



### 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



10W Power Amplifier 32GHz-38GHz

Parameter	Min	Typ	Max	Units
Frequency Range	32 ~ 38			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 (P <sub>sat</sub> )		39.6	40	dBm
Supply Current (V <sub>dd</sub> =+24V)		4.5	7	A
Isolation S <sub>12</sub>	30	40		dB
Input Max		-5		dBm
Weight	3115			g
Impedance	50			Ohms
Input /Output Connector	2.92 mm - Female			
Finishing	Nickel plating			
Material	Aluminum			



# RF-LAMBDA

The power beyond expectations

RFLUPA32G38GB

10W Power Amplifier 32GHz-38GHz

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	
Step 1	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.

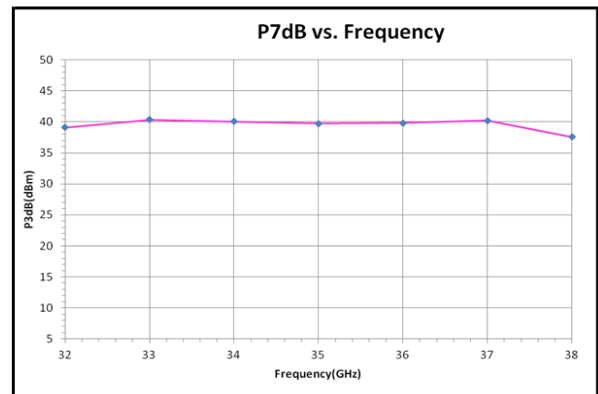
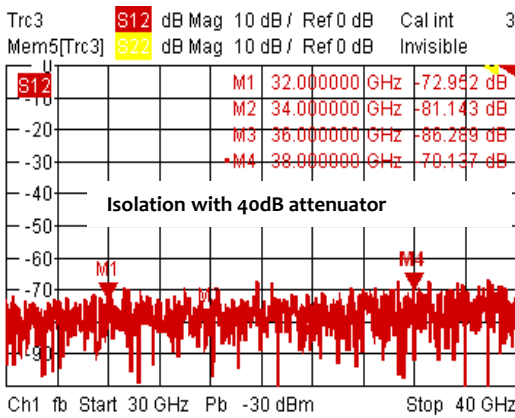
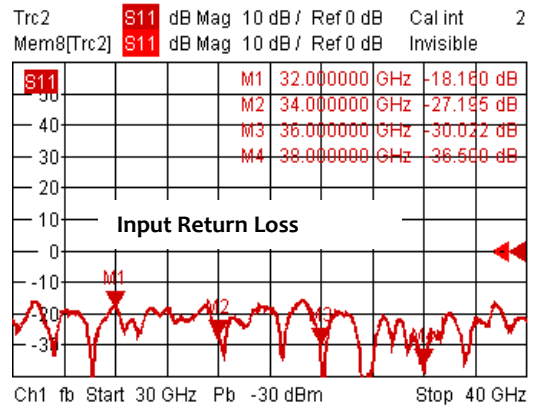
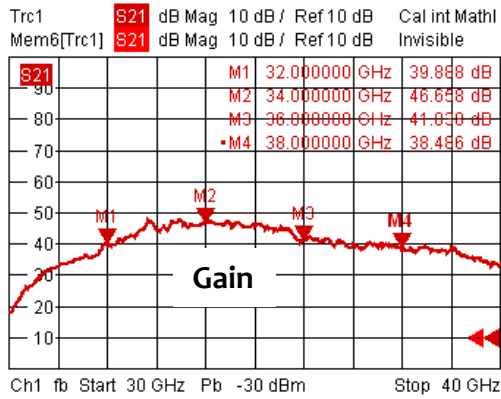


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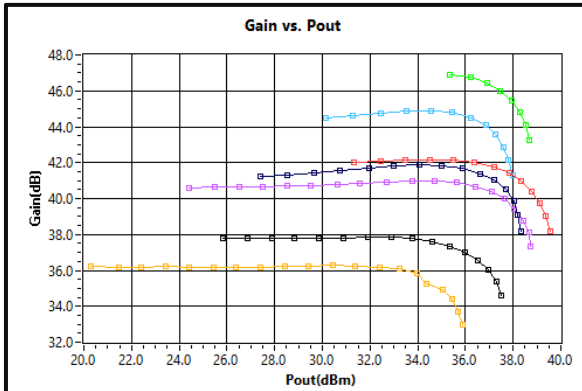
The power beyond expectations

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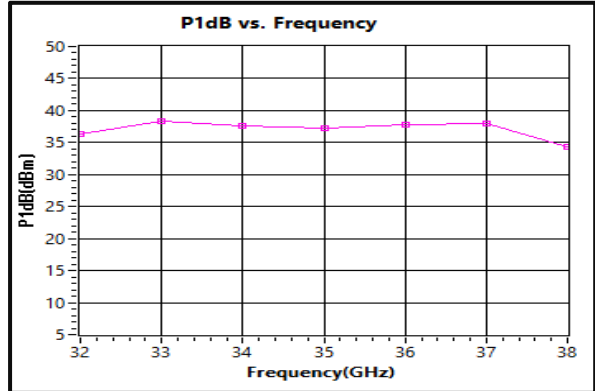
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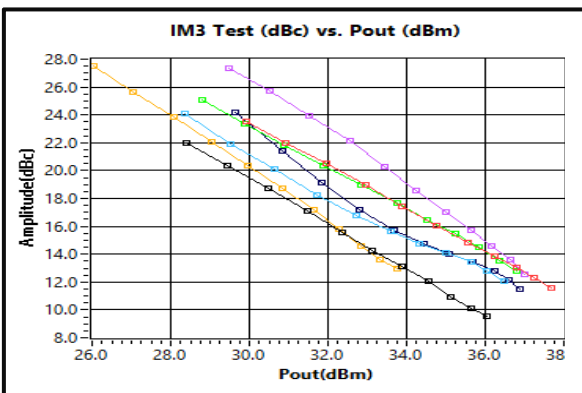
## Gain vs. output power



## P1dB vs. Frequency



## IM3 vs. Pout



## P3dB vs. Frequency

