



## AMP1044-2 SOLID STATE HIGH POWER AMPLIFIER

### FEATURES

Class A/AB linear design  
High Power Advanced technology devices  
Instantaneous wide bandwidth  
Suitable for all single channel modulation standards  
Small form factor & light weight  
Built-in monitoring & protection circuits  
High efficiency, with unprecedented reliability and ruggedness



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

| Parameter                    | Specification       | Notes                       |
|------------------------------|---------------------|-----------------------------|
| Operating Frequency Range    | 3.0 - 6.0 GHz       |                             |
| Power Output @ Psat          | 100 Watt Min        | CW                          |
| Power Output @ P1dB          | 60 Watt Typ         |                             |
| Power Gain                   | 50 dB Min           | 0dBm or less for rated Pout |
| Power Gain Flatness          | 3.0 dB p-p Max      | Constant input power        |
| Input / Output Return Loss   | 10 dB Min           |                             |
| 2-Tone Intermodulation (IMD) | -30 dBc Typ         | 40dBm/Tone, Δ = 1 MHz       |
| Harmonics                    | -20 dBc Typ         | At rated Pout               |
| Non-Harmonics Spurious       | -60 dBc Max         |                             |
| Operating Voltage            | 28 VDC Nom          |                             |
| Current Consumption          | 24 Amp Max          | At rated Pout               |
| Max Input Power              | +8 dBm Max          | <10 Sec without damage      |
| Load VSWR Protection         | 10 : 1 <sup>1</sup> | <1 minute at rated Pout     |

1 Modules could be damaged due to excessive VSWR beyond 1 minute

### 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 <sup>2</sup> |                |

2 MIL Spec available for quotation

### MECHANICAL SPECIFICATIONS

| Parameter                      | Specification       | Notes                |
|--------------------------------|---------------------|----------------------|
| Dimensions                     | 260 x 200 x 27mm    | Excluding Connectors |
| Weight                         | 3.1 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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### D-SUB CONNECTOR PIN ASSIGNMENT

| Pin    | Function       | Description                                               |
|--------|----------------|-----------------------------------------------------------|
| 1      | Not Used       | Not Used                                                  |
| 2      | Not Used       | Not Used                                                  |
| 3      | CURRENT SENSOR | $I_D @ 20\text{mV}/100\text{mA Typ}$                      |
| 4      | TEMP SENSOR    | $V_T @ 10\text{mV}/^\circ\text{C} + 500\text{mV Typ}$     |
| 5      | SHUTDOWN       | Enable = TTL "High" (>3.2V) or Open / Disable = TTL "Low" |
| A1, A2 | VDD            | 30VDC                                                     |
| A3, A4 | GND            | Ground                                                    |

### OUTLINE DRAWING

