Triple Junction Coaxial Circulator 2GHz-4GHz

Product Description

RFLC313G2G4 is a triple junction coaxial circulator with a frequency range of 2 to 4GHz.

The circulator has a typical isolation of 35dB. The maximum insertion loss is 1.0dB.

The circulator input and output connectors are SMA-Female.

Features

- High power handling up to 100W
- 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=+25ºC)

Parameter			Min.	Typ.	Max.	Units
Frequency Range				2 - 4		GHz
Insertion Loss	Port1 ->Port2	@2-2.2GHz		1.0	1.5	dB
		@2.2-4GHz		1.0	1.2	
	Port2 ->Port3	@2-2.2GHz		1.0	1.5	dB
		@2.2-4GHz		1.0	1.2	
Isolation	Port2 ->Port1		32	35		dB
	Port3 ->Port2		32	35		dB
VSWR				1.35	1.50	: 1
Forward Power					100	W
Reverse Power					10	W
Rotation				Clockwise		
Input / Output Connectors				SMA-Female(Input) – SMA-Female(Output)		
Weight				0.55 Max.		lbs.
Impedance				50		Ω

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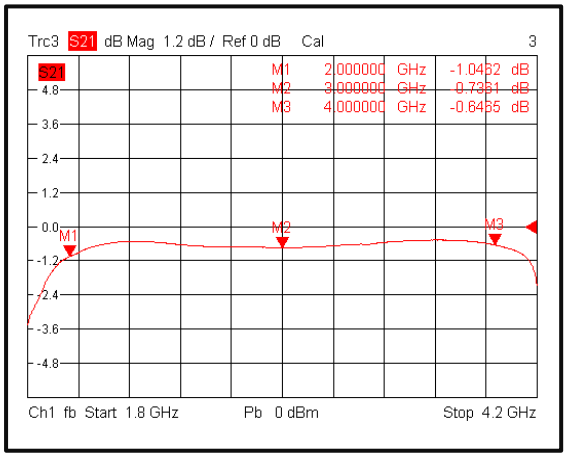
Environmental Specifications and Test Standards

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)

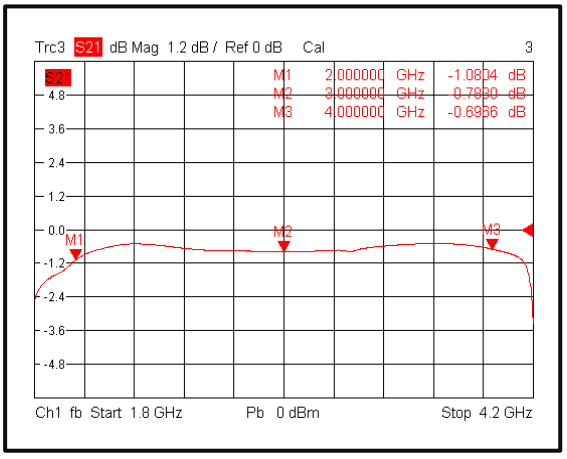
*For vibration testing details please see additional information section.

Typical Performance Plots

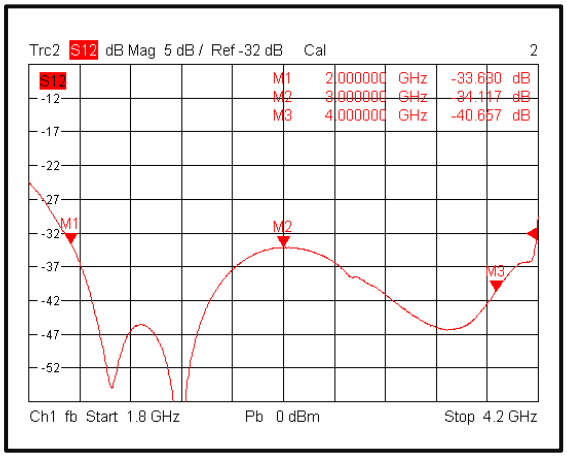
Insertion Loss (Port 1-Port 2)



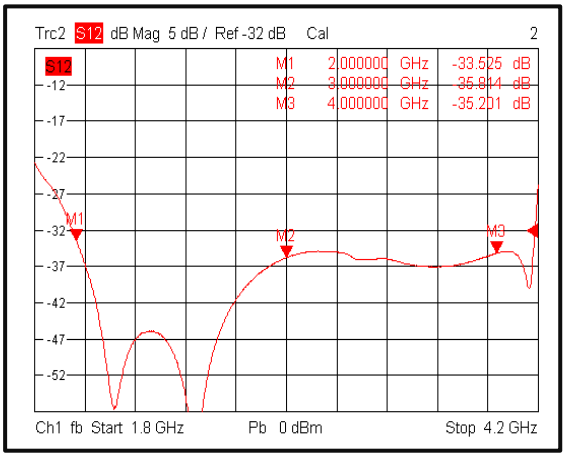
Insertion Loss (Port 2-Port 3)



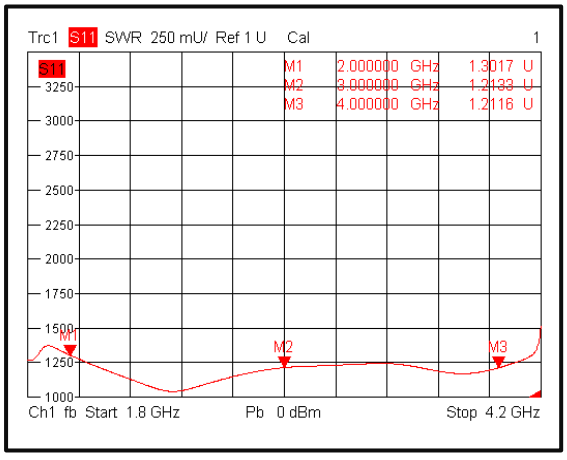
Isolation (Port 3-Port 2)



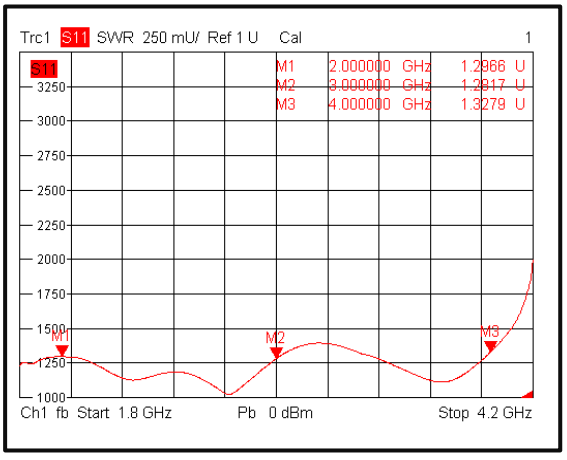
Isolation (Port 2-Port 1)



VSWR 1

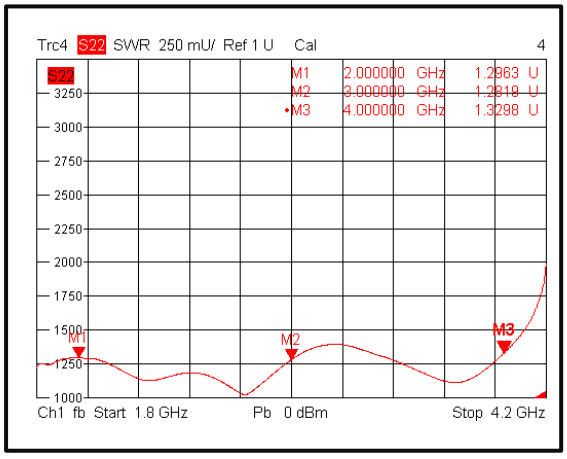


VSWR 2

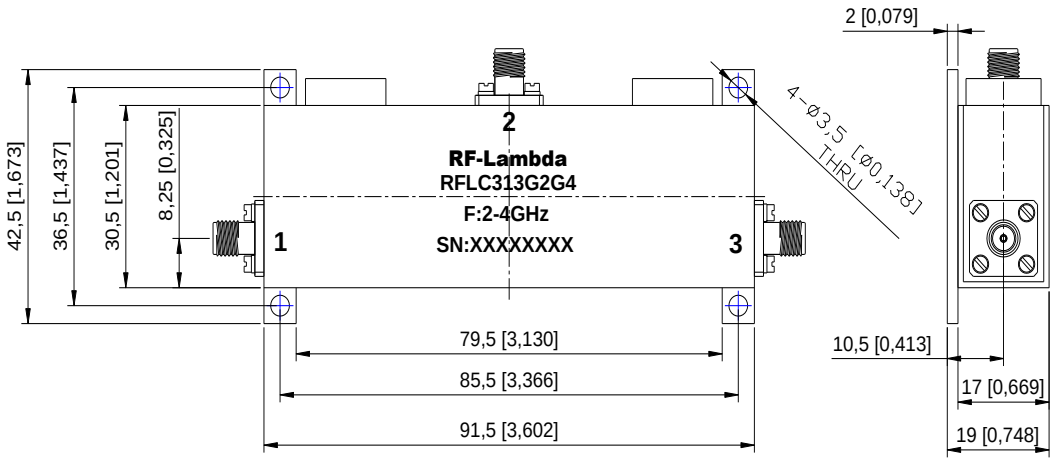


Typical Performance Plots

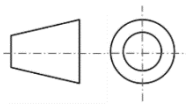
VSWR3



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. * Air cooling is Required - Mandatory for High Power Operation .
6. 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
RFLC313G2G4	Standard	2GHz-4GHz Coaxial Circulator

Important Notice

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