500W High Power Circulator
700MHz-800MHz

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

Product Description

The RFC216-500-750M is a high power circulator with a frequency range of 700 to 800MHz.

The circulator has a typical isolation of 20dB. The maximum insertion loss is 0.2dB.The circulator has good isolation performance.

The operating temperature of this product is within -45 to +85ºC

Features

- High power handling up to 500W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss
- Stable performance over temperature
- Aerospace and military applications
- LMDS multi-carrier operation
- High peak to average handling capability
- All specifications can be modified upon request

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		700-800		MHz
Insertion Loss			0.20	dB
Isolation (Note 1)	20			dB
VSWR			1.25	:1
Forward Power (CW)			500	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		N-Female		
Impedance		50		Ω

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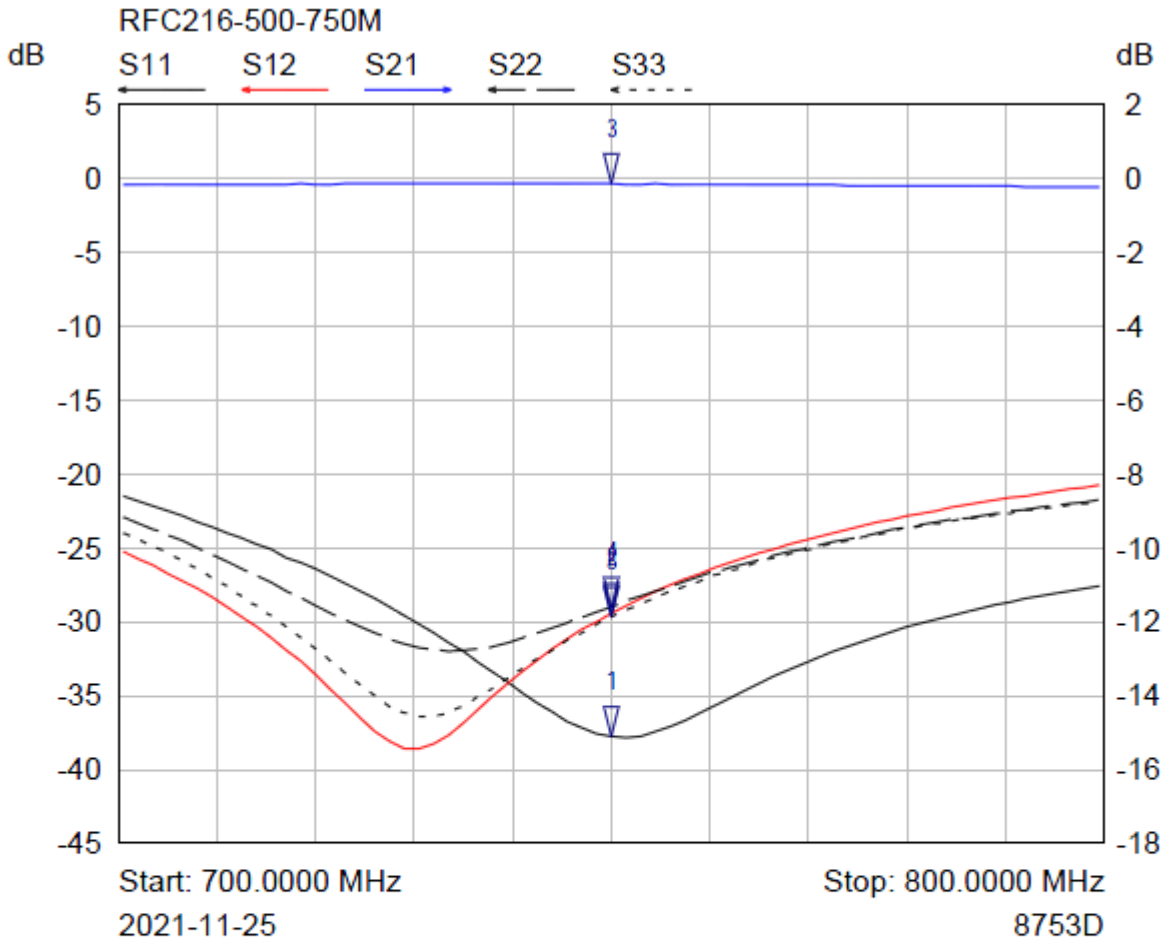
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-45ºC to +85ºC (Case Temperature)
Storage Temperature	-55ºC to +105ºC
Thermal Shock	-45ºC → +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	750.0000 MHz	-37.77 dB	
2	S12	750.0000 MHz	-29.41 dB	
3	S21	750.0000 MHz	-0.15 dB	
4	S22	750.0000 MHz	-28.98 dB	
5	S33	750.0000 MHz	-29.67 dB	

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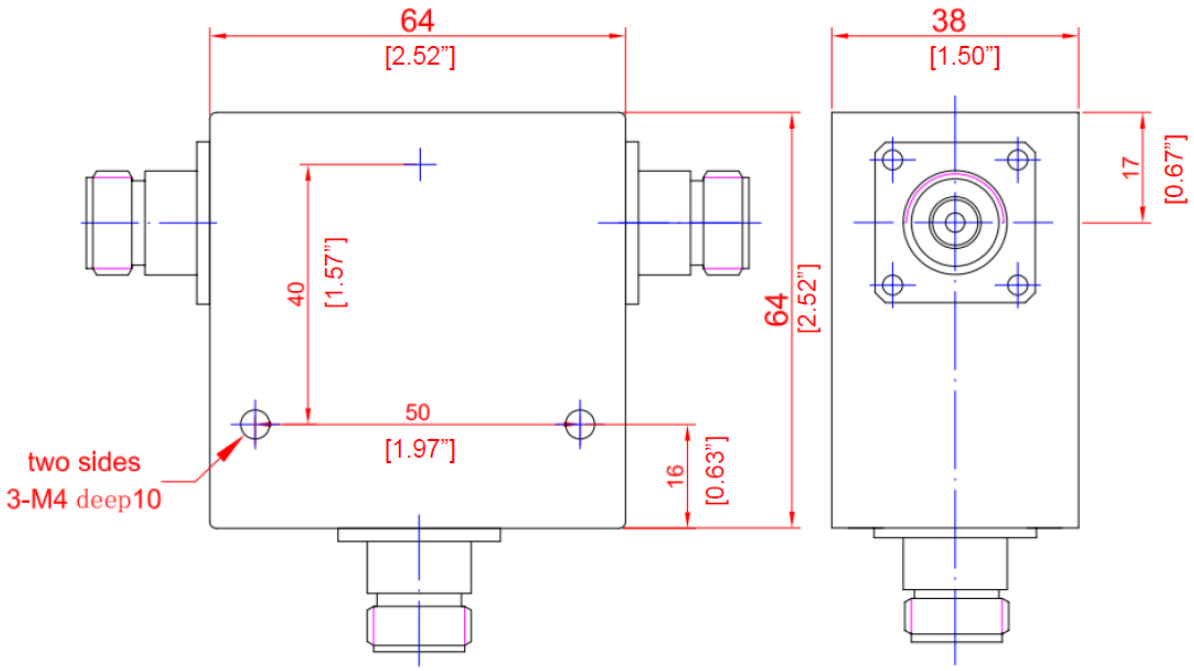
Typical Performance Plots



Notes:
1. Package Material: Aluminum Alloy
2. Finish : Nickel
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

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
RFC216-500-750M	N Female Connectors	700MHz~800MHz High Power Circulator

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