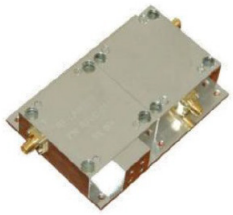
Dual Junction Circulator
1.25 - 1.35GHz



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

Product Description

RFC219FNC is a dual junction circulator with a frequency range of 1.25 to 1.35GHz.

The circulator has a typical isolation(port2->port1) of 17dB and isolation (port3->port2) of 34dB . The maximum insertion loss (port1->port2) is 0.3dB and insertion loss (port2 >port3) is 0.6dB .

The operating temperature of this product is within -20 to +60ºC

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		1.25-1.35		GHz
Insertion Loss (port1->port2)			0.3	dB
Insertion Loss (port2 >port3)			0.6	dB
Isolation (port2->port1)	17			dB
Isolation (port3->port2)	34			dB
Rotation		1->2->3->4->1		
VSWR			1.2	:1
Power Handling			50 Forward 20 Reverse	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		N-Female(Input)--N-Female(Output)		
Impedance		50		Ω

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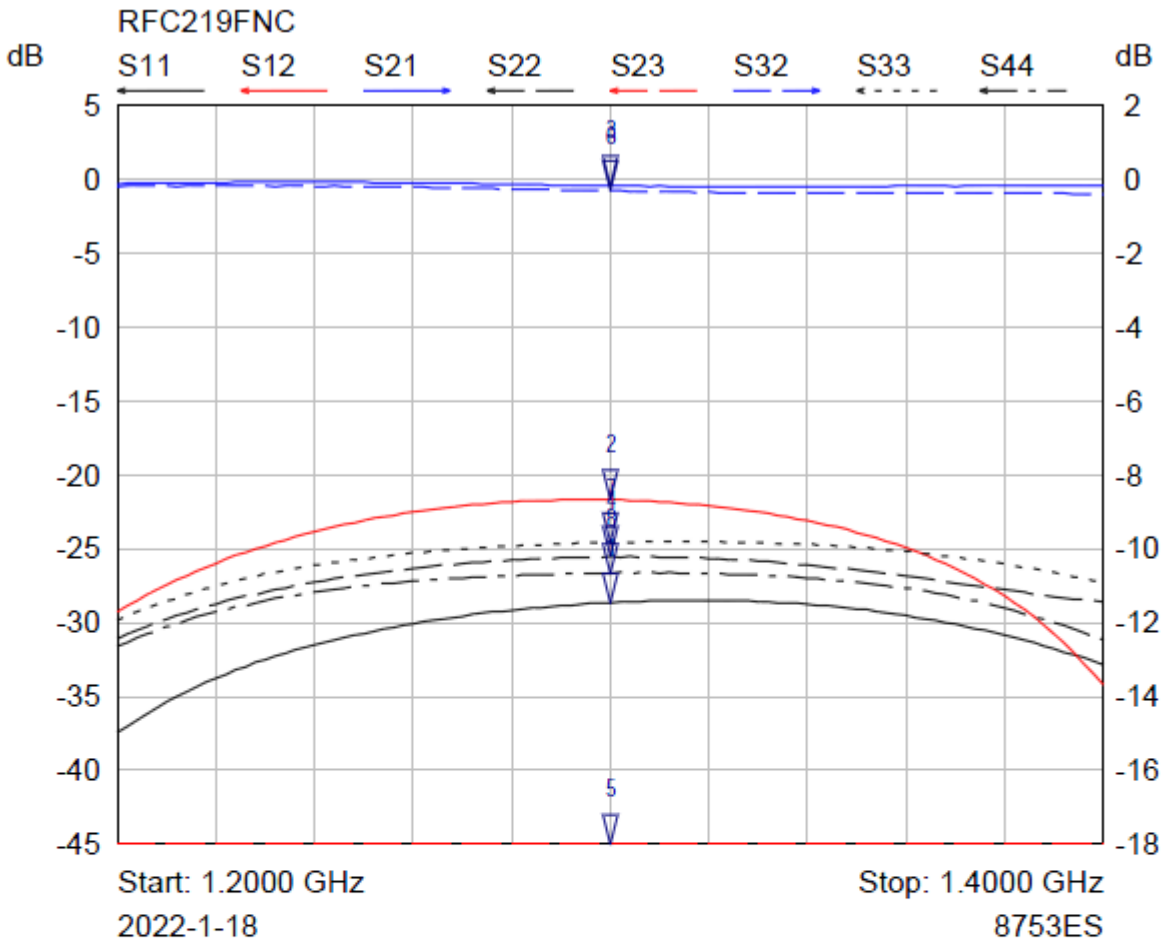
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-20ºC to +60ºC (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)

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1	S11	1.3000 GHz	-28.64 dB	
2	S12	1.3000 GHz	-21.68 dB	
3	S21	1.3000 GHz	-0.18 dB	
4	S22	1.3000 GHz	-25.54 dB	
5	S23	1.3000 GHz	-60.27 dB	
6	S32	1.3000 GHz	-0.31 dB	
7	S33	1.3000 GHz	-24.58 dB	
8	S44	1.3000 GHz	-26.66 dB	

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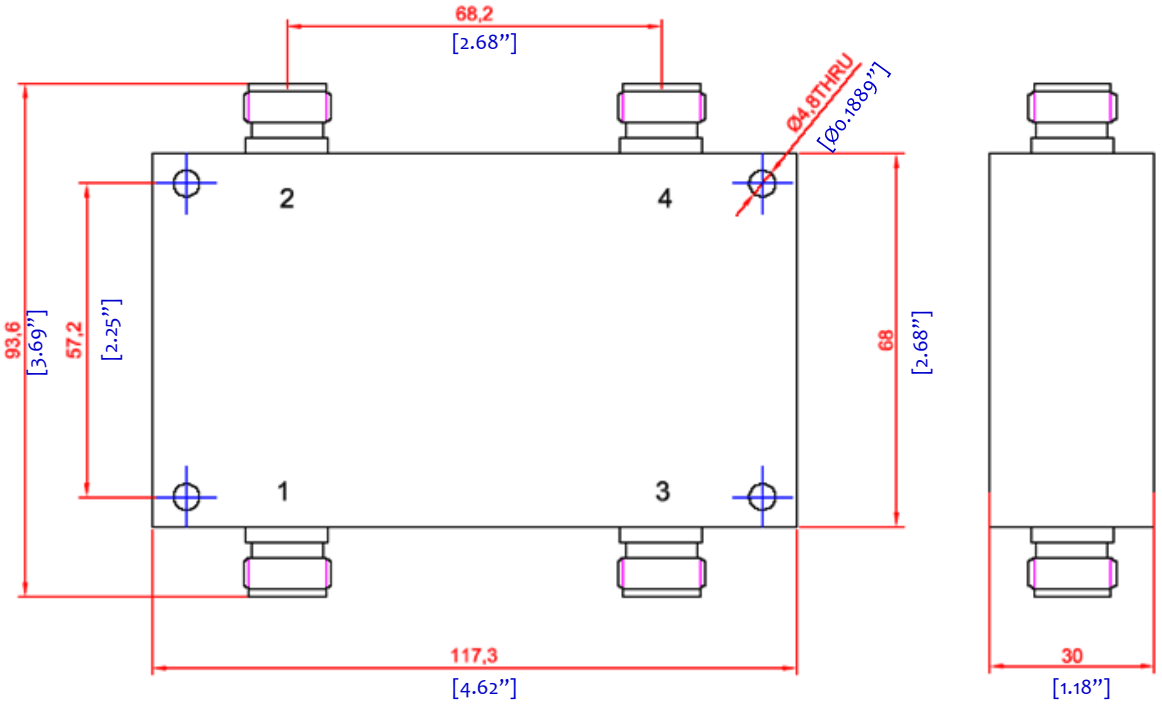
Typical Performance Plots



Notes:
1. Package Material: Aluminum Alloy / Copper
2. All dimensions are in millimeters [inches]
3. 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
RFC219FNC	connectors N-Female	1.25 - 1.35GHz Dual Junction Circulator

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