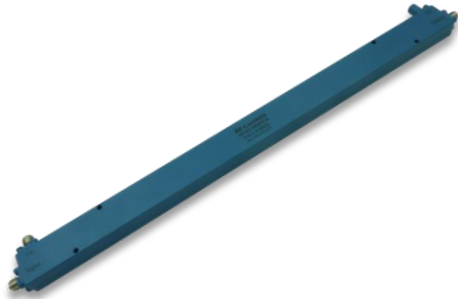


Coaxial 50W 10dB Directional Coupler 0.1 – 4.5GHz



Features

- High power handling up to 50W
- Functional Bandwidth : 0.1GHz to 18GHz
- Low Insertion Loss
- Stable performance over temperature
- High peak to average handling capability

Typical Applications

- Aerospace and Military
- Wireless Infrastructure
- Test and Measurement

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

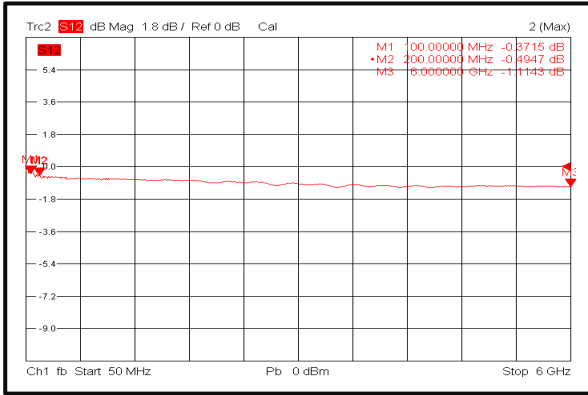
Parameters		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Coupling Frequency Range		0.1		0.2	0.2		4.5	0.2		18	GHz
Nominal Coupling			14	15	9	10	11.5	8.5	10	11.5	dB
Frequency Sensitivity			±1.0			±0.7	±1.2		±1.0	±1.5	dB
Directivity		20			18	20			12		dB
Insertion Loss (Excl Coupling)				0.5			0.5			0.5	dB
Insertion Loss (True) @0.1-6GHz(1.6dB Max.)			0.5	1.0		1.15	1.5		2.5	3.0	dB
VSWR Primary			1.1	1.2		1.2	1.25		1.6		:1
VSWR Secondary			1.1	1.2		1.2	1.25		1.6		:1
Power Rating	Average	50									W
	Peak	1									KW
Impedance		50									Ohms
Weight		6.7Max.									Ounces
Input / Output Connectors		SMA-Female									
Material		Aluminum									
Finish		Blue Paint									

Environmental Specifications and Test Standards

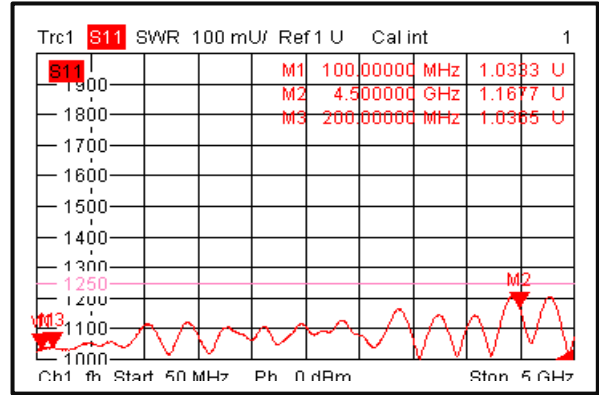
Parameter	Description
Operational Temperature	-40°C~+85°C (Case Temperature)
Storage Temperature	-50°C~+105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours
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)

Typical Performance Plots

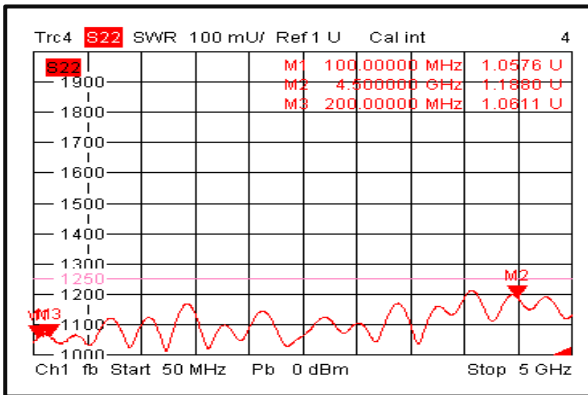
Insertion Loss (0.1-6GHz)



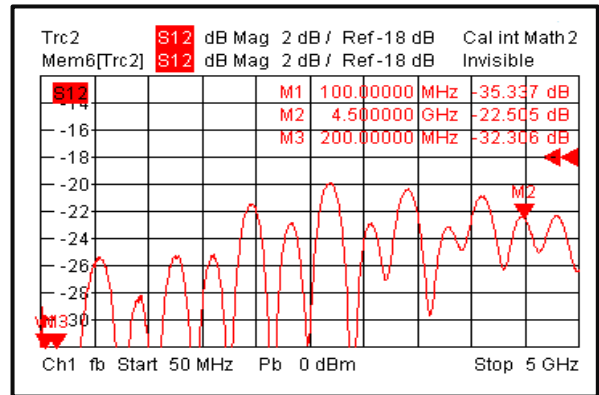
Primary VSWR (0.1-4.5GHz)



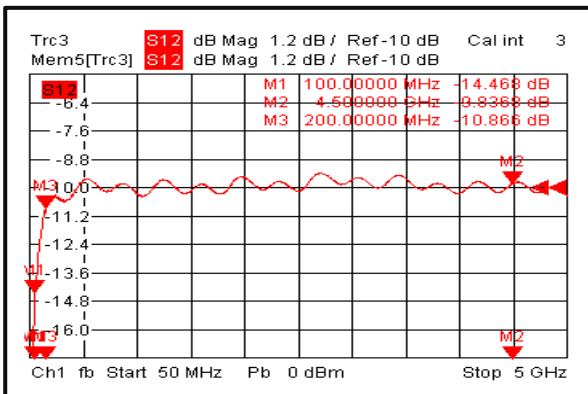
Secondary VSWR (0.1-4.5GHz)



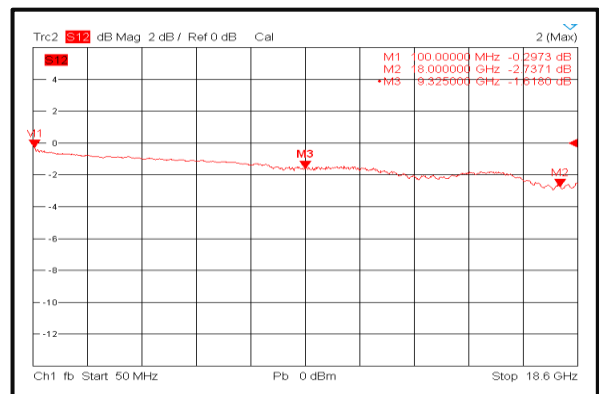
Directivity (0.1-4.5GHz)



Nominal Coupling (0.1-4.5GHz)

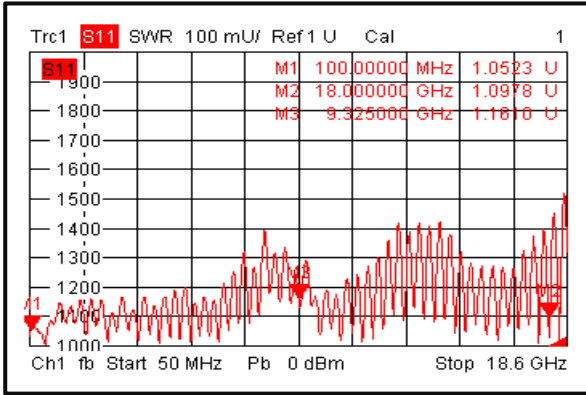


Insertion Loss (0.2-18GHz)

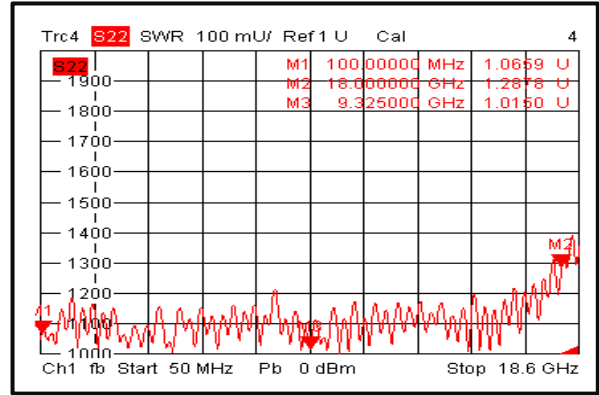


Coaxial 50W 10dB Directional Coupler 0.1 – 4.5GHz

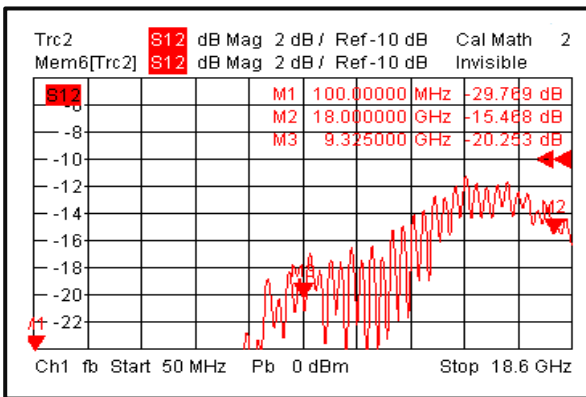
Primary VSWR (0.2-18GHz)



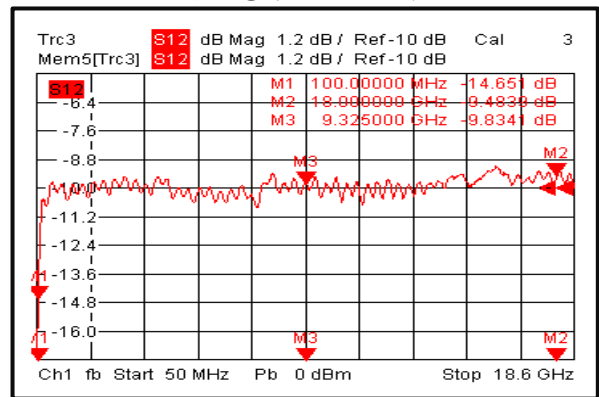
Secondary VSWR (0.2-18GHz)



Directivity (0.2-18GHz)



Nominal Coupling (0.2-18GHz)



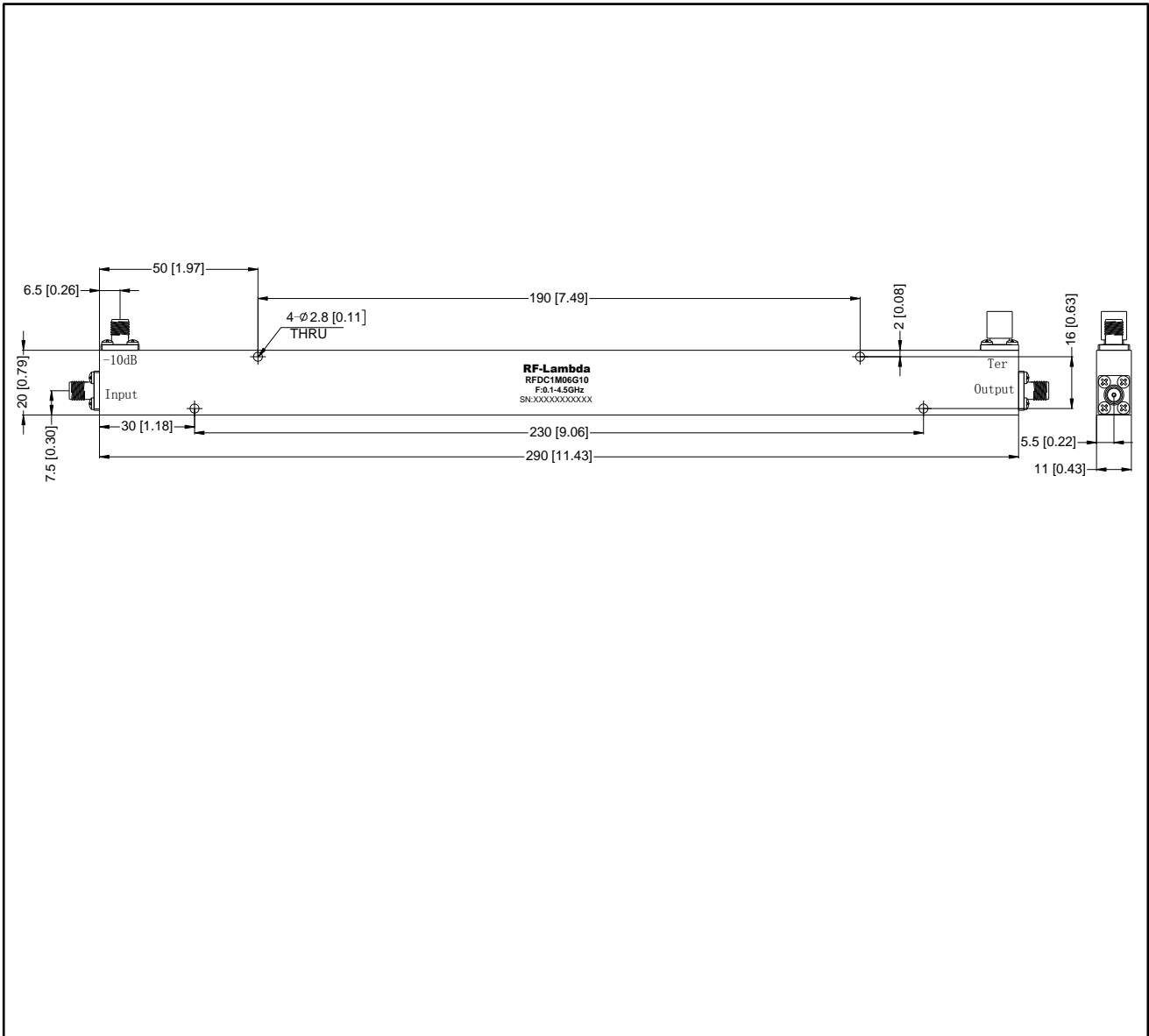
Coaxial 50W 10dB Directional Coupler 0.1 – 4.5GHz

Outline Drawing:

All Dimensions in mm [inches]

Outline Tolerances ± 0.5 [0.02]

Mounting Holes Tolerances ± 0.2 [0.008]



Coaxial 50W 10dB Directional Coupler 0.1 – 4.5GHz

Important Notice

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.