

The PA8G11G1400V6 is a 1400-watt, high-performance broadband power amplifier covering 8000 – 11000 MHz, designed for CW, and Pulse, and general RF applications. With its maximum performance in gain, efficiency, signal flatness, and RF output power, this SSPA is the ideal building block for millimetre-wave sub-systems with wide-ranging applications.

Leveraging advanced Gallium Nitride (GaN) technology, the amplifier delivers a minimum saturated output power of 61.5 dBm (1400W) and a minimum small-signal gain of 50 dB with ± 1 dB gain flatness. Built-in protection, monitoring, and control circuits ensure long-term reliability and repeatable performance across temperature and load conditions.

The unit is supplied in a rugged 5U rack-mount enclosure, with SMA-Type female connector for input and WR90 waveguide for output interfaces, and is compatible with RS-232/RS-485/RS-422/USB/Ethernet interfaces (customer choose) for control and telemetry. Designed for indoor use, an optional outdoor hub-mount version is available on request.



Product Features:

- Frequency Range: 8– 11 GHz
- Saturated Output Power: 61.5 dBm
- Solid State MMIC Reliability
- Multi-Element Redundancy
- Instant On (no warm-up)
- Weight: 30kg
- Form Factor: Standard 5U rack mounted

- Control Interfaces: RS-232 / RS-485 / RS-422 / USB / Ethernet (customer selectable)
- Power Input: 100–240 VAC, 50/60 Hz
- Solid-State MMIC Reliability
- Rack-Mountable (5U, 50 cm depth)

Application:

- Radar Transmitters
- Satellite Communication Systems
- TWTA Replacement
- R&D and Laboratory Use
- Jamming
- Military and Aerospace Platforms

Electrical Specifications ($T_A=+25^{\circ}\text{C}$)

Parameter	Typ	Units
Frequency Range	8000 – 11000	MHz
Minimum Small Signal Gain (0 dBm input)	50	dB
Saturated Output Power (Pulse DC=10% PIN = 0 dBm)	1400	W
Gain Variance (Maximum)	+/-1	dB
Gain Variation Over Temperature (-40°C to +70°C)	+/-1	dB
Input/output Return Loss	-13	dB
IMD3	-28	dBc
PA enable / disable time	1	uSec
Noise Figure @ max. gain	10	dB
Input RF drive level without damage	+ 6 (Max)	dBm
Operating voltage	100 to 240	VAC
Supply Current	10	A
Weight	30	Kg
Impedance	50	Ohms
Size	5U rack, 50cm deep	
Input Connector	SMA Female	
Output connector	WR90 Waveguide / UG39/U Flange	



Solid State Power Amplifier 1400W 8GHz to 11GHz

Part No.: PA8G11G1400V6

Monitoring and control interface	D-SUB, 9-pin, Male
AC Power connector	IEC 60320-C14

Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-40°C to +85°C
Thermal Shock	-40°C to +85°C (5 Cycles / 10 hours)
Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C; 1.5 Hours Per Axis
High-Temperature Burn-In	Temperature +85°C for 72 Hours
Shock	1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)

Handling Precautions



Caution!
ESD-Sensitive Device

RF VOLTAGE HAZARD: Contact with RF fields at the output connector can cause burns or electric shock. High levels of RF/Microwave energy may be present when the unit is operating.

HIGH DC CURRENT HAZARD: High levels of DC current are present when the unit is operating.

Each amplifier is
shipped in a hard and
well-protected carry case.



Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

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