

# AMP1145AP SOLID STATE HIGH POWER AMPLIFIER



## FEATURES

- Class AB linear GaN design
- Suitable for high power full L Band high power pulse applications
- Built in fast pulse modulator
- Built-in monitoring and protection circuits
- High reliability and ruggedness
- Built-in isolator

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

Parameter	Specification				Notes
Model	<b>AMP1145AP</b>				
Operating Frequency Range	1.0 - 2.0 GHz				
Peak Output Power	1100 Watt Min				With 5% duty cycle
Pulse Characteristics	<b>Width (tp)</b>	<b>Duty(δ)</b>	<b>PRF</b>	<b>Droop</b>	Max rating
	100 μS	5 %		1 dB	
Rise / Fall Time	<75 nS Typ				10% - 90% of pulse output
Switching Delay Time (Td)	200 nS Typ				
Power Gain	61 dB Nom				
Power Gain Flatness	2.0 dB p-p Typ				
Input / Output Return Loss	12 dB Min				Relative to 50 Ohm
Harmonics	-20 dBc Typ				At rated Pout
Non-Harmonics Spurious	-65 dBc Max				
Operating Voltage	50 VDC Nom				
Current Consumption	10 Amp Ave / 100 Amp Peak Max				δ = 5%, 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	Requires 10KμF Ext. Cap
Weight	6.5Kg.	Outline drawing
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

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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

