



AMP3004P SOLID STATE HIGH POWER PULSE AMPLIFIER

FEATURES

Class AB GaN Devices
Designed for X-Band Pulse applications
Built-in protection circuits
High reliability and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	9.1 - 9.5 GHz	BW = 400 MHz
Peak Pulse Output @ Psat	400 Watt Min / 500W Typ	
Peak Pulse Output @ P1dB	55 dBm Min	
Power Gain at Peak Power	56 dB Min	
Max Input Power	+10 dBm	No damage
Power Gain Flatness	1.0 dB p-p Max	
Gain Stability Over Temperature	±0.3 dB Max	
Input VSWR	1.5 : 1 Max	Relative to 50 Ohm
Output VSWR	2.0 : 1 Max	Relative to 50 Ohm
Harmonics	-35 dBc Max @ Psat	
Spurious	-65 dBc Max	
Pulse Width	60 µs Max	
Duty Cycle	20% Max	
PRF	5 KHz Max	
Pulse Droop	0.8 dB Max @ Psat	50 µs PW, 20 % Duty
Rise / Fall Time	75 nS Max @ Psat	
Switching Delay Time (Td)	300 nS Typical	
Noise Figure	10dB Max	
Operating Voltage	49 VDC ± 1.0 V	
Current Consumption	60 Amp Peak / 13 Amp Avg.	At 20% Duty-Cycle
Quiescent Current	TBD	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Note
Operating Case Temperature	-30 to +60 °C	
Storage Temperature	-40 to +70 °C	
Relative Humidity	5 to 95 %	Non Condensation

MECHANICAL SPECIFICATIONS

Parameter	Specifications	Value
Dimensions	235 x 160 x 43 mm	Excluding Connectors
Weight	4 Kg. Max	
Cooling	External Heatsink	Forced air required
Input / Output Connectors	SMA-F / WG	

I/O INTERFACE

Pin	Function	Test Results
A1	VDD	+49VDC
A2	GND	Ground
P1	N/C	N/C
P2	GATING SIGNAL	TTL "Hi" = Disable Function @ 50mS (Option: 5uS Trigger/Pulse Modulator)
P3	CURRENT MONITOR: I_D @ 25mV/100mA	
P4	TEMP. MONITOR: 10mV/°C + 500mV	0.782V @ Room temp = 28.2°C
P5	SHUTDOWN	TTL HIGH

OUTLINE DRAWING (Unit: mm)

