



RF-LAMBDA

The power beyond expectations

RAMP26G40GJ

20W 26-40GHz Solid State Broadband EMC Benchtop Power Amplifier



Features

- High Saturated Power 43dBm.
- Convenient AC Power Input.
- Integrated Heat Sink and Fan.
- High linearity and low noise figure.

Typical Applications

- Microwave Radio and VSAT.
- Aerospace and Military Applications.
- Telecom Infrastructure Applications.
- Test and Measurement

Electrical Specifications, $T_A=25^\circ\text{C}$

Parameter	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	26			40			GHz
Gain		43			43		dB
Gain Flatness		± 1			± 1		dB
Gain Adjustment Step (20dB Range)		0.1			0.1		dB
Noise Figure		6.5			7		dB
Input Return Loss		15			15		dB
Output Return Loss		25			25		dB
Output Power for 3 dB Compression (P_{3dB})		42			42		dBm
Saturated Output Power (P_{sat})		43			43		dBm
Spurious		40			40		dBc
Weight	50						lbs
Impedance	50						Ohms
Input / Output Connectors	2.92mm - Female						
Finish	White Painted Finish						
Material	Aluminum / Copper						

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Absolute Maximum Ratings	
Supply Voltage	110v / 220v AC
RF Input Power (RFIN) Pin_max = Psat - Gainsat	Psat – Gain
Storage Temperature (°C)	-50 to +125

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	Turn on AC power.
Step 3	Enable RF output
Power OFF Procedure	
Step 1	Turn off RF Output Power
Step 2	Turn Off AC power
Step 3	Disconnect Input and Output

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-55°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & 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	MIL-STD-883	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)



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Ordering Information	
Part No.	Description
RAMP26G40GJ	26-40GHz 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 RF - Lambda amplifier will go through power and temperature stress testing.

Since the die, ICs or MMICs are fragile, these are not covered by warranty. Any damage to these will NOT be free to repair.