HD30174
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

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

ELECTRICAL SPECIFICATIONS

Parameter		Specification	Notes
Operating Frequency Range		1.0 - 6.0 GHz	
Power Output		20 Watt Min	>30 Watt Typ CW
Output Power @ P1dB G.C.P.		12 Watt Typ	>20Watt Typ CW
Power Gain		43 dB Min	
Power Gain Flatness		3.0 dB p-p Max	Constant input power
Input / Output Return Loss		-10 dB Max	Relative to 50 Ohm
2-Tone Intermodulation (IMD)		-30 dBc Typ	33 dBm/Tone, Δ = 1 MHz
Harmonics @ Rated Pout	2^{nd}	-20 dBc Typ	-15dBc Typ @ <2GHz
	3^{rd}	<-20 dBc Typ	-30dBc Typ
Spurious		-60 dBc Max	Non-harmonics
Operating Voltage		28 - 30 VDC Nom	
Current Consumption		6 Amp Max	At rated Pout
Input Power Protection		+8 dBm Max	<10 Sec without damage
Load VSWR Protection		∞ : 1	<1 minute at rated pout

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	188 x 92 x 27 mm	Excluding connectors
Weight	800 gr.	
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	9-Pin D-Sub	
Cooling	External Heatsink	Forced air required

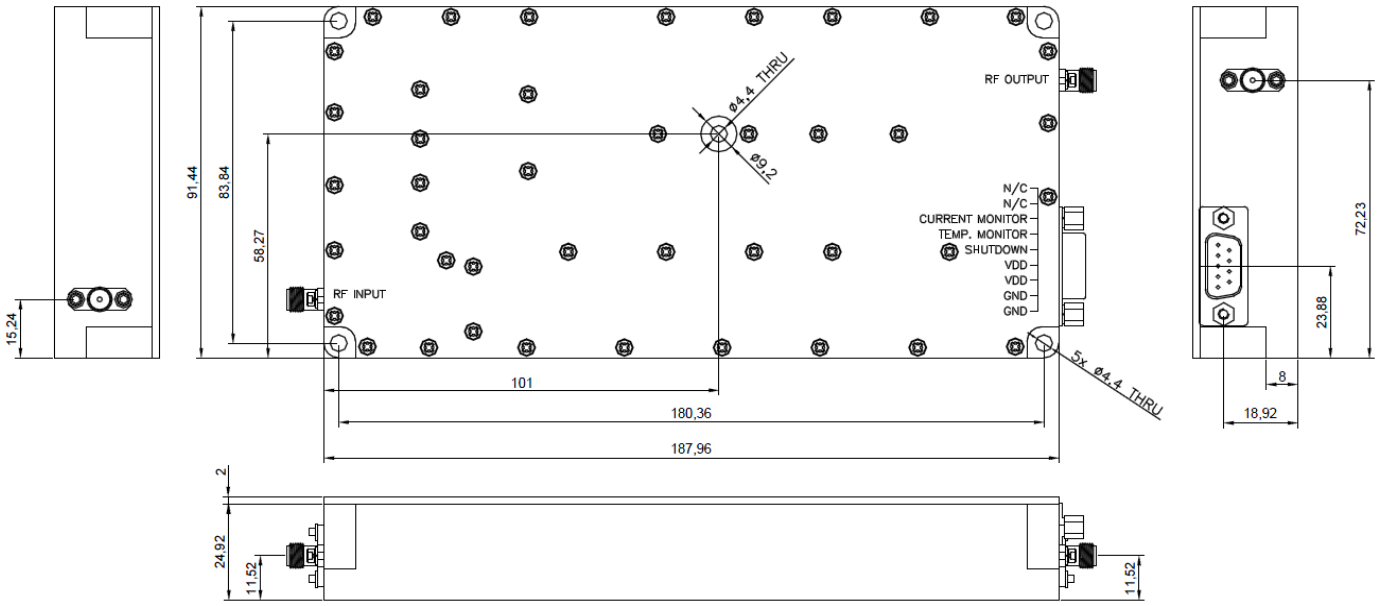
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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	OPTION 101 - Forward power detect
2	VVA	OPTION 103 - Variable Voltage Attenuator
3	CURRENT SENSOR	I_D@50mV/100mA Typ
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	Enable = TTL “Low” or 0V / Disable = TTL “High” (>3.2V)
6, 7	VDD	28VDC
8, 9	GND	Ground

OUTLINE DRAWING



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