



AMP3104 SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear GaN design
Instantaneous wide bandwidth
Suitable for all single channel modulation standards
Built-in protection circuits
High reliability and ruggedness



ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	5.6 - 6.0 GHz	
Power Output	40 Watt Min / 50W Typ	CW
Power Gain	46 dB Min	
Power Gain Flatness	3.0 dB p-p Max	Constant input power
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	-30 dBc Typ	35 dBm/Tone, $\Delta = 1$ MHz
Harmonics	-20 dBc Typ	At rated Pout
Non-Harmonics Spurious	-60 dBc Max	
Operating Voltage	30 VDC $\pm$ Nom	
Current Consumption	7 Amp	At rated Pout
Max Input Power	+8 dBm	Without damage
Load VSWR Protection	$\infty : 1$	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non Condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	188 x 92 x 27 mm	Excluding Connectors
Weight	825 gr.	Max Weight
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	OPTION 101 - Forward power detect
2	VVA	OPTION 103 - Variable Voltage Attenuator
3	CURRENT SENSOR	$I_D @ 20mV/100mA$ Typ
4	TEMP SENSOR	$V_T @ 10mV/^{\circ}C + 500mV$ Typ
5	SHUTDOWN	TTL
6, 7	VDD	30VDC
8, 9	GND	Ground



The top view drawing shows the overall dimensions and component placement on the PCB. Key features include:

- J1 RF INPUT**: Located at the bottom left.
- J2 RF OUTPUT**: Located at the top right.
- J3**: A multi-pin connector located near the center right, with pins labeled N/C, N/C, CURRENT MONITOR, TEMP. MONITOR, SHUTDOWN, VDD, GND, and GND.
- Hole Dimensions**: Various circular holes are shown with diameters such as $\phi 8.2$, $\phi 4.06$, and $\phi 4.06$ THRU.
- Dimensions**: Numerous linear dimensions are provided, including 91.44, 83.84, 75.5, 40.5, 180.36, 187.96, 66.96, 23.88, 15.24, 24.92, 11.52, 18.92, and 0.

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103	VVA	Variable Voltage Attenuator