

50W Wide Band Power Limiter 7.5GHz-12.5GHz



Product Description

RFPLT08G12GG is a wideband power limiter with a frequency range of 7.5 to 12.5GHz.

The max peak power of the limiter is 50W. The typical insertion loss is 0.75 dB and Flat Leakage at > 30dBm input is 18dB.

The power limiter's connectors are SMA-Female.

The operating temperature of this product is -40 to +85°C.

Features

- Wide Band Operation 7.5-12.5GHz
- Passive, High Isolation Limiter
- Low Insertion Loss and Good Return Loss
- High Power Handling: 50W

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°C)

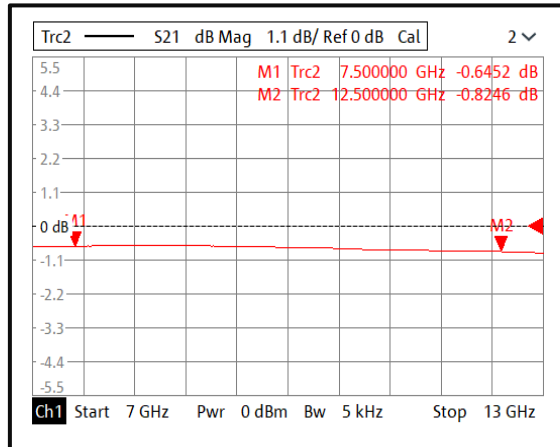
Parameter	Min	Typ	Max	Units
Frequency Range	7.5		12.5	GHz
CW Input Power (50 Ω, 25 °C)			40	dBm
CW Input Power (50 Ω, 85 °C)			36	dBm
Peak Power (Pulsed , PW = 100us, Duty Cycle = 10%, 50 Ω, 25 °C)			47	dBm
Peak Power (Pulsed , PW = 100us, Duty Cycle = 10%, 50 Ω, 85 °C)			46	dBm
Insertion Loss		0.75	1.0	dB
VSWR		1.3	1.5	: 1
Flat Leakage Power at PIN >30 dBm		18		dBm
Peak Power Leakage		20		dBm
Weight		0.07 Max.		lbs.
Input / Output Connectors	SMA-Female(Input) - SMA-Female(Output)			
Package	Epoxy Sealed (Standard)			
	Hermetically Sealed (Optional)			

Environmental Specifications and Test Standards

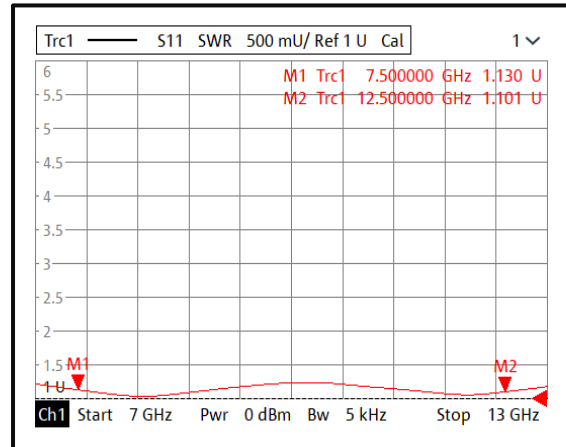
Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-50°C to +105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 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	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

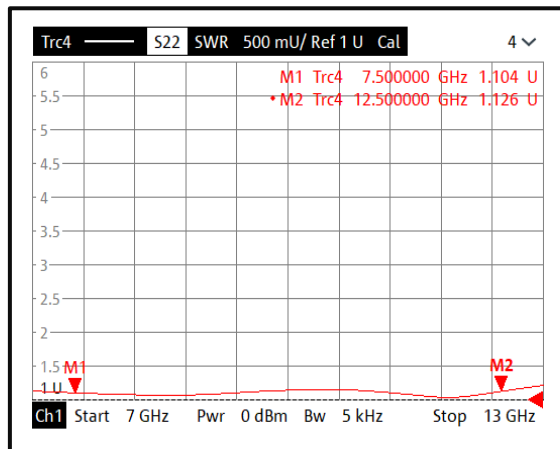
Insertion Loss @+25°C



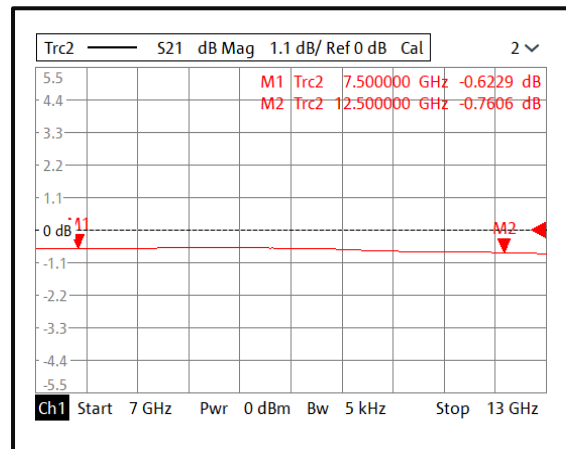
Input VSWR @+25°C



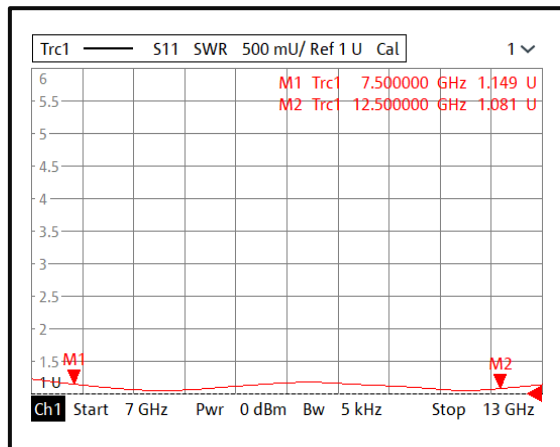
Output VSWR @+25°C



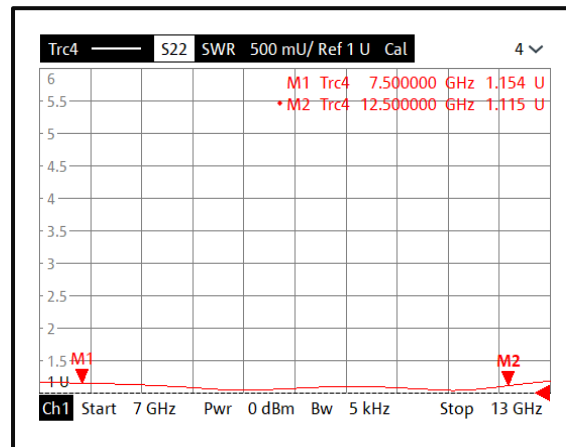
Insertion Loss @-40°C



Input VSWR @-40°C

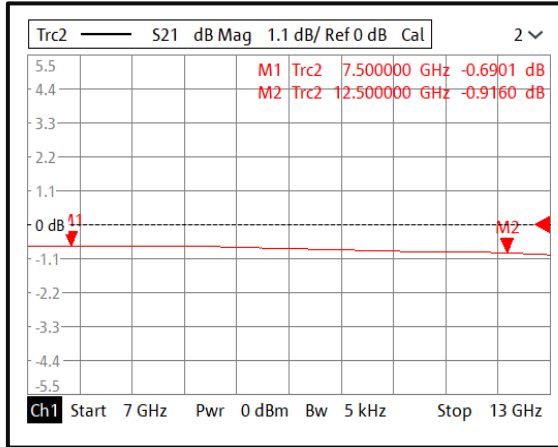


Output VSWR @-40°C

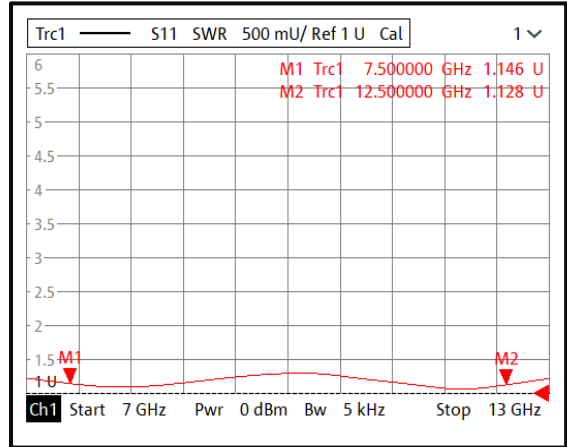


Typical Performance Plots

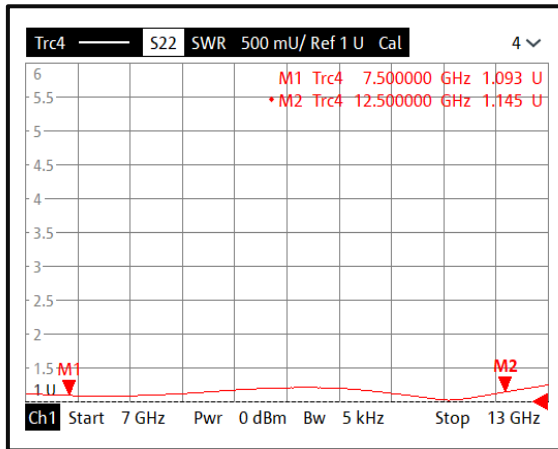
Insertion Loss @+85°C



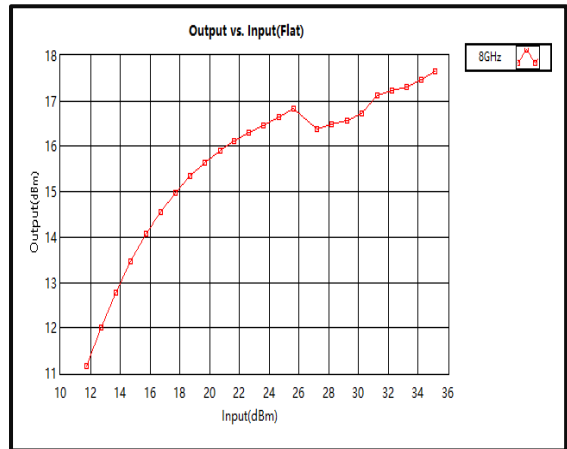
Input VSWR @+85°C



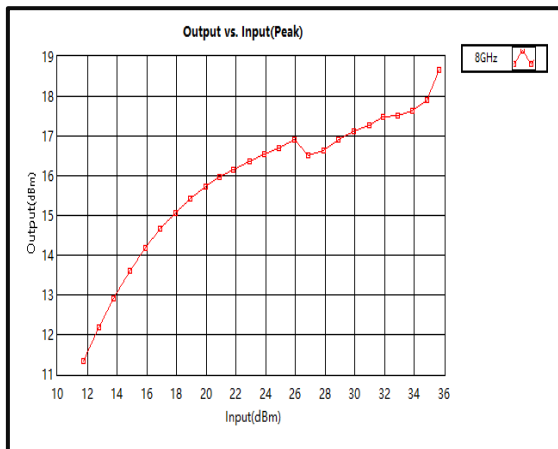
Output VSWR @+85°C



Flat Leakage Power



Peak Power Leakage

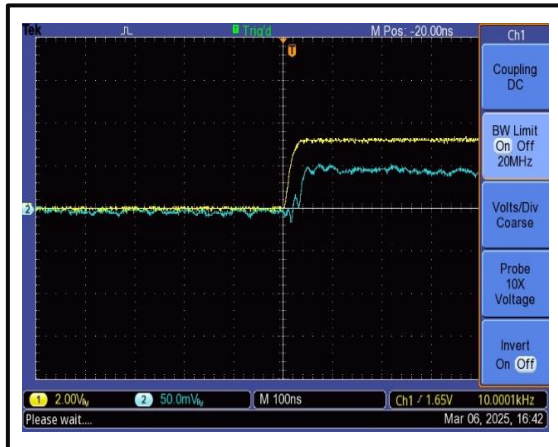


Recovery Speed

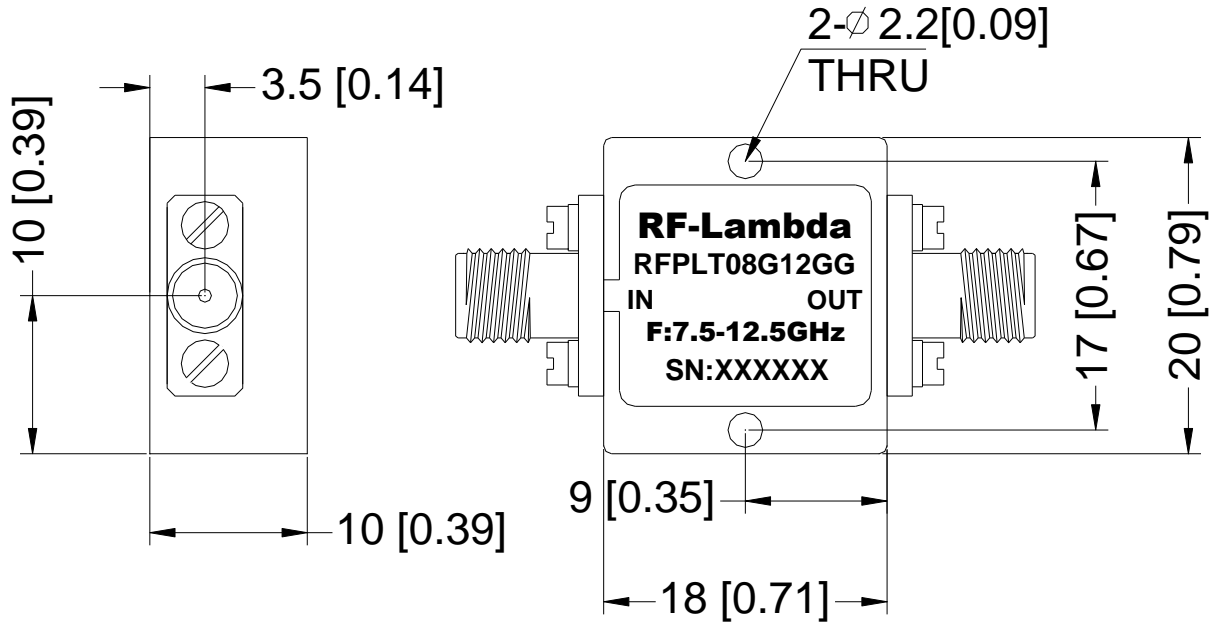


Typical Performance Plots

Limiting Time

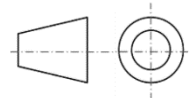


Outline Drawing



Notes:

1. Package Material: Aluminum
2. Finish: Gold Plated
3. All dimensions are in millimeters [inches].
4. Housing Tolerances ± 0.1 [0.004] unless otherwise specified.
5. Standard torque wrench must be used to secure RF connectors.



Additional Information

Documentation	Webpage
ESD Policy	https://rflambda.com/pdf/rflambda_esd_control.pdf
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
RFPLT08G12GG	Standard	7.5GHz-12.5GHz Power Limiter

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