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MODEL 1000TP1G3
M1, M2
1000/500 WATTS PULSE
Dual Band 1.15 - 1.45 GHz,
2.7 - 3.1 GHz

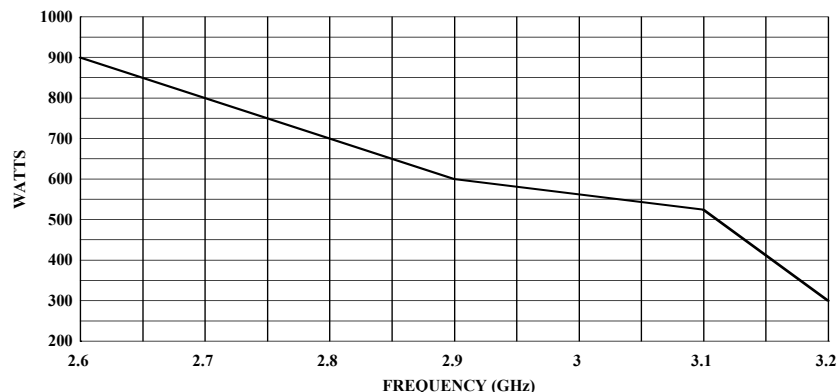
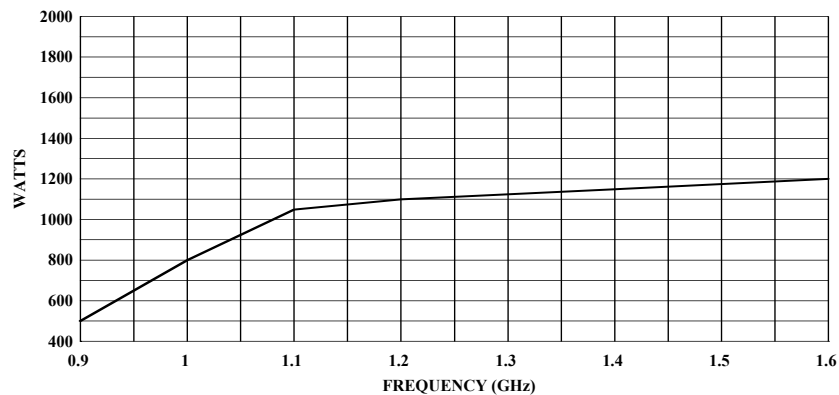
The Model 1000TP1G3 is a self contained, forced air cooled, dual band traveling wave tube (TWT) microwave amplifier designed for pulse applications at low to moderate duty factors where dual band operation and high gain are required. A reliable TWT provides a conservative 1000/475 watts minimum peak 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, 0 dBm 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 1000TP1G3 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.

1000TP1G3 TYPICAL POWER OUTPUT



SPECIFICATIONS

Model 1000TP1G3

POWER (fundamental), PEAK PULSE, @ OUTPUT CONNECTOR

Nominal	1400 watts (from 1.15 –1.45 GHz, low band)
Minimum.....	1000 watts (from 1.15 –1.45 GHz, low band)
Nominal	525 watts (from 2.7 – 3.1 GHz high band)
Minimum.....	475 watts (from 2.7 – 3.1 GHz high band)

FLATNESS..... ± 10 dB maximum, equalized for ± 3 dB maximum at rated power within each band

FREQUENCY RESPONSE..... 1.15 –1.45 GHz / 2.7 – 3.1 GHz instantaneously

INPUT FOR RATED OUTPUT..... 1.0 milliwatt maximum

GAIN (at maximum setting)..... 60 dB minimum low band
57 dB minimum high band

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 500 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 max (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 90 dBm/Hz (maximum), minus 93 dBm/Hz (typical)
(pulse off)..... Minus 140 dBm/Hz (typical)

HARMONIC DISTORTION..... *Minus 0 dBc maximum, Minus 5 dBc typical low band
Minus 15 dBc typical high band

PRIMARY POWER..... 190-260 VAC, single phase
50/60 Hz
1.0 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)
1000TP1G3	With removable enclosure	68 kg (150 lb)	50.3 x 25.4 x 89 cm 19.8 x 10 x 35 in
1000TP1G3M1	Shipped without an outer cabinet	55 kg (120 lb)	48.3 x 22.2 x 89 cm 19.0 x 8.75 x 35 in
1000TP1G3M2	Enclosure removed for rack mounting - slides and front handles installed	57 kg (125 lb)	48.3 x 22.2 x 89 cm 19.0 x 8.75 x 35 in

*Contact Amplifier Research for alternative harmonic specifications.