

Coaxial 1W 0° 4-Way Power Divider DC-50GHz



Product Description

RFLT4WDC50G is a 4-Way power divider with a frequency range of DC to 50GHz.

The forward power handling of this power divider is 1W. The Insertion Loss is 3.5dB with a typical isolation of 12dB.

The working temperature of this product is between - 40°C and + 85°C.

Features

- High power handling up to 1W
- Wide band operation
- High isolation within operational band
- Low Insertion Loss

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, TA = +25°C

Parameter		Min	Typ	Max	Min	Typ	Max	Units
Frequency Range		DC		26.5	26.5		50	GHz
Nominal Splitter Loss			12			12		dB
Insertion Loss			2.5	3.0		3.5	4.0	dB
Isolation		9	10.5		9.5	12		dB
Input VSWR			1.3	1.6		1.7	2.0	: 1
Output VSWR			2.0	2.5		1.8	2.5	: 1
Amplitude Imbalance			±0.4	±0.5		±0.5	±0.6	dB
Phase Imbalance			±4	±6		±7	±10	deg
Power Rating	Forward Power			1				W
	Reverse Power			0.1				W
	Peak Power			10 (10% Duty Cycle, 1 us Pulse Width)				W
Weight				0.092Max.				lbs
Impedance				50				Ω
Input / Output Connectors				2.4mm-Female(Input) – 2.4mm-Female(Output)				
Package				Epoxy Sealed (Standard)				
				Hermetically Sealed (Optional)				

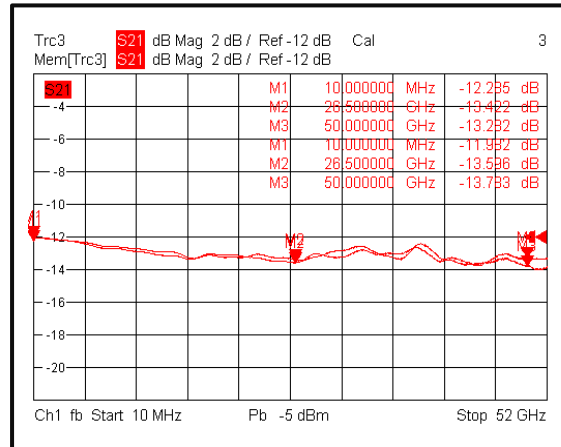
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-50°C to +105°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)

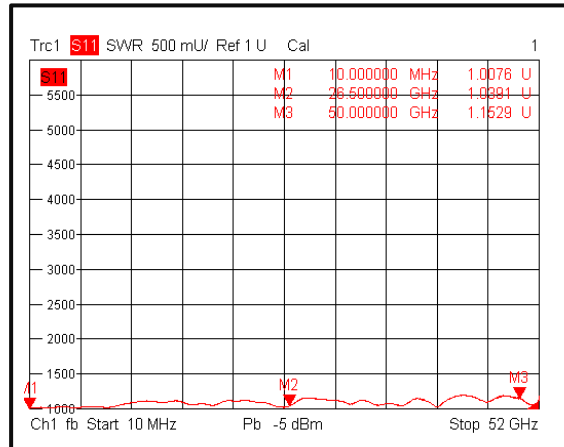
*For vibration testing details please see additional information section.

Typical Performance Plots

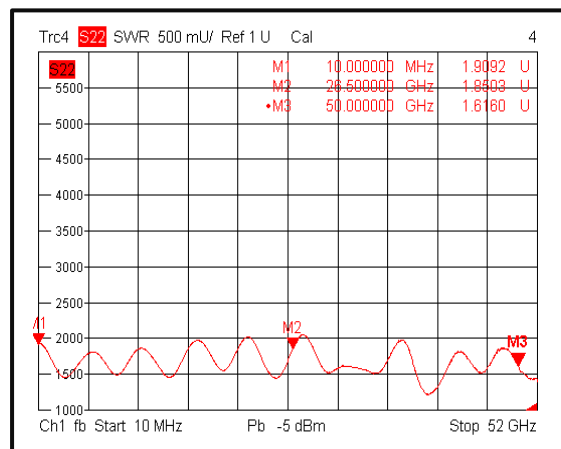
Loss & Amplitude Imbalance



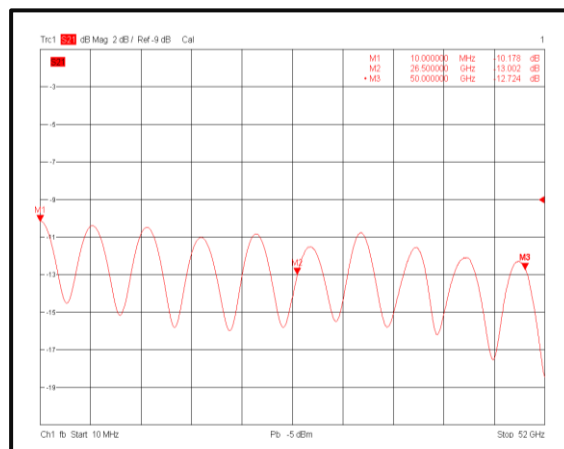
Input VSWR



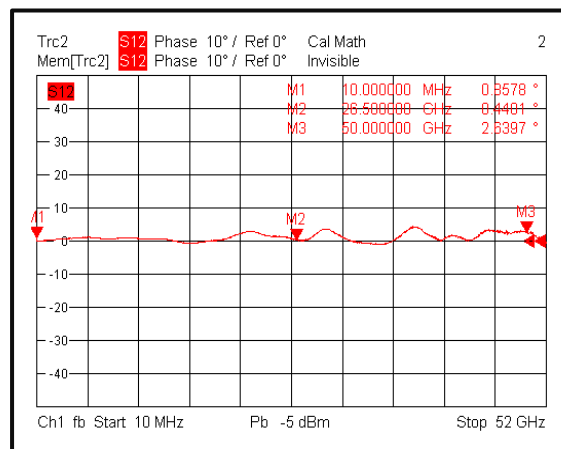
Output VSWR



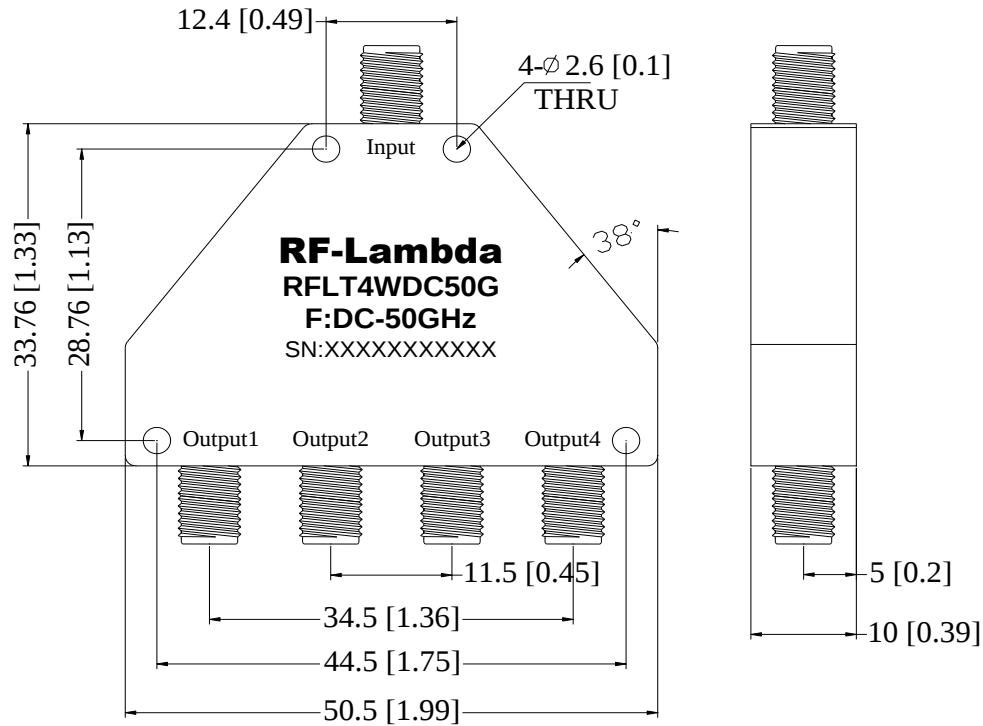
Isolation



Phase Imbalance

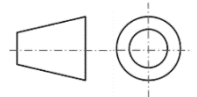


Outline Drawing



Notes:

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



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

Ordering Information

Part Number	Modification	Description
RFLT4WDC50G	Connectors 2.4mm-Female	DC-50GHz 4-Way Power Divider

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