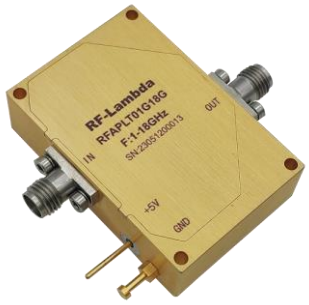
Input Over Drive Front End Protector 1GHz-18GHz



Product Description

RFAPLT01G18G is an input over drive front end protector with a frequency range of 1 to 18GHz.

The maximum input power of the limiter is 30dBm. The typical insertion loss is 3.5dB with a flat leakage of -20dBm.

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

Features

- Wide Band Operation 1-18GHz
- Passband:1-23GHz (Limiting only to 18GHz)
- Active, High Isolation Limiter
- Low Insertion Loss
- High Power Handle Capability up to 30dBm

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=+25ºC)

Parameter	Min	Typ	Max	Units
Frequency Range	1		18	GHz
CW Input Power		30		dBm
Insertion Loss		3.5	4.0	dB
VSWR		1.5	2.0	: 1
Flat Leakage Power at PIN = +30dBm		-20	-15	dBm
Peak Power Leakage (at Pin≤33 dBm ,10% , 2us)		-17		dBm
Voltage		+5		V
Current		200		mA
Weight		0.084 Max.		lbs.
Input / Output Connectors		SMA-Female(Input)-SMA-Female(Output)		
Package		Epoxy Sealed (Standard)		
		Hermetically Sealed (Optional)		

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Absolute Maximum Ratings

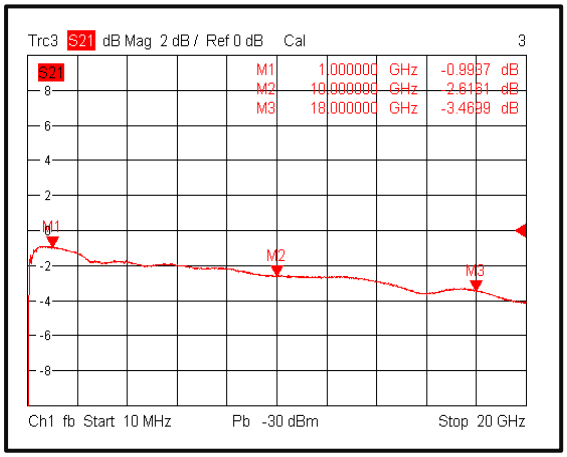
Parameter	Rating
Voltage	+5.5V
RF Input Power (CW)	+33dBm

Environmental Specifications and Test Standards

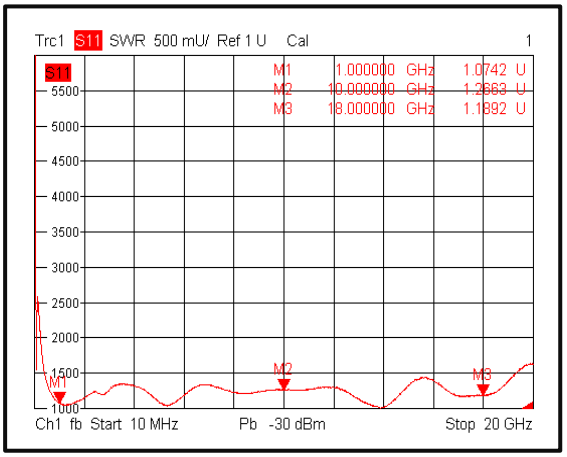
Parameter	Description
Operational Temperature	-40ºC to +85ºC (Case Temperature)
Storage Temperature	-50ºC to +105ºC
Thermal Shock	-40ºC → +85ºC (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85ºC for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

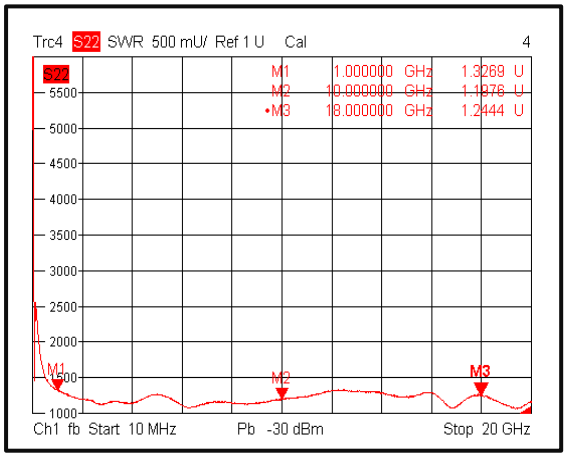
Insertion Loss @+25℃



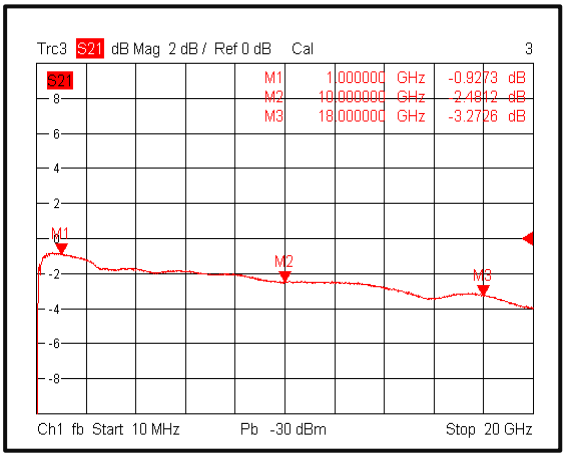
Input VSWR @+25℃



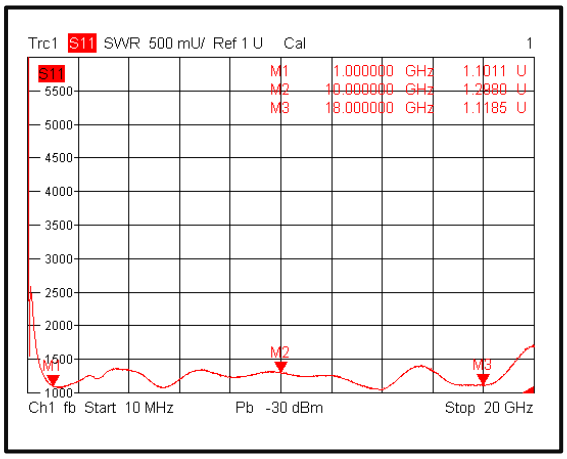
Output VSWR @+25℃



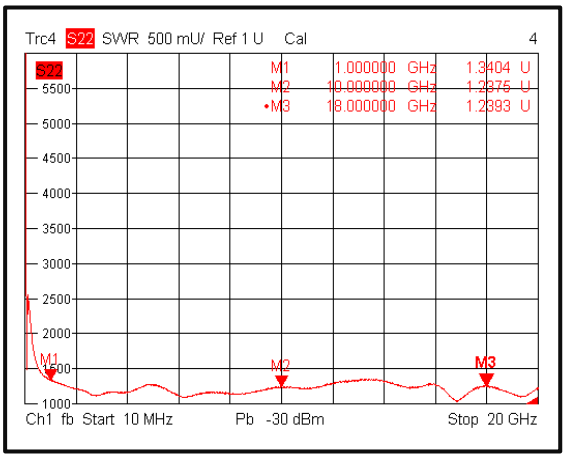
Insertion Loss @-40℃



Input VSWR @-40℃

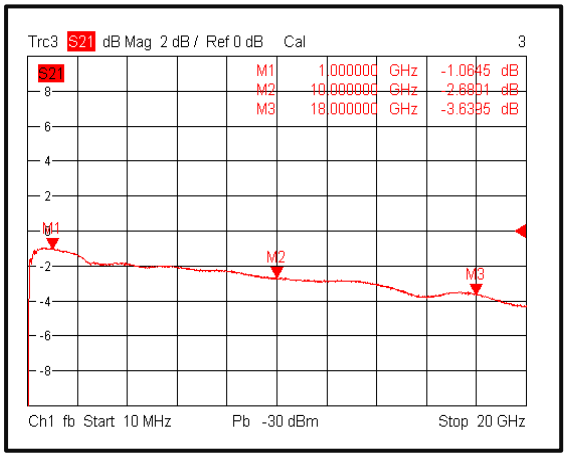


Output VSWR @-40℃

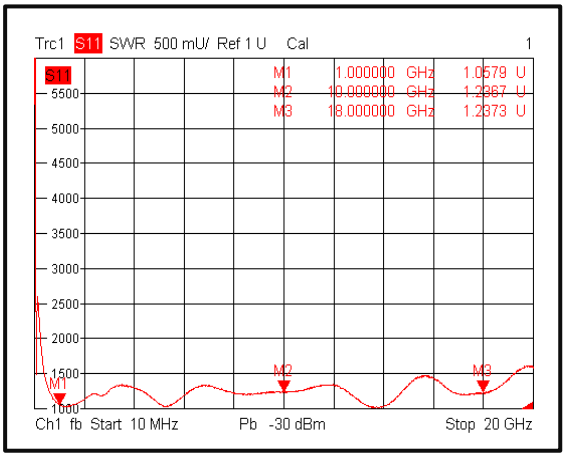


Typical Performance Plots

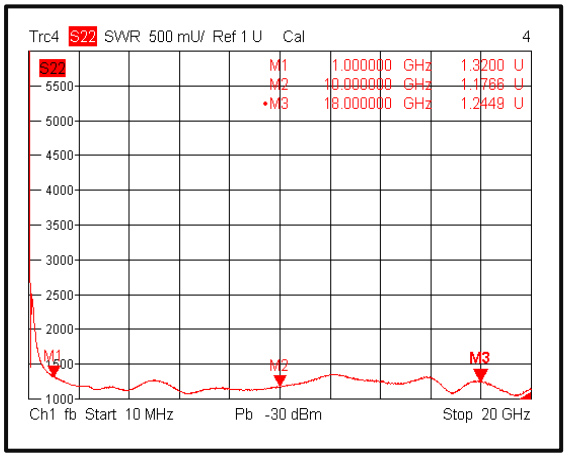
Insertion Loss @+85℃



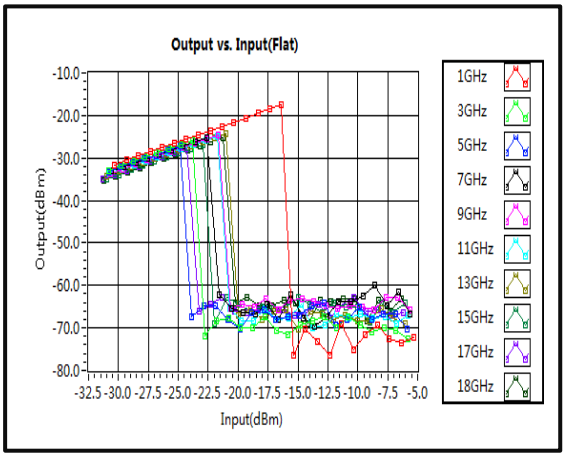
Input VSWR @+85℃



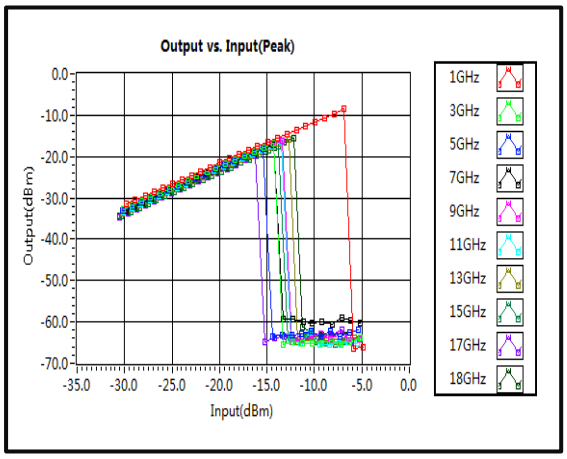
Output VSWR @+85℃



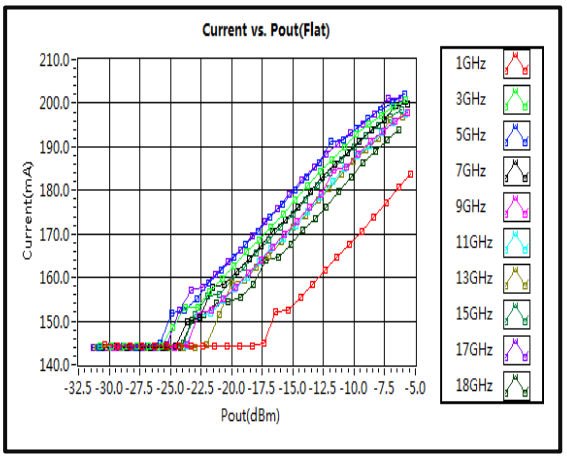
Flat Leakage Power



Peak Power Leakage

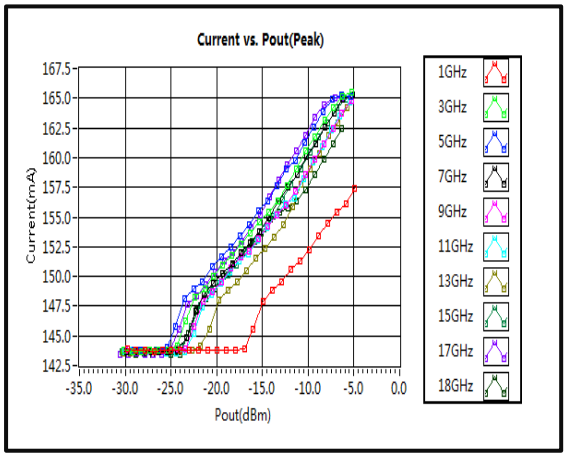


Current vs. Pout(Flat)

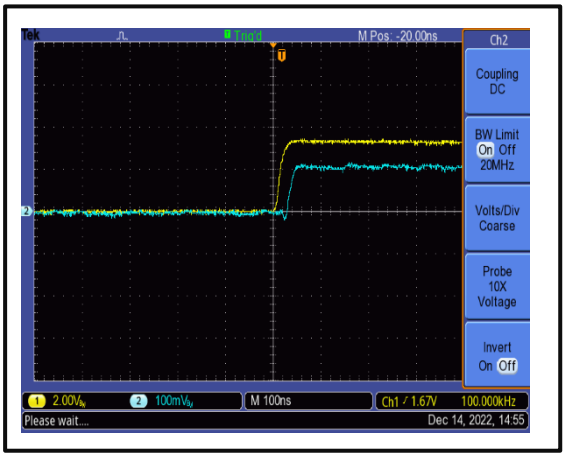


Typical Performance Plots

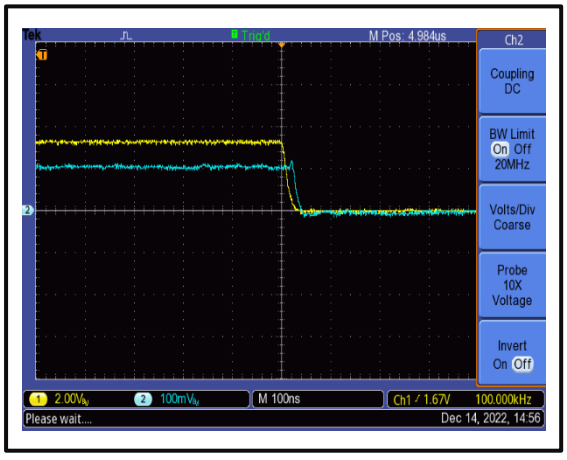
Current vs. Pout(Peak)



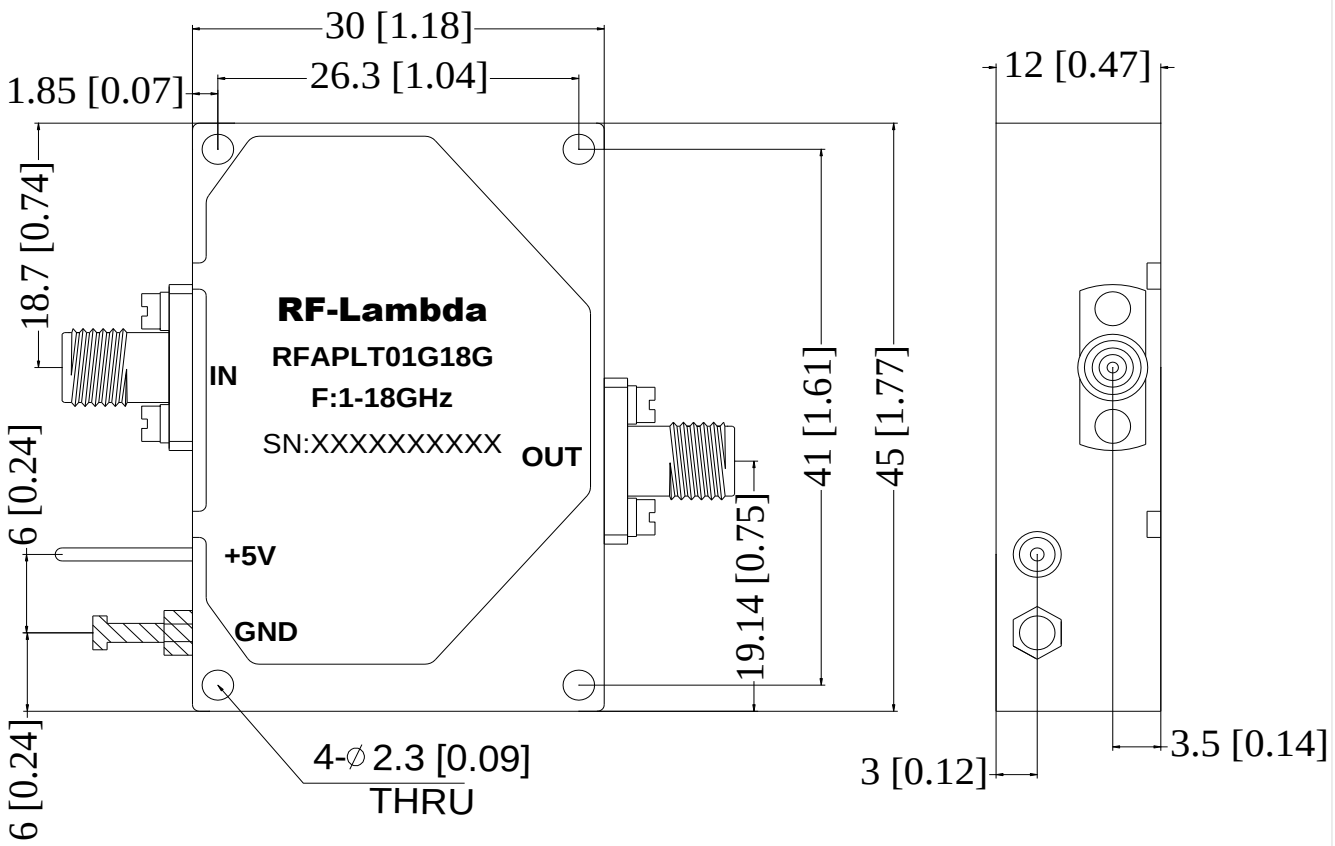
Speed



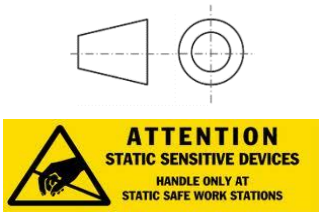
Speed



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
RFAPLT01G18G	Standard	1GHz-18GHz Power Limiter

Important Notice

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