



3000SP2z7G3z1

- 3000 Watts Pulse
- 2.7GHz–3.1GHz

Features

The Model 3000SP2z7G3z1 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 3000 watts minimum peak RF pulse power at the amplifier output connector. Stated power specifications are at the fundamental frequency.

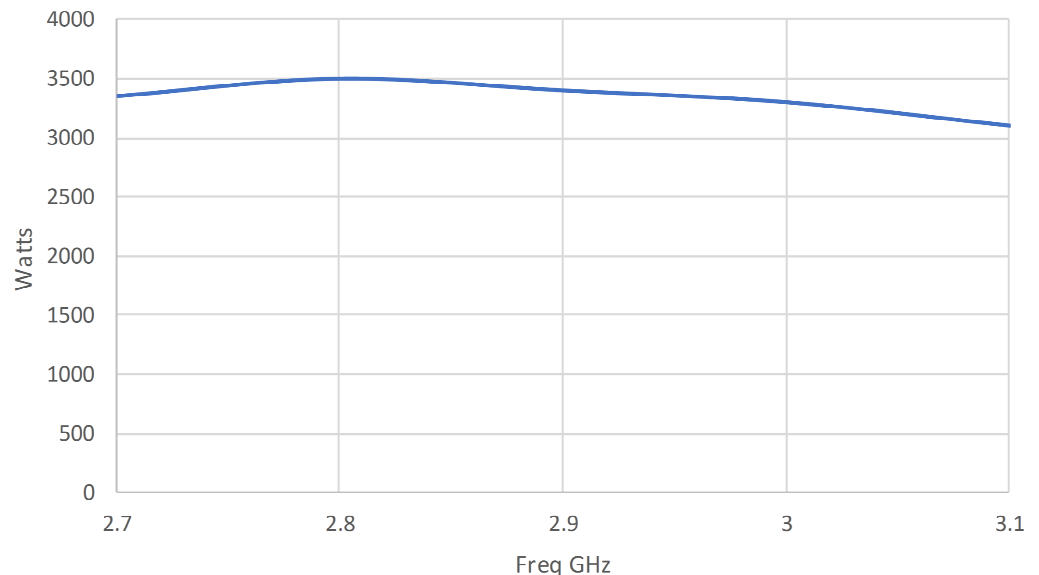
The amplifier's front panel digital display shows forward and reflected average power output or forward and reflected peak power, plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, standby, operate, faults, excess average or peak reflected power warning and remote. Standard features include built-in IEEE-488 (GPIB), RS-232 serial and Ethernet interfaces, 0dBm input, TTL Gating, VSWR protection, gain control, RF out-

put sample ports, plus monitoring of baseplate temperature and cabinet temperature. Modular design of the power supply and RF components allow for easy access and repair. Use of switching mode power supplies results in significant weight reduction.

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 pro-

3000SP2z7G3z1 Typical Power Output



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Specifications

RATED POWER OUTPUT: 3000 watts minimum
INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum
PULSE DROOP: –0.5dB max@3000W for a 50µs pulse
FLATNESS: ±1.0 dB typical; ±2.0 dB maximum
FREQUENCY RESPONSE: 2.7–3.1GHz instantaneously
GAIN (at maximum setting): 65 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 1500 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 1µs maximum from pulse input to RF 90%
 Pulse Width Distortion ±20 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: –30 dBc maximum
SPURIOUS: Minus 60 dBc Typ.
PRIMARY POWER: 100-264 VAC, 50/60 Hz, single phase, 1500 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)
3000SP2z7G3z1	N (f), front	7-16 DIN (f), front	40 kg (88 lbs)	50.3 x 20.3 x 71.4 cm, 19.8 x 7.8 x 28.1 in
3000SP2z7G3z1M1	N (f), rear	7-16 DIN (f), rear See NOTE	40 kg (88 lbs)	50.3 x 20.3 x 71.4 cm, 19.8 x 7.8 x 28.1 in
3000SP2z7G3z1M2	Same as 3000SP2z7G3z1	Same as 3000SP2z7G3z1 with enclosure removed for rack mounting	30 kg (66 lbs)	48.3 x 17.8 (4U) x 68 cm, 19 x 7.0 (4U) x 26.8 in
3000SP2z7G3z1M3	Same as 3000SP2z7G3z1	Same as 3000SP2z7G3z1M1 with enclosure removed for rack mounting	30 kg (66 lbs)	48.3 x 17.8 (4U) x 68 cm, 19 x 7.0 (4U) x 26.8 in

NOTE: This option causes a power output loss of ≤0.3dB.