HD31133
SOLID STATE HIGH POWER AMPLIFIER



FEATURES

Class AB GaN design
Instantaneous ultra wide Bandwidth
Built-in protection circuits
Suitable for all single channel modulation standards
High reliability and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	1 - 20 GHz	
Power Output Psat	4 Watt Min / 5 - 6 Watt Typ	3W Typ @ 18-20GHz
Power Output P1dB GCP	1 Watt Typ	CW
Small Signal Gain	37 dB Min	
Power Gain Flatness	4 dB p-p Max	
Input Return Loss	>10 dB Typ	
Harmonics	-20 dBc Typ	At rated Pout -10dBc Typ @ 1-2GHz
Noise Figure	8 dB Max	
Spurious	-60 dBc Max	Non-harmonics
Operating Voltage	22 - 24VDC Nom	
Current Consumption	1.8 Amp Max / <1.5 Amp Typ	At rated Pout
Max Input Power Protection	+5 dBm Max	0dBm nominal input level
Load VSWR	5 : 1 Max	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +70°C	
Storage Temperature	-40 to +85°C	
Relative Humidity	5 to 95 %	Non-condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	90 x 85 x 22mm	Excluding Connectors
Weight	300 gr.	
RF Connectors In/Out	SMA female	Cover Flange
DC Power	Feed Thru	
Cooling	External Heatsink	Forced air required

PIN ASSIGNMENT

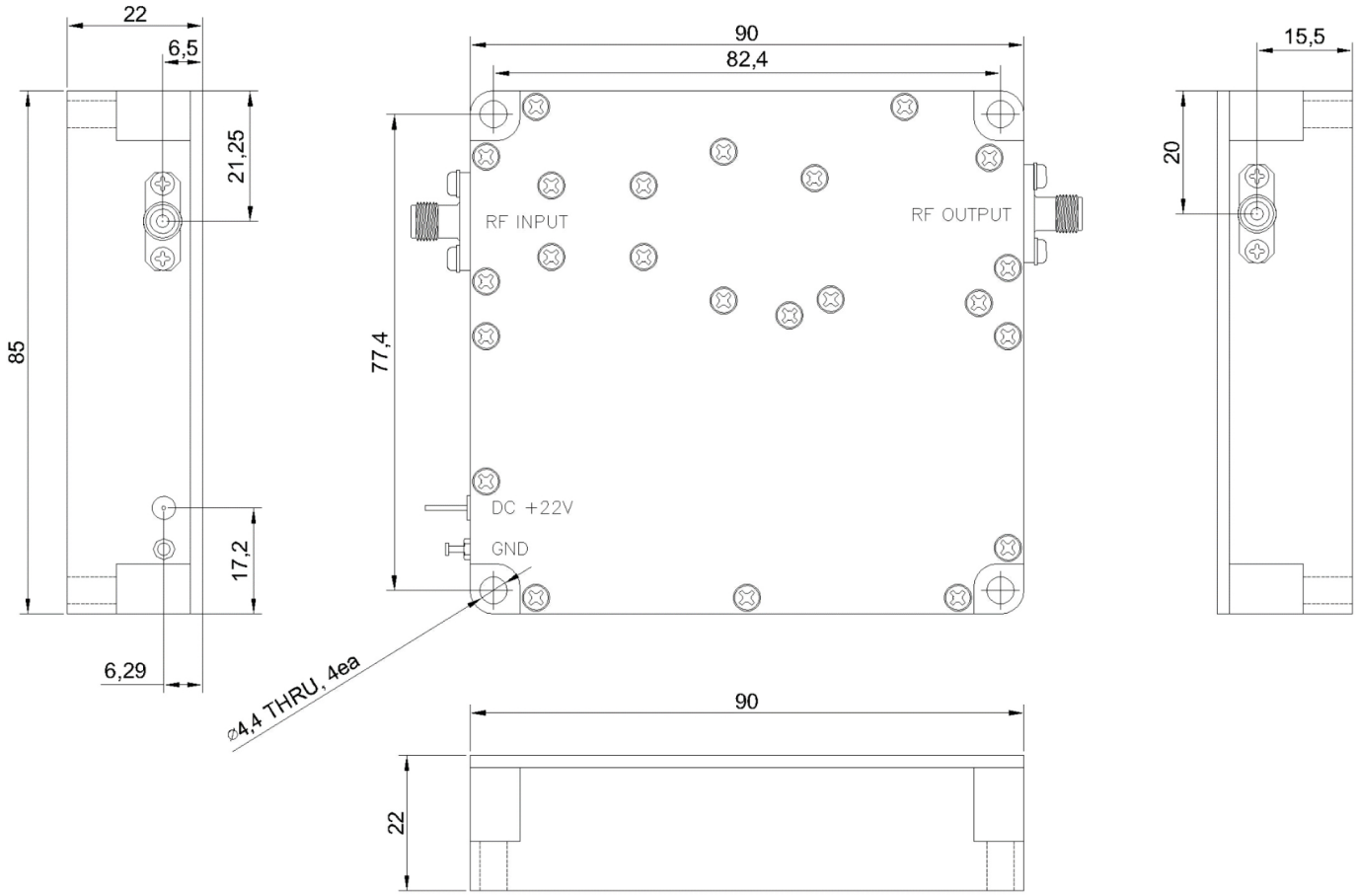
Pin	Function	Description
1	DC Voltage	+22 - 24VDC
2	GND	GND

332C Dante Ct. Holbrook, NY 11741 Phone: 631-588-3877 Fax: 631-648-0518
www.rfamplifiers.com www.rfcomp.com sales@hdcom.com

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Communications Corp.

OUTLINE DRAWING



TYPICAL TEST DATA

Freq. [GHz]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Input [dBm]	-6.0	-7.0	-6.0	-8.0	-6.0	-6.0	-5.0	-5.0	0	0	0	0	0	0	0	0	0	0	0	0
Psat[W]	4.2	5.8	5.9	6.4	7.3	6.4	5.8	5.9	5.9	5.7	6.2	5.6	5.6	4.6	5.2	4.8	5.0	5.0	3.6	2.3
P1dB[W]	1.51	1.66	1.27	1.66	1.66	1.55	1.26	1.32	1.11	0.92	0.89	0.85	0.78	0.69	0.84	0.91	1.11	0.98	1.09	0.76
Current[A]	1.15	1.15	1.29	1.30	1.29	1.28	1.37	1.33	1.39	1.46	1.35	1.52	1.43	1.61	1.45	1.52	1.47	1.42	1.36	1.24

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