

Ultra Wide Band Power Limiter 0.05GHz-21GHz



Product Description

RFPLT01M20GG is an ultra wideband power limiter with a frequency range of 0.05 to 21GHz.

The max input power of the limiter is 36dBm. The typical insertion loss is 1.3 dB and Flat Leakage at 30dBm input is 18dBm.

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

Features

- Passive, High Isolation Limiter
- Low Insertion Loss and Good Return Loss
- High Power Handling

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)

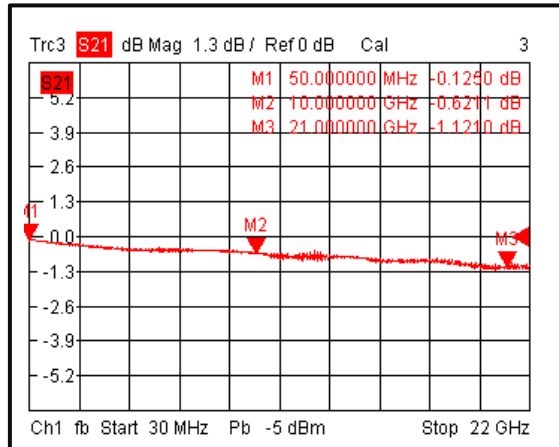
Parameter	Min	Typ	Max	Units
Frequency Range	0.05		21	GHz
CW Input Power			36	dBm
Peak Power Handling (pulsed : PW = 100 us, Duty Cycle = 10%)			40	dBm
Insertion Loss		1.3	1.45	dB
VSWR		1.6	1.8	: 1
Flat Leakage Power at PIN > 30 dBm		18	20.5	dBm
Peak Power Leakage		20	22	dBm
Weight		0.066 Max.		lbs.
Input / Output Connectors	SMA-Female(Input)-SMA-Female(Output)			
Package	Epoxy Sealed (Standard)			
	Hermetically Sealed (Optional)			

Environmental Specifications and Test Standards

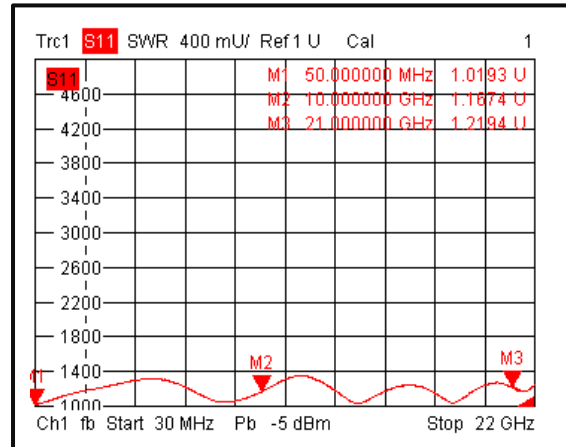
Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-50°C to +105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for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

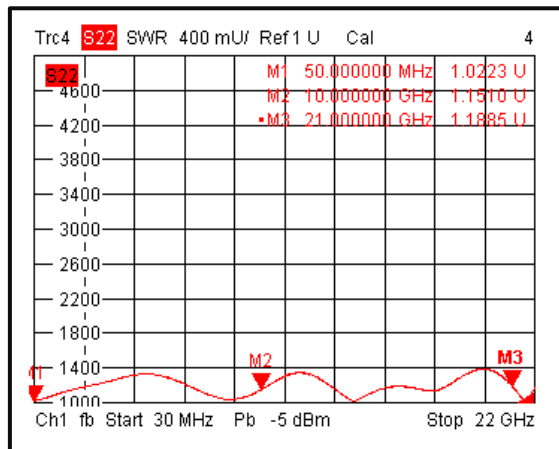
Insertion Loss @+25°C



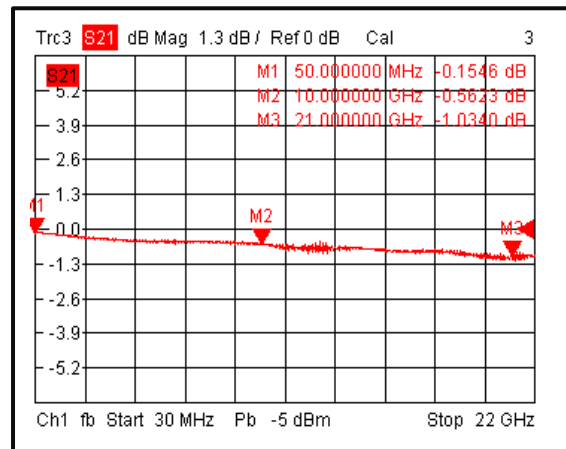
Input VSWR @+25°C



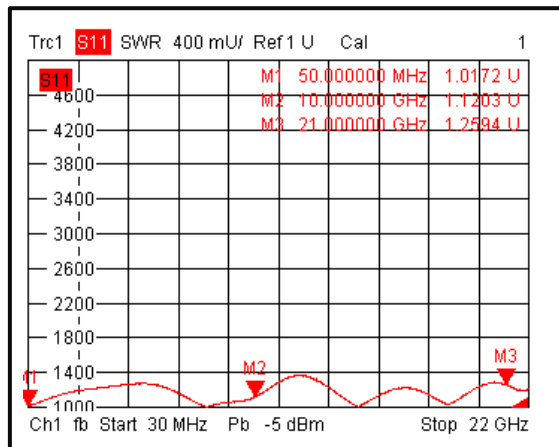
Output VSWR @+25°C



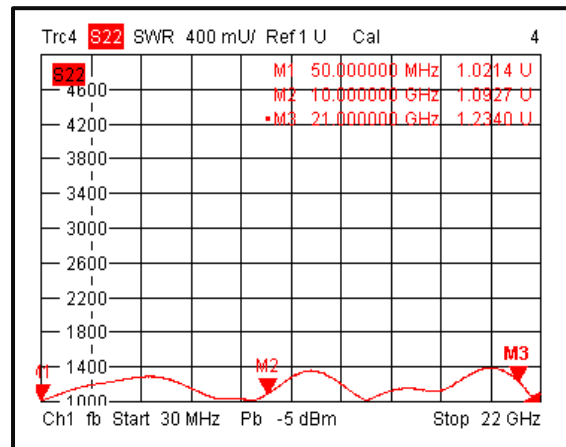
Insertion Loss @-40°C



Input VSWR @-40°C

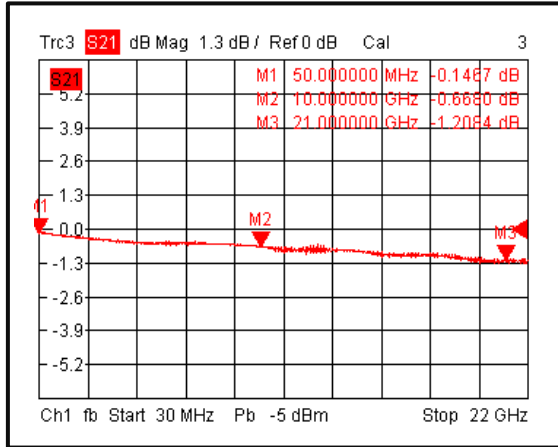


Output VSWR @-40°C

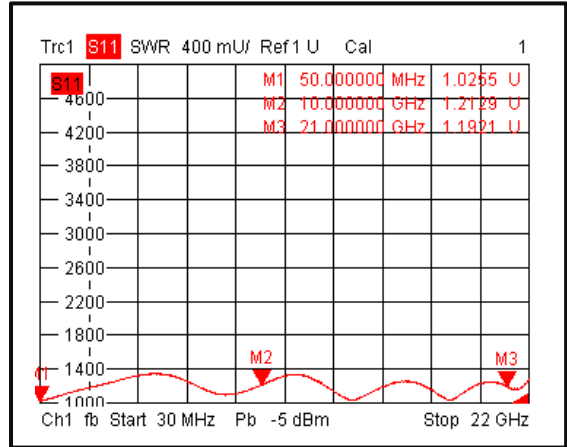


Typical Performance Plots

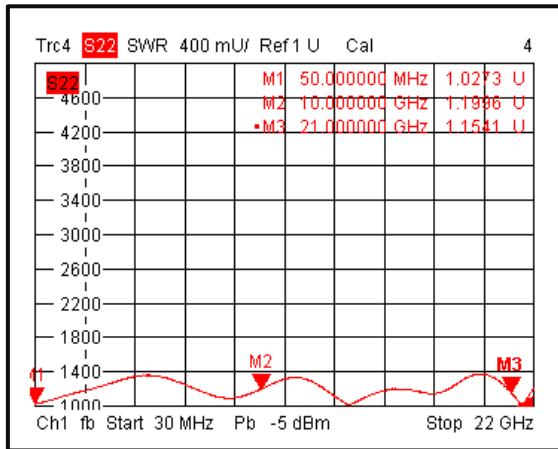
Insertion Loss @+85°C



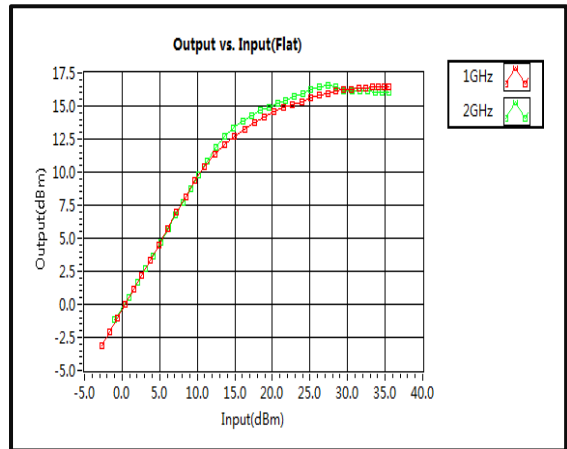
Input VSWR @+85°C



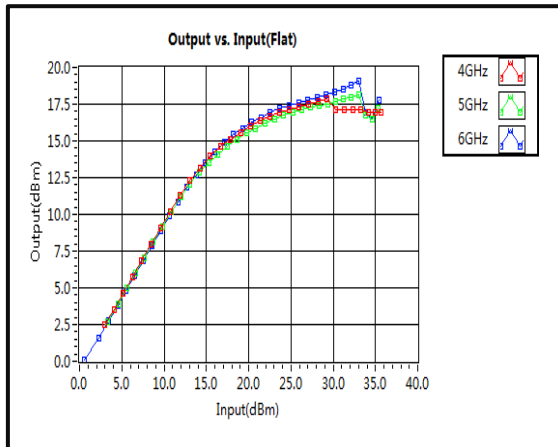
Output VSWR @+85°C



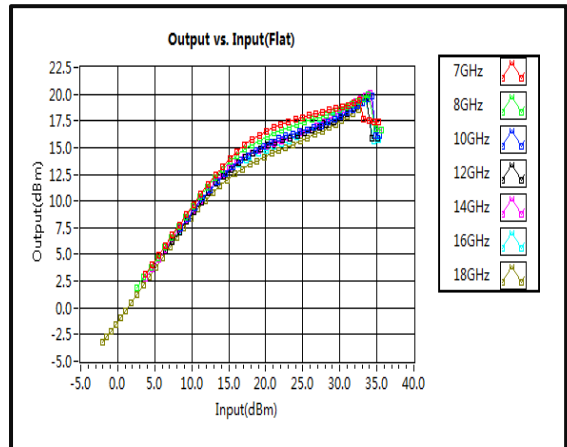
Flat Leakage Power (1GHz-2GHz)



Flat Leakage Power (4GHz-6GHz)

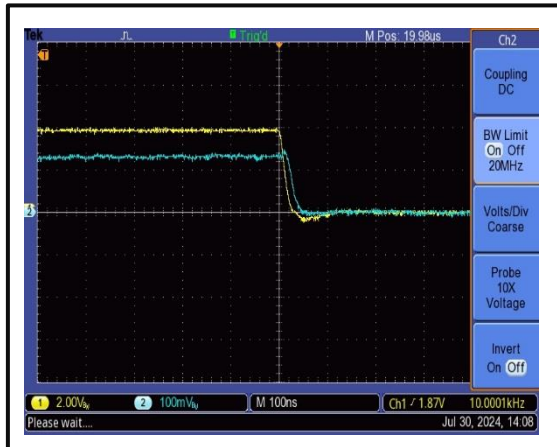


Flat Leakage Power (7GHz-18GHz)

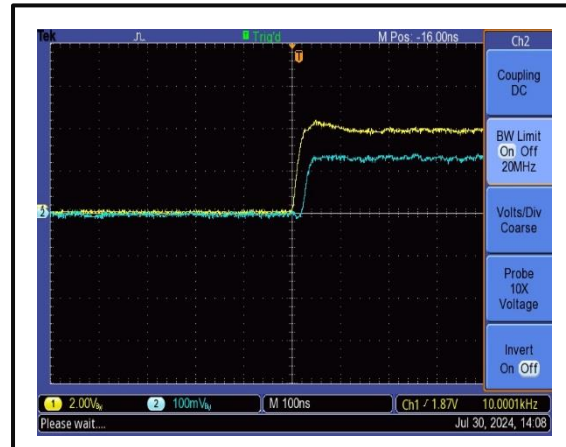


Typical Performance Plots

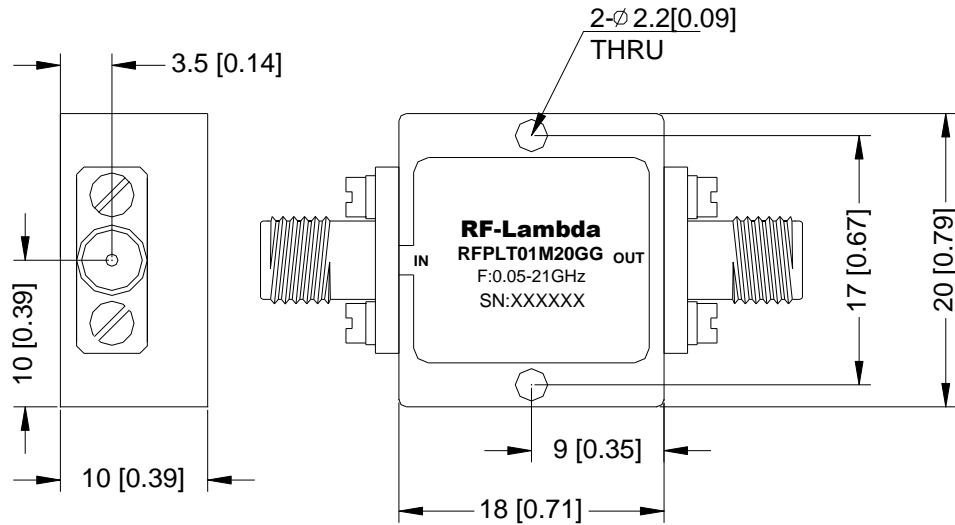
Recovery Time



Limiting Speed

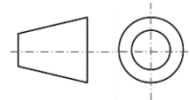


Outline Drawing



Notes:

1. Package Material: Aluminum.
2. Finish: Gold Plated.
3. All dimensions are in millimeters [inches].
4. Tolerances ± 0.15 [0.006] unless otherwise specified.



Additional Information

Documentation	Webpage
ESD Policy	https://rflambda.com/pdf/rflambda_esd_control.pdf
Heatsink Lookup Specifications	https://rflambda.com/search_heatsink.jsp
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
RFPLT01M20GG	Standard	0.05GHz-21GHz Power Limiter

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