HD31805
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class A/AB linear GaN design
Instantaneous ultra-wide bandwidth
High power covering the full S and C bands
Suitable for all Single channel modulation standards
Small form factor & light weight
Built-in protection circuits
High reliability and ruggedness

ELECTRICAL SPECIFICATIONS: 50Ω, 25°C

Parameter	Specification	Notes
Operating Frequency Range	2.0 - 8.0 GHz	
Power Output @ Psat	40 Watt Min	CW
Power Output @ P1dB GCP	30 Watt Min / 40 Watt Typ	Biased class A
Power Gain	46 dB Min	
Power Gain Flatness	4.0 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	36dBm/Tone, Δ = 1 MHz
Harmonics	-25 dBc Typ	At rated Pout
Spurious	-60 dBc Max	Non-harmonics
Noise Figure	8.0 dB Max	
Operating Voltage	32 VDC Nom	
Current Consumption	13 Amp Max / 11 Amp Typ	At rated Pout
Input Power Protection	+5 dBm Max	<10 Sec without damage
Load VSWR Protection	5 : 1 Max	<1 minute at rated Pout

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-20 to +65 °C	
Storage Temperature	-40 to +85 °C	
Relative Humidity	5 to 95 %	Non-condensing

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	250 x 110 x 25 mm	Excluding connectors
Weight	1.4 Kg.	
RF Connectors In/Out	SMA female	
DC Power / Interface Connector	7-Pin Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

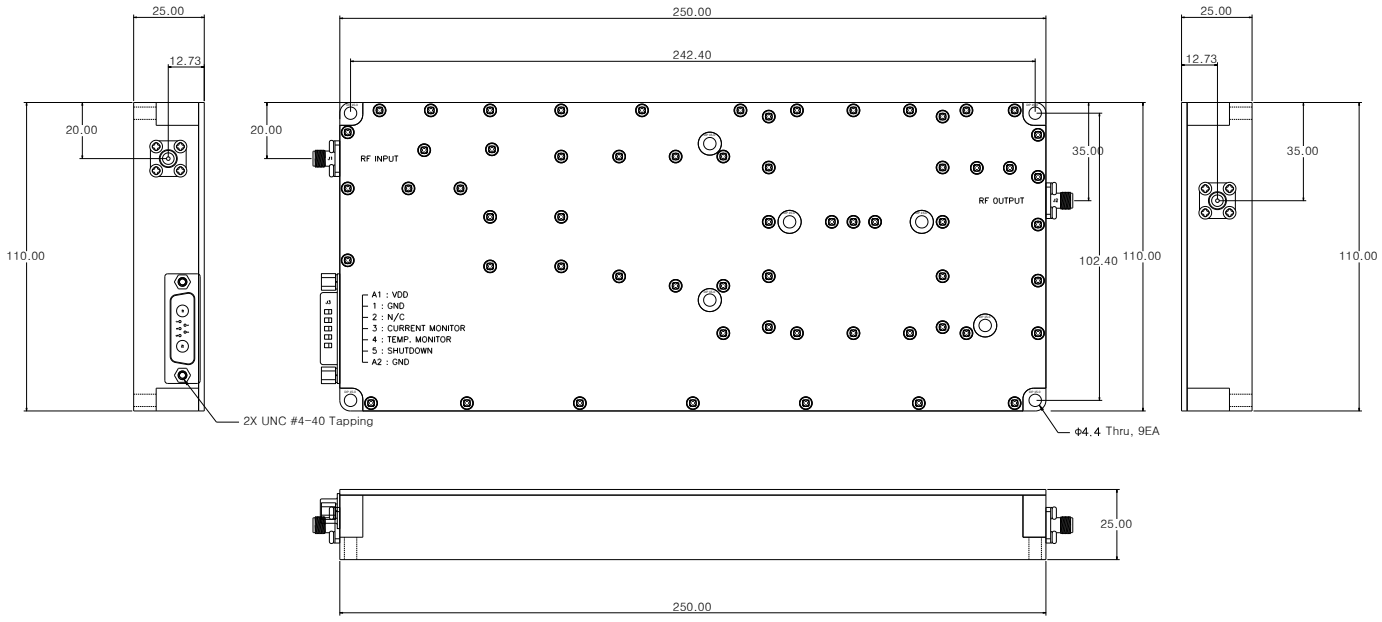
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D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Description
1	FWD	Reserved
2	VVA	Reserved
3	CURRENT SENSOR	I_D@50mV/100mA Typ
4	TEMP SENSOR	V_T@10mV/°C + 500mV Typ
5	SHUTDOWN	TTL
A1	VDD	32VDC
A2	GND	Ground

OUTLINE DRAWING



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