

## 250W High Power Circulator 2.7GHz - 3.1GHz

### Product Description

RFLC-HXD-47-V6 is a 250W high power circulator with a frequency range of 2.7 to 3.1GHz.

The circulator has a typical isolation of 20dB. The maximum insertion loss is 0.3dB.

The operating temperature of this product is within -20 to +75°C

### Features

- High power handling up to 250W
- 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

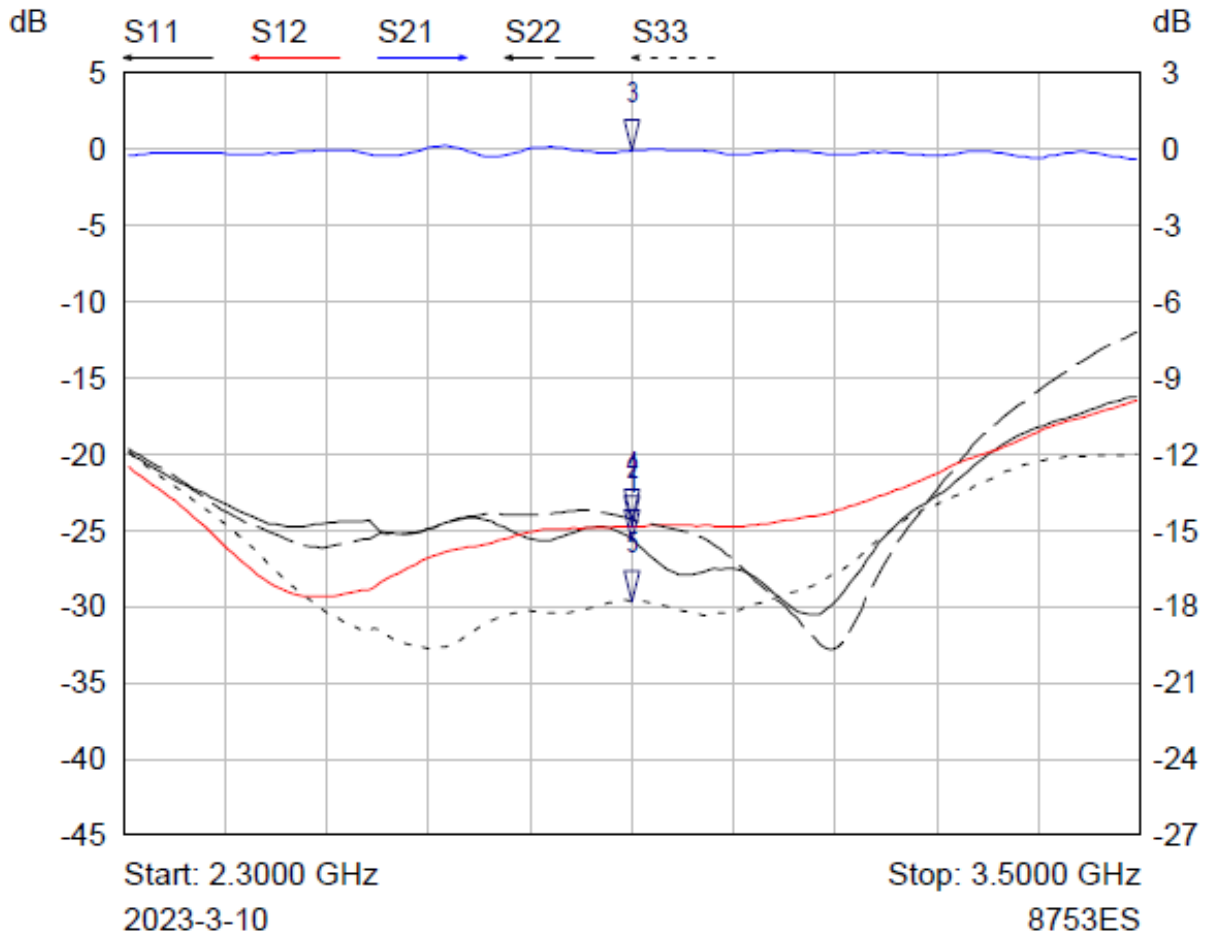
### Electrical Specifications( $T_A=25^\circ\text{C}$ )

Parameter	Min	Typ	Max	Units
Frequency Range		2.7-3.1		GHz
Insertion Loss		0.25	0.3	dB
Isolation (Note 1)	20	25		dB
VSWR		1.1	1.2	:1
Power Handling (CW)			250	W
Rotation		Clockwise (Standard) Counter Clockwise (Upon Request)		
Input / Output Connectors		-		
Finish		Nickel Plated		
Case Material		Aluminum Alloy / Copper		
Impedance		50		$\Omega$

**Environmental Specifications and Test Standards**

Parameter	Description
Operational Temperature	-20°C to +75°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)

Typical Performance Plots



Mkr	Trace	X-Axis	Value	Notes
1	S11	2.9000 GHz	-25.63 dB	
2	S12	2.9000 GHz	-24.72 dB	
3	S21	2.9000 GHz	-0.06 dB	
4	S22	2.9000 GHz	-24.29 dB	
5	S33	2.9000 GHz	-29.64 dB	

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-47-V6	Standard	2.7GHz-3.1GHz Coaxial Circulator

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