# HD31796
# SOLID STATE HIGH POWER AMPLIFIER

**FEATURES**

Class AB linear GaN design
Instantaneous wide bandwidth
Designed for EMI/RFI, lab, and general communication applications
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 - 6.0 GHz | |
| Power Output CW | 150 Watt Min | Pin=0dBm for rated Pout |
| Power Output @ P1dB GCP | 80 Watt Min | 100 Watt Typ |
| Power Gain | 52 dB Min | |
| Power Gain Flatness | 4.0 dB p-p Max | Constant input power |
| Input / Output Return Loss | -10 dB Max | |
| 2-Tone Intermodulation (IMD) | -30 dBc Typ | 43dBm/Tone, Δ = 1 MHz |
| Harmonics | <-20 dBc Typ | At rated Pout |
| Spurious | -60 dBc Max | Non-harmonics |
| Operating Voltage | 32 VDC Nom | |
| Current Consumption | 40 Amp Max | At rated Pout |
| Max Input Power | +3 dBm Max | <10 Sec without damage |
| Load VSWR Protection | 5 : 1 Max | <1 minute at rated output |

**ENVIRONMENTAL CHARACTERISTICS**

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

**MECHANICAL SPECIFICATIONS**

| Parameter | Specification | Notes |
|---|---|---|
| Dimensions | 250 x 200 x 27 mm | Excluding Connectors |
| Weight | 5.9 Kg. | |
| RF Connectors In/Out | SMA / Type-N female | |
| DC Power / Interface Connector | Hybrid 9-Pin D-Sub | 9W4 |
| Cooling | External Heatsink | Forced air required |

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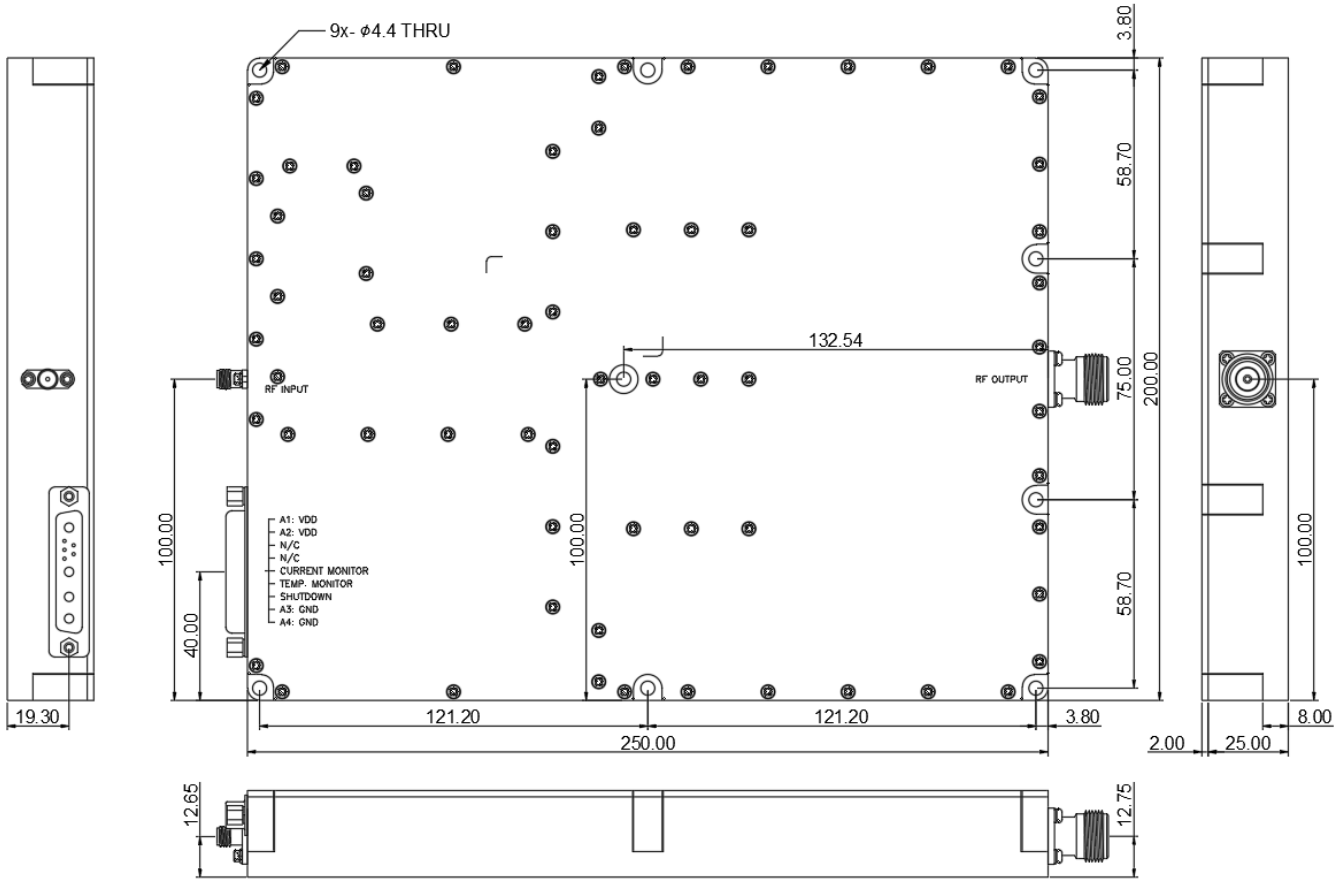
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**D-SUB CONNECTOR PIN ASSIGNMENT**

| Pin | Function | Description |
|---|---|---|
| 1 | FWD | OPTION 101 - Forward Power Detect |
| 2 | VVA | OPTION 103 - Variable Voltage Attenuator |
| 3 | CURRENT SENSOR | $I_D$ @ 10mV/100mA Typ |
| 4 | TEMP SENSOR | $V_T$ @ 10mV/°C + 500mV Typ |
| 5 | SHUTDOWN | TTL |
| A1, A2 | VDD | 32VDC |
| A3, A4 | GND | Ground |

**OUTLINE DRAWING**





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