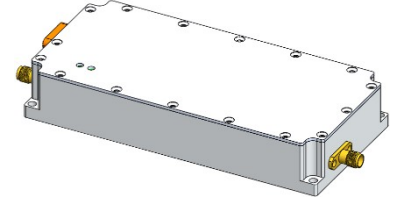


Description

The HZ3002700-50 is a highly reliable amplifier which is guaranteed to deliver 50 watts of power within the 300MHz to 2700MHz frequency range and related RF performance under specified temp and environmental conditions. When paired with the appropriate SDR source, it can do the jamming perfectly. This amplifier is suitable for use in defend systems in the V and U bands. It utilizes the latest high power RF GaN transistors, with protection functions to ensure high availability.



Applicaton and Feature

- Utilizing third-generation GaN transistors
- Ultra-wide working bandwidth and instant bandwidth
- Excellent reliability

Specifications of Products

| Electrical Specifications | | | | | |
|--------------------------------|-----|-----|------|------|---|
| Parameter | Min | Typ | Max | Unit | Test Condition |
| Operating frequency | 300 | | 2700 | MHz | |
| Instant bandwidth | | | 200 | MHz | Broadband signal, such as OFDM signal |
| Output power (Psat) | 40 | 50 | | W | CW signal |
| Gain (small signal) | 38 | | 48 | dB | Measured with VNA in swept frequency mode at -20dBm. Input power calibrated/measured at the amplifier input port. |
| Gain flatness (small signal) | -4 | | 4 | dB | Test condition the same as Gain |
| Noise figure | | | 20 | dB | |
| Input VSWR | | | 1.8 | | Measured with VNA in swept frequency mode at -20dBm. |

| Electrical Specifications | | | | | |
|---|-----|-----|-----|---------|--|
| Parameter | Min | Typ | Max | Unit | Test Condition |
| | | | | | Input power calibrated/measured at the amplifier input port. |
| Spurious | | -60 | | dBc | CW signal at the output power of 50W. Spurious defined as any non-harmonic amplifier output. Spurious measured in a 1kHz resolution bandwidth, 10kHz video bandwidth. Specifications apply at offsets of greater than or equal to ± 10 kHz from the RF carrier. Maximum measurement frequency is 8GHz |
| Harmonics(2 nd , 3 rd) | -10 | | | dBc | CW signal source at output power of 50W |
| Operating voltage | 24 | 28 | 32 | V | Note: Output power capabilities and gain will vary with voltage |
| Operating current | | 7.2 | 9 | A | CW signal source at output power of 50W |
| PA Enable/Disable time | | | 10 | μ s | Measurement with of 50W CW output. Rise and fall time of amplifier output envelope recorded. Rise and fall times at 10%-90% of the output power in linear scale. PA Enable/ Disable signal set to 10kHz repetition rate and 50% duty cycle |

| Alarm and Protection | |
|----------------------|---|
| Parameter | Introductions |
| Over temperature | When the temperature exceeds $80^{\circ}\text{C}\pm 5^{\circ}\text{C}$, the amplifier automatically shut down; When the temperature drops below $70^{\circ}\text{C}\pm 5^{\circ}\text{C}$, the amplifier will automatically turn on. |



HZ3002700-50

50W-Solid State Broadband High Power Amplifier

| Environmental Specifications | | | | |
|------------------------------------|---|-----|-----|------|
| Parameter | Min | Typ | Max | Unit |
| Operating temperature | -40 | | +60 | °C |
| Storage temperature | -55 | | +85 | °C |
| Relative Humidity (non-condensing) | | | +95 | % |
| Altitude | MIL-STD-810F Method 500.4 | | | |
| Vibration/Shock | Pass MIL-STD-810F - Method 514.5/516.5 – Proc I | | | |

| Mechanical Specifications | | |
|---------------------------|------------------------------------|------|
| Parameter | Value | Unit |
| Dimension | 125×59×21.5 | mm |
| Weight | 0.5 | kg |
| RF Connectors In/Out | Input: SMA-KFD46 Output: SMA-KFD46 | - |
| Control Connector | D-Sub 9-Pin Female | - |
| Power Supply Connector | D-Sub 9-Pin Female | - |
| Cooling | External Heat sink | - |

| DC Interface Connector | | |
|------------------------|-------------|--|
| PIN# | Description | Specification |
| 1 | VDD | Supply Voltage:+24V~32V,+28V Nominal |
| 2 | VDD | Supply Voltage:+24V~32V,+28V Nominal |
| 3 | VDD | Supply Voltage:+24V~32V,+28V Nominal |
| 4 | VDD | Supply Voltage:+24V~32V,+28V Nominal |
| 5 | GND | Ground Return |
| 6 | GND | Ground Return |
| 7 | GND | Ground Return |
| 8 | PA_EN | PA on :0V or the Hanging PA off :Input 3.3V or 5V |
| 9 | Not Used | No Connection |

Outline Drawing

