

10W Power Amplifier 32GHz~38GHz

- High output power
- Aerospace and military application
- High Peak to average handle capability
- High Linearity and low noise figure
- All specifications can be modified upon request



Parameter	Min	Тур	Max	Units
Frequency Range	32 ~ 38 GHz		GHz	
Gain	35	40	48	dB
Gain Flatness		±5		dB
Gain Variation Over Temperature (-45 ~ +85C)		±3		dB
Input Return Loss	5	10		dB
Output Return Loss	12	15		dB
Output Power For 1dB Compression (P-1dB)	34	37	38	dBm
Output Power For 3dB Compression (P-3dB)	35	38	39	dBm
Saturated Output Power (Psat)		39.6	40	dBm
Supply Current (Vdd=+24V)		4.5	7	Α
Isolation S12	30	40		dB
Input Max		-5		dBm
Weight	3115 g		g	
Impedance	50 Ohms		Ohms	
Input /Output Connector	2.92 mm - Female			
Finishing	Nickel plating			
Material	Aluminum			



Absolute Maximum Ratings			
Supply Voltage	+28 VDC		
RF Input Power (RFIN)	-5 dBm		
Storage Temperature(C°)	-50 to +125		

Note: Maximum RF input power is set to assure safety of amplifier. Input power may be increased at own risk to achieve full power of amplifier. Please reference gain and power curves

Biasing Up Procedure			
	Connect input and output with 50 Ohm source/load. (in band VSWR<1.9:1 or >10dB return loss)		
Step 2	Connect Ground Pin		
Step 4	Connect +24 VDC Biasing		
Power OFF Procedure			
Step 2	Turn Off +24 VDC Biasing		
Step 3	Remove RF Connection		
Step 4	Remove Ground		

Environment specifications			
Operational Temperature (C°)	-45 ~ +85(Case Temperature must be less than 85C all time)		
Altitude	30,000 ft. (Epoxy Seal Controlled environment)		
	60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)		
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis		
Humidity	100% RH at 35c, 95%RH at 40°c		
Shock	20G for 11msc half sin wave,3 axis both directions		

Ordering Information		
Part No Description		
RFLUPA32G38GB	32GHz~38GHz Power Amplifier	

Amplifier Use

Ensure that the amplifier input and output ports are safely terminated into a proper 50 ohm load before turning on the power. Never operate the amplifier without a load. A proper 50 ohm load is defined as a load with impedance less than 1.9:1 or return loss larger than 10dB relative to 50 Ohm within the specified operating band width.

Power Supply Requirements

Power supply must be able to provide adequate current for the amplifier. Power supply should be able to provide 1.5 times the typical current or 1.2 times the maximum current (whichever is greater).

In most cases, RF-Lambda amplifiers will withstand severe mismatches without damage. However, operation with poor loads is discouraged. If prolonged operation with poor or unknown loads is expected, an external device such as an isolator or circulator should be used to protect the amplifier.

Ensure that the power is off when connecting or disconnecting the input or output of the amp.

Prevent overdriving the amplifier. Do not exceed the recommended input power level.

Adequate heat-sinking required for RF amplifier modules. Please inquire.

Amplifiers do not contain Thermal protection, Reverse DC polarity or Over voltage protection with the exception of a few models. Please inquire.

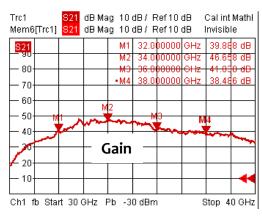
Proper electrostatic discharge (ESD) precautions are recommended to avoid performance degradation or loss of functionality.

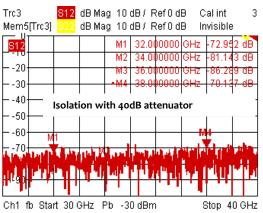
What is not covered with warranty?

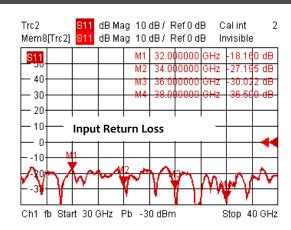
Each of RF-Lambda amplifiers will go through power and temperature stress testing. Due to fragile of the die, IC or MMIC, those are not covered by warranty. Any damage to those will NOT be free to repair.

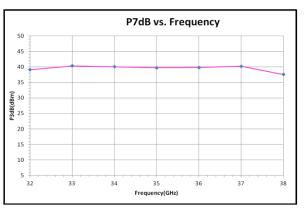


RFLUPA32G38GB

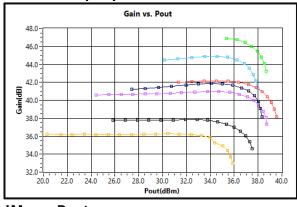




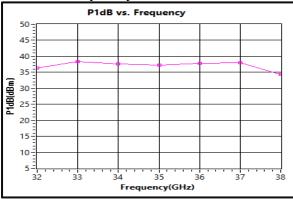




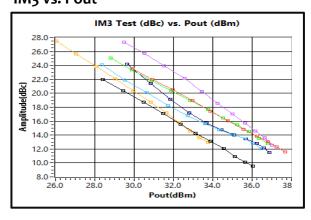
Gain vs. output power



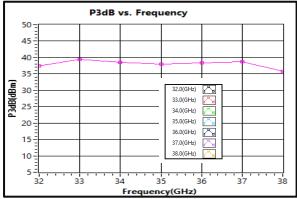
P1dB vs. Frequency



IM₃ vs. Pout

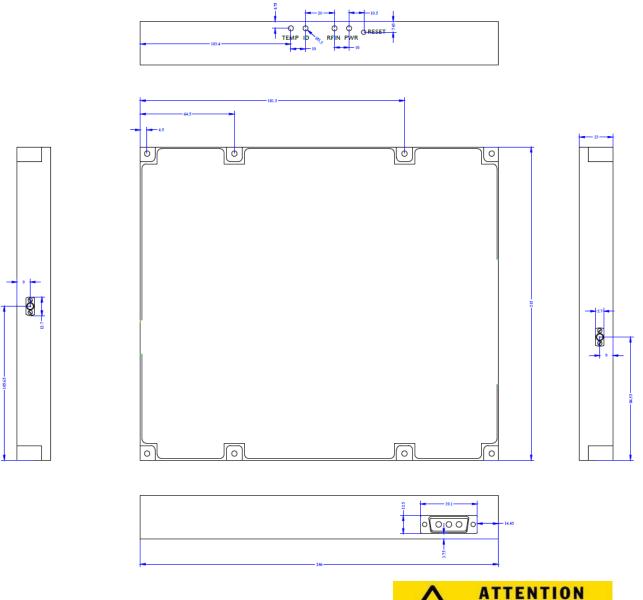


P3dB vs. Frequency



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Heat Sink required during operation.

Important Notice

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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.

STATIC SENSITIVE DEVICES
HANDLE ONLY AT

STATIC SAFE WORK STATIONS