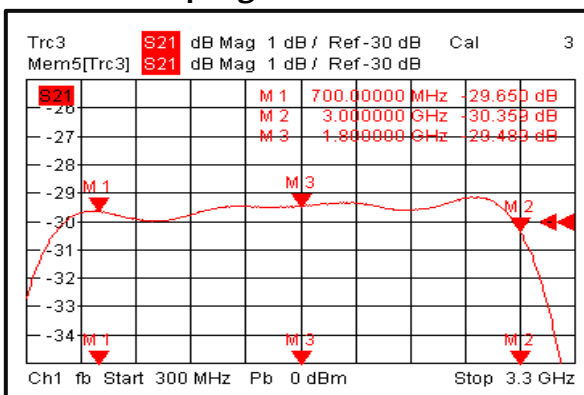
**Secondary VSWR**



**Directivity**



**Nominal Coupling**





# RF-LAMBDA

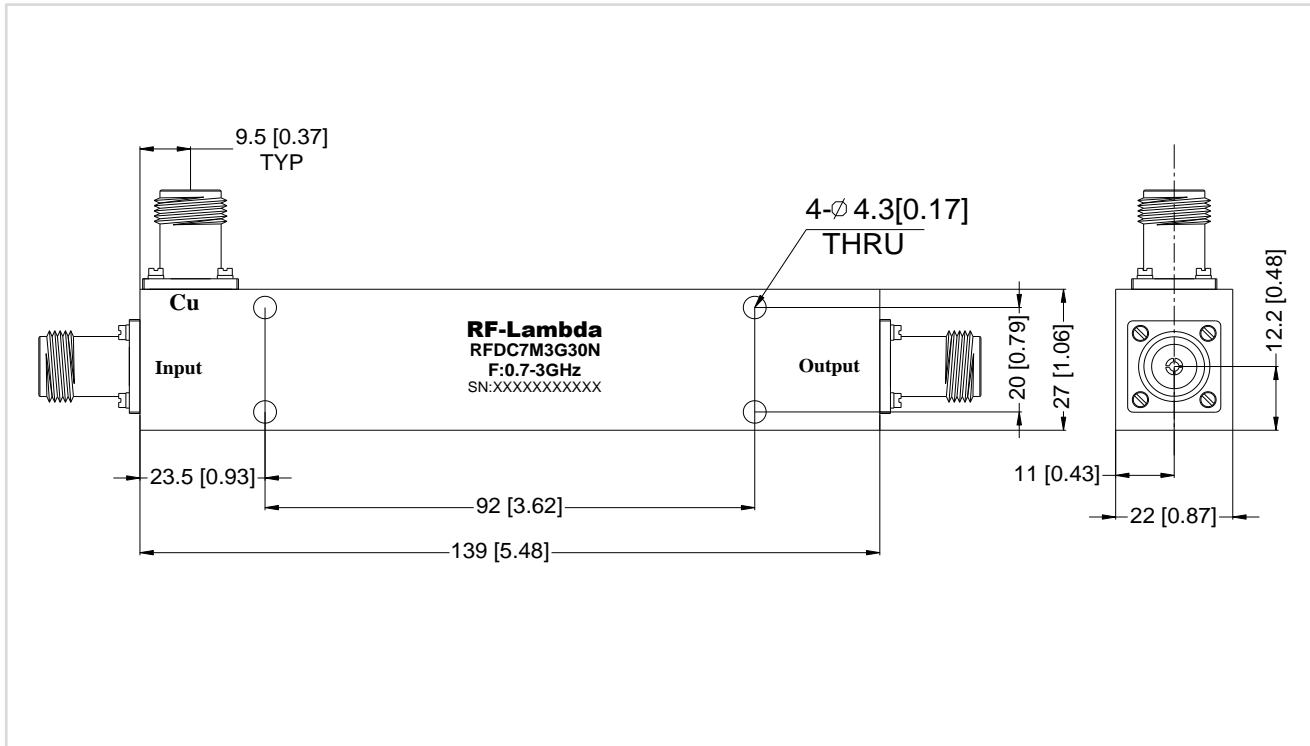
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## RFDC7M3G30N

### Outline Drawing:

All Dimensions in mm [inches]

Tolerance  $\pm 0.3$  [0.012]



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