



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFWI90F

100W WR90 Ultra Wide Band Waveguide Isolator 8.2 - 12.4GHz



Features

- High power handling capability up to 100W
- Wide band operation
- High isolation within operational band
- Low Insertion loss
- Stable performance over temperature

Typical Applications

- Aerospace and military applications
- Wireless Infrastructure
- Test and Measurement

Electrical Specifications, $T_A=25^\circ\text{C}$

Parameter	Min	Typ.	Max	Units
Frequency Range	8.2-12.4			GHz
Insertion Loss		0.25	0.30	dB
Isolation (Note 1)	20	21		dB
VSWR		1.15	1.20	:1
Forward Power (CW)			100	W
Reverse Power (CW)			20	W
Rotation	Clockwise (Standard) Counter Clockwise (upon request)			
Finish	Oxidation by color			
Flange Type	UG39/U			
Case Material	Aluminum alloy			
Weight	12.35			ounces
Impedance	-			Ω
Note 1: Units which have a narrower frequency bandwidth can achieve higher isolation & lower insertion loss Bandwidth (5 ~10) % x Center Frequency (Isolation >23dB) Bandwidth (20~30) % x Center Frequency (Isolation >21dB) Bandwidth (40~60) % x Center Frequency (Isolation >20dB) Ask manufacturer for details				

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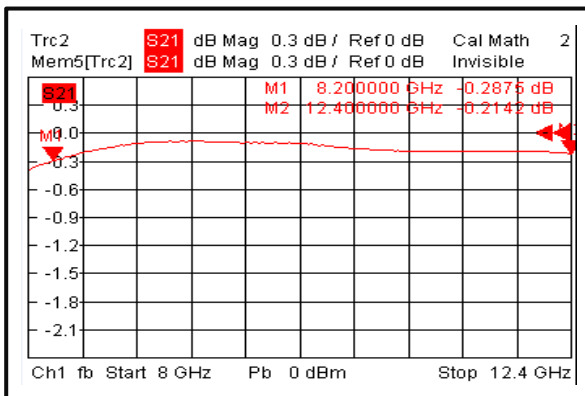
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Environmental Specifications and Test Standards

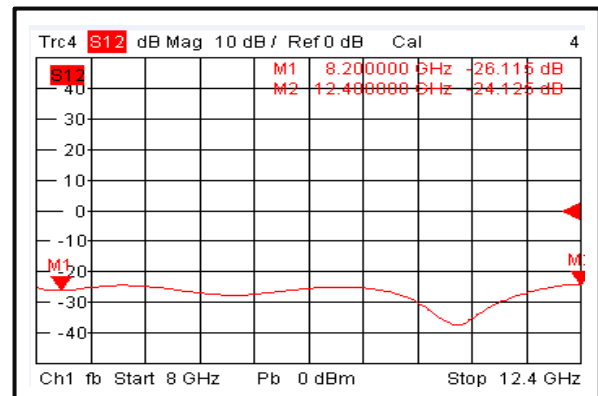
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+105°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
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	MIL-STD-883	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

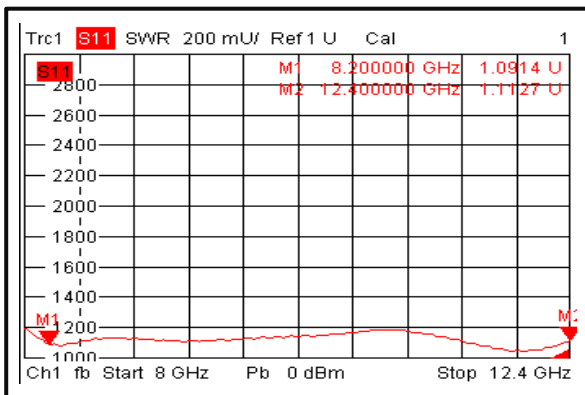
Insertion Loss



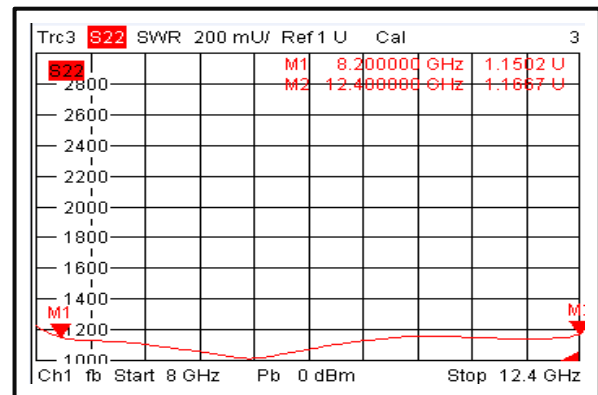
Isolation



VSWR1



VSWR2



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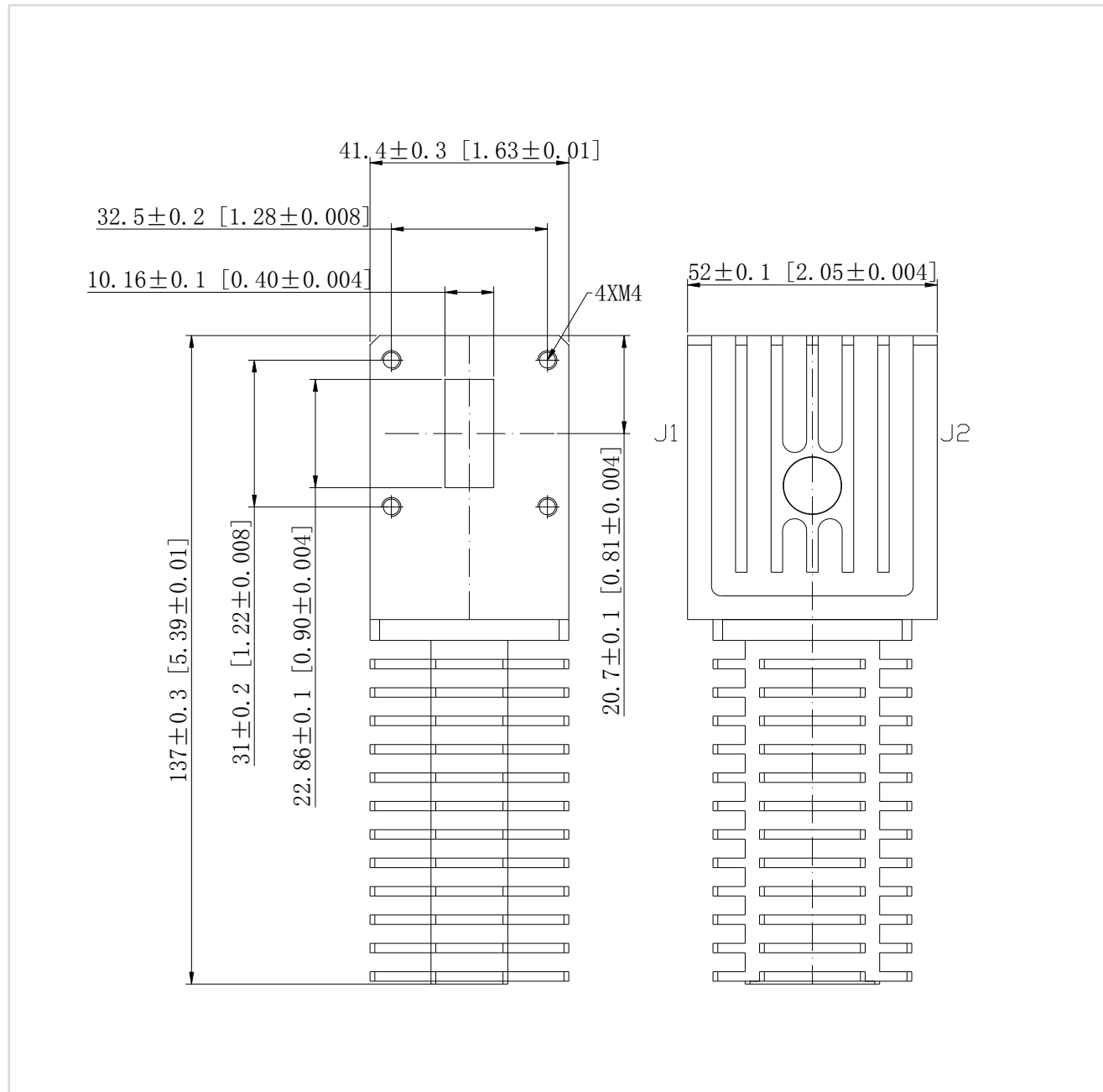
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Outline Drawing:

All Dimensions in mm [inches]



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