# 700 MHz–2.5 GHz 30 W Minimum Broadband RF Power Amplifier Module

The 700–2500 MHz stage specifies 30 W minimum saturated output and 45 dB minimum gain. Current at 30 W is 3.8 A typical, and the source specifies a 10:1 continuous load VSWR rating at 30 W.

The 180 × 120 × 25 mm module provides SMA female input, N-K female output and hybrid 7-pin D-Sub. RS-485 and internally pulled-low 3.3 V TTL enable accompany voltage, current, temperature and open/short-circuit monitoring.



## Electrical Specifications

+28.0 VDC, 25 °C, 50 Ω system unless otherwise stated; Input power 0 dBm

| Parameter | Symbol | Minimum | Typical | Maximum | Unit |
|---|---|---|---|---|---|
| Operating frequency | BW | 700 | - | 2500 | MHz |
| Saturated RF output power | Pout | 30 | - | - | W |
| Power gain | Gp | 45 | - | - | dB |
| Power gain flatness | Gp | - | ±1.5 | - | dB |
| VSWR | S11 | - | - | 2 | - |
| Harmonics at 30 W | H | - | -12 | - | dBc |
| Spurious signals | Spur | - | -60 | - | dBc |
| Input/output impedance | Impedance | - | 50 | - | Ω |
| Operating voltage | VDC | 24 | 28 | 32 | VDC |
| Power-added efficiency | Eff | - | 35 | - | % |
| Current consumption at Pout = 30 W | IDD | - | 3.8 | - | A |

## Monitoring and Protection

| Parameter | Specification |
|---|---|
| Monitoring | Voltage, current, temperature and open/short-circuit detection |
| Over-temperature protection | Amplifier shutdown above 85 °C |
| Supply protection | Shutdown above 32 V, below 24 V, or with accidental reverse wiring |

## Absolute Maximum Ratings

Exceeding these ratings may damage the module

| Parameter | Rating |
|---|---|
| RF input drive without damage | +10 dBm |
| Load VSWR at Pout = 30 W | 10:1 at all load phases, continuous |
| Thermal overload | 85 °C shutdown |

## Environmental Specifications

The environmental figures are design targets. Confirm the applicable values for your project.

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

## DC and Control Interface

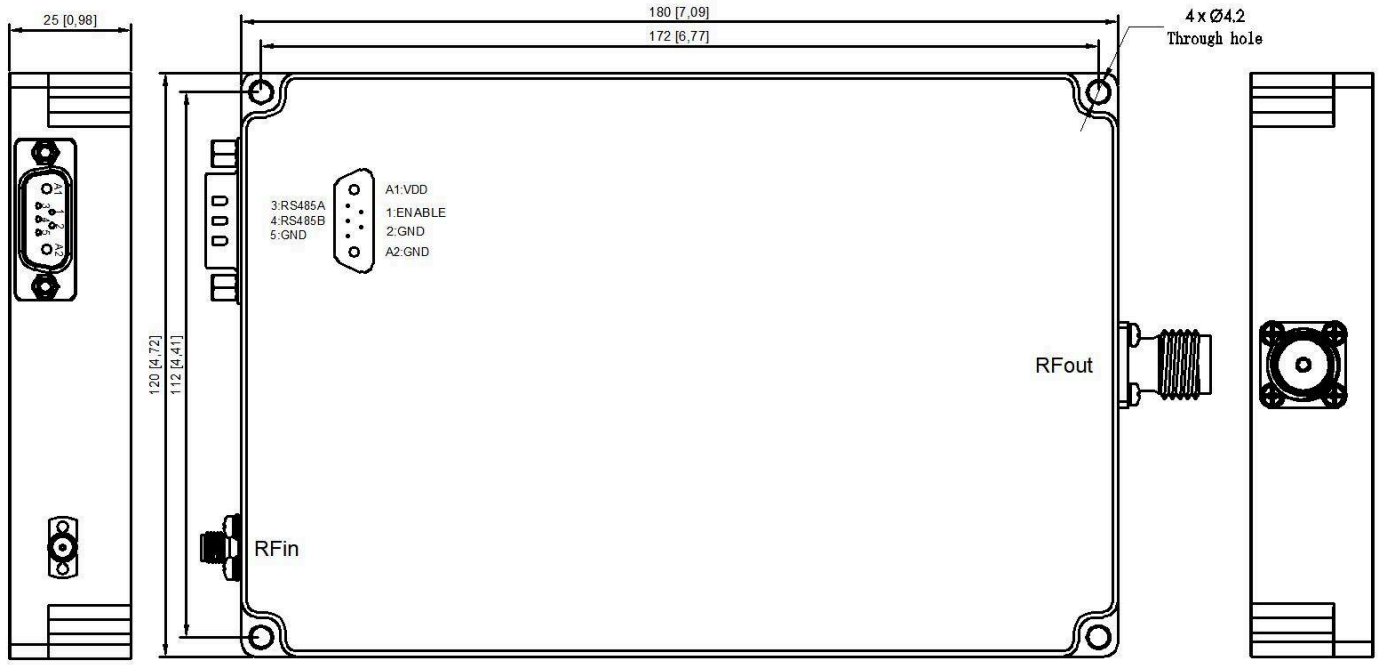
| Pin # | Description | Specification |
|---|---|---|
| A1 | A1 VDD | 28VDC |
| A2 | A2 GND | Ground |
| 1 | 1 ENABLE | TTL logic high (3.3 V); internally pulled low |
| 2 | 2 GND | Ground |
| 3 | 3 RS485A | RS-485 serial communication |
| 4 | 4 RS485B | RS-485 serial communication |

## Mechanical Specifications

Original mechanical outline drawing. The source table marks pin 5 as NC; the source drawing marks it as GND. Confirm the function and wiring of pin 5 before connection.

| Parameter | Value | Unit |
|---|---|---|
| Dimensions | 180 × 120 × 25[7.09 × 4.72 × 0.98] (Maximum) | mm [in] |
| Weight | 1[2.2] (Typical) | kg [lb] |
| RF input connector | SMA female | - |
| RF output connector | N-K female | - |
| DC/control interface | Hybrid D-Sub 7-pin male | - |

## Mechanical Outline




**Current publication record** · 1.3 · 2026-11-11. Specification tables updated. Replaces revision 1.2.

**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.