

Ultra Wide Band Coaxial Circulator 6GHz – 18GHz



Note: The photo is for illustration purposes only.
Please refer to outline drawing

Product Description

RFLC601G06G18 is an ultra wide band coaxial circulator with a frequency range of 6 to 18GHz.

The circulator has a typical isolation of 9dB. The maximum insertion loss is 2.0dB.

The operating temperature of this product is within -20 to +75°C

Features

- High power handling up to 10W
- 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

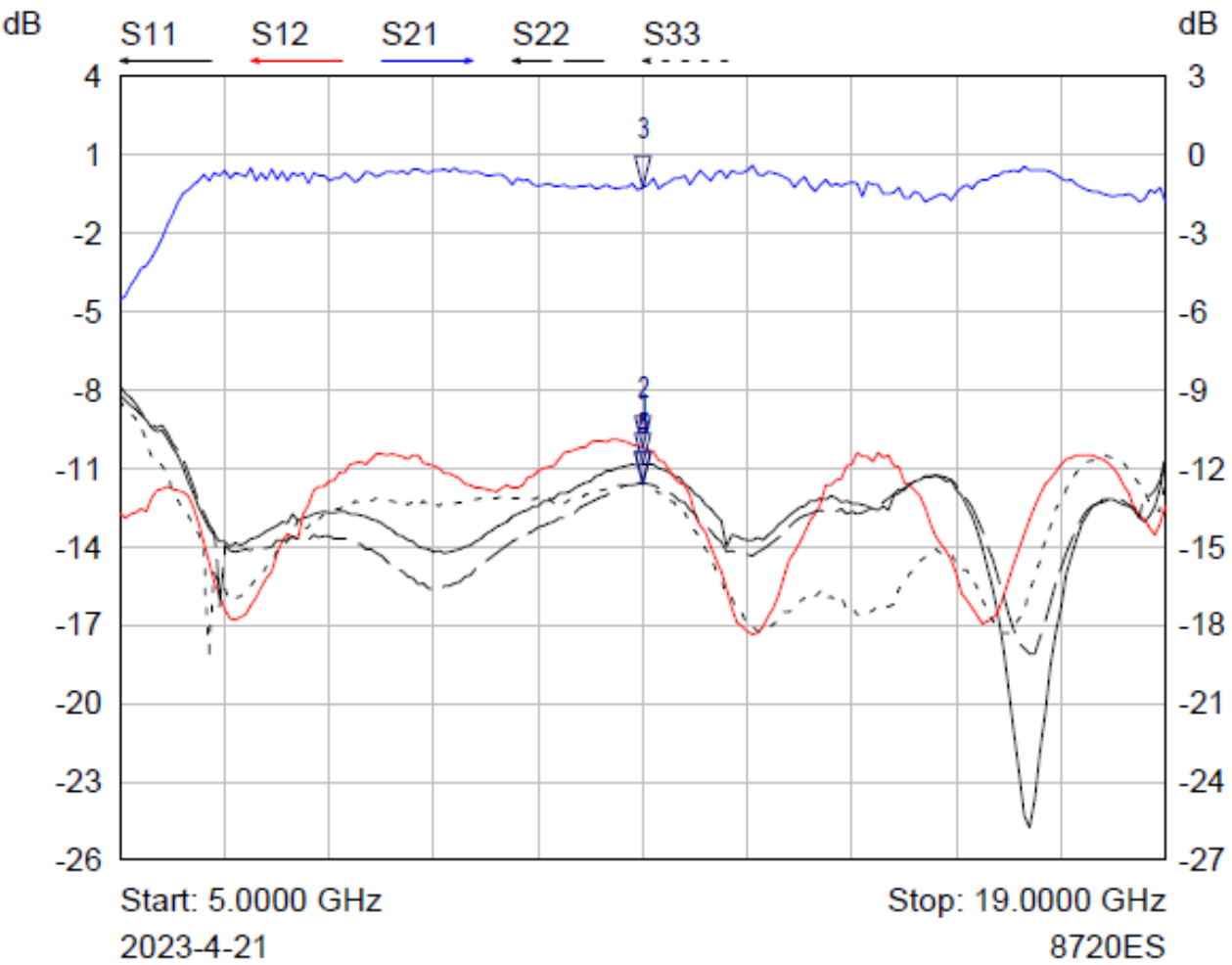
Electrical Specifications(T_A=25°C)

Parameter	Min	Typ	Max	Units
Frequency Range		6 – 18		GHz
Insertion Loss			2.0	dB
Isolation	9			dB
VSWR			2.1	:1
Power			10	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		SMA–Female		
Impedance		50		Ω

Environmental Specifications and Test Standards

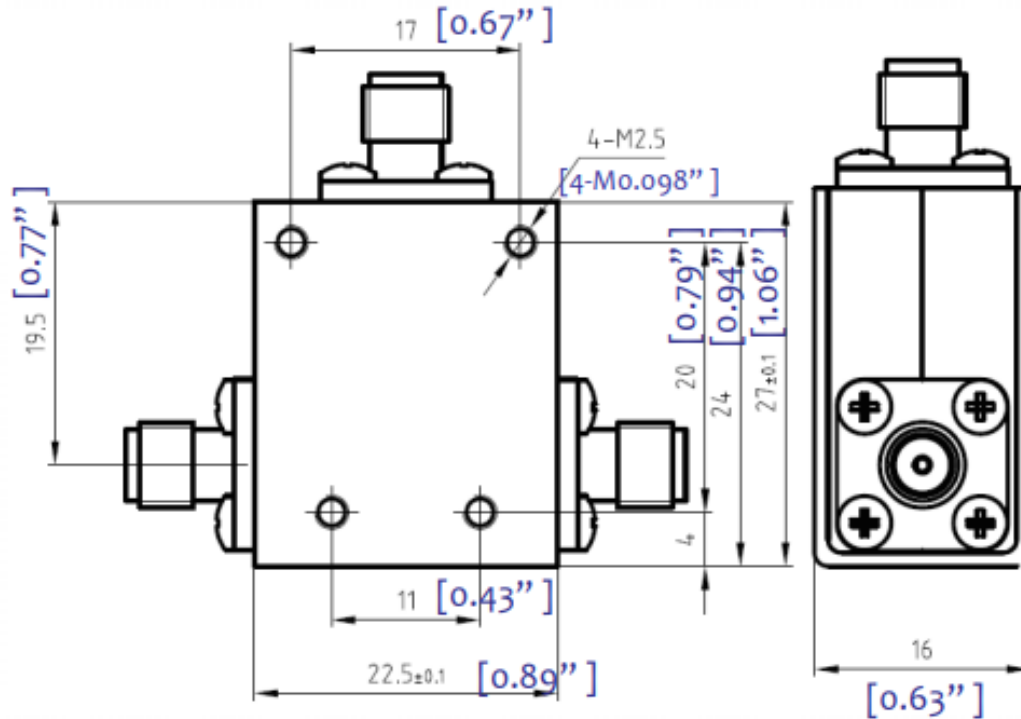
Parameter	Description
Operational Temperature	-20°C to +75°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
Shock	1. Weight >20g, 50g half sine wave for 11ms, 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)

Typical Performance Plots



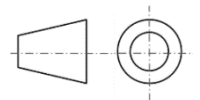
Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	12.0000 GHz	-10.84 dB	
2 ▾	S12	12.0000 GHz	-10.19 dB	
3 ▾	S21	12.0000 GHz	-1.25 dB	
4 ▾	S22	12.0000 GHz	-11.55 dB	
5 ▾	S33	12.0000 GHz	-11.61 dB	

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.
5. Standard torque wrench must be used to secure RF connectors.



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
RFLC601G06G18	Standard	6GHz-18GHz Coaxial Circulator

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