HD Communications Corp.

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	50 Watt Typ	CW
Power Output @ P1dB G.C.P.	25 Watt Min	CW
Power Gain	47 dB Min	
Power Gain Flatness	3.0 dB p-p Max	Constant input power
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	>30 dBc Typ	37 dBm/Tone, Δ = 1 MHz
Harmonics	>20 dBc Typ	At rated Pout
Non Harmonics Spurious	>60 dBc	
Operating Voltage	28 - 30 VDC	
Current Consumption	12 Amp Max	At rated Pout
Max Input Power	+8 dBm	Without damage
Load VSWR Protection	∞ : 1	
Turn On / Off Speed	5 µSec Max	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +75 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non Condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	285 x 106 x 27 mm	Excluding Connectors
Weight	1.5 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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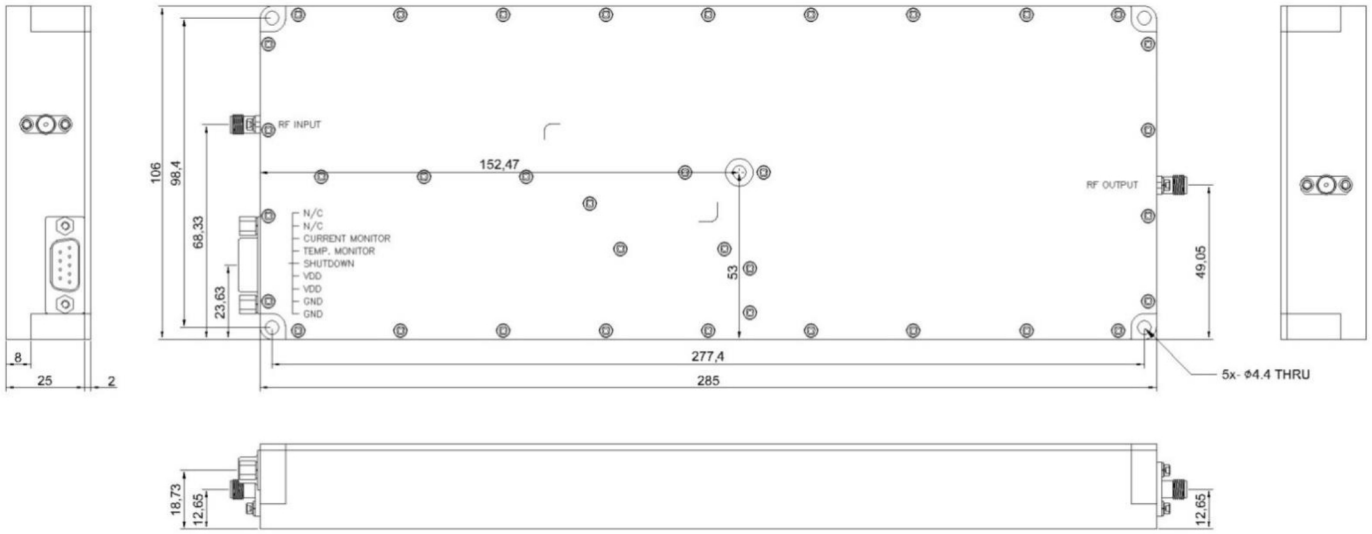
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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	N/C
2	VVA	N/C
3	CURRENT SENSOR	I_D@20mV/100mA Typ
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	TTL
6, 7	VDD	30VDC
8, 9	GND	Ground

OUTLINE DRAWING



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