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MODEL 1000TP2G8
1000 WATTS PULSE
2.5 – 7.5 GHz

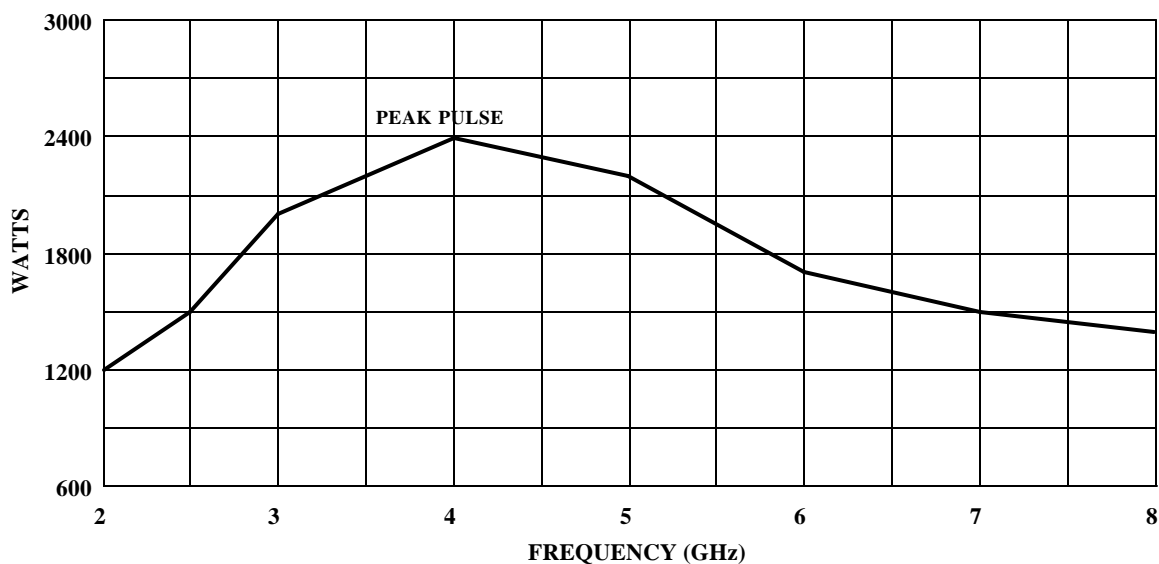
The Model 1000TP2G8 is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for pulse applications at low to moderate duty factors where instantaneous bandwidth and high gain are required. A reliable TWT subsystem provides a conservative 1000 watts minimum 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, 0 dBm input, TTL Gating, VSWR protection, gain control, RF output sample port, 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 1000TP2G8 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 packaging alternatives.

1000TP2G8 TYPICAL POWER OUTPUT



SPECIFICATIONS

Model 1000TP2G8

POWER (fundamental), PEAK PULSE, @ OUTPUT CONNECTOR

Nominal..... 1900 watts
 Minimum..... 1000 watts

FLATNESS..... ±7 dB maximum, equalized for
 ±3 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)..... 60 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 power foldback protection at average reflected power exceeding 30 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 – 100 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 72 dBm/Hz (maximum), minus
 74 dBm/Hz (typical)
 (pulse off)..... Minus 140 dBm/Hz (typical)

HARMONIC DISTORTION..... *Minus 1.5 dBc maximum, Minus 1.7 dBc typical

PRIMARY POWER..... 190-260 VAC, single phase
 50/60 Hz
 1.5 KVA maximum

CONNECTORS

RF input..... Type N female on rear panel
 RF output..... Type N female on rear panel
 RF output sample port..... Type N female on rear panel
 Pulse input..... Type BNC female on rear panel
 GPIB IEEE-488 female on rear panel
 Interlock..... DB-15 female on rear panel

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

MODEL CONFIGURATIONS

| Model Number | Description | Weight | Size (W x H x D) |
|--------------|--|----------------|--|
| 1000TP2G8 | With removable enclosure | 53 kg (115 lb) | 50.3 x 25.4 x 82 cm 19.8 x 10 x 32 in |
| 1000TP2G8M1 | Shipped without an outer cabinet | 39 kg (85 lb) | 48.3 x 22.2 x 74 cm 19.0 x 8.75 x 29 in |
| 1000TP2G8M2 | Enclosure removed for rack mounting - slides and front handles installed | 41 kg (90 lb) | 48.3 x 22.2 x 74 cm 19.0 x 8.75 x 29 in |

* Contact Amplifier Research for alternative harmonic specifications.