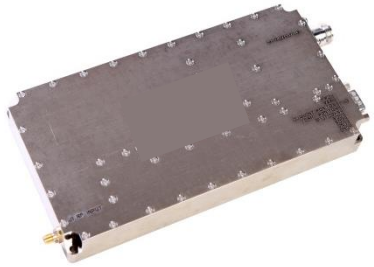
# HD31220
# SOLID STATE HIGH POWER AMPLIFIER

**FEATURES**

Class AB linear LDMOS design
Instantaneous wide bandwidth
Suitable for all single channel modulation standards
Built-in monitoring and protection circuits
High reliability and ruggedness



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

| Parameter | Specification | Notes |
|---|---|---|
| Operating Frequency Range | 20 - 100 MHz Min | |
| Power Output @ Pin=0dBm | 200 Watt Min | CW |
| Power Gain | 53 dB Min | |
| Power Gain Flatness | 3.0 dB p-p Max | |
| Input Return Loss | -10 dB Max | Relative to 50 Ohm |
| 2-Tone Intermodulation (IMD) | <-30 dBc Typ | 43dBm/Tone, Δ = 1MHz |
| Harmonics | $2^{nd}$ <-20dBc, $3^{rd}$ <-12dBc Typ | At rated Pout |
| Spurious | -60 dBc Max | Non-harmonics |
| Operating Voltage | 32 VDC Nom | |
| Current Consumption | 15 Amp Max | At rated Pout |
| Input Power Protection | +8 dBm Max | <10 Sec without damage |
| Load VSWR Protection | ∞ : 1 | <1 minute at rated Pout |
| Turn On / Off Speed | 5 µSec Max | |

**ENVIRONMENTAL CHARACTERISTICS**

| Parameter | Specification | Notes |
|---|---|---|
| Operating Case Temperature | -20 to +75 °C | |
| Storage Temperature | -40 to +85 °C | |
| Relative Humidity | 5 to 95 % | Non-condensing |

**MECHANICAL SPECIFICATIONS**

| Parameter | Specification | Notes |
|---|---|---|
| Dimensions | Option 103: 162 X 106 X 28 mm<br>Option 101: 200 X 106 X 28 mm | Excluding connectors |
| Weight | 700 gr. | |
| RF Connectors In/Out | SMA-F / Type-N | |
| DC Power / Interface Connector | 7-Pin Hybrid D-Sub | |
| Cooling | External Heatsink | Forced air required |

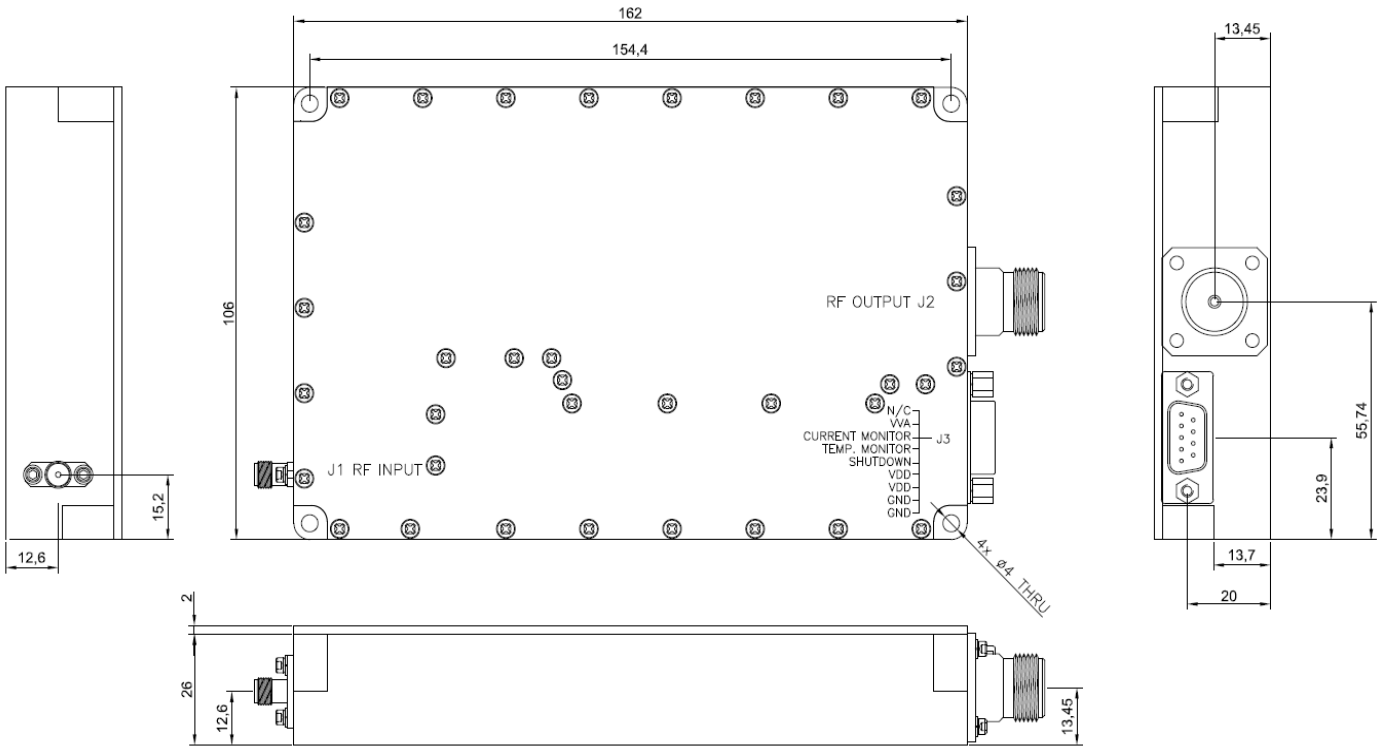
**D-SUB CONNECTOR PIN ASSIGNMENT**

| Pin | Function | Description |
|---|---|---|
| 1 | FWD | Option-101 - Analog Forward Power Indicator |
| 2 | VVA | Option-103 - Analog Gain Control |
| 3 | CURRENT SENSOR | $I_D$@20mV/100mA Typ |
| 4 | TEMP SENSOR | $V_T$@10mV/°C + 500mV Typ |
| 5 | SHUTDOWN | TTL |
| A1 | VDD | 32VDC |
| A2 | GND | Ground |

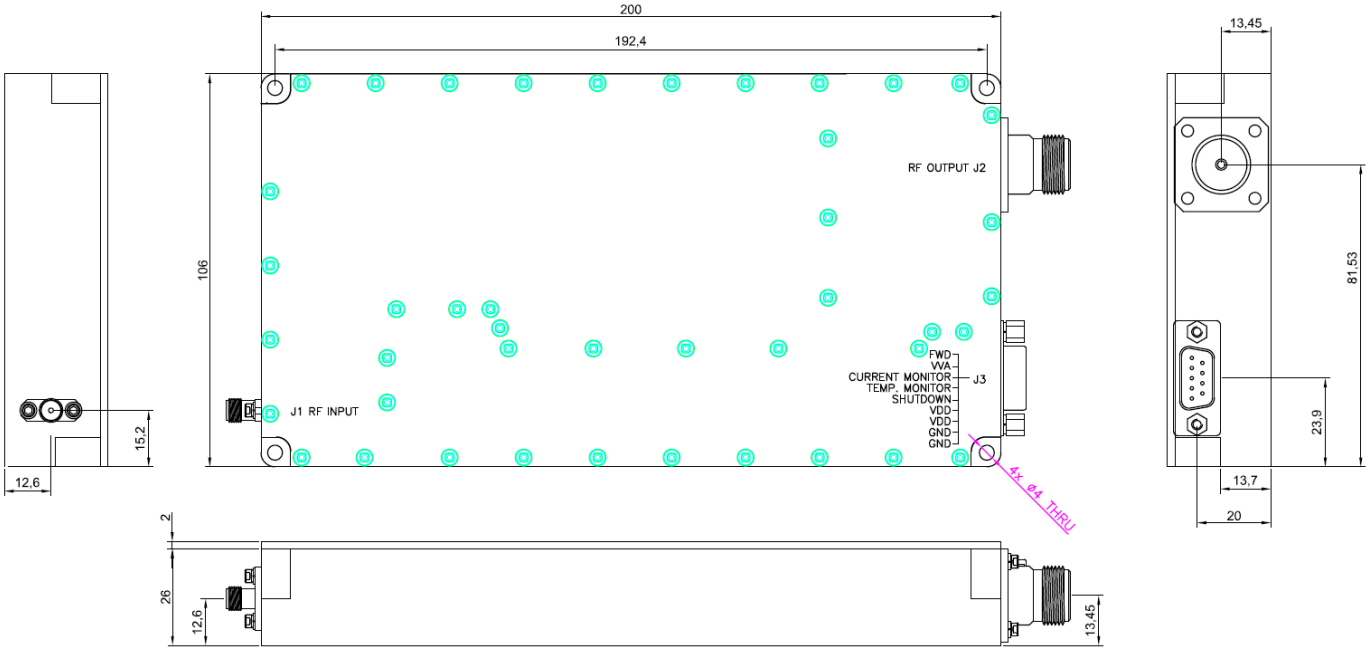
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## OUTLINE DRAWING - OPTION 103




## SHOWN WITH OPTION 101 & 103





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