

## Ultra Wide Band Coaxial Isolator 1.7 - 3GHz



Note: Photo is for illustration only.  
Please refer to the outline drawing.

### Product Description

RFLI301G17G30 is an ultra wide band coaxial isolator with a frequency range of 1.7 to 3GHz.

The isolator has a typical isolation of 20dB. The maximum insertion loss is 0.5dB.

The operating temperature of this product is within -40 to +70°C.

### Features

- High power handling up to 50W
- 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<sub>A</sub>=+25°C)

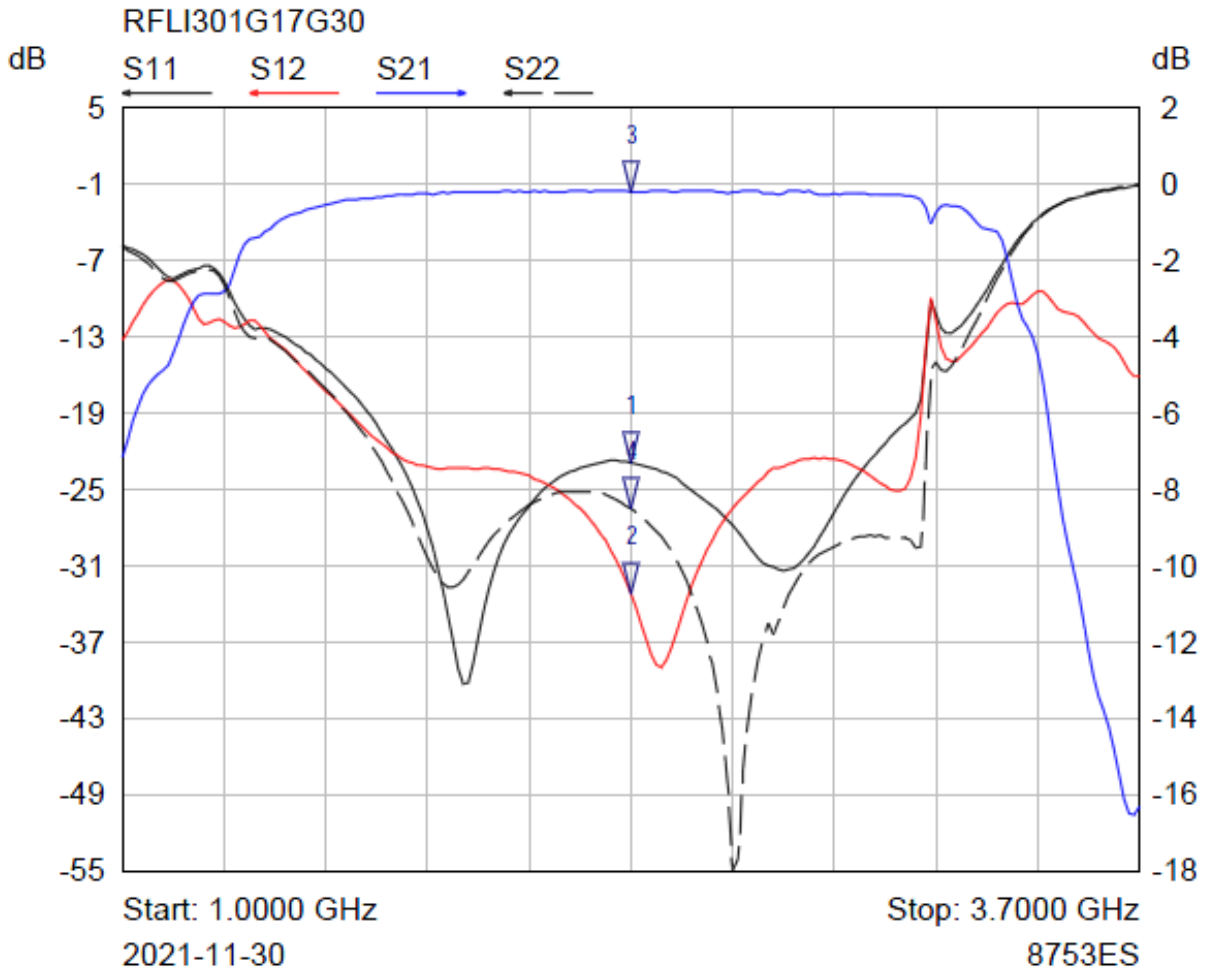
Parameter	Min	Typ	Max	Units
Frequency Range		1.7 – 3		GHz
Insertion Loss		0.30	0.50	dB
Isolation (Note 1)	20	21		dB
VSWR		1.20	1.30	:1
Forward Power (CW)			50	W
Reverse Power (CW)			5	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors	RFLI301G17G30S	SMA-Female(Input)--SMA-Female(Output)		
	RFLI301G17G30N	N-Female(Input)--N-Female(Output)		
Impedance		50		Ω

**Environmental Specifications and Test Standards**

Parameter	Description
Operational Temperature	-40°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.

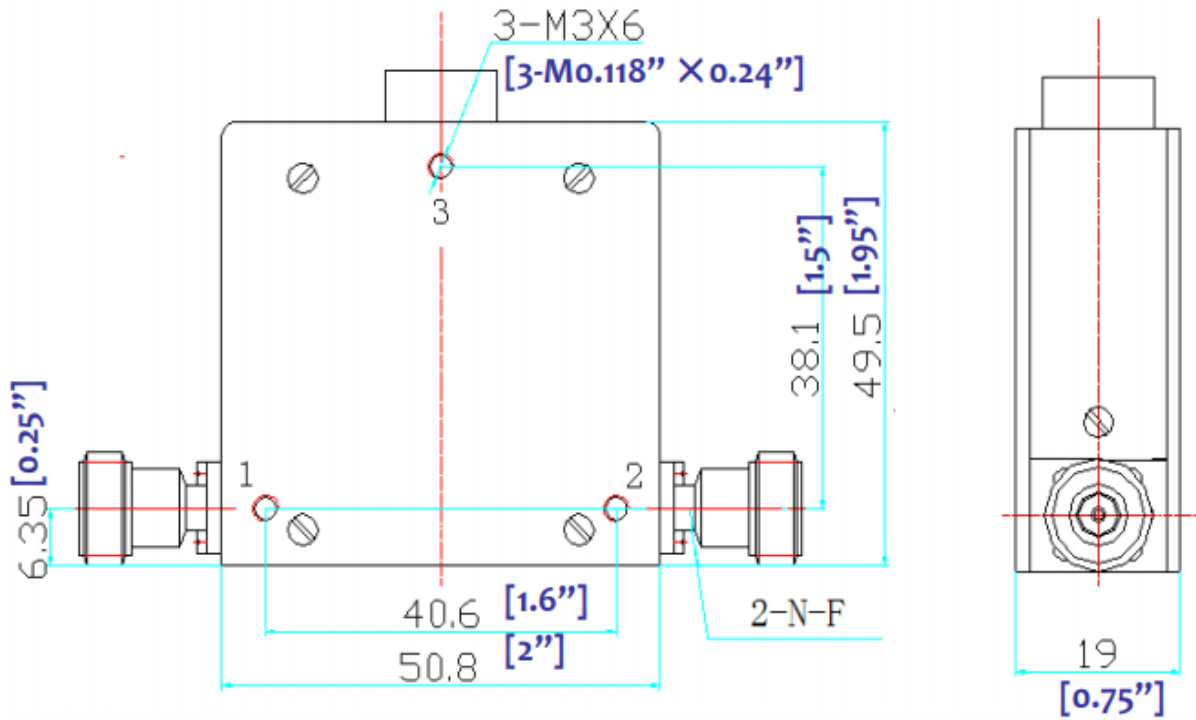
**Typical Performance Plots**



Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	2.3500 GHz	-22.93 dB	
2 ▾	S12	2.3500 GHz	-33.25 dB	
3 ▾	S21	2.3500 GHz	-0.19 dB	
4 ▾	S22	2.3500 GHz	-26.52 dB	

SN:211102

Outline Drawing



N Female Version Shown

Notes:

1. Package Material: Aluminum alloy
2. Finish : Nickel Plated
3. All dimensions are in millimeters [inches]
4. Tolerance  $\pm 0.25(0.01)$ , unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors

Additional Information

Documentation	Webpage
Connector Torque Specifications	<a href="https://www.rflambda.com/pdf/Torque_Specifications.pdf">https://www.rflambda.com/pdf/Torque_Specifications.pdf</a>
Random Vibration Test Standard	<a href="https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf">https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf</a>

**Ordering Information**

Part Number	Modification	Description
RFLI301G17G30S	Connectors SMA-Female	1.7GHz ~ 3GHz Coaxial Isolator
RFLI301G17G30N	Connectors N-Female	1.7GHz ~ 3GHz Coaxial Isolator

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