AMP5002P
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. Spectrum meets ICAO specifications.
Standard features include PPM modulation, pulse shaping circuits, sample ports (forward power), 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±0.1 MHz	
Power Output	66 dBm±0.5 dBm	Peak Pulse
Duty Cycle	1% Nom / 2% Max	
Pulse Width	32 µS Max	
Pulse Rise	50 - 100 nS	
Pulse Fall Time	50 - 200 nS	
Pulse Droop	< 1dB	32 µS pulse width
Modulation	PCM	
Class of Operation	AB/C	LDMOS transistors design
Power Gain	63 dB ± 2.0dB	
Input Return Loss	-14 dB	Relative to 50 Ohm
Operating Voltage	46 VDC	
Current Consumption	3.5 Amp Max	4 KW Peak @ 1% DS
Harmonics	50 dBc Typ	
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	8.5 x 6.7 x 1.39Inch	Excluding Heatsink
Dimensions	8.6 x 6.7 x 3.0 Inch	Including Heatsink
Weight	4 lb. (1.8 Kg) or 8 lb. (3.6Kg)	Without/ With Heatsink
RF Connectors In/Out	SMA female / Type N female	
DC Power / Interface Connector	Miniature D-Sub	
Cooling	External Heatsink	Forced air required @ 2% DS

OPTIONS

1. Internal Frequency Source	4. Alternate Frequency - 1090 MHz	7. Programming Port
2. Serial Interface (RS-232)	5. DPSK Modulation	8. Serial Interface
3. Extended Temperature Range	6. Liquid Cooling	9. Selectable Freq. - 1030 or 1090 MHz

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OUTLINE DRAWING