



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				

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



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

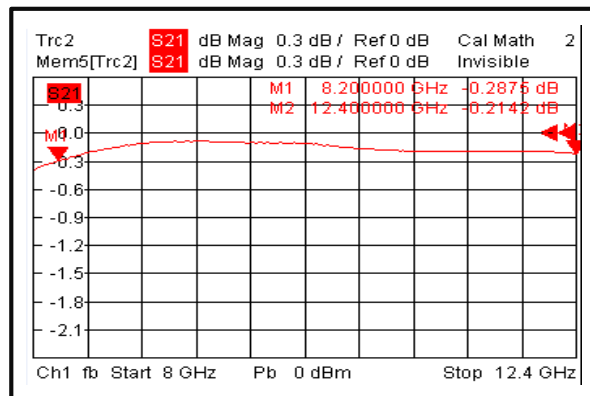
RFWI90F

Environmental Specifications and Test Standards

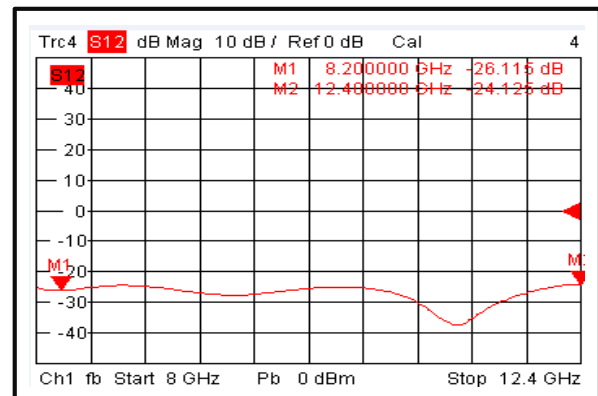
Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+105°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72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

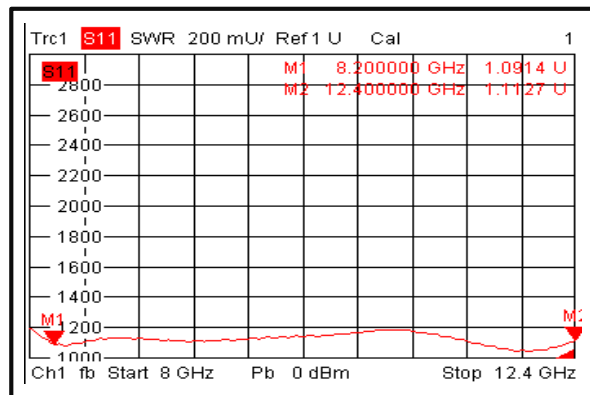
Insertion Loss



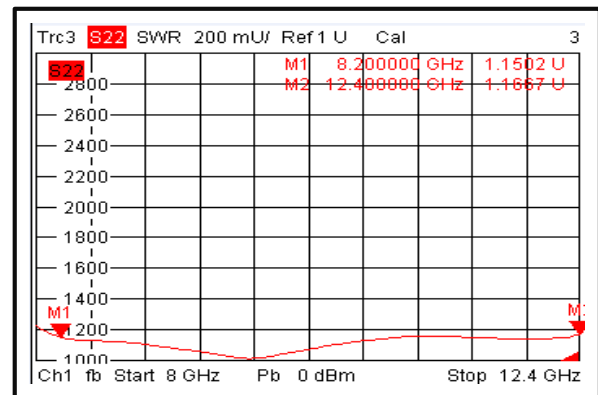
Isolation



VSWR1



VSWR2



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



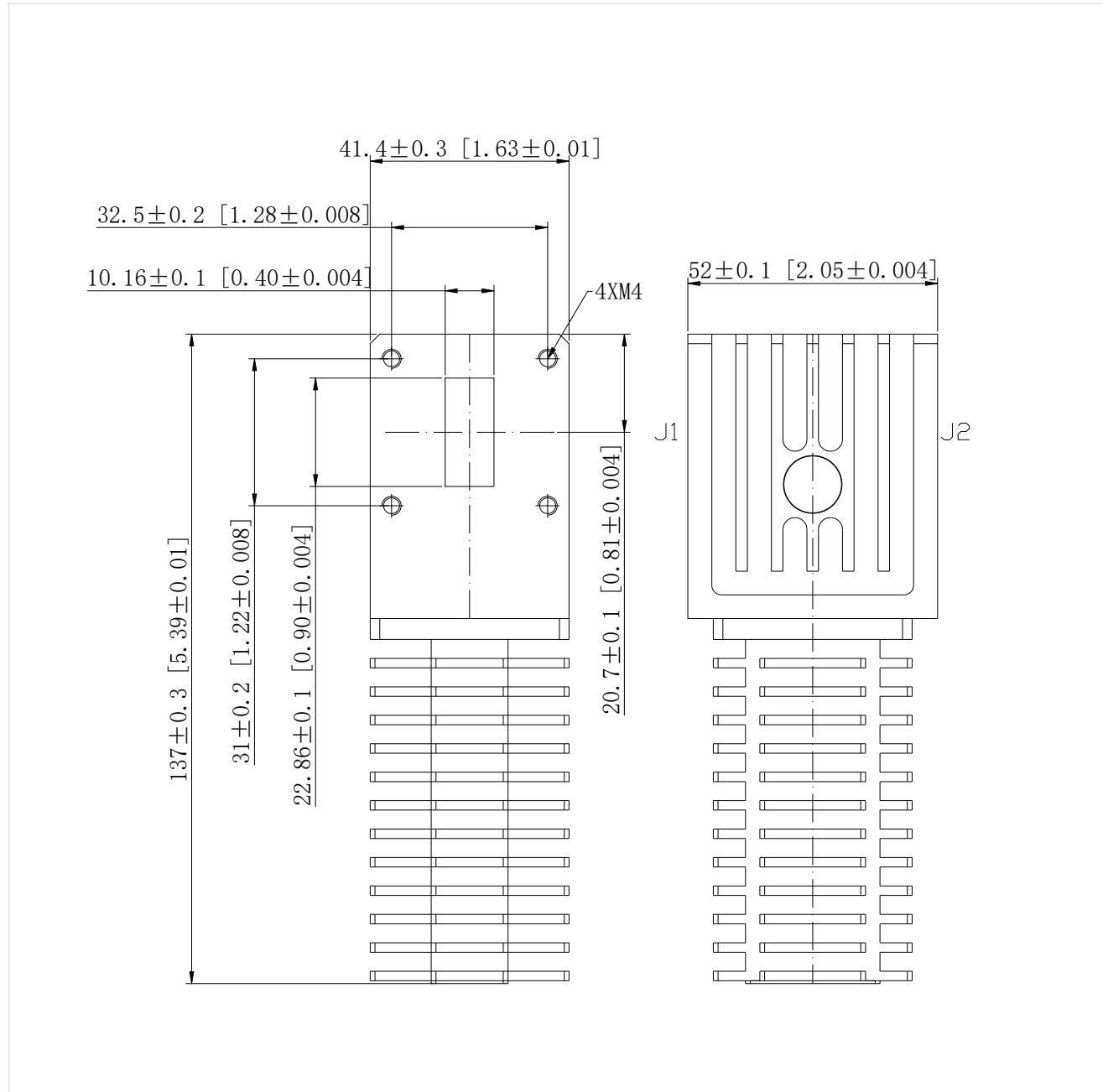
RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFWI90F

Outline Drawing:

All Dimensions in mm [inches]



Important Notice

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.

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