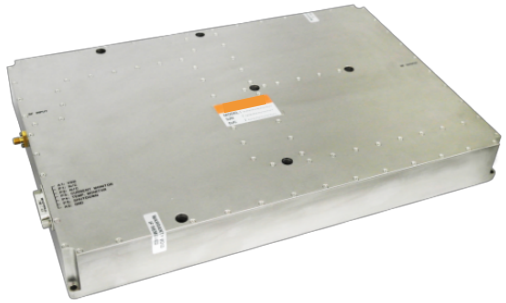
HD Communications Corp.

HD31966
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear GaN design
Suitable for high power P-Band pulse applications
Built in fast pulse modulator
Built-in monitoring and protection circuits
High reliability and ruggedness
Built-in isolator



ELECTRICAL SPECIFICATIONS@ 48VDC, 50Ω, 25°C

Parameter	Specification			Notes	
Operating Frequency Range	400 - 1000 MHz				
Peak Output Power	2000 Watt Min			With 4% duty cycle	
Pulse Characteristics	**Width (tp)**	**Duty (δ)**	**Droop**	**Rise / Fall**	
	1 - 25 µS	1 - 4 %	<0.8 dB[1]	<75 nS Typ	
Switching Delay Time (Td)	200 nS Typ				
Power Gain	60 dB Nom				
Power Gain Flatness	2.0 dB p-p Max				
Input / Output Return Loss	12 dB Min			Relative to 50 Ohm	
Harmonics	-20 dBc Typ			At rated Pout	
Spurious	-65 dBc Max			Non-harmonics	
Operating Voltage	50 VDC Nom				
Current Consumption	8 Amp Ave / 180 Amp Peak Max			δ = 4%, tp = 25µS	
Maximum Input Power Protection	+5 dBm			<10 seconds without damage	
Load VSWR	∞ : 1			Output isolator	
Pulse Trigger / Modulator Speed	1 µS Max				

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75°C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	95 % Max	Non-condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	365 x 250 x 43 mm	
Weight	6.5 Kg.	
RF Connectors In/Out	SMA female / Type-N female	
DC Power / Interface Connector	7-Pin Hybrid D-Sub	7W4
Cooling	External Heatsink	Forced air required

NOTES:

1. Requires 10KuF Ext. Cap

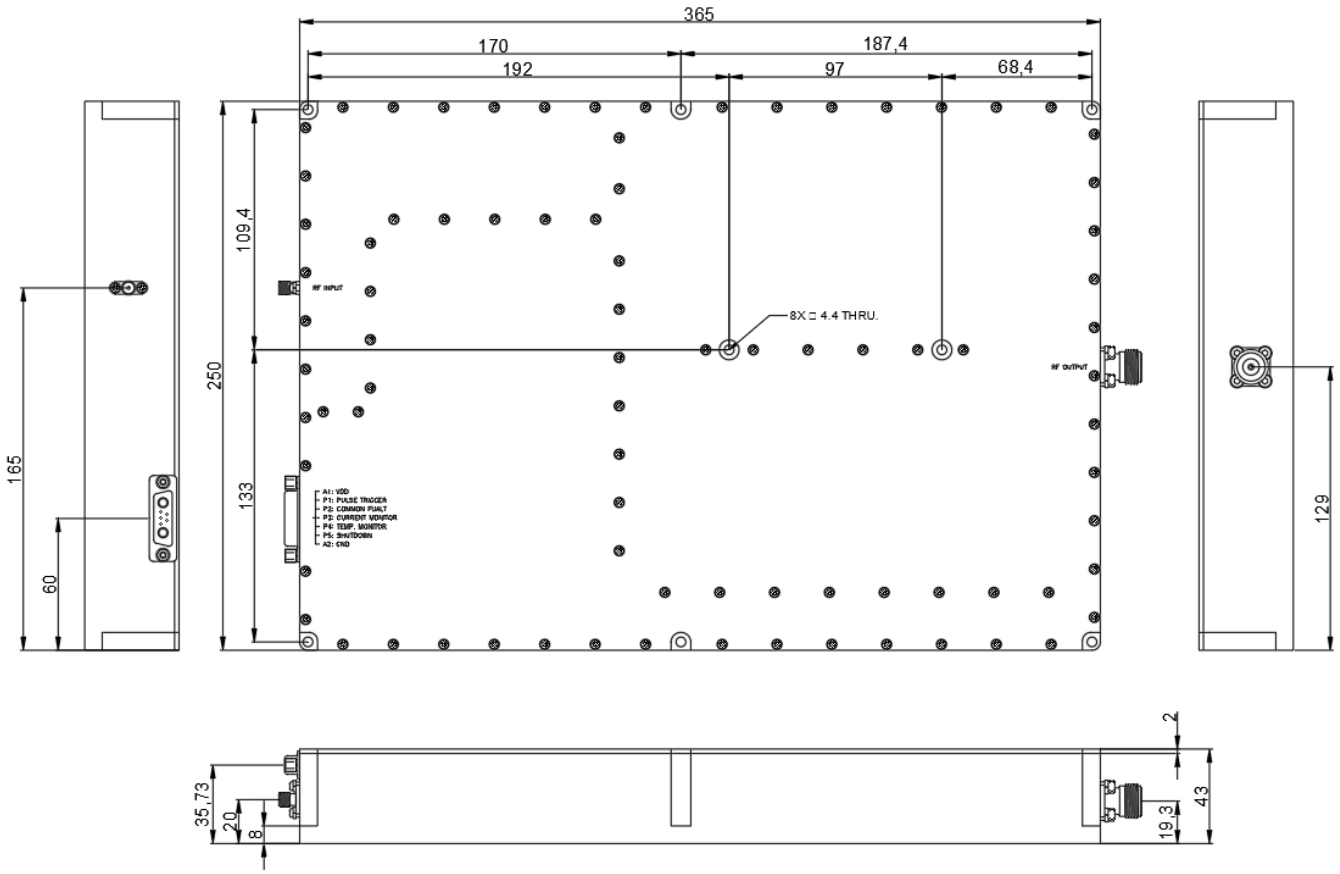
332C Dante Ct. Holbrook, NY 11741 Phone: 631-588-3877 Fax: 631-648-0518
www.rfcomp.com www.rfamplifiers.com sales@hdcom.com

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D-SUB PIN ASSIGNMENT

Pin #	Function	Description	
A1	VDD	+50VDC External	
A2	GND	Ground	
P1	PULSE TRIGGER	TTL High (>2.5V) HPA ON TTL Low (<0.7) Open HPA OFF	
P2	COMMON FAULT	Input: TTL High (>2.5V) HPA OFF TTL Low (<0.7V) / Open HPA ON Output: Fault On TTL High (>5V) Fault Off Low (0.7V)	Fault: Current, Temp, Duty, Rev Power
P3	CURRENT SENSOR	Output: I_D @ 20mV/100mA Typ	
P4	TEMP SENSOR	Output: V_T @ 10mV/°C + 500mV Typ	
P5	SHUTDOWN	TTL: High (>2.5V) / Open, HPA ON TTL Low (<0.7) / GND HPA OFF	

OUTLINE DRAWING



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