



AMP3110P SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear GaN design
Suitable for high power S-Band 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
Operating Frequency Range	2.7 - 3.1 GHz			
Peak Output Power	1000 Watt Min / 1200 Watt Typ			With 10% duty cycle
Pulse Characteristics	Width (tp)	Duty(δ)	Droop	
	100 μS	10 %	0.5 dB	Max rating
Rise / Fall Time	<75 nS Typ			Nominal Peak Power (Time measured between 10% and 90% of output)
Switching Delay Time (Td)	200 nS Typ			
Power Gain	62 - 64 dB Nom			
Power Gain Flatness	2.0 dB p-p Max			
Input / Output Return Loss	12 dB Min			Relative to 50 Ohm
Harmonics	>40 dBc Typ			At rated Pout
Non-Harmonics Spurious	>65 dBc			
Operating Voltage	50 VDC Nom			
Current Consumption	15 Amp Ave / 100 Amp Peak Max			δ = 10%, PW 100μS
Maximum Input Power Protection	+5 dBm			Maximum hold of 10 seconds without damage
Load VSWR	∞ : 1			Output isolator
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	14.37 x 9.84 x 0.31in (365 x 250 x 43mm)	Requires 10KμF Ext. Cap
Weight	14.3 lb. (6.5Kg.)	Outline drawing 1
RF Connectors In/Out	SMA female / Type-N female	
DC Power / Interface Connector	7-Pin Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

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FEED-THRU PIN ASSIGNMENT

Pin #	Function	Description
A1	VDD	+50VDC
A2	GND	Ground
1	RESERVED	N/A
2	RESERVED	N/A
3	CURRENT SENSOR	$I_D @ 20\text{mV}/100\text{mA Typ}$
4	TEMP SENSOR	$V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$
5	PULSE TRIGGER / MODULATOR	TTL: Hi = Off, Lo = On @ $1\mu\text{S}$

OUTLINE DRAWING

