



AMP5009P SOLID STATE HIGH POWER PULSE AMPLIFIER

FEATURES

Ruggedized, compact Class AB high power pulse SSPA designed for high reliability IFF applications such as Secondary Surveillance Radar (SSR) applications, IFF Modes 1, 2, 3/A and Mode C. Standard features include protection against over-temperature, excess VSWR, excess modulation (pulse width and duty cycle). An internal capacitive bank provides low output droop over extended pulse widths. Input pulse trigger is accomplished through TTL compatible level signals.



ELECTRICAL SPECIFICATIONS: 50Ω, 25°C

Parameter	Specification	Notes
Operating Frequency	1030 & 1090 MHz	
Power Output	2 KW Min	Peak Pulse
Duty Cycle (δ)	4 % Max	
Pulse Width (tp)	32 μ S Max	
Pulse Rise	50 - 100 nS	
Pulse Fall Time	50 - 100 nS	
Pulse Droop	1 dB Max	$T_p = 32 \mu S, \delta = 4\%$
Modulation	PCM	
Class of Operation	AB/C	LDMOS transistors design
Power Gain	63 dB \pm 2.0dB	
Input Return Loss	-14 dB Max	Relative to 50 Ohm
Operating Voltage	46 VDC Nom	
Current Consumption	7.5 Amp Avg Max	2 KW Peak @ $\delta = 4\%$
Harmonics 2 nd / 3 rd	-40 / -50 dBc Typ	
Load VSWR Protection	$\infty : 1$	Output isolator @ rated Power <1 minute

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Note
Operating Case Temperature	-20 to +65 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non-condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	245 x 200 x 40 mm	Excluding connectors
Weight	3.2 Kg.	
RF Connectors In/Out	SMA female / Type N female	
DC Power / Interface Connector	7 Pins Hybrid D-Sub	
Cooling	External Heatsink	Forced air

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
A1	VDD	+46VDC
1	CURRENT MONITOR	$I_D @ 20mV/100mA$ Typ
2	TEMP MONITOR	$V_T @ 10mV/^\circ C + 500mV$ Typ
3	VOLTAGE MONITOR	N/C
4	SHUTDOWN	TTL "Hi" = Disable Function @ 50mS (Option: 5uS Trigger/Pulse Modulator)
5	GND	Ground
A2	GND	Ground

OUTLINE DRAWING

