



2000TP2G8B

- Pulse Amplifier
- M1-M2
- 2000 Watts
- 2.5GHz-7.5GHz

Features

The Model 2000TP2G8B is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for pulse applications at low to moderate duty factors where instantaneous bandwidth and high gain are required. A reliable TWT provides a conservative 2000 watts minimum peak RF pulse power at the amplifier output connector. Stated power specifications are at 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 port, auto sleep, plus monitoring of TWT helix current, cathode voltage, collector

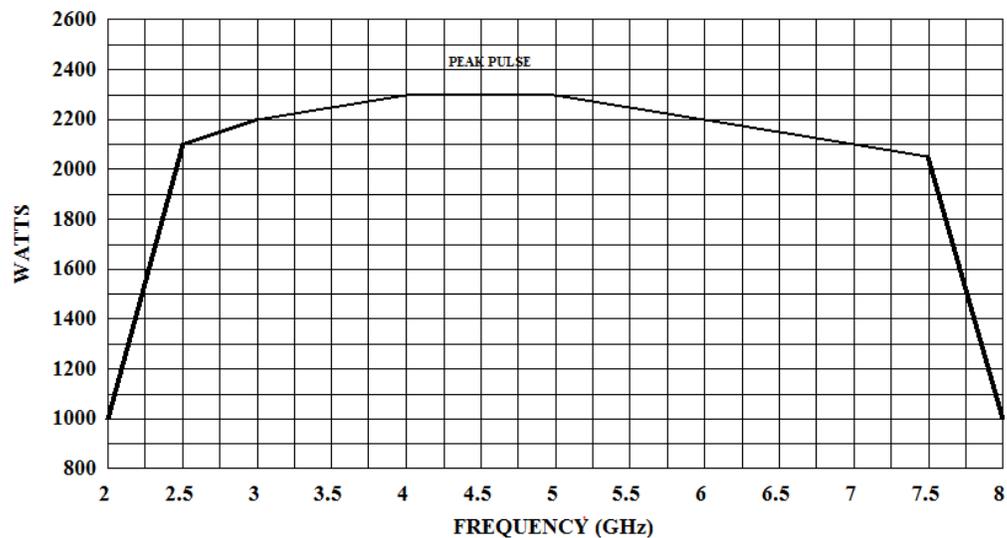
voltage, heater current, heater voltage, baseplate temperature and cabinet temperature. Modular design of the power supply and RF components allow for easy access and repair. Use of a switching mode power supply results in significant weight reduction.

Housed in a stylish contemporary cabinet, the Model 2000TP2G8B 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.

See Model Configurations for alternative packaging and external harmonic filters.

2000T2G8B TYPICAL POWER OUTPUT



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Specifications

POWER (fundamental), PEAK PULSE, @ OUTPUT CONNECTOR: Nominal, 2200 watts; Minimum, 2000 watts

FLATNESS: ± 13 dB maximum, equalized for ± 4 dB maximum at rated power

FREQUENCY RESPONSE: 2.5–7.5 GHz instantaneously

INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum

GAIN (at maximum setting): 63 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: Output pulse width foldback protection at peak reflected power exceeding 1000 watts. 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	0.07–30 microseconds.
Pulse Rate (PRF)	100 kHz maximum
Duty Cycle	4% maximum.
RF Rise and Fall	30 ns max (10% to 90%).
Delay	300 ns maximum from pulse input to RF 90%
Pulse Width Distortion	± 30 ns maximum (50% point 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 70 dBm/Hz (maximum), minus 72 dBm/Hz (typical)

(pulse off) Minus 140 dBm/Hz (typical)

HARMONIC DISTORTION: Minus 0 dBc maximum, Minus 1.5 dBc typical

PRIMARY POWER: 190-260 VAC, single phase; 50/60 Hz; 1.2 KVA maximum

CONNECTORS:

RF input:	Type N female, rear panel
RF output:	Type N female, rear panel
RF output sample port:	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.

EXPORT CLASSIFICATION: 3A999.d

Model Configurations

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- E** Must select one enclosure type from the following [E1 or E2 or E2S]:
- E1** Removable outer enclosure, size 50.3 x 25.4 x 82 cm (19.8 x 10 x 32 in). Add approximately 14 kg (30 lbs) to weight of E2.
- E2** Without outer enclosure, size 48.3 x 22.2 x 69 cm (19 x 8.75 x 27 in). Weight approximately 39 kg (85 lbs).
- E2S** Enclosure removed for rack mounting; slides and front handles installed, size same as E2. Add approximately 2 kg (5 lbs) to weight of E2.

Model Number	Features	
	E	S
2000TP2G8B	E	S
2000TP2G8B	E1	-
2000TP2G8BM1	E2	-
2000TP2G8BM2	E2S	-