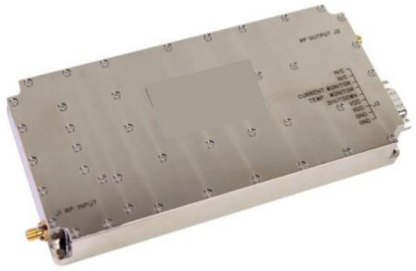
HD31514
SOLID STATE HIGH POWER AMPLIFIER

HD Communications Corp.

FEATURES

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



ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	225 - 400 MHz	
Power Output	275 Watt Typ	CW
Power Output @ P1dB GCP	250 Watt Min	
Power Gain	52 dB Min / 54 dB Max	
Gain Variation Over Operating Temperature	1 dB p-p Max	At -20°C +/- 0.75dB
Input / Output Return Loss	10 dB Min	Relative to 50 Ohm
Noise Figure	10 dB Max	
2-Tone Intermodulation (IMD)	-30dBc Typ	44 dBm/Tone, Δ = 1MHz
Harmonics 2^{nd} / 3^{rd}	-35 dBc Typ	At rated Pout
Non-Harmonics Spurious	-60 dBc Max	
Operating Voltage	32 VDC Nom	
Current Consumption	22 Amp Max	At rated Pout
Input Power Protection	+5 dBm Max	>10 Sec without damage
Load VSWR Protection	2.5 : 1	Load VSWR shutdown
Turn On / Off Speed	5 µSec Max	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20° to +70 °C	Temp Shutdown @ >85°C
Storage Temperature	-40° to +85 °C	
Relative Humidity	5 to 95 %	Non-Condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	240 x 120 x 28 mm	Excluding Connectors
Weight	TBD	Max Weight
RF Connectors In/Out	SMA female / Type-N Female	
DC Power / Interface Connector	9-Pin D-Sub	Pin assignment table
Cooling	External Heatsink	Forced air required

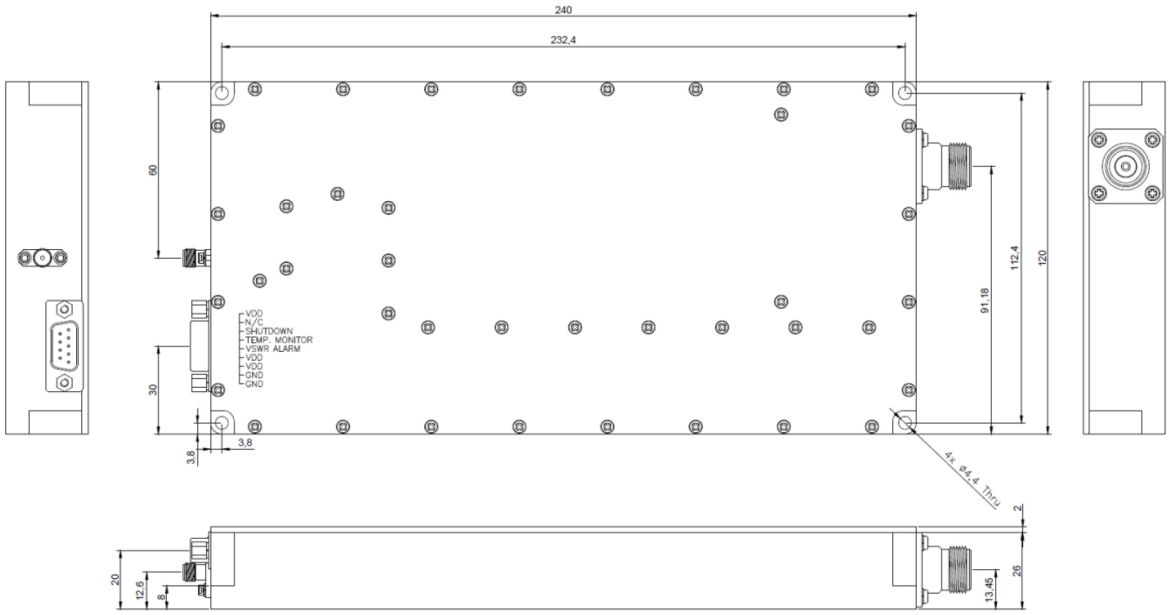
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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	VDD	32VDC
2	N/A	N/A
3	SHUTDOWN	Amplifier Enable: TTL “Low” or Open Amplifier Disable: TTL “High” (3.3V logic)
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ (Range -10°C to +85°C / 0 to 3.3V)
5	VSWR alarm	VSWR tripped = TTL “High” (No latch / 3.3V / P_{REV} = >3:1 load VSWR @ nominal Pout) Normal Operation = TTL “Low”
6, 7	VDD	32VDC
8, 9	GND	Ground

OUTLINE DRAWING



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