AMP3019
SOLID STATE HIGH POWER AMPLIFIER

PRELIMINARY

FEATURES

Class AB GaN design
Designed for X-Band High Power Pulse applications
Built-in protection circuits
High reliability and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	9.35 - 9.75 GHz	
Peak Pulse Output Power	300 Watt Min / 400 Watt Typ	Pulse
Power Gain	56 dB Min	
Power Gain Flatness	3.0 dB p-p Max	
Input / Output Return Loss	15 dB / 10 dB Min	
Harmonics	>30 dBc	At rated Pout
Non Harmonics Spurious	>60 dBc	
Pulse Duty Cycle vs. Pulse Width	30% @ 100 uS / 10% @ 200 uS	
Pulse Droop	1.5dB @ 100 uS/30% DC 2.0 dB @ 200uS/10% DC	
Rise & Fall Time	75 nS	
Switching Delay	400 nS Typ	
Noise Figure	10 dB Max	
Operating Voltage	31 - 33 VDC Nom	
Efficiency (PAE)	18 % Nom	At rated Pout
Max Input Power	+8 dBm Max	Without damage
Load VSWR Protection	∞ : 1	Output Isolator

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-30 to +60 °C	
Storage Temperature	-40 to +70 °C	
Relative Humidity	5 to 95 %	Non Condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	268 X 237 X 41 mm	Including Connectors
Weight	TBD	
RF Connectors In/Out	SMA/WR90	Cover Flange
DC Power / Interface Connector	17-Pin Hybrid Dsub (17W2)	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	I/O	Description
A1	VDD	I	32 VDC
A2	GND		Ground
P1	Switch_Control	I	Active High(TTL Level)
P2	GND		Ground
P3	Temp_Monitor	O	0V ~ +1.5V(DC)
P4	GND		Ground
P5	Current_Monitor_32V	O	0V ~ 4.5V(DC)
P6	GND		Ground
P7	Gain_Atten_Control	I	0V ~ 4.5V(DC)
P8	GND		Ground
P9	Enable	I	Active Low(TTL Level)
P10	GND		Ground
P11			N/C
P12			N/C
P13			N/C
P14			N/C
P15			N/C

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OUTLINE DRAWING