



AMP5051P-TDWR SOLID-STATE HIGH-POWER AMPLIFIER

FEATURES

- Class AB linear GaN design
- C-Band, narrow bandwidth medium power pulse applications
- Terminal Doppler Weather Radar (TDWR)
- Built-in RS-422 control, monitoring and protection circuits
- High reliability and ruggedness



ELECTRICAL SPECIFICATIONS: 50 Ω, 25 °C

Parameter	Specification	Notes
Operating Frequency Range	5.60 - 5.65 GHz	
Output Power @ 3 dB Compression	20 Watt Min	Pulse
Pulse Characteristics	Width	
	0.9 1.3 μS	
Pulse Characteristics	Duty	
	1 %	
Pulse Characteristics	PRF	
	2100 Hz	
Power Gain	50 dB Min	
Power Gain Flatness	1.5 dB p-p Max	Constant input power
Phase and Amplitude	No change with DC voltage	
Gain Linearity	+20 to +40 dBm	
Gain Variation	±1 dB Max	Within operating temperature
Phase Linearity	± 4 degrees Max	
Input / Output VSWR	1.3 :1 Max	Relative to 50 Ohm
RF Gating	3 - 4 μS Max	
Gating Delay	1 μS	Prior to RF pulse
Harmonics	-40 dBc Max	At Rated Pout
Spurious	-70 dBc Max	Non-harmonics
Drive	RS-422	
Operating Voltage	28 VDC ±5 V Nom	
Current Consumption	200 mA Max	At rated pulse Pout
Input Power Protection	-10 dBm Max	<10 Sec without damage
Load VSWR Protection	∞ : 1	<1 minute at rated Pout

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	0 to +60 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non-condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	8.75 x 4.00 x 1.25 inch	Excluding connectors
Weight	-	
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required



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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	Ground	GND
2	VDD	+28VDC
3	Return	+28VDC return
4	RF Gate	RF Gate +
5	RF Gate	RF Gate -
6	Fault	General I/O Fault
7	VDD	+28VDC
8	+12V	NA
9	-12V	NA

OUTLINE DRAWING