

# AMP1110

## SOLID STATE HIGH POWER AMPLIFIER

### FEATURES

Class AB linear GaN hybrid design  
Instantaneous wide bandwidth  
Suitable for all modulations standards  
Built-in protection circuits  
High reliability and ruggedness



### ELECTRICAL SPECIFICATIONS

| Parameter                    | Specification  | Notes                        |
|------------------------------|----------------|------------------------------|
| Operating Frequency Range    | 4.0 - 8.0 GHz  |                              |
| Power Output                 | 40 Watt Min    | CW                           |
| Power Gain                   | 46 dB Min      |                              |
| Power Gain Flatness          | 4.0 dB p-p Max | Constant input power         |
| Input / Output Return Loss   | 10 dB Min      | Relative to 50 Ohm           |
| 2-Tone Intermodulation (IMD) | >30 dBc Typ    | 36dBm/Tone, $\Delta = 1$ MHz |
| Harmonics                    | >25 dBc Typ    | At rated Pout                |
| Non Harmonics Spurious       | >60 dBc Min    |                              |
| Noise Figure                 | 8.0 dB Max     |                              |
| Operating Voltage            | 38 VDC Nom     |                              |
| Current Consumption          | 12 Amp Max     | At rated Pout                |
| Max Input Power              | +8 dBm         | Without damage               |
| Load VSWR Protection         | 3 : 1          |                              |

### ENVIRONMENTAL CHARACTERISTICS

| Parameter                  | Specification | Notes            |
|----------------------------|---------------|------------------|
| Operating Case Temperature | -20 to +65 °C |                  |
| Storage Temperature        | -40 to +85 °C |                  |
| Relative Humidity          | 5 to 95 %     | Non Condensation |

### MECHANICAL SPECIFICATIONS

| Parameter                      | Specification      | Notes                |
|--------------------------------|--------------------|----------------------|
| Dimensions                     | 190 X 200 X 25 mm  | Excluding Connectors |
| Weight                         | TBD                |                      |
| RF Connectors In/Out           | SMA female         |                      |
| 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            | Reserved                           |
| 2   | VVA            | Reserved                           |
| 3   | CURRENT SENSOR | $I_D @ 50mV/100mA$ Typ             |
| 4   | TEMP SENSOR    | $V_T @ 10mV/^{\circ}C + 500mV$ Typ |
| 5   | SHUTDOWN       | TTL                                |
| A1  | VDD            | 38VDC                              |
| A2  | GND            | Ground                             |

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## OUTLINE DRAWING

