

AMP3122 SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear LDMOS 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	225 - 400 MHz	
Power Output	275 Watt Typ	CW
Power Output @ P1dB GCP	250 Watt Min	
Power Gain	52 dB Min / 54 dB Max	
Gain Variation Over Operating Temperature	1 dB p-p Max	At -20°C +/- 0.75dB
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
Noise Figure	10 dB Max	
2-Tone Intermodulation (IMD)	-30dBc Typ	44 dBm/Tone, Δ = 1MHz
Harmonics 2 nd / 3 rd	-35 dBc Typ	At rated Pout
Non-Harmonics Spurious	-60 dBc Max	
Operating Voltage	32 VDC Nom	
Current Consumption	22 Amp Max	At rated Pout
Input Power Protection	+5 dBm Max	>10 Sec without damage
Load VSWR Protection	2.5 : 1	Load VSWR shutdown
Turn On / Off Speed	5 μSec Max	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20° to +70 °C	Temp Shutdown @ >85°C
Storage Temperature	-40° to +85 °C	
Relative Humidity	5 to 95 %	Non-Condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	240 x 120 x 28 mm	Excluding Connectors
Weight	TBD	Max Weight
RF Connectors In/Out	SMA female / Type-N Female	
DC Power / Interface Connector	9-Pin D-Sub	Pin assignment table
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	VDD	32VDC
2	N/A	N/A
3	SHUTDOWN	Amplifier Enable: TTL "Low" or Open Amplifier Disable: TTL "High" (3.3V logic)
4	TEMP SENSOR	$V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$ (Range -10°C to $+85^\circ\text{C}$ / 0 to 3.3V)
5	VSWR alarm	VSWR tripped = TTL "High" (No latch / 3.3V / $P_{REV} = >3:1$ load VSWR @ nominal Pout) Normal Operation = TTL "Low"
6, 7	VDD	32VDC
8, 9	GND	Ground

OUTLINE DRAWING
