HD31780
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear GaN design
Instantaneous wide bandwidth
Suitable for all single channel modulations standards
Small form factor & light weight
Built-in protection circuits
High reliability and ruggedness



ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	0.8 - 6.0 GHz	
Power Output @ Psat	50 Watt Typ	CW
Power Output @ P1dB	25 Watt Min	CW
Power Gain	47 dB Min	0dBm or less for rated Pout
Power Gain Flatness	3.0 dB p-p Max	Constant input power
Input Return Loss	-10 dB Max	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	<-30 dBc Typ	37 dBm/Tone, Δ = 1MHz
Harmonics 2nd	-12 dBc Typ < 1 GHz / -20 dBc Typ	At rated Pout
Harmonics 3rd	<-20 dBc Typ	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Operating Voltage	28 - 30 VDC	
Current Consumption	12 Amp Max / <8 Amp Typ	At rated Pout
Input Power Protection	+8 dBm	<10 Sec without damage
Load VSWR Protection	∞ : 1	<1 minute at rated Pout
Turn On / Off Speed	5 µSec Max	Optional

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	up to 95 %	Non-condensing
Altitude	3000 meters	
Shock & Vibration	Normal transport[1]	

1 MIL Spec available for quotation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	230 x 106 x 27 mm	Excluding connectors
Weight	1.25 Kg.	
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

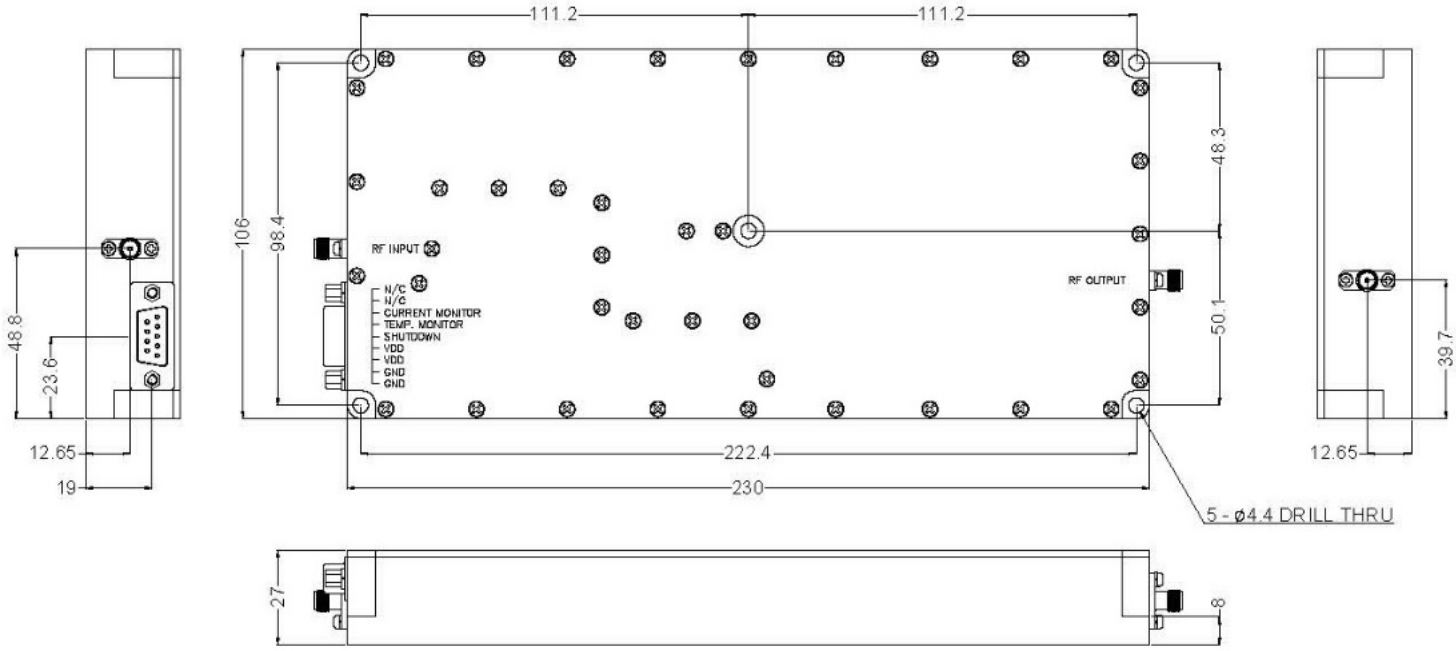
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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	N/C	N/C
2	N/C	N/C
3	CURRENT SENSOR	I_D@20mV/100mA Typ
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	Enable = TTL High or Open; Disable = TTL Low or Short
6, 7	VDD	28VDC
8, 9	GND	Ground

OUTLINE DRAWING



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