



General Description

The P600/500W8-11CPR-AC SSPA is a high power, broadband, solid state power amplifier housed in a ruggedized rack mount chassis. The SSPA incorporates a wide input range multimode DC–DC converter power supply with a compact forced air-cooled design. The amplifier is appropriate for high–power wide–band susceptibility testing, communications, radar, or any application requiring instantaneous power amplification of signals across the 8.0–11.0 GHz frequency band.

The P600/500W8-11CPR-AC incorporates high efficiency GaN MMICs, spatially combined in a compact structure to achieve robust, high performance power amplification across the entire band. The high-speed gating feature not only gates off the spurious but also the low power driver amplifier to ensure ultra-low noise interpulse power levels. This high-speed gating feature also includes the ability to envelope the RF signal inside the gating signal by using leading and trailing edge time delays adjustable over the ethernet communication link.

The Polarity amplifier is designed to have a wide input range AC to DC converter with extremely low output voltage ripple that operates in CW and pulse regulation modes. The output regulation guarantees very low pulse to pulse noise and low pulse droop performance on the RF output signal.

Rear Panel Connections



P600/500W8-11CPR-AC



Product features

- Operating frequency: 8.0–11.0 GHz
- Output power: 600/500W saturated power
- Gating frequency: 100kHz, burst to 1MHz
- VDS gating: 50ns rise and fall times
- RF Gating: <5ns rise and fall times
- RF droop: 0.1dB @ 100us pulse widths
- Small signal gain: 65 dB nominal
- Saturated gain: 55 dB nominal
- Input voltage: 104-265VAC Single Phase
- Weight: 85lbs, depends on features
- Monitor and Control: Ethernet
- Frequency Counter: 2 to 18GHz
- Cooling: Air (duty limited) or Liquid CW
- Enclosure: Rack or hub mountable

Applications

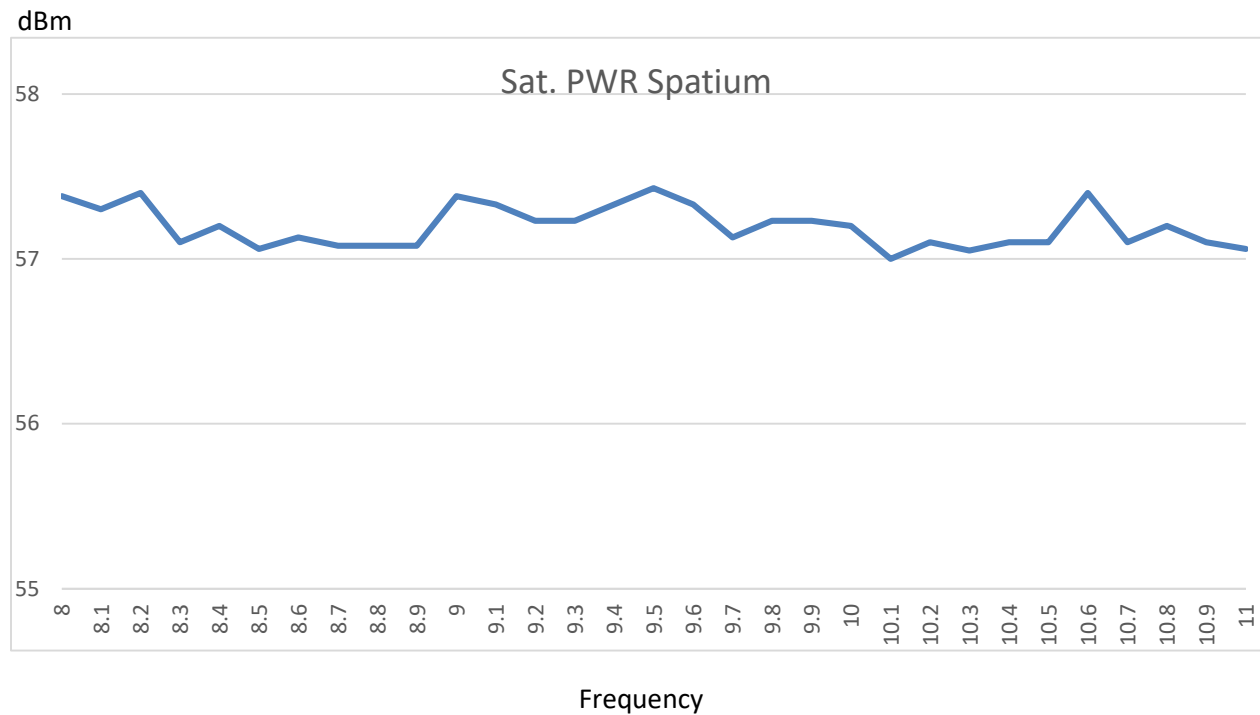
- Radar
- Communications
- Test and Measurement
- EMI Testing

Ordering Information

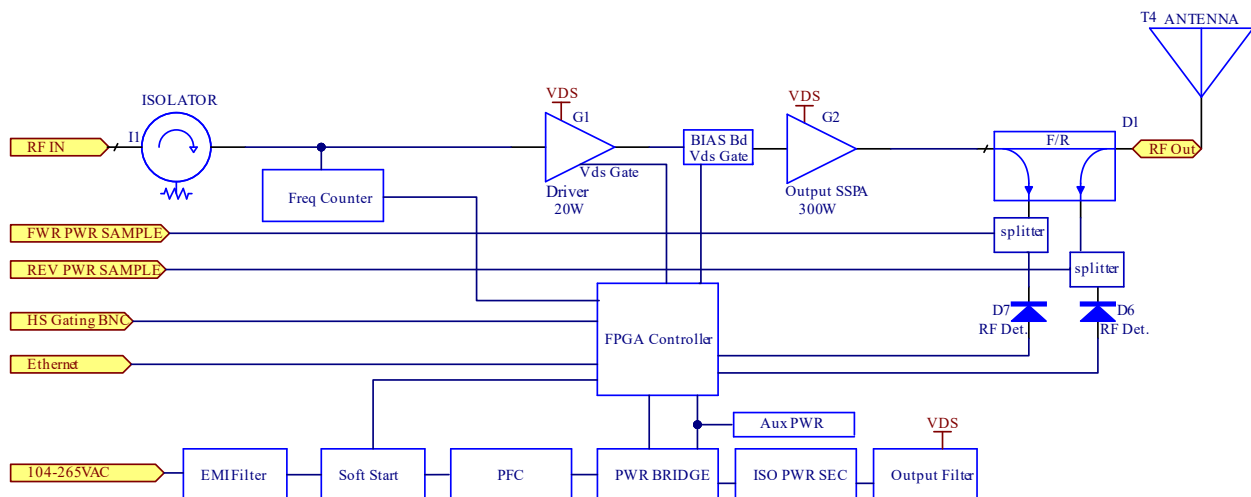
Part No.	ECCN	Description
P600/500W8-11CPR-AC	3A611.X	8-11GHz 600/500W SSPA



SSPA Frequency vs. Power @ 35C



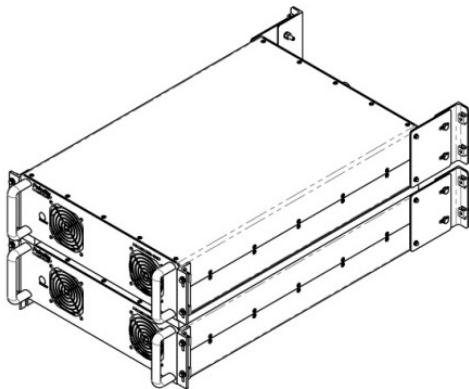
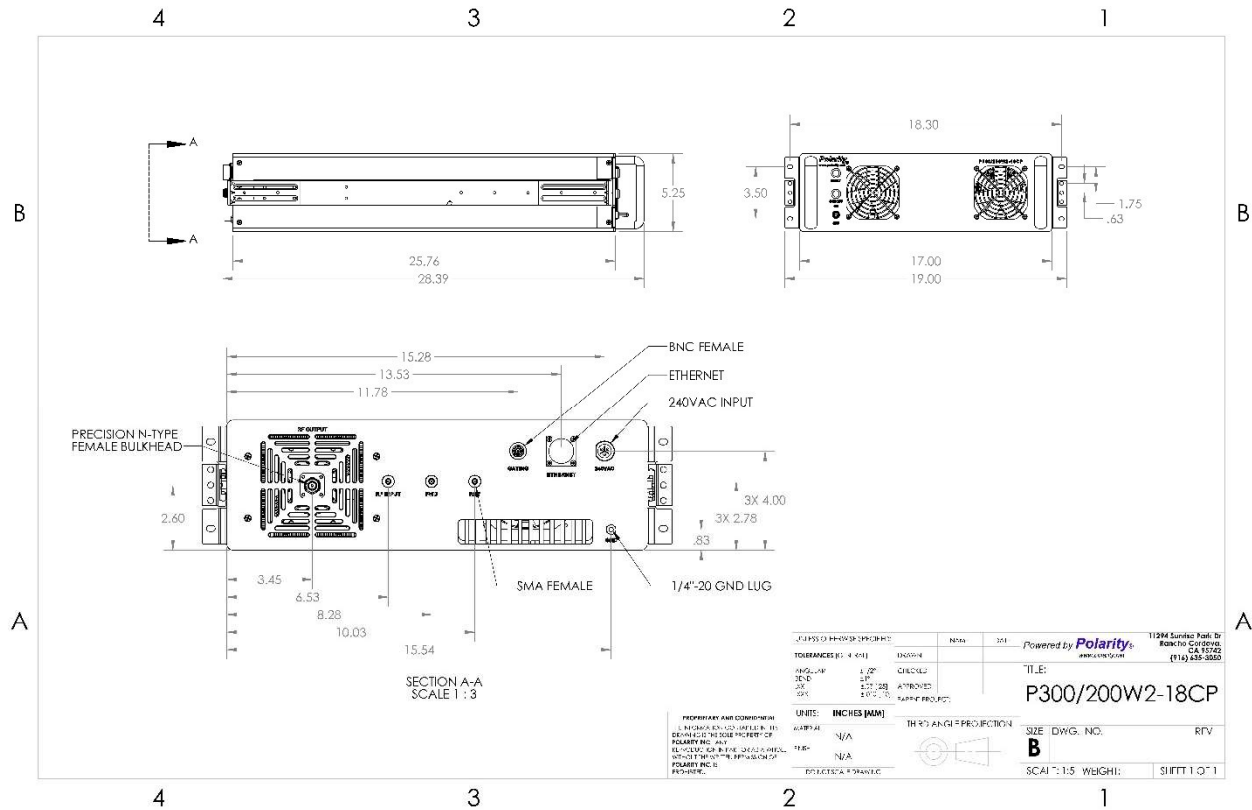
Functional Block Diagram





Package Marking and Dimensions

P500W8-11CPR-AC



VIEW FOR REFERENCE ONLY



Caution ESD - Sensitive Device



Absolute Maximum Ratings

Parameter	Rating
RF Input Power, CW, 50 Ω, T _{CASE} =25 °C	+10 dBm
Load VSWR	3.0:1
AC Current (104, 115, 265VAC)	24, 22, 10 A
Storage Air Temperature	-30 to +75 °C
Operating Air Temperature	-40 to +40 °C

Recommended

Parameter	Min	Typ	Max	Units
Voltage (V _{dc})	104	115	265	Volts
Current (dc)	22	20	10	Amps
Operating Air Temperature	-40	25	40	°C
RF Input Power, CW		0	+5	dBm