HD Communications Corp.

HD31765
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear LDMOS design
Instantaneous ultra wide bandwidth
Suitable for all single channel modulation standards
Built-in monitoring and protection circuits
High reliability and ruggedness



ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	20 - 1000 MHz	
Power Output Psat	100 Watt Min	CW
Power Gain	20 - 30 dB Nom	
Gain Flatness	3.0 dB p-p Max	Constant input power
Input Return Loss	10 dB Min	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	-30 dBc Typ	37dBm/Tone, Δ = 1MHz
Harmonics 2^{nd} / 3^{rd}	-25 dBc / -15 dBc Typ	At rated Pout
Non-Harmonics Spurious	-60 dBc Max	
Operating Voltage	28 - 30 VDC Nom	
Current Consumption	10 Amp Max	At rated Pout
Operating Input Power	1 Watt Nom	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 Condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	162 X 100 X 30 mm	Excluding Connectors
Weight	TBD	Max Weight
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

D-SUB CONNECTOR PIN ASSIGNMENT

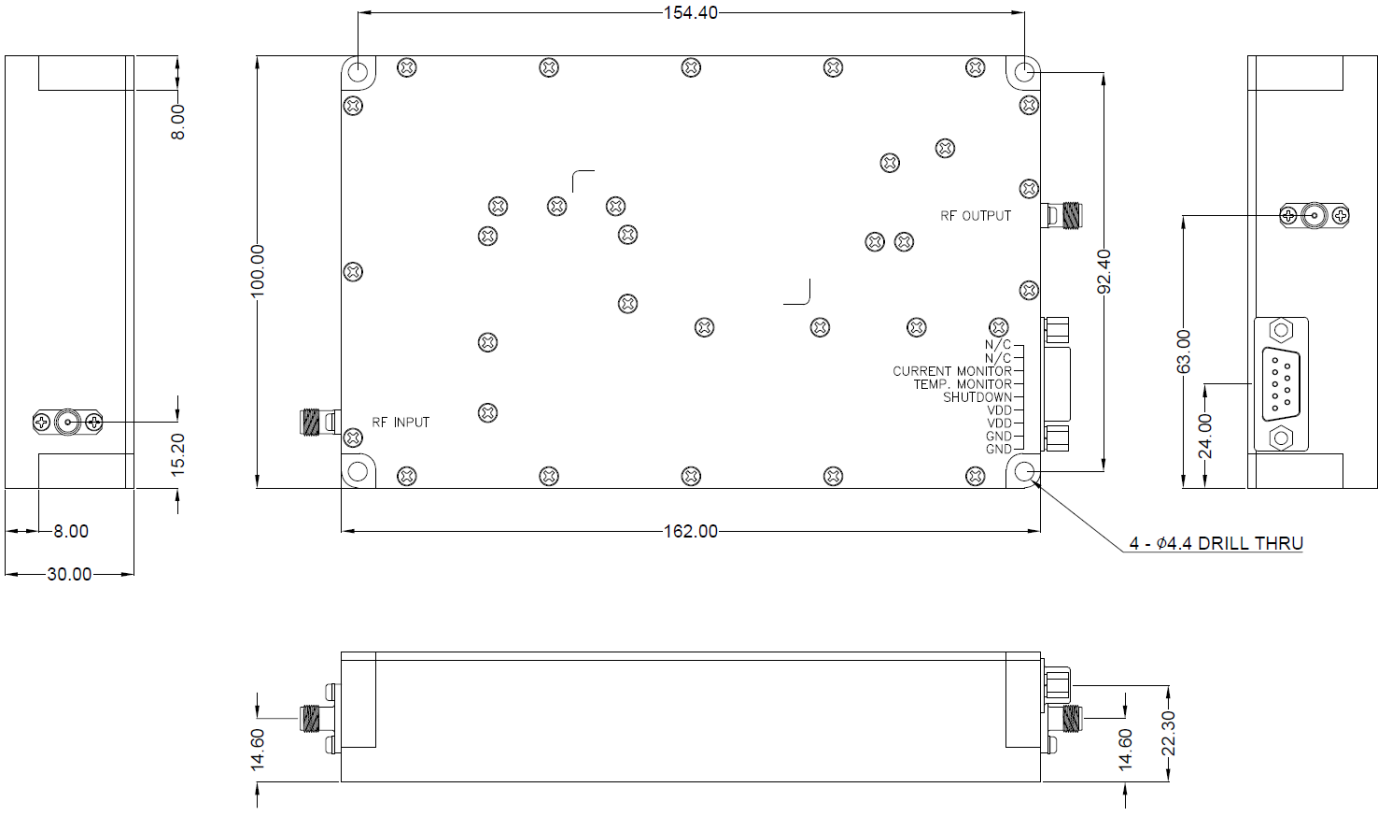
Pin	Function	Description
1	FWD	N/C
2	VVA	N/C
3	CURRENT SENSOR	I_D@50mV/100mA Typ
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	TTL
6, 7	VDD	28 - 30VDC
8, 9	GND	Ground

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OUTLINE DRAWING



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