# HD31781
# SOLID STATE HIGH POWER AMPLIFIER



**FEATURES**

Class AB GaAsFET Chip & Wire technology
Instantaneous ultra-wide Bandwidth
Designed for EMI/RFI, lab, and general communication applications
Suitable for all single channel modulation standards
Built-in protection circuits
High reliability and ruggedness

**ELECTRICAL SPECIFICATIONS**: 50Ω, 25°C

| Parameter | Specification | Notes |
|---|---|---|
| Operating Frequency Range | 6.0 - 18.0 GHz | |
| Power Output Psat | 8 Watt Min | CW |
| Small Signal Gain | 40 dB Min | |
| Power Gain Flatness | 4.0 dB p-p Max | |
| Input Return Loss | -10 dB Max | 50 Ohm reference |
| Harmonics | <-15 dBc Typ | At rated Pout |
| Noise Figure | 10 dB Max | |
| Spurious | -60 dBc Max | Non-harmonics |
| Operating Voltage | 12 VDC ±0.5 V | |
| Current Consumption | 12 Amp Max | At rated Pout |
| Input Power Protection | +3 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 | 100 x 100 x 27 mm | Excluding connectors |
| Weight | 600 gr. | |
| RF Connectors In / Out | Hi Freq. SMA-female | |
| DC Power / Interface Connector | 9-Pin D-Sub | |
| Cooling | External Heatsink | Forced air required |

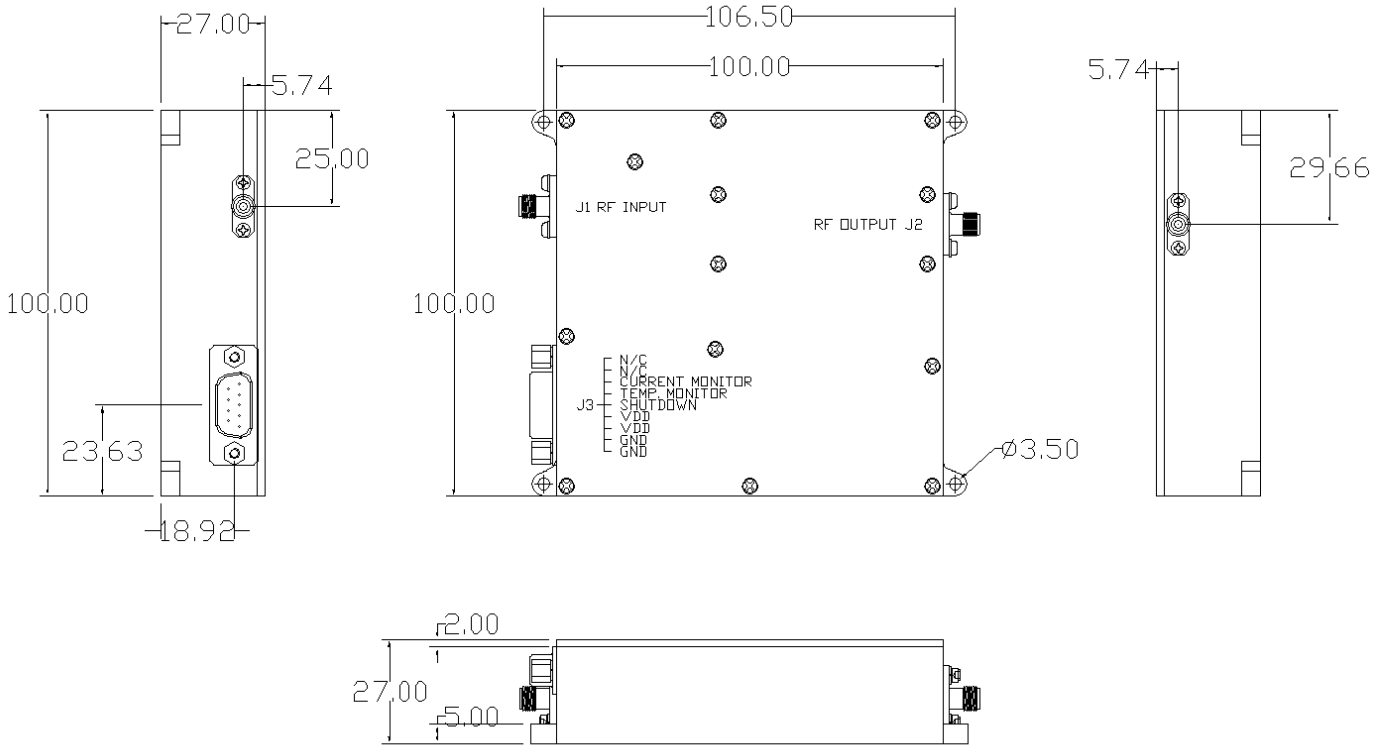
**D-SUB CONNECTOR PIN ASSIGNMENT**

| Pin | Function | Description |
|---|---|---|
| 1 | | N/A |
| 2 | | N/A |
| 3 | Current Sensor | $I_D$@20mV/100mA Typ |
| 4 | Temp Sensor | $V_T$@10mV/°C + 500mV Typ |
| 5 | Shutdown | TTL |
| 6, 7 | VDD | 12VDC |
| 8, 9 | GND | Ground |

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**OUTLINE DRAWING**





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