

AMP1014B 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

| Parameter | Specification | Notes |
|-------------------------------------|---|------------------------------------|
| Operating Frequency Range | 20 - 520 MHz | |
| Power Output @ Psat CW | 100 Watt Min 70 Watt Min / 80 Watt Typ | @28VDC @24VDC |
| Power Output @ P1dB CW | 50 Watt Min 35 Watt Min | @28VDC @24VDC |
| Power Gain | 50 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 | 40dBm/Tone, $\Delta = 1\text{MHz}$ |
| Harmonics | 2nd < -35dBc Typ 3rd < -15dBc Typ | At rated Pout |
| Spurious | -60 dBc Max | Non-harmonics |
| Operating Voltage DC Input Range | 24 - 30 VDC Operational +21 to +31 VDC | Operational No damage |
| Current Consumption | 9 Amp Max @ 28 VDC 10 Amp Max @ 24 VDC | At rated Pout |
| Input Power Protection | +13 dBm Max | <10 Sec without damage |
| Load VSWR Protection | $\infty : 1$ Min | <1 minute at rated Pout |
| Turn On / Off Speed | 5 μSec Max | |

ENVIRONMENTAL CHARACTERISTICS

| Parameter | Specification | Notes |
|----------------------------|---------------|---------------------|
| Operating Case Temperature | -30 to +75 °C | Extended Temp range |
| Storage Temperature | -40 to +85 °C | |
| Relative Humidity | 5 to 95 % | Non-condensing |

MECHANICAL SPECIFICATIONS

| Parameter | Specification | Notes |
|--------------------------------|-------------------|----------------------|
| Dimensions | 200 x 100 x 27 mm | Excluding connectors |
| Weight | 950 gr. | |
| RF Connectors In/Out | 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 | FWD | TTL level "Hi" @ Pout=5Watt |
| 2 | CURRENT SENSOR | I _D @20mV/100mA Typ |
| 3 | TEMP SENSOR | TTL "Hi" @ >77°C |
| 4 | | |
| 5 | SHUTDOWN | TTL |
| 6, 7 | VDD | 28VDC |
| 8, 9 | GND | Ground |

OUTLINE DRAWING

