

## High Power Circulator 88MHz - 108MHz



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

### Product Description

RFLC-HXD-7-98 is a high power circulator with a frequency range of 88 to 108MHz.

The circulator has a minimum isolation of 20dB. The maximum insertion loss is 0.9dB.

The operating temperature of this product is within -20 °C to +70°C

### Features

- High power handling up to 100W
- 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

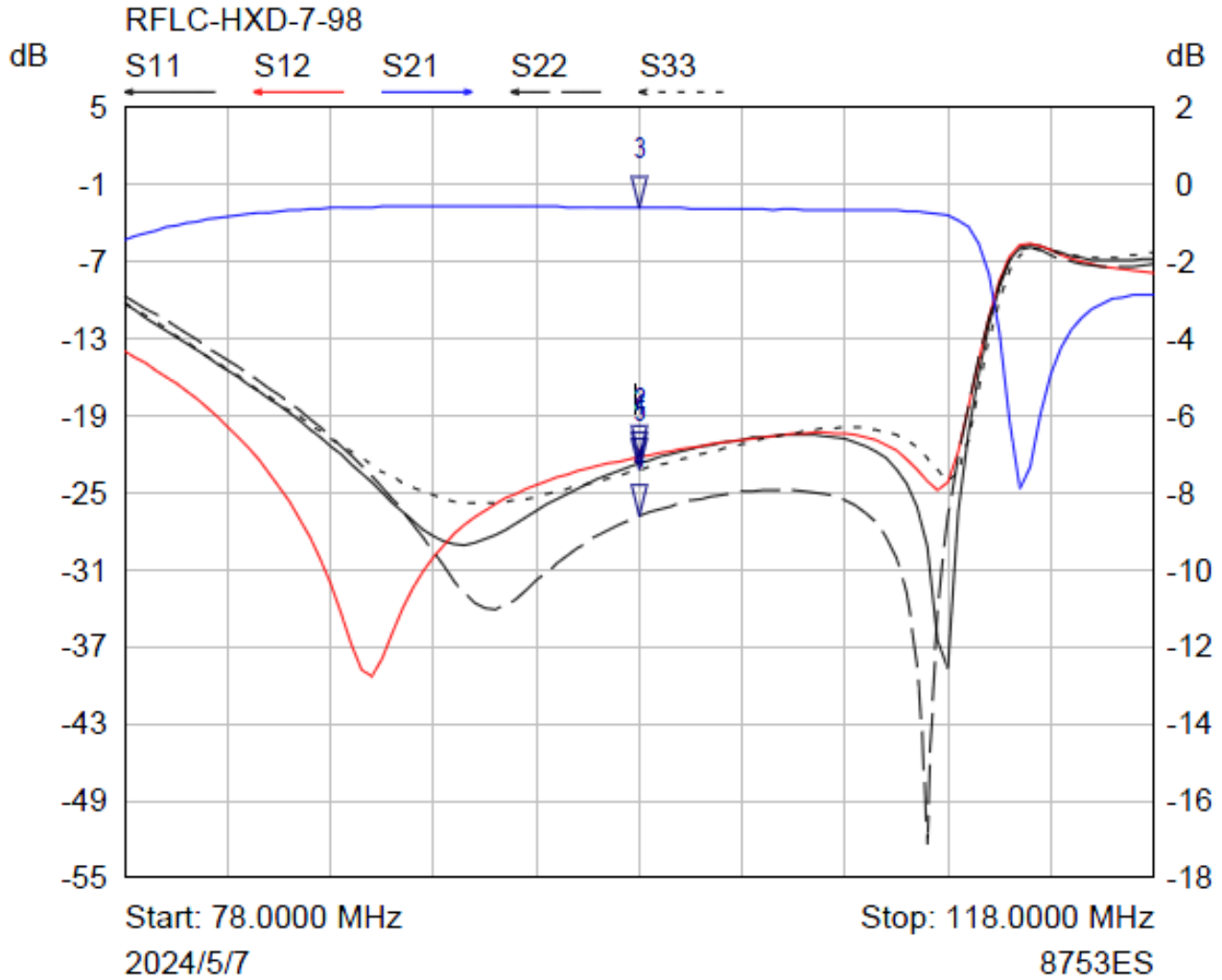
### Electrical Specifications(T<sub>A</sub>=25°C)

Parameter	Min	Typ	Max	Units
Frequency Range		88 - 108		MHz
Insertion Loss			0.9	dB
Isolation	20			dB
VSWR			1.25	:1
Forward Power			100	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		N-Female		
Impedance		50		Ω

**Environmental Specifications and Test Standards**

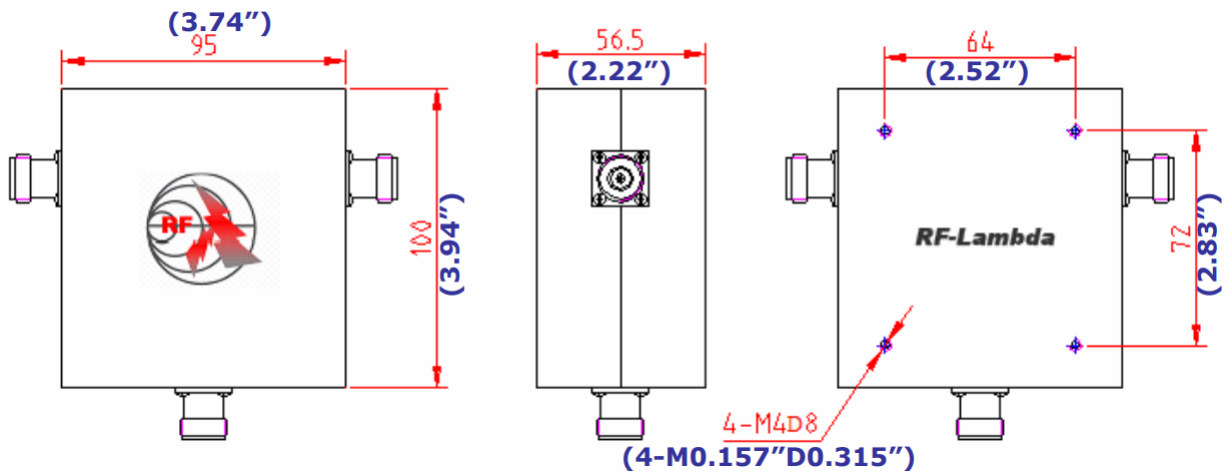
Parameter	Description
Operational Temperature	-20°C to +70°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-20°C → +70°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
Shock	1. Weight >20g, 50g half sine wave for 11ms, 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



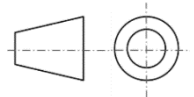
Mkr	Trace	X-Axis	Value	Notes
1 ▾	S11	98.0000 MHz	-22.71 dB	
2 ▾	S12	98.0000 MHz	-22.21 dB	
3 ▾	S21	98.0000 MHz	-0.60 dB	
4 ▾	S22	98.0000 MHz	-26.81 dB	
5 ▾	S33	98.0000 MHz	-23.23 dB	

**Outline Drawing**



Notes:

1. Package Material: Aluminum / Copper
2. Finish: Nickel Plated
3. All dimensions are in millimeters [inches].
4. Outline Tolerances  $\pm 0.5$  [0.02], Mounting Hole Tolerances  $\pm 0.2$  [0.008] unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



Additional Information

Documentation	Webpage
ESD Policy	<a href="https://rflambda.com/pdf/rflambda_esd_control.pdf">https://rflambda.com/pdf/rflambda_esd_control.pdf</a>
Connector Torque Specifications	<a href="https://www.rflambda.com/pdf/Torque_Specifications.pdf">https://www.rflambda.com/pdf/Torque_Specifications.pdf</a>
Random Vibration Test Standard	<a href="https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf">https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf</a>

**Ordering Information**

Part Number	Modification	Description
RFLC-HXD-7-98	Connectors N-Female	88MHz-108MHz High Power Circulator

**Important Notice**

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