

AMP1145P-2 SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear GaN design
 Designed for high power UHF & P Bands high power pulse applications
 Built in fast pulse modulator
 Built-in monitoring and protection circuits
 High reliability and ruggedness



ELECTRICAL SPECIFICATIONS@ 50VDC, 50Ω, 25°C

Parameter	Specification				Notes
Model	AMP1145P-2				
Operating Frequency Range	0.2 - 0.8 GHz				
Peak Output Power	2 KW Typ				With 10% duty cycle
Pulse Characteristics	Width (tp)	Duty (δ)	PRF	Droop	Max rating
	100 μS	5 %	-	1 dB ¹	
Rise / Fall Time	<75 nS Typ				10% - 90% of pulse output
Switching Delay Time (Td)	200 nS Typ				
Power Gain	63 dB Nom				
Power Gain Flatness	3.0 dB p-p Typ				
Input / Output Return Loss	-10 dB Max				Relative to 50 Ohm
Harmonics	-20 dBc Typ				At rated Pout
Spurious	-60 dBc Max				
Operating Voltage	50 VDC Nom				Non-harmonics
Current Consumption	15 Amp Ave / 150 Amp Peak Max				δ = 10%, PW 100μS
Input Power Protection	+5 dBm Max				<10 Sec without damage
Load VSWR Protection	10 : 1 Max				<1 minute at rated Pout
Pulse Trigger / Modulator Speed	1 μS Max				

ENVIRONMENTAL CHARACTERISTICS

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

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	365 x 250 x 43 mm	Outline drawing
Weight	6.5 Kg.	
RF Connectors In/Out	SMA female / Type-N female	
DC Power / Interface Connector	7-Pin Hybrid D-Sub	7W4
Cooling	External Heatsink	Forced air required

Notes:

1. Required 10KuF Ext. Cap

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D-SUB PIN ASSIGNMENT

Pin #	Function	Description	
A1	VDD	+50VDC External	
A2	GND	Ground	
P1	PULSE TRIGGER	TTL High (>2.5V) HPA ON TTL Low (<0.7) Open HPA OFF	
P2	COMMON FAULT	Input: TTL High (>2.5V) HPA OFF TTL Low (<0.7V) / Open HPA ON Output: Fault On TTL High (>5V) Fault Off Low (0.7V)	Fault: Current, Temp, Duty, Rev Power
P3	CURRENT SENSOR	Output: $I_D @ 20mV/100mA$ Typ	
P4	TEMP SENSOR	Output: $V_T @ 10mV/^\circ C + 500mV$ Typ	
P5	SHUTDOWN	TTL: High (>2.5V) / Open, HPA ON TTL Low (<0.7) / GND HPA OFF	

OUTLINE DRAWING

