HD31514
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Designed for UHF high power communications.
Class AB linear LDMOS design
Suitable for all single channel modulation standards
Built-in monitoring and protection circuits
High reliability and ruggedness



ELECTRICAL SPECIFICATIONS : 50Ω, 25°C

Parameter	Specification	Notes
Operating Frequency Range	225 - 400 MHz	
Power Output @ Psat	275 Watt Min	CW
Power Output @ P1dB	250 Watt Min	CW
Power Gain	54 dB Typ	0dBm or less for rated Pout
Power Gain Flatness	2.0 dB p-p Max	Constant input power
Input Return Loss	-10 dB Max	Relative to 50 Ohm
2-Tone Intermodulation (IMD)	-26 dBc Typ	44 dBm/Tone, Δ = 1MHz
Harmonics 2^{nd} / 3^{rd}	-20 dBc / -35 dBc Typ	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Noise Figure	10 dB Max	
Operating Voltage	32 VDC Nom	
Current Consumption	20 Amp Max	At rated Pout
Input Power Protection	+5 dBm Max	<10 Sec without damage
Load VSWR Protection	2.5 : 1 Max[1]	<1 minute at rated Pout
Turn On / Off Speed	5 µSec Max	Optional

1 Modules could be damaged due to excessive VSWR beyond 1 minute.

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[2]	

2 MIL Spec available for quotation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	240 x 120 x 28 mm	Excluding connectors
Weight	1.4 Kg.	
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

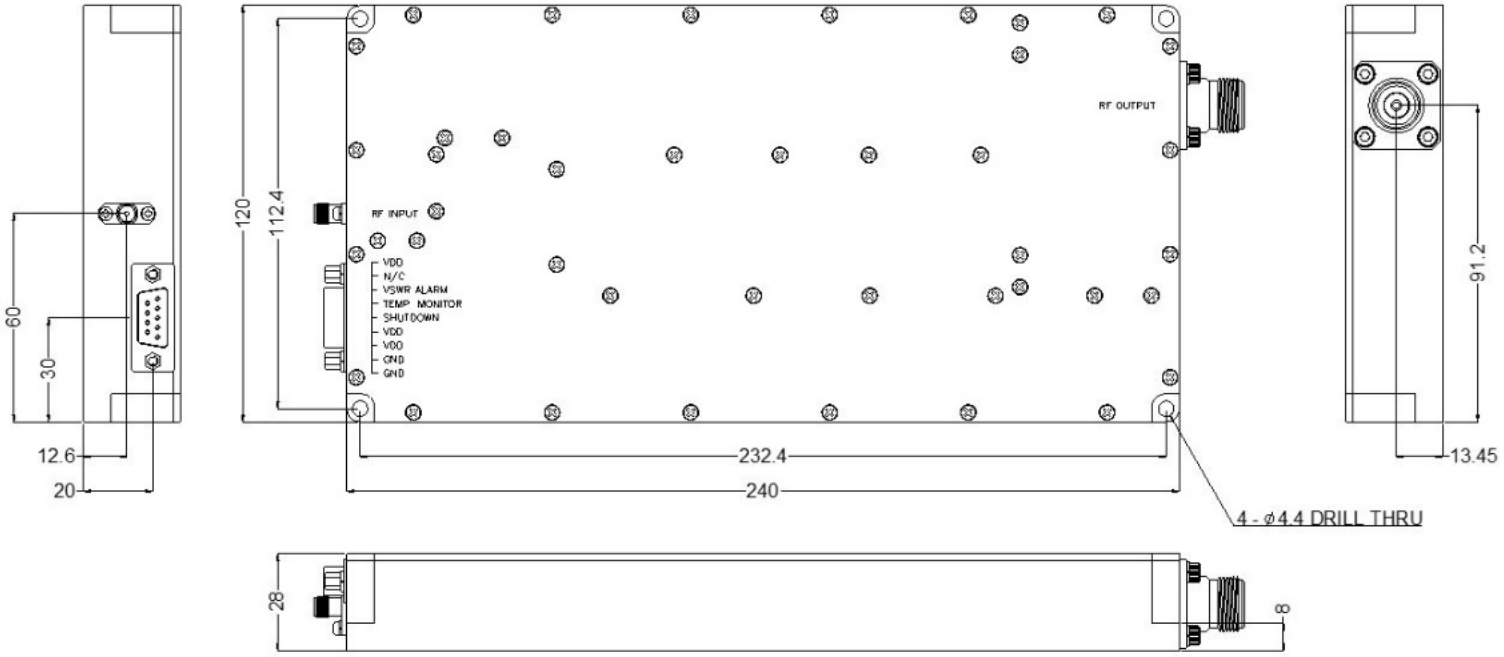
338 Jericho Turnpike, Suite 387, Syosset NY, 11791 (631)-588-3877
www.rfamplifiers.com sales@hdcom.com. www.rfcomp.com
Specifications subject to change without notice. Specifications and drawings may vary with selected options.

HD31514
SOLID STATE HIGH POWER AMPLIFIER

D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	VDD	32VDC
2	N/C	N/C
3	VSWR alarm	VSWR tripped = TTL High (No latch / 3.3V / P_{REV} = 50W) Normal Operation = TTL Low
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	Enable = TTL High or Open; Disable = TTL Low or Short
6, 7	VDD	32VDC
8, 9	GND	Ground

OUTLINE DRAWING



338 Jericho Turnpike, Suite 387, Syosset NY, 11791 (631)-588-3877
www.rfamplifiers.com sales@hdcom.com. www.rfcomp.com
Specifications subject to change without notice. Specifications and drawings may vary with selected options.