

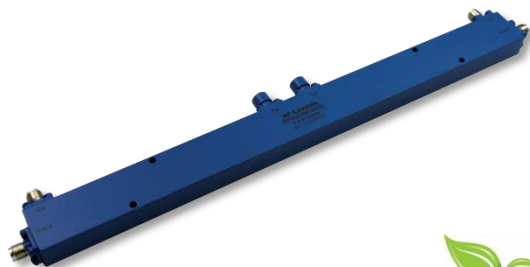


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFDDC5M18G20

Coaxial 50W 20dB Dual Directional Coupler 0.5 - 18GHz



Features

- High power handling up to 50 W
- Ultra Wide band operation
- High directivity within operational band
- Low Insertion Loss
- High peak to average handling capability
- Stable performance over temperature

Typical Applications

- Aerospace and military applications
- LMDS multi-carrier operation

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

Parameters		Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range		0.5		6	6		18	GHz
Nominal Coupling		19	20	21.5	19	20	21.5	dB
Frequency Sensitivity			± 0.7	± 1.0		± 0.7	± 1.0	dB
Directivity		15	18		10	12		dB
Insertion Loss (Excl Coupling)			0.75	1.0		1.6	2.0	dB
Insertion Loss (True)			0.8	1.2		1.8	2.2	dB
VSWR Primary			1.3	1.5		1.4	1.6	:1
VSWR Secondary			1.3	1.5		1.4	1.6	:1
Power Rating	Average	50						W
	Peak	1						KW
Impedance		50						Ohms
Weight		5.64						Ounces
Input / Output Connectors		SMA-Female						
Material		Aluminum						
Finish		Blue Paint						

Coaxial 50W 20dB Dual Directional Coupler 0.5 - 18GHz



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFDDC5M18G20

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-40°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) 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 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	MIL-STD-883	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)

Coaxial 50W 20dB Dual Directional Coupler 0.5 - 18GHz



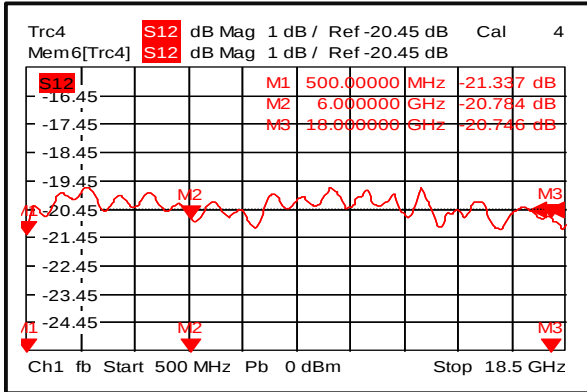
RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

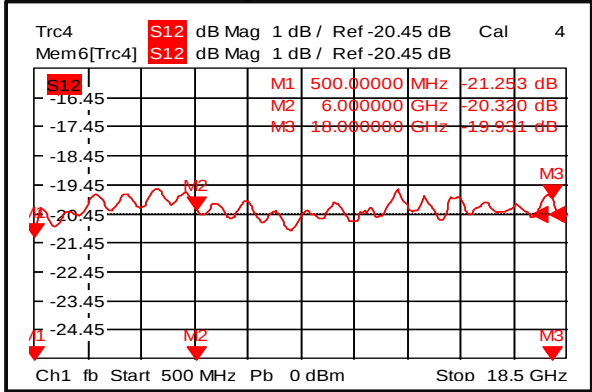
RFDDC5M18G20

Typical Performance Plots

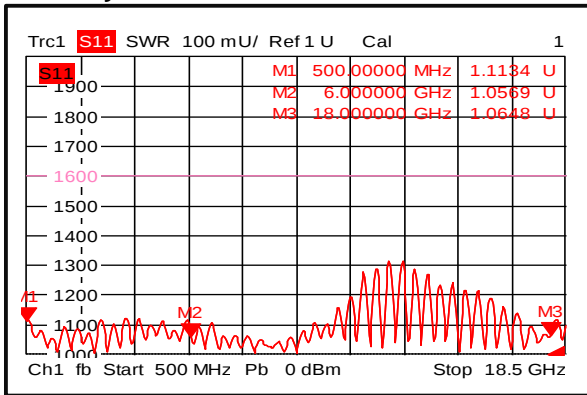
Nominal Coupling 1



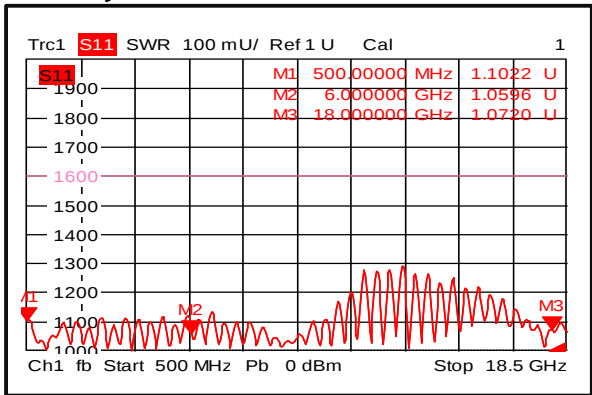
Nominal Coupling 2



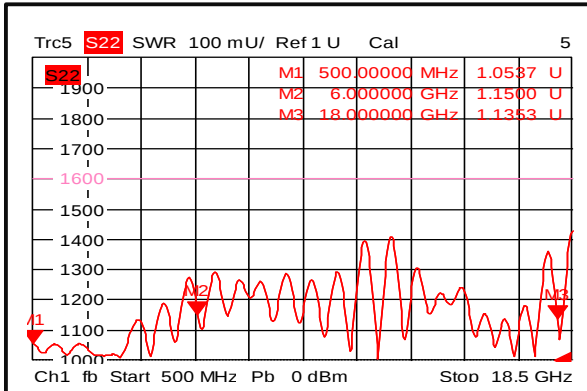
Primary VSWR 1



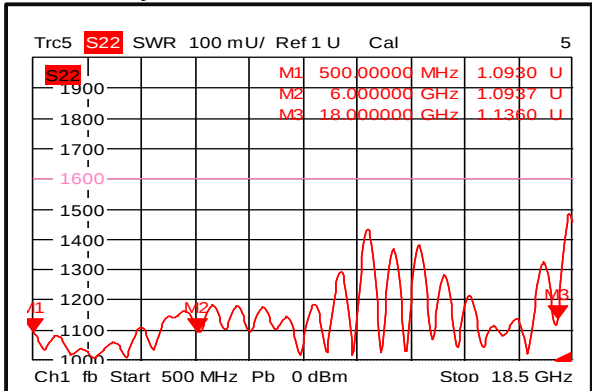
Primary VSWR 2



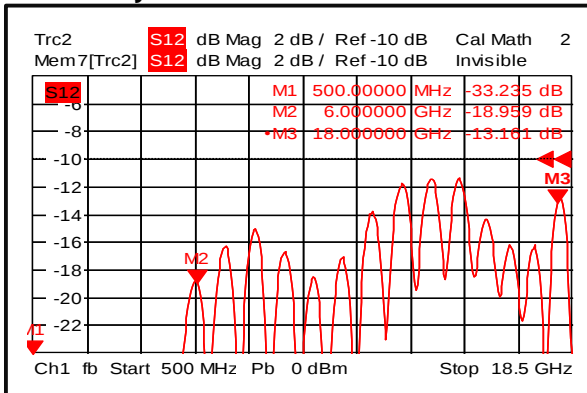
Secondary VSWR 1



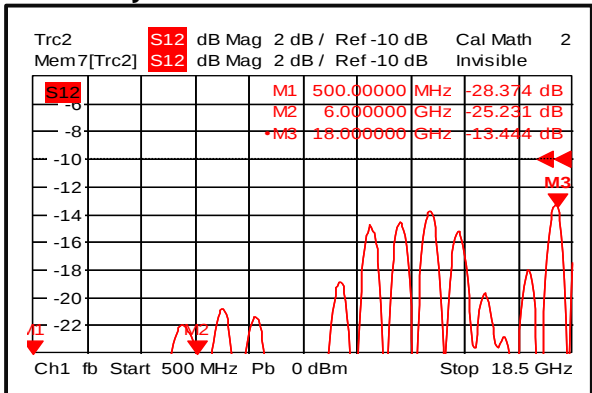
Secondary VSWR 2



Directivity 1



Directivity 2



Coaxial 50W 20dB Dual Directional Coupler 0.5 - 18GHz

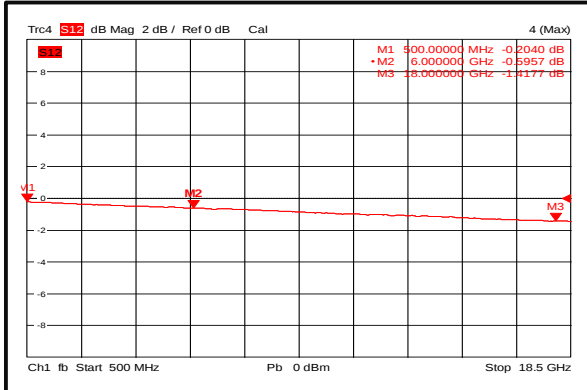


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFDDC5M18G20

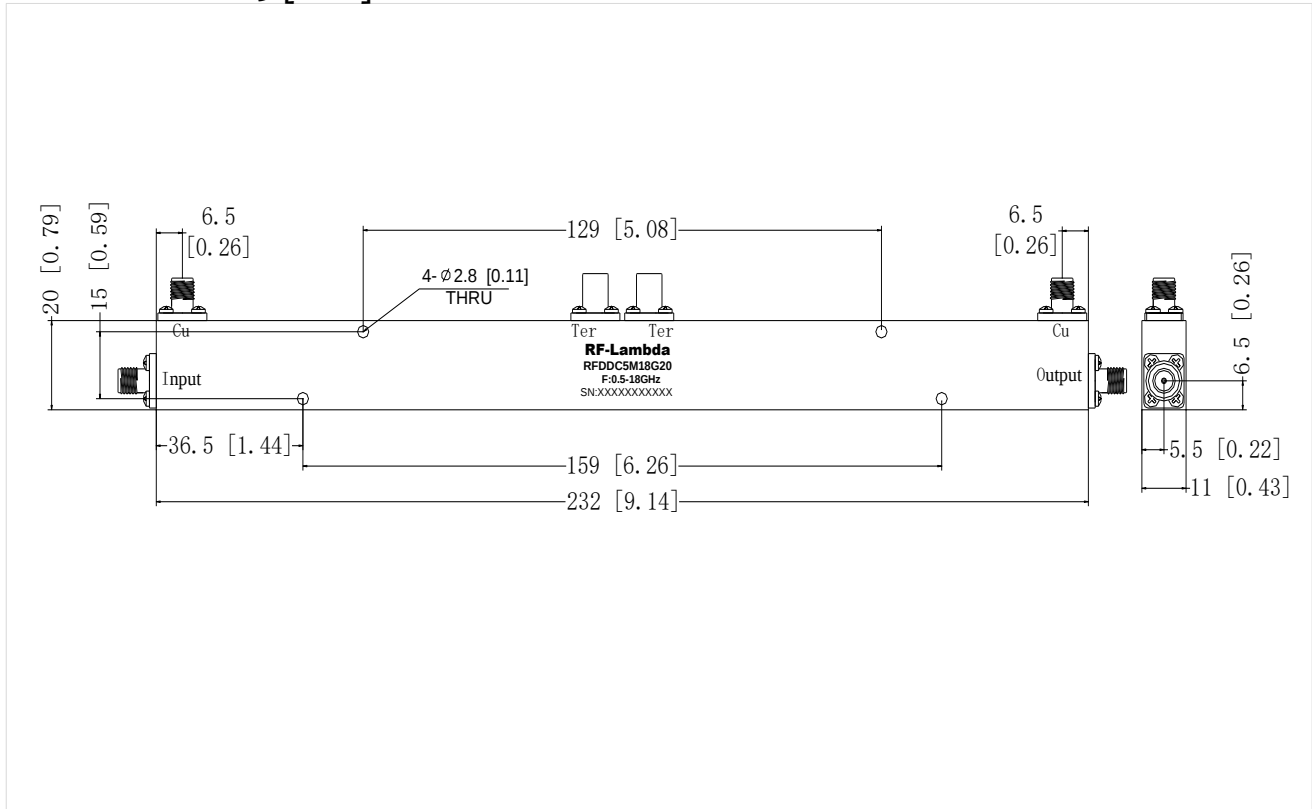
Insertion Loss



Outline Drawing:

All Dimensions in mm [inches]

Tolerance ± 0.25 [0.01]



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.

Coaxial 50W 20dB Dual Directional Coupler 0.5 - 18GHz