

8000TP2z7G3z1

- Pulse Amplifier
- M1–M5
- 8000 Watts
- 2.7GHz–3.1GHz

Features

The Model 8000TP2z7G3z1 is a self-contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for pulse applications at low duty factors where instantaneous bandwidth and high gain are required. A reliable TWT provides a conservative 8000 watts minimum peak RF pulse power at the amplifier output connector. Stated power specifications are at the fundamental frequency.

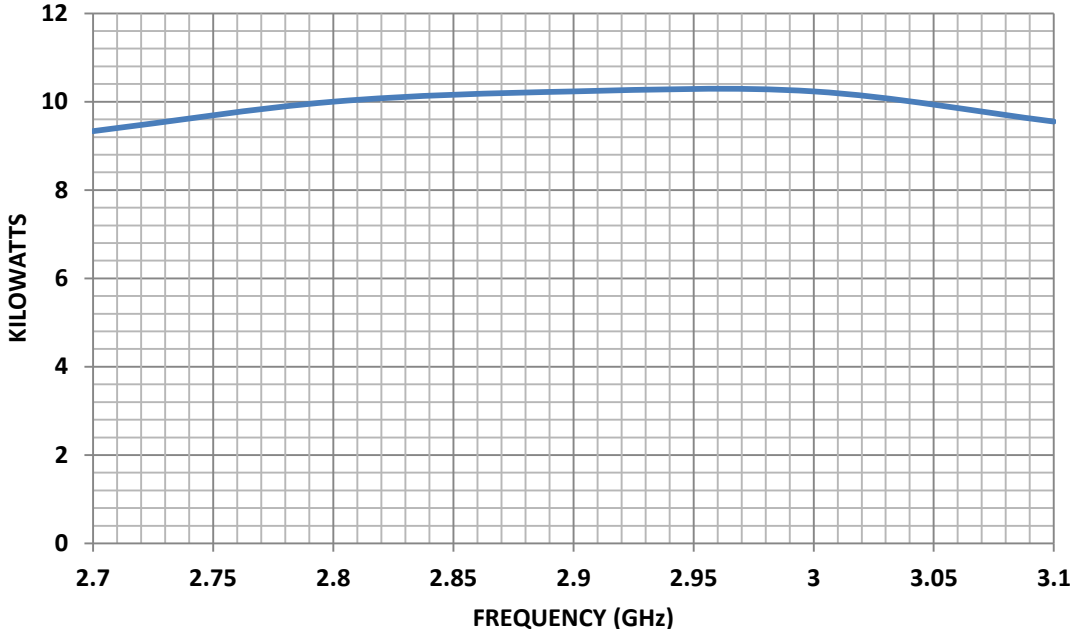
The amplifier's front panel digital display shows forward and reflected average power output or forward and reflected peak power, plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess average or peak reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0dBm input, TTL Gating, VSWR protection, gain control, RF output sample ports, auto sleep, plus monitoring of TWT helix current, cathode voltage, collector voltage, heater current, heater voltage, 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.

See Model Configurations for alternative packaging and special features.

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.

8000TP2z7G3z1 TYPICAL POWER OUTPUT



AR RF/Microwave Instrumentation
160 School House Rd
Souderton, PA 18964
215-723-8181

For an applications engineer call:800.933.8181

www.arworld.us

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Specifications

POWER (Fundamental), Peak Pulse, @ Output: Nominal, 10,000 watts; Minimum, 8000 watts

FLATNESS: ±6 dB maximum

FREQUENCY RESPONSE: 2.7-3.1 GHz

INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum

GAIN (at maximum setting): 69 dB minimum

GAIN ADJUSTMENT (continuous range): 35 dB minimum

INPUT IMPEDANCE: 50 ohms, VSWR 2.5:1 maximum

OUTPUT IMPEDANCE: 50 ohms, VSWR 2.5:1 typical

MISMATCH TOLERANCE: Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

PULSE CAPABILITY:

Pulse Width	0.1 – 40 microseconds
Pulse Rate (PRF)	100 kHz maximum
Duty Cycle	1% maximum.
RF Rise and Fall	50 ns max (10% to 90%)
Delay	500 ns maximum from pulse input to RF 90%
Pulse Width Distortion	±30 ns maximum (50% points of output pulse width compared to 50% points of input pulse width)
Pulse Off Isolation	80 dB minimum, 90 dB typical
Pulse Input	TTL level, 50 ohm nominal termination

NOISE POWER DENSITY:

(pulse on)	Minus 55 dBm/Hz maximum; Minus 80 dBm/Hz typical
(pulse off)	Minus 140 dBm/Hz (typical)

HARMONIC DISTORTION: Minus 20 dBc maximum

PRIMARY POWER: 190-260 VAC, 50/60 Hz single phase, 2 KVA maximum

CONNECTORS:

RF input:	Type N female, rear panel
RF output:	Type DIN 7-16 female, rear panel
RF output forward and reflected sample ports	Type N female, rear panel
Pulse input:	Type BNC female, rear panel
GPIB:	IEEE-488 female, rear panel
Interlock:	DB-15 female, rear panel

COOLING: Forced air (self contained fans), air entry and exit in rear.

SIZE (W x H x D): 50.3 x 26 x 88.9 cm, 19.8 x 10.3 x 35 in

WEIGHT (approximate): 61 kg, 135 lbs

EXPORT CLASSIFICATION: 3A999.d

Model Configurations

E **Package Alternatives.** May select an alternative from the following [E1C or (E1C and E2S) and/or E3H]:

E1C **Cabinet:** Without outer enclosure for rack mounting, size (W x H x D) 49 x 22 (5U) x 83.8 cm, 19 x 8.75 (5U) x 33 in., Subtract approximately 11 kg, 25 lbs, for removal of outer enclosure.

E2S **Slides:** slides installed, add approximately 2 kg, 5 lbs.

E3H **Handles:** Front pull handles installed.

	Features
	E
8000TP2z7G3z1	Base model
M1	E1C
M2	E3H
M3	E1C & E3H
M4	E1C & E2S
M5	E1C & E2S & E3H

Model number example: Model 8000TP2z7G3z1M2 would have option