

Ultra Wide Band Circulator 9.1GHz - 9.6GHz



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

Product Description

RFLC504G91G96 is an ultra wide band coaxial circulator with a frequency range of 9.1 to 9.6GHz.

The circulator has a minimum isolation of 20dB. The maximum insertion loss is 0.7dB.

The circulator input and output connectors are SMA-Female.

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

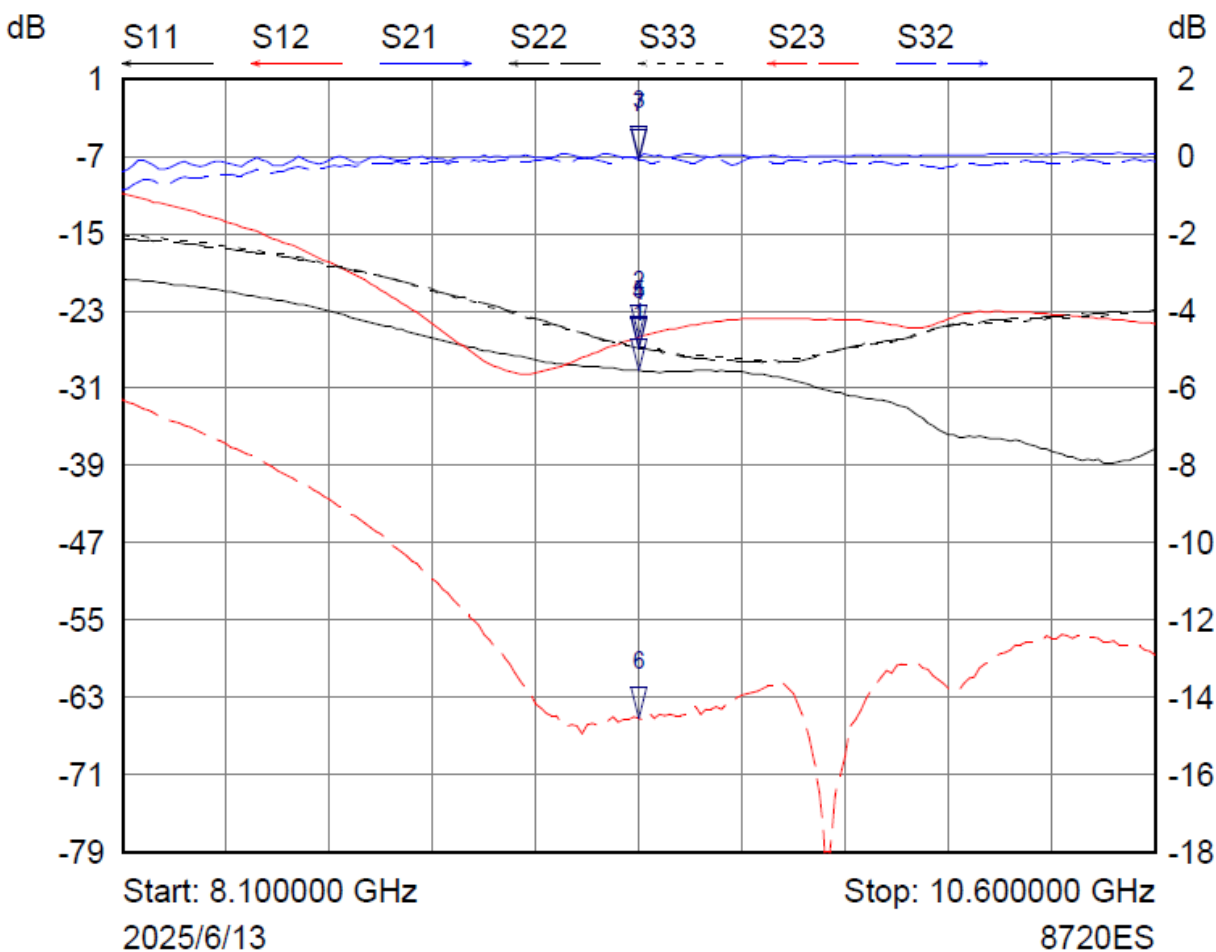
Parameter		Min.	Typ.	Max.	Units
Frequency Range			9.1 – 9.6		GHz
Insertion Loss	Port1 -> Port2			0.4	dB
	Port2 -> Port3			0.7	dB
Reverse Isolation	Port2 -> Port1	20			dB
	Port3 -> Port2	45			dB
VSWR				1.25	: 1
Forward Power				50	W
Reverse Power				5	W
Rotation			Clockwise (Standard) Counter Clockwise (upon request)		
Input / Output Connectors			SMA-Female(Input) – SMA-Female(Output)		
Weight			-		lbs.
Impedance			50		Ω

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20°C to +60°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)

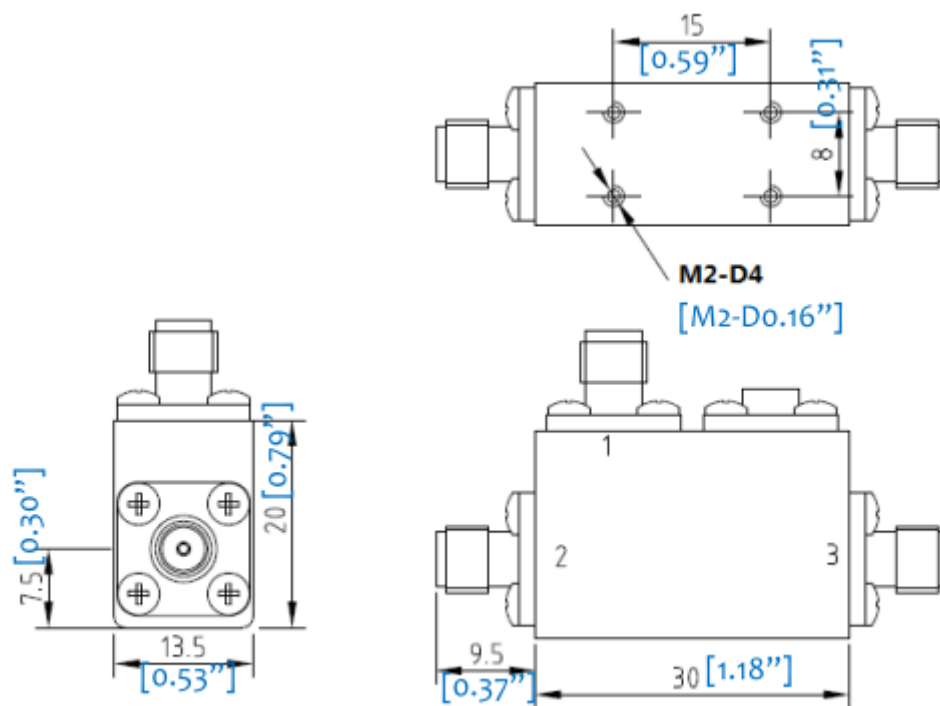
*For vibration testing details please see additional information section.

Typical Performance Plots



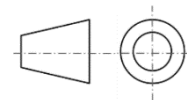
Mkr	Trace	X-Axis	Value	Notes
1 ▽	S11	9.350000 GHz	-29.1992 dB	
2 ▽	S12	9.350000 GHz	-25.7250 dB	
3 ▽	S21	9.350000 GHz	-0.0198 dB	
4 ▽	S22	9.350000 GHz	-26.8199 dB	
5 ▽	S33	9.350000 GHz	-26.6938 dB	
6 ▽	S23	9.350000 GHz	-65.1069 dB	
7 ▽	S32	9.350000 GHz	-0.0970 dB	

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
RFLC504G91G96	Standard (SMA-Female Connectors)	9.1GHz-9.6GHz Circulator
RFLC504G91G96N	Connectors N-Female	9.1GHz-9.6GHz Circulator

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