# HD31286
# SOLID STATE HIGH POWER AMPLIFIER

**FEATURES**

Class AB linear GaN design
Instantaneous ultra-wide bandwidth
Suitable for all single channel modulations 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 - 6.5 GHz | |
| Power Output @ Psat | 100 Watt Min / 120 Watt Typ | 3dB lower @ 6.0-6.5GHz @ CW |
| Power Gain | 51 dB Min | 0dBm or less for rated Pout |
| Power Gain Flatness | 4.0 dB p-p Max | Constant input power |
| Input Return Loss | -10 dB Max | Relative to 50 Ohm |
| 2-Tone Intermodulation (IMD) | -30 dBc Typ | 40 dBm/Tone, Δ = 1 MHz |
| Harmonics | -20 dBc Typ | At rated Pout |
| Spurious | -60dBc Max | Non-harmonics |
| Operating Voltage | 28 VDC Nom | |
| Current Consumption | 24 Amp Max | At rated Pout |
| Input Power Protection | +8 dBm Max | <10 Sec without damage |
| Load VSWR Protection | 5 : 1 Max | <1 minute at rated Pout |
| Turn On / Off Speed | 5 µSec Max | Optional |

**ENVIRONMENTAL CHARACTERISTICS**

| Parameter | Specification | Notes |
|---|---|---|
| Operating Case Temperature | -20 to +65 °C | |
| Storage Temperature | -40 to +85 °C | |
| Relative Humidity | up to 95 % | Non-condensing |
| Altitude | 3000 meters | |
| Shock & Vibration | Normal transport[1] | |

1 MIL Spec available for quotation.

**MECHANICAL SPECIFICATIONS**

| Parameter | Specification | Notes |
|---|---|---|
| Dimensions | 250 x 200 x 27mm | Excluding connectors |
| Weight | 3 Kg. | |
| RF Connectors In/Out | SMA female | |
| DC Power / Interface Connector | 9-Pin Hybrid D-Sub | 9W4 |
| Cooling | External Heatsink | Forced air required |

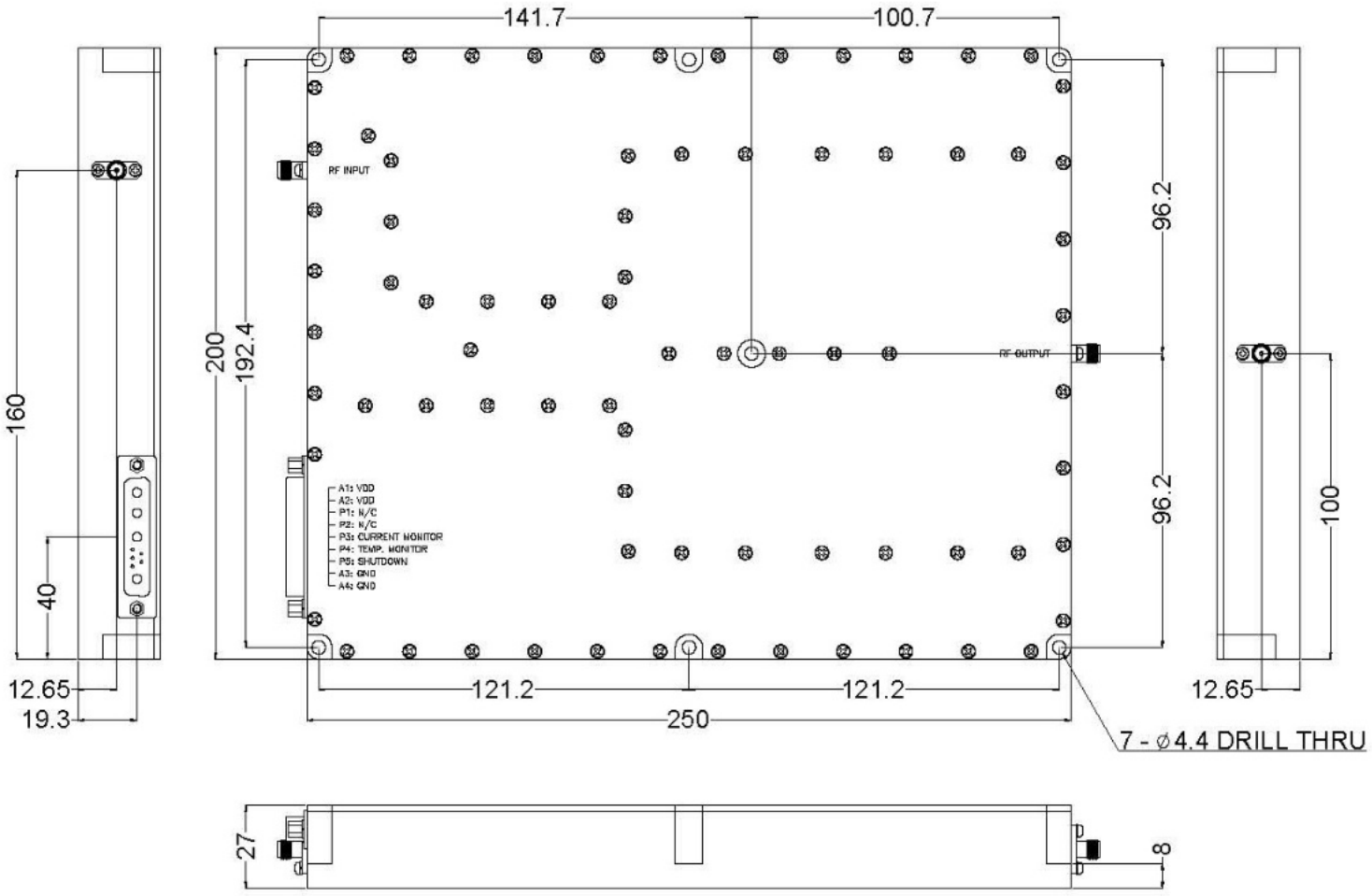
**D-SUB CONNECTOR PIN ASSIGNMENT**

| Pin | Function | Description |
|---|---|---|
| 1 | N/C | N/C |
| 2 | N/C | N/C |
| 3 | CURRENT SENSOR | $I_D$@20mV/100mA Typ |
| 4 | TEMP SENSOR | $V_T$@10mV/°C + 500mV Typ |
| 5 | SHUTDOWN | Enable = TTL High or Open; Disable = TTL Low or Short |
| A1, A2 | VDD | 28VDC |
| A3, A4 | GND | Ground |

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Specifications subject to change without notice. Specifications and drawings may vary with selected options.

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## OUTLINE DRAWING





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