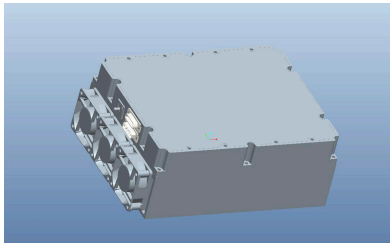


## 8000–12000 MHz GaN RF Power Amplifier, 100 W Typical

The GaN amplifier covers 8000–12000 MHz with 100 W typical saturated output and 53 dB minimum gain. Typical output at 1 dB compression is 20 W, with ±1.5 dB typical gain flatness.



### Electrical Specifications · +28.0VDC; 25°C; 50Ω

| Parameter                        | Symbol    | Minimum | Typical | Maximum | Unit |
|----------------------------------|-----------|---------|---------|---------|------|
| Operating frequency              | BW        | 8000    | -       | 12000   | MHz  |
| Output power at 1 dB compression | P-1dB     | -       | 20      | -       | W    |
| RF output power @ PSAT           | PSAT      | -       | 100     | -       | W    |
| Power gain @ PSAT                | Gp        | 53      | -       | -       | dB   |
| Power gain flatness @ PSAT       | ΔGp       | -       | ±1.5    | -       | dB   |
| Input return loss                | S11       | -       | -15     | -       | dB   |
| Spurious signals @ PSAT          | Spur      | -       | -60     | -       | dBc  |
| Input/output impedance           | Impedance | -       | 50      | -       | Ω    |
| Operating voltage                | VDC       | -       | 28      | -       | VDC  |

### Absolute Maximum Ratings

| Parameter                     | Rating                                        |
|-------------------------------|-----------------------------------------------|
| RF input drive without damage | +10 dBm maximum                               |
| Load VSWR at Pout = 100 W     | ∞; All load phases and amplitudes; continuous |
| Thermal overload              | 85 °C → Shutdown (maximum)                    |

### Environmental Specifications · Design targets; project confirmation required

| Parameter                          | Minimum | Typical | Maximum | Unit | Notes               |
|------------------------------------|---------|---------|---------|------|---------------------|
| Operating temperature              | -20     | -       | 50      | °C   | -                   |
| Storage temperature                | -25     | -       | 65      | °C   | Storage temperature |
| Relative humidity (non-condensing) | -       | -       | 95      | %    | -                   |

Mechanical Specifications

| Parameter            | Value                        | Unit |
|----------------------|------------------------------|------|
| Dimensions           | 250 × 200 × 100 mm (maximum) | mm   |
| Weight               | 5.7 kg (maximum)             | kg   |
| RF input connector   | SMA, female                  | -    |
| RF output connector  | N-K                          | -    |
| DC/control interface | Hybrid, D-Sub 7W2, male      | -    |

DC and Control Interface

| Pin # | Description                  | Specification                                 |
|-------|------------------------------|-----------------------------------------------|
| A1    | A1 — Ground                  | Ground                                        |
| A2    | A2 — Positive supply         | +28V                                          |
| 1     | 1 — Enable                   | TTL logic high (3.3 V); internally pulled low |
| 2     | 2 — Ground                   | Ground                                        |
| 3     | 3 — Temperature sense output | 750 ±20 mV @25 °C; 10 mV/°C                   |
| 4     | 4 — Current sense output     | 100 mV/A                                      |
| 5     | 5 — Ground                   | Ground                                        |

Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.