Wide Band Coaxial Isolator
2GHz-4GHz

Product Description

RFLI-301-4 is a wide band coaxial isolator with a frequency range of 2 to 4GHz.

The isolator has a typical isolation of 18dB. The maximum insertion loss is 0.6dB.

The isolator input and output connectors are SMA-Female or N-Female.

Features

- High power handling up to 100W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- High peak to average handling 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=+25ºC)

Parameter		Min.	Typ.	Max.	Units
Frequency Range			2 - 4		GHz
Insertion Loss	@2-2.2GHz		0.6	1.1	dB
	@2.2-4GHz		0.5	0.6	
Isolation		18	18.5		dB
VSWR			1.3	1.35	:1
Forward Power (CW)				100	W
Reverse Power (CW)				10	W
Rotation			Clockwise		
Input / Output Connectors			SMA-Female (RFLI-301-4S) N-Female (RFLI-301-4N)		
Weight			0.21 Max.		lbs
Impedance			50		Ω

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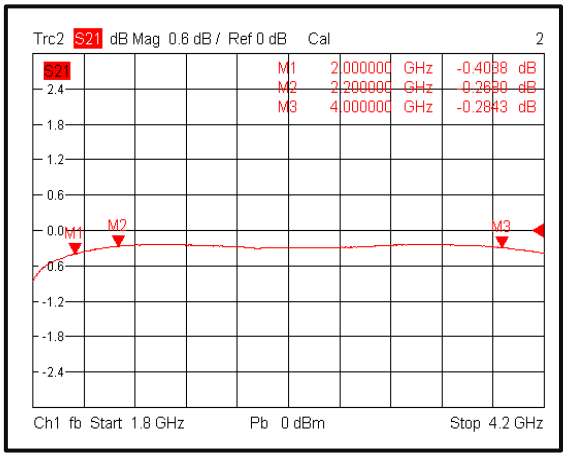
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	0ºC to +70ºC (Case Temperature)
Storage Temperature	-40ºC to +85ºC
Thermal Shock	-40ºC → +85ºC (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)

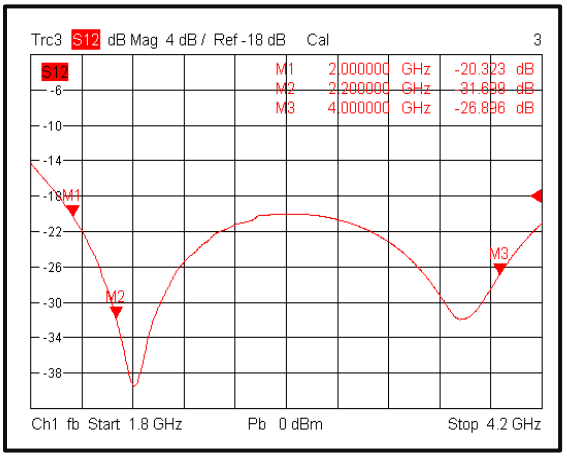
**For vibration testing details please see additional information section.

Typical Performance Plots

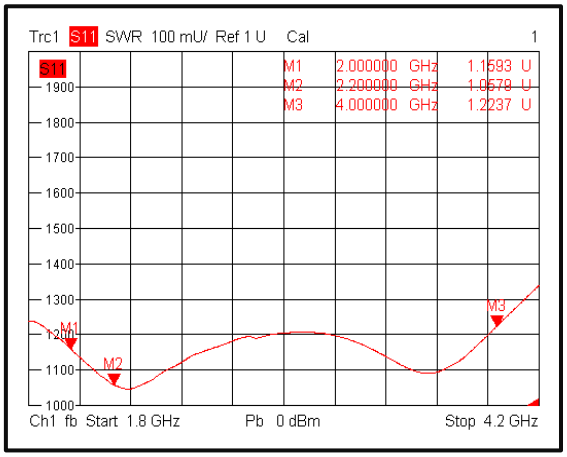
Insertion Loss



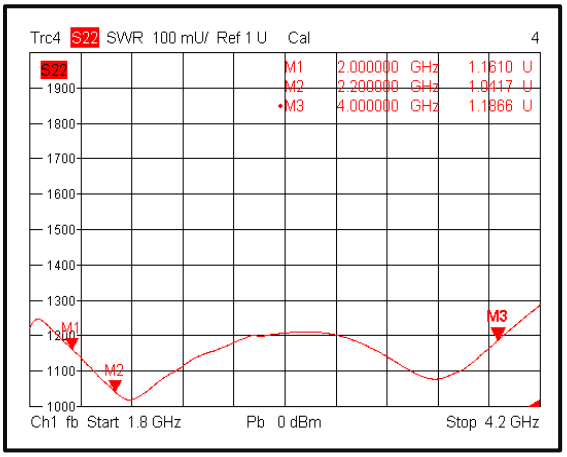
Isolation



VSWR 1

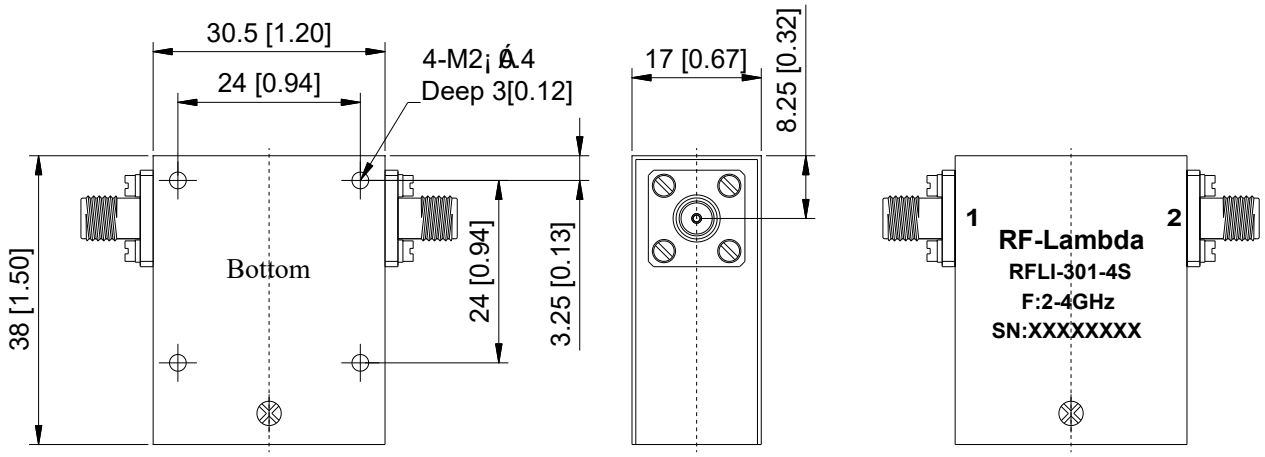


VSWR 2

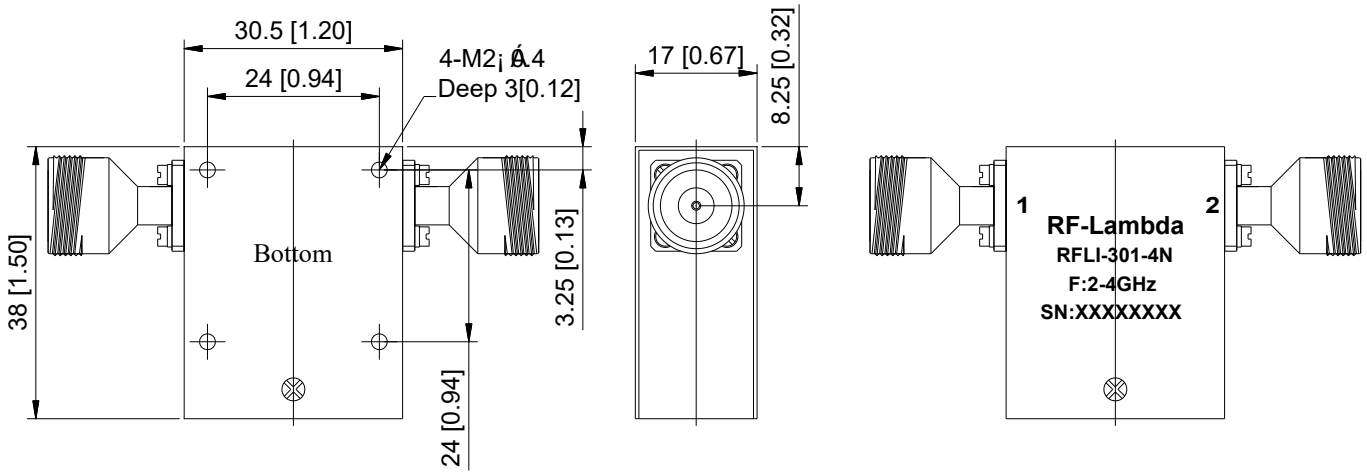


Outline Drawing

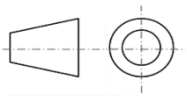
SMA -Female



N -Female



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
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
RFLI-301-4	Connectors SMA-Female or N-Female	2GHz-4GHz Coaxial Isolator

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