Wide Band Coaxial Circulator
1.71GHz-2.69GHz

Product Description

RFLC301G17G27 is a wide band coaxial circulator with a frequency range of 17.1 to 2.69GHz.

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

The operating temperature of this product is within -20 to +70ºC

Features

- High power handling up to 50W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature

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℃)

Parameter	Min	Typ	Max	Units
Frequency Range		1.71-2.69		GHz
Insertion Loss		0.40	0.50	dB
Isolation (Note 1)	20	21		dB
VSWR		1.20	1.22	:1
Forward Power (CW)			50	W
Rotation		Clockwise (Standard) Counter Clockwise (upon request)		
Input / Output Connectors		RFLC301G17G27N (N-Female) RFLC301G17G27S (SMA-Female)		
Weight		0.34 Max		lbs.
Impedance		50		Ω

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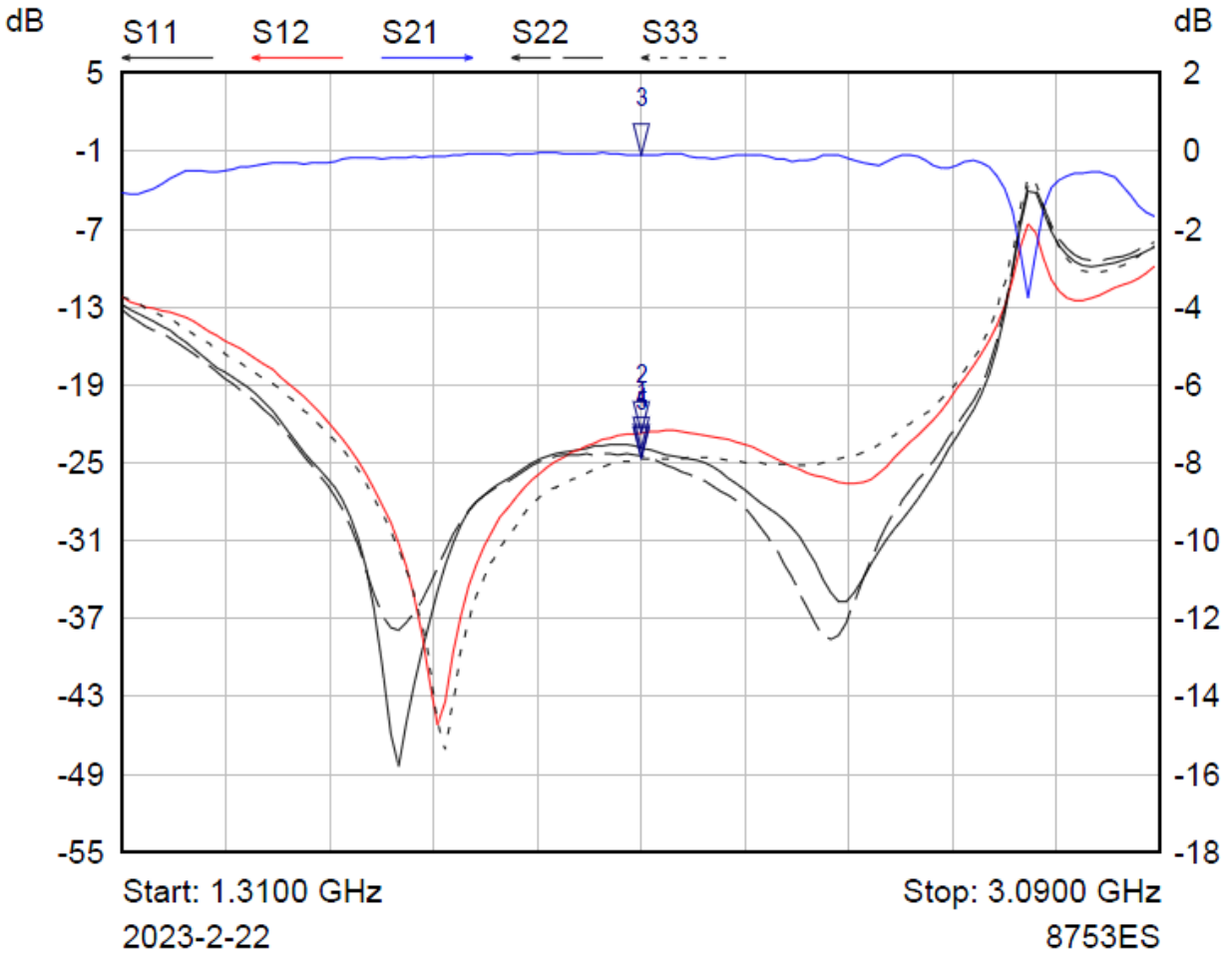
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20ºC to +70ºC (Case Temperature)
Storage Temperature	-45ºC 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)

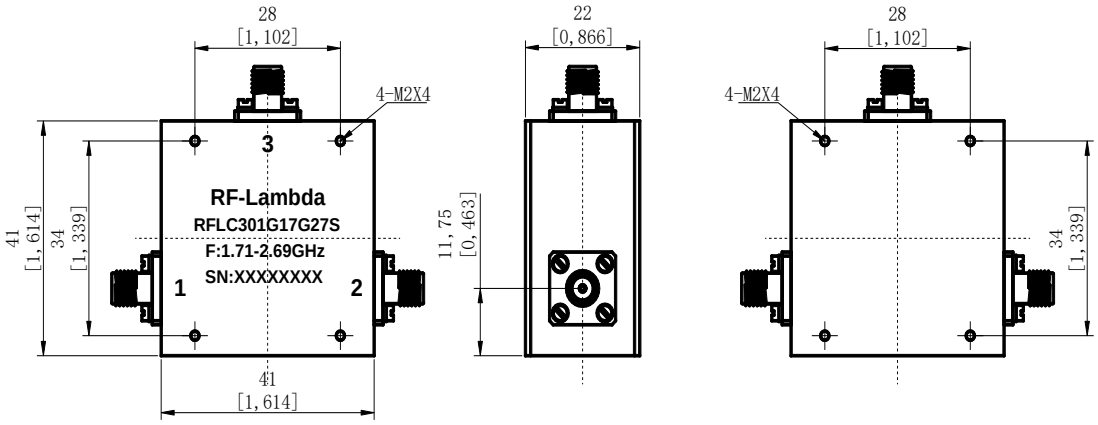
Typical Performance Plots



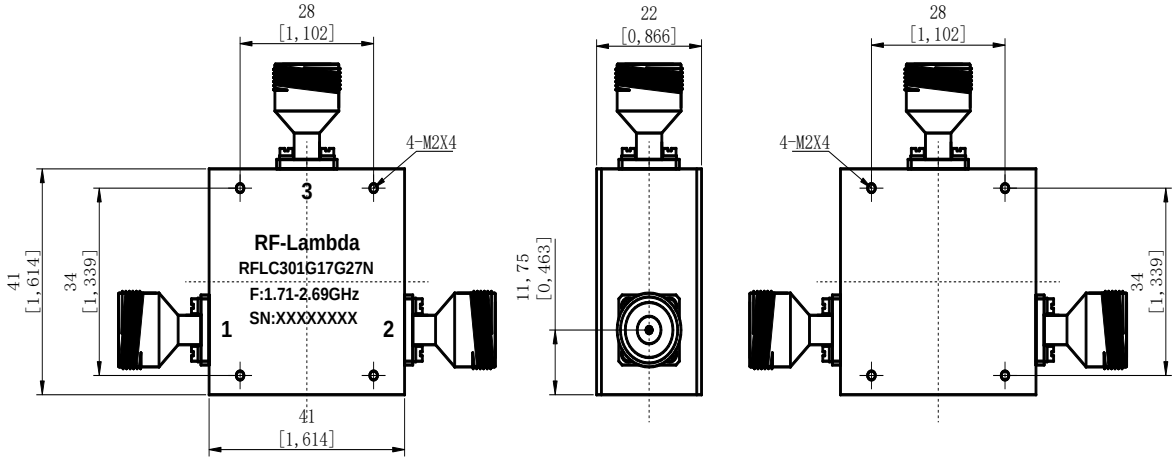
Mkr	Trace	X-Axis	Value	Notes
1	S11	2.2000 GHz	-23.85 dB	
2	S12	2.2000 GHz	-22.67 dB	
3	S21	2.2000 GHz	-0.09 dB	
4	S22	2.2000 GHz	-24.49 dB	
5	S33	2.2000 GHz	-24.75 dB	

Typical Performance Plots

SMA-Type Version



N-Type Version



Notes:
1. Package Material: Aluminum Alloy
2. Finish : Nickel Plated
3. All dimensions are in millimeters [inches]
4. Tolerance ±0.25(0.01).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
RFLC301G17G27S	connectors SMA-Female	1.71GHz - 2.69GHz Coaxial Circulator
RFLC301G17G27N	connectors N-Female	1.71GHz - 2.69GHz Coaxial Circulator

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