



## 8000SP1z2G1z4

- 8000 Watts Pulse
- 1.2GHz–1.4GHz

### Features

The Model 8000SP1z2G1z4 is a self-contained, forced-air-cooled, broadband solid-state microwave amplifier designed for pulse applications at low duty factors where instantaneous bandwidth and high gain are required. The unit provides a conservative 8000 watts minimum peak RF pulse power at the amplifier output connector. Stated power specifications are at the fundamental frequency.



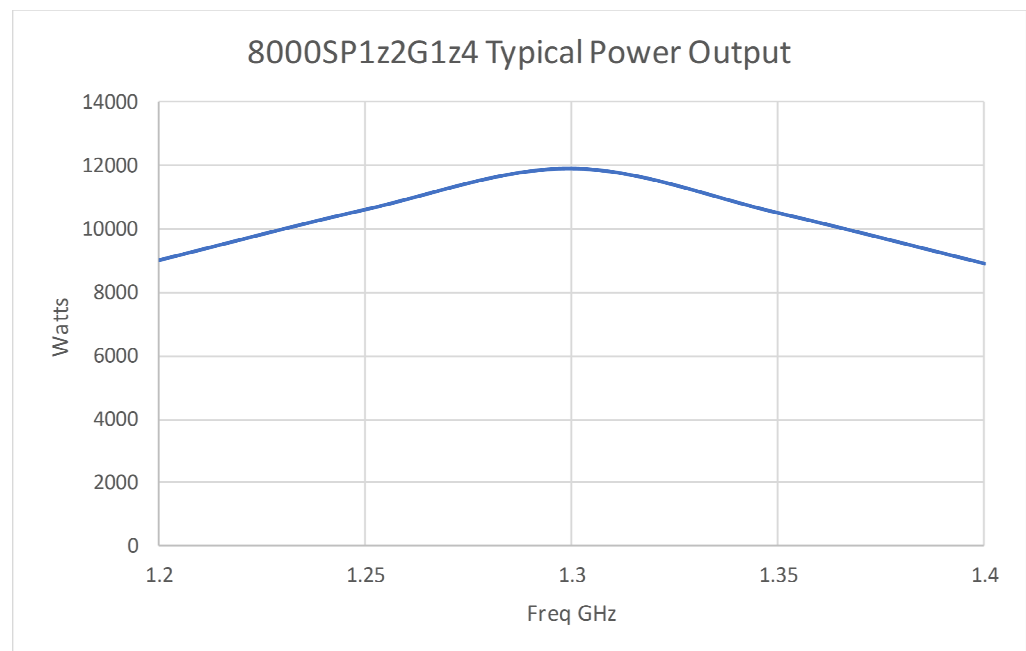
The Model 8000SP1z2G1z4 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a color LCD touch screen and a single rotary knob to offer status reporting and control capability. The display provides Forward Power

and Reflected Power values plus amplifier status. Special features include a gain control and RF output level protection.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 serial and Ethernet. The bus interface connector is located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

Housed in a stylish contemporary cabinet, the amplifier provides readily available pulsed RF power for a variety of applications in Test and Measurement, (including EMC RF pulse susceptibility testing), Industrial and University Research and Development, and Service applications. AR also offers a broad range of amplifiers for CW (Continuous Wave) applications.

The export classification for this equipment is 3A999.d. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.



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## Specifications

**RATED POWER OUTPUT:** 8000 watts minimum  
**INPUT FOR RATED OUTPUT:** 1.0 milliwatt maximum  
**PULSE DROOP:** -0.5dB max @8000W for a 5 $\mu$ s pulse  
**FLATNESS:**  $\pm$ 1.0 dB typical;  $\pm$ 2.0 dB maximum  
**FREQUENCY RESPONSE:** 1.2–1.4 GHz instantaneously  
**GAIN (at maximum setting):** 69 dB minimum  
**GAIN ADJUSTMENT:** Continuous Range 20 dB minimum, (4096 steps remote)  
**INPUT IMPEDANCE:** 50 ohms, VSWR 2.0:1 maximum  
**OUTPUT IMPEDANCE:** 50 ohms, nominal  
**MISMATCH TOLERANCE:** Output pulse width foldback protection at peak reflected power exceeding 4000 watts. Will operate without damage or oscillation when connected to any load impedance.  
**PULSE CAPABILITY:**

Pulse Width	0.1–50 microseconds
Pulse Rate (PRF)	50 kHz maximum
Duty Cycle	6% maximum
RF Rise and Fall	30 ns max (10% to 90%).
Delay	$\leq$ 1 $\mu$ s maximum from pulse input to RF 90%
Pulse Width Distortion	$\pm$ 25 ns maximum (difference between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB minimum
Pulse Input	TTL level, 50 ohm nominal termination

**NOISE FIGURE:** 8 dB maximum  
**HARMONIC DISTORTION:** Minus 30 dBc max  
**SPURIOUS:** Minus 60 dBc Typ.  
**PRIMARY POWER:** 100-264 VAC, 50/60 Hz, single phase, 4000 watts maximum  
**CONNECTORS:**  
 RF: See Model Configurations  
 RF output forward and reflected sample ports: Type N female, rear  
 PULSE INPUT: Type BNC female, rear  
**REMOTE INTERFACES:**  
 IEEE-488: 24 pin  
 RS-232: 9 pin subminiature D  
 Ethernet: RJ-45  
**SAFETY INTERLOCK:** 15 pin Subminiature D  
**COOLING:** Forced air (self contained fans)  
**SIZE & WEIGHT:** See Model Configurations  
**EXPORT CLASSIFICATION:** 3A999.d

### MODEL CONFIGURATIONS

MODEL NUMBER	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
8000SP1z2G1z4	N (f), front	7-16 DIN (f), rear	90 kg (198.5 lbs)	50.3 x 50.8 x 90 cm, 19.8 x 20 x 35.4 in
8000SP1z2G1z4M1	N (f), rear	7-16 DIN (f), rear	90 kg (198.5 lbs)	50.3 x 50.8 x 90 cm, 19.8 x 20 x 35.4 in
8000SP1z2G1z4M2	Same as 8000SP1z2G1z4 with enclosure removed for rack mounting		80 kg (176 lbs)	48.3 x 48.8 (11U) x 77.5 cm, 19 x 19.2 (11U) x 30.5 in
8000SP1z2G1z4M3	Same as 8000SP1z2G1z4M1 with enclosure removed for rack mounting		80 kg (176 lbs)	48.3 x 48.8 (11U) x 77.5 cm, 19 x 19.2 (11U) x 30.5 in