

AMP5021P SOLID STATE HIGH POWER AMPLIFIER



FEATURES

Ruggedized, compact Class AB linear LDMOS design
 Suitable for S-Band high power pulse applications
 Internal capacitive bank provides low output droop
 Built-in monitoring and protection circuits
 High reliability and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	3.0 GHz \pm 12MHz	
Peak Output Power	300 Watt Min	Peak Pulse
Power Gain	55 dB Nom	
Pulse Width (tp)	20 μ S Max	
Maximum pulse repetition rate	20 Hz	
Duty Cycle (δ)	0.04 % Max	
Pulse timing jitter	2 nS	
Pulse Droop	>1.0 dB	@ 20 μ S
Rise / Fall Time	100 nS Max	
Pulse to Pulse Instability - Amplitude/Phase	0.07dB / 0.15° Max	
In Pulse Instability - Amplitude/Phase	0.05 dB / 1° Max	@ 20 μ S
Input Return Loss	12 dB Min	Relative to 50 Ohm
Harmonics	>30 dBc	At rated Pout
Non-Harmonics Spurious	>60 dBc	
Noise Figure	4 dB Max	
Operating Voltage	45 VDC Nom	
Current Consumption	30 Amp Peak / 4 Amp Avg	
Nominal Input Power	0 dBm Nom	
Load VSWR	10: 1 Min	

ENVIRONMENTAL CHARACTERISTICS

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

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	200 x 140 x32 mm	Excluding Connectors
Weight	TBD	Max Weight
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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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	CURRENT SENSOR	$I_D @ 20mV/100mA$ Typ
2	TEMP SENSOR	$V_T @ 10mV/^\circ C + 500mV$ Typ
3	N/C	N/C
4	SHUTDOWN	TTL "Hi" = Disable Function @ 50mS (Option: 5uS Trigger/Pulse Modulator)
5	GND	Ground
A1	VDD	45VDC
A2	GND	Ground

OUTLINE DRAWING

