

Wide Band Coaxial Circulator 2.1GHz-2.9GHz



Product Description

RFC26-100 is a wide band coaxial circulator with a frequency range of 2.1 to 2.9GHz.

The circulator has a typical isolation of 21dB. The type insertion loss is 0.25dB.

The circulator input and output connectors are SMA-Female.

Features

- High power handle capability up to 100W
- Wide band operation
- High isolation within operational band
- Low Insertion loss
- Low temperature coefficient ferrite material offer stable performance over temperature
- High peak to average handle capability
- All specifications can be modified upon request

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 ($T_A=+25^{\circ}\text{C}$)

Parameter	Min.	Typ.	Max.	Units
Frequency Range		2.1-2.9		GHz
Insertion Loss		0.25	0.35	dB
Isolation	20	21		dB
VSWR		1.20	1.25	:1
Forward Power			100	W
Rotation		Clockwise		
Input / Output Connectors		N-Female (Input) – N-Female (Output)		
Weight		0.24 Max.		lbs.
Impedance		50		Ω

* Air cooling is Required - Mandatory for High Power Operation.

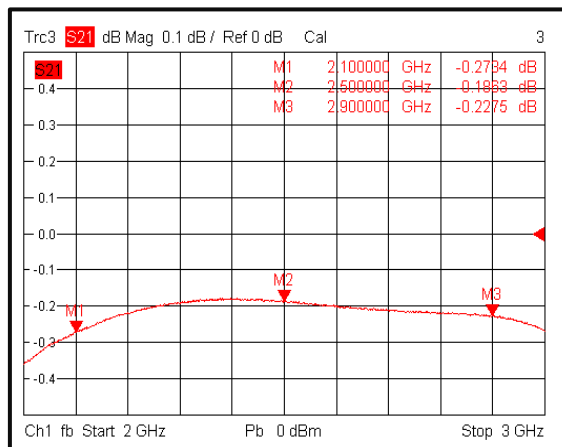
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +70°C (Case Temperature)
Storage Temperature	-40°C to +85°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
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)

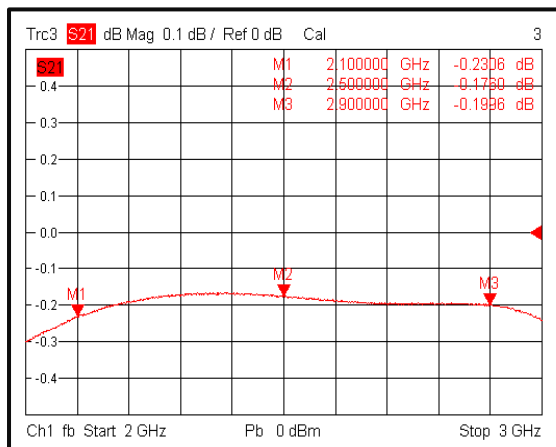
*For vibration testing details please see additional information section.

Typical Performance Plots

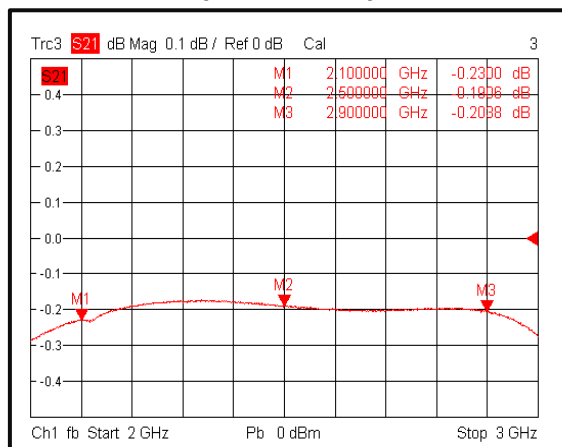
Insertion Loss (Port 1-Port 2)



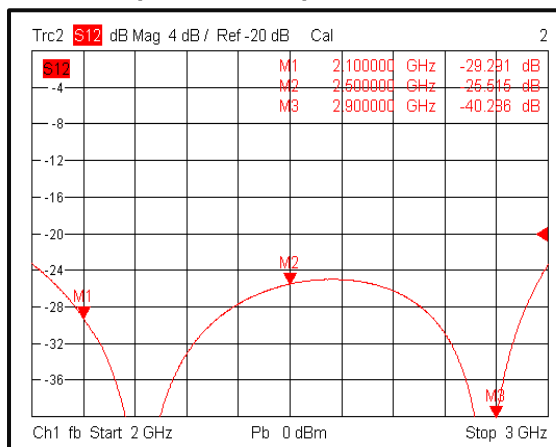
Insertion Loss (Port 2-Port 3)



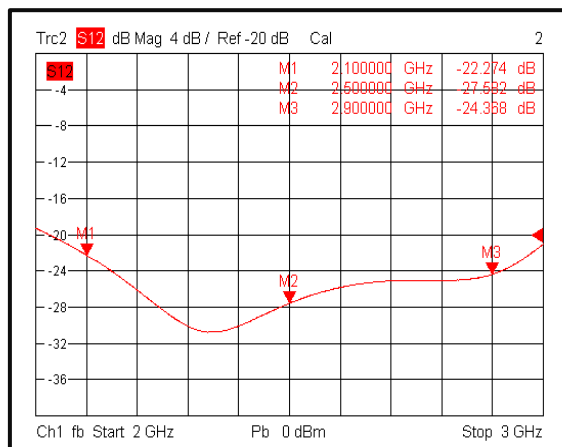
Insertion Loss (Port 3-Port 1)



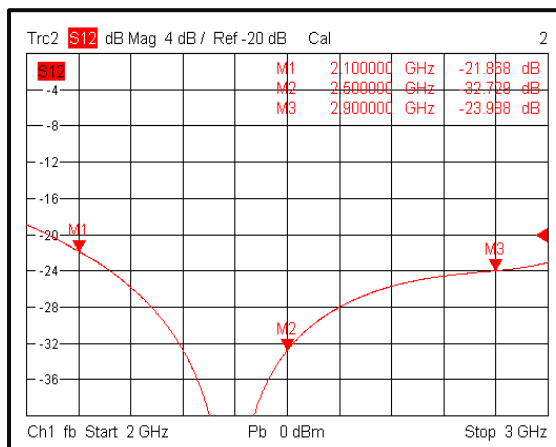
Isolation (Port 2-Port 1)



Isolation (Port 3-Port 2)

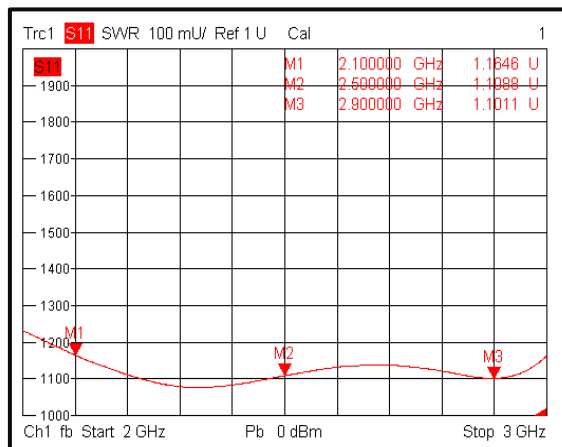


Isolation (Port 1-Port 3)

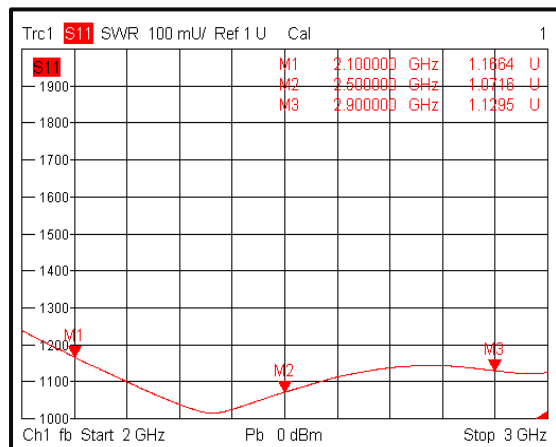


Typical Performance Plots

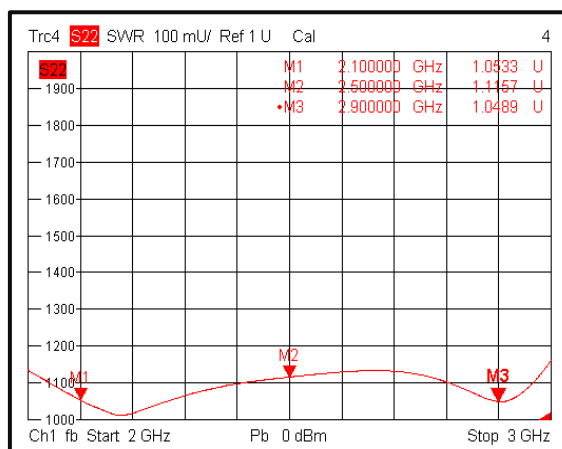
VSWR 1



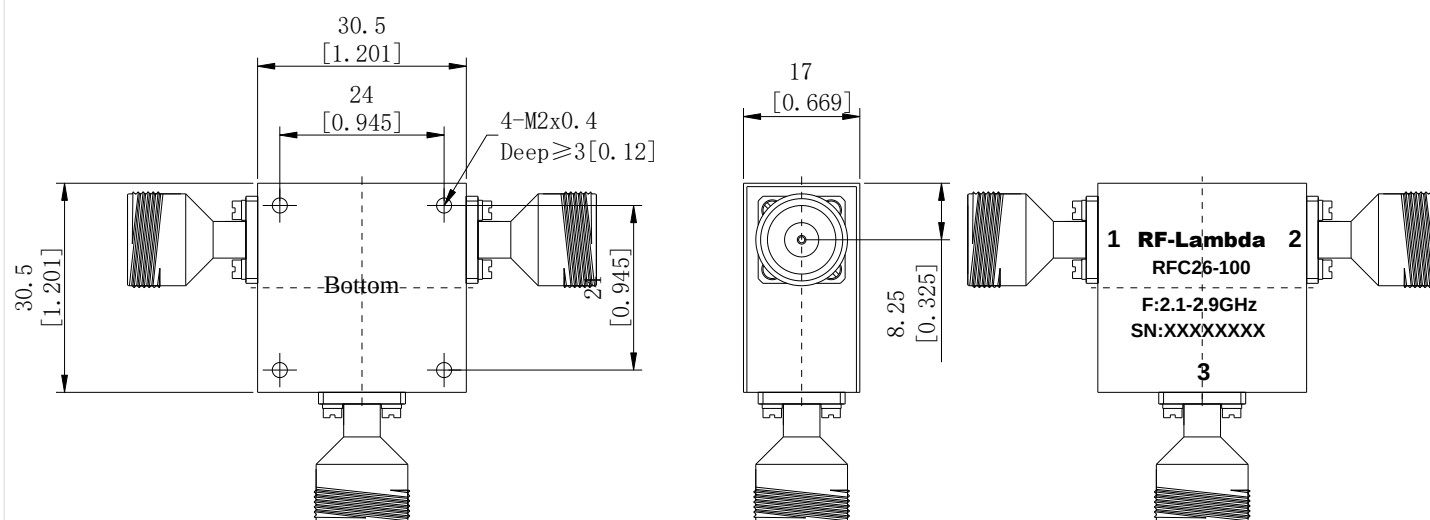
VSWR 2



VSWR 3



Outline Drawing



Notes:

1. Package Material: Aluminum Alloy
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches].
4. Outline Tolerances ± 0.5 [0.02], Mounting Hole Tolerances ± 0.2 [0.008] unless otherwise specified.

Additional Information

Documentation	Webpage
ESD Policy	https://rflambda.com/pdf/rflambda_esd_control.pdf
Connector Torque Specifications	https://www.rflambda.com/pdf/Torque_Specifications.pdf
Random Vibration Test Standard	https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf

Ordering Information

Part Number	Modification	Description
RFC26-100	Standard	2.1GHz-2.9GHz Coaxial Circulator

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