



SOLID STATE HIGH POWER AMPLIFIER
MtronPTI P/N: PA5009P

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 forward power indicator, 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 modulation is accomplished through TTL compatible level signals.

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency	1030 & 1090 MHz	
Power Output	63 dBm 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	Tp=32 μ S, δ =4%
Modulation	PCM	
Class of Operation	AB/C	LDMOS transistors design
Power Gain	63 dB $\pm$ 2.0dB	
Input Return Loss	14 dB Min	Relative to 50 Ohm
Operating Voltage	46 VDC Nom	
Current Consumption	7.5 Amp Avg Max	2 KW Peak @ δ =4%
Harmonics	>50 dBc	
Load VSWR Protection	∞ : 1	

ENVIRONMENTAL CHARACTERISTICS

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

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	216 x 171 x 35 mm	Excluding Connectors
Weight	1.8 Kg Nom	Without/ With Heatsink
RF Connectors In/Out	SMA female / Type N female	
DC Power / Interface Connector	D-Sub	
Cooling	External Heatsink	Forced air



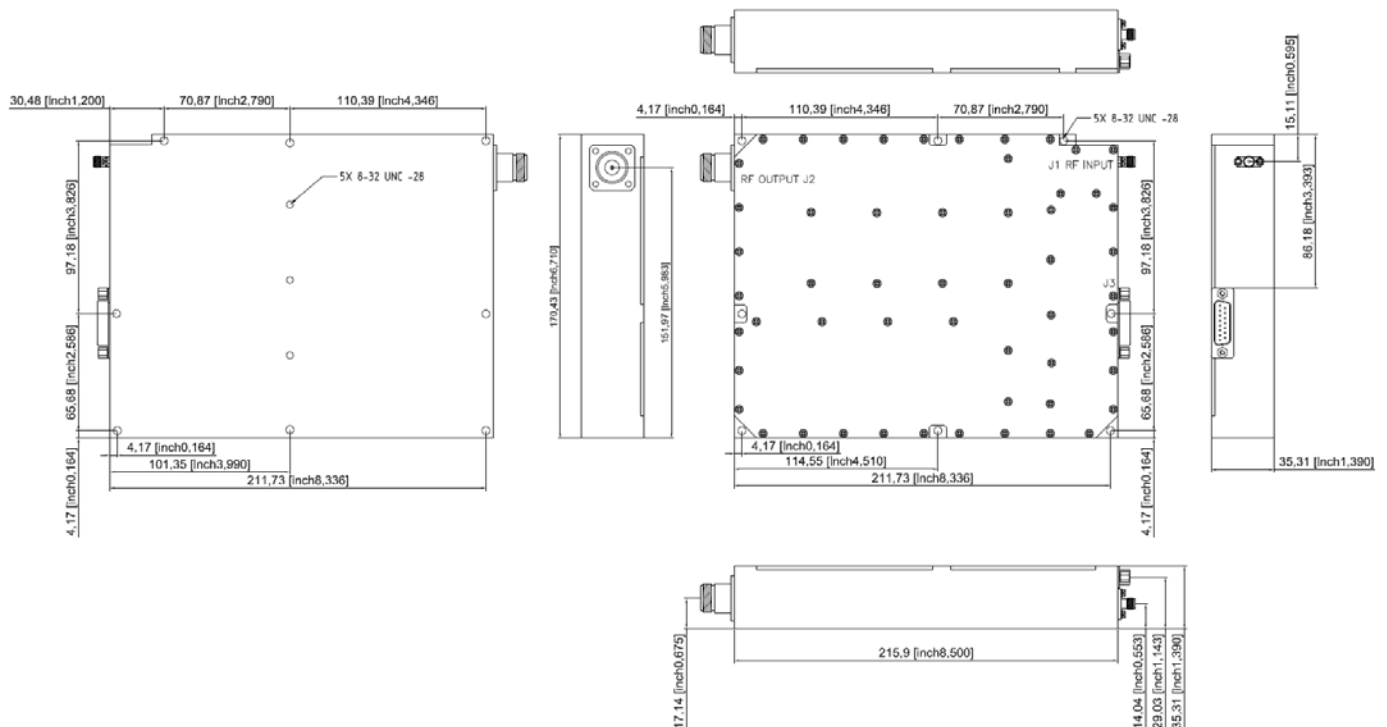
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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
A1	VDD	+46VDC
1	CURRENT MONITOR	$I_D @ 20\text{mV}/100\text{mA Typ}$
2	TEMP MONITOR	$V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$
3	VOLTAGE MONITOR	$50\text{mV}/1\text{V Typ}$
4	SHUTDOWN	TTL
5	GND	Ground
A2	GND	Ground

OUTLINE DRAWING



Data Sheet Revision Table:

Date	Rev.	Author.	Details of Revision
05-15-15	0	DPD	Initial Draft.