



# AMP3096P SOLID STATE HIGH POWER AMPLIFIER

## FEATURES

- Class AB linear GaN design
- Instantaneous bandwidth
- Suitable C-Band high peak power pulse applications
- Small form factor & light weight
- Built-in protection circuits
- High reliability and ruggedness



## ELECTRICAL SPECIFICATIONS: 50Ω, 25°C

| Parameter                   | Specification           |             |              | Notes                 |  |
|-----------------------------|-------------------------|-------------|--------------|-----------------------|--|
| Operating Frequency Range   | 5.4 - 5.9 GHz           |             |              |                       |  |
| Power Output Peak Pulse     | 300 Watt Min            |             |              |                       |  |
| Power Gain                  | 55 dB Min               |             |              |                       |  |
| Power Gain Flatness         | 2.0 dB p-p Max          |             |              | Constant input power  |  |
| Input / Output Return Loss  | -10 dB Max              |             |              | Relative to 50 Ohm    |  |
| Input Pulse Characteristics | <b>Width</b>            | <b>Duty</b> | <b>Droop</b> | <b>Rise/Fall</b>      |  |
|                             | 150 μS                  | 10 %        | <1 dB        | <100 nS               |  |
| Harmonics                   | <-20 dBc Typ            |             |              | At rated Pout         |  |
| Spurious                    | -60 dBc Max             |             |              | Non-harmonics         |  |
| Operating Voltage           | 50 VDC Nom              |             |              |                       |  |
| Current Consumption         | 24 Amp Peak / 6 Amp Max |             |              | At rated Pout         |  |
| Input Power Protection      | +8 dBm Max              |             |              | Without damage        |  |
| Load VSWR Protection        | ∞ : 1                   |             |              | Output isolator       |  |
| Turn On / Off Speed         | 1 μSec Max              |             |              | Fast switching option |  |

## 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 |

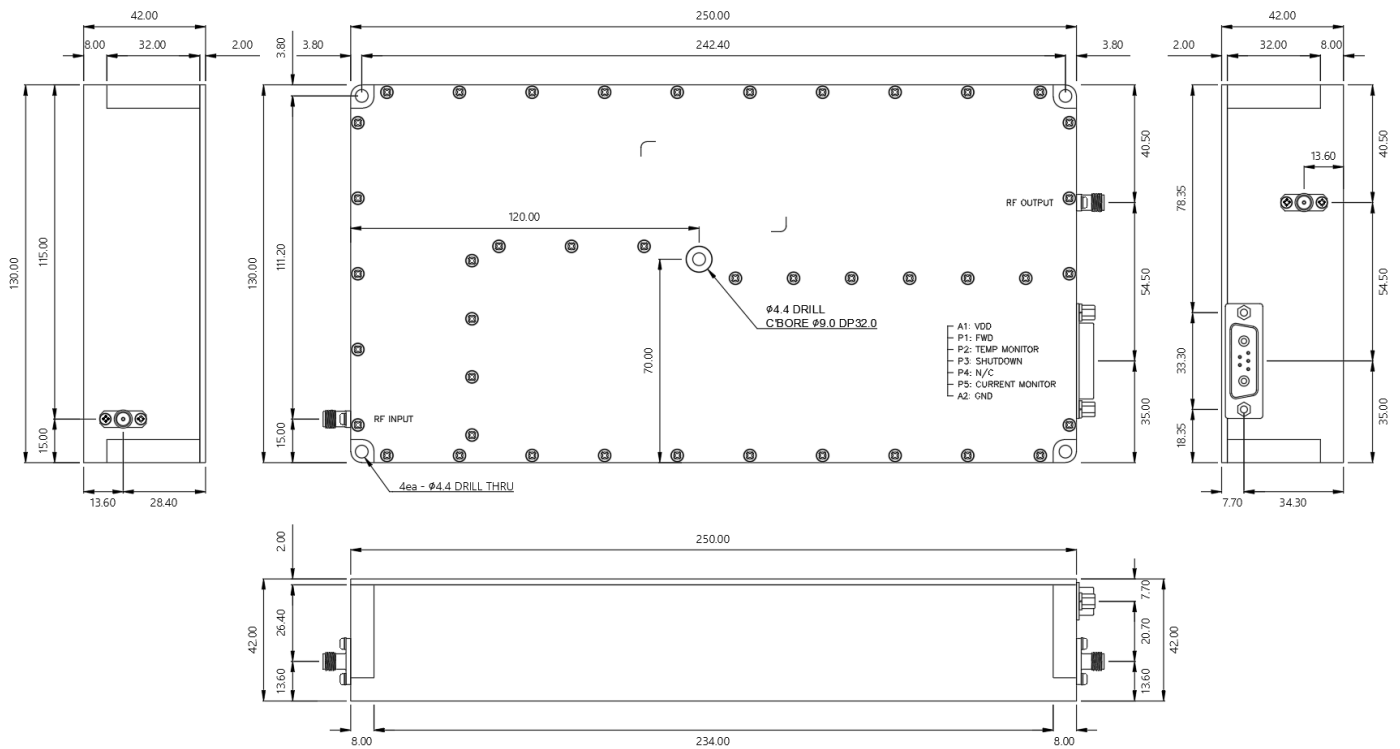
## MECHANICAL SPECIFICATIONS

| Parameter                      | Specification       | Notes                |
|--------------------------------|---------------------|----------------------|
| Dimensions                     | 250 x 130 x 42 mm   | Excluding connectors |
| Weight                         | -                   |                      |
| RF Connectors In/Out           | SMA / Type-N female |                      |
| DC Power / Interface Connector | 7-Pin Hybrid D-Sub  | 7W2                  |
| Cooling                        | External Heatsink   | Forced air required  |

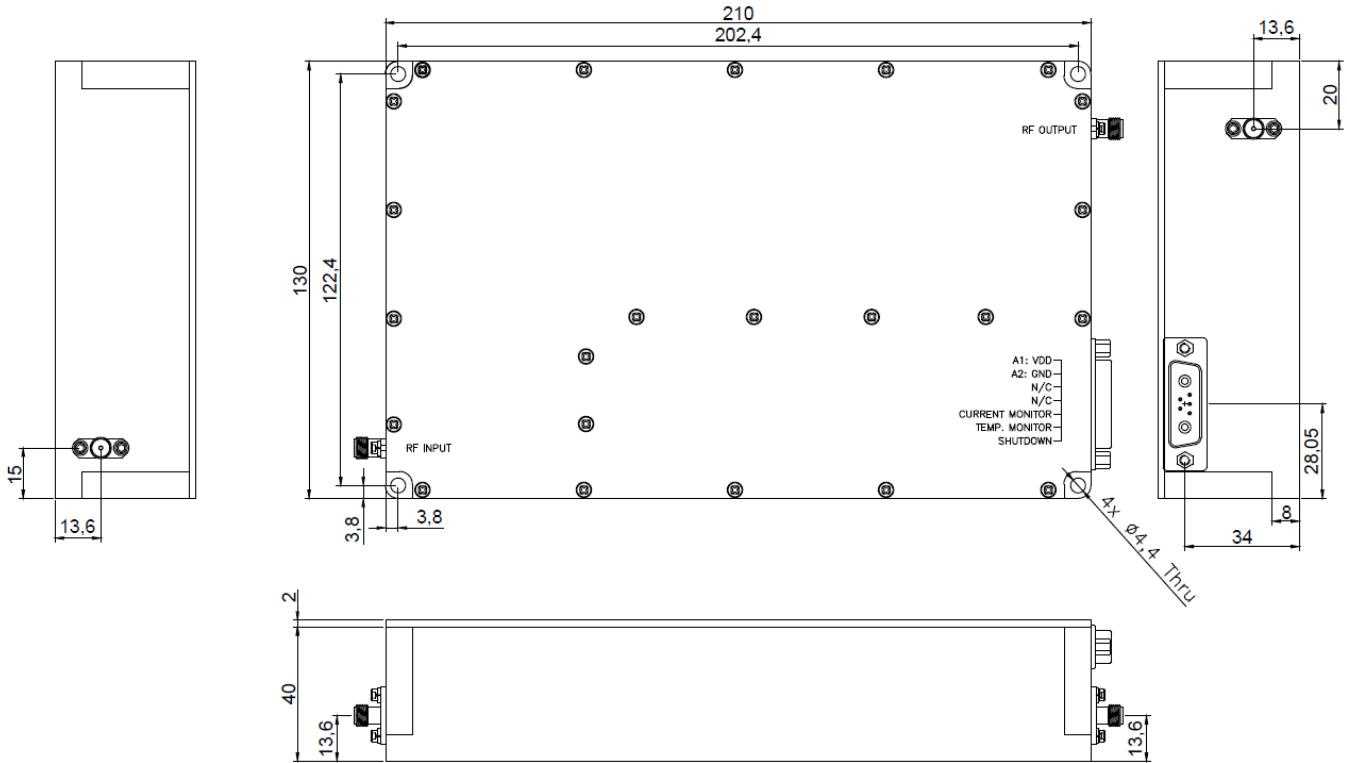
### D-SUB CONNECTOR PIN ASSIGNMENT

| Pin | Function       | Description   |
|-----|----------------|---|
| 1   | FWD            | N/C   |
| 2   | TEMP SENSOR    | $V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$ |
| 3   | SHUTDOWN       | TTL   |
| 4   | N/C            |   |
| 5   | CURRENT SENSOR | $I_D @ 20\text{mV}/100\text{mA Typ}$                  |
| A1  | VDD            | 50VDC   |
| A2  | GND            | Ground  |

### OUTLINE DRAWING



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## OUTLINE DRAWING WITH OPTIONAL HEATSINK

