

AMP3085 SOLID STATE HIGH POWER AMPLIFIER



FEATURES

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

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	8.0 - 12.0 GHz	
Power Output Past	100 Watt Min / 120 Watt Typ	CW
Power Gain	50 dB Min	
Power Gain Flatness	4.0 dB p-p Max	
Input Return Loss	10 dB Min	
Harmonics	>25 dBc	At rated Pout
Non Harmonics Spurious	>60 dBc	
Noise Figure	10 dB Max	
Operating Voltage	32 VDC Nom	30VDC for Max Output
Current Consumption	22 Amp Max	At rated Pout
Max Input Power	+3 dBm Max	Without damage
Load VSWR Protection	5 : 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	170 X 180 X 27 mm	Excluding Connectors
Weight	3.5 Kg.	
RF Connectors In/Out	SMA female	Cover Flange
DC Power / Interface Connector	7-Pin Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1		N/A
2		N/A
3	Current Sensor	$I_D @ 20mV/100mA$ Typ
4	Temp Sensor	$V_T @ 10mV/°C + 500mV$ Typ
5	Shutdown	TTL
A1	VDD	32VDC
A2	GND	Ground



Figure 1: Mechanical drawing of the PCB layout. The drawing shows three views: a top view, a side view, and a bottom view. The top view is a rectangle with dimensions 180.00 mm by 176.50 mm. It features a central square area with a side length of 170.00 mm. The top view also shows a 'RF INPUT' port on the left side and a 'RF OUTPUT' port on the right side. The side view shows the thickness of the PCB as 1.80 mm. The bottom view shows the layout of the components on the reverse side, including a 'CURRENT MONITOR' and a 'TEMP. MONITOR'. The bottom view also shows a 'SHUTDOWN' pin and a 'GND' pin. The bottom view dimensions include a 27.00 mm width for the component area and a 5.00 mm gap between components. The bottom view also shows a 2.00 mm dimension for the component area.