



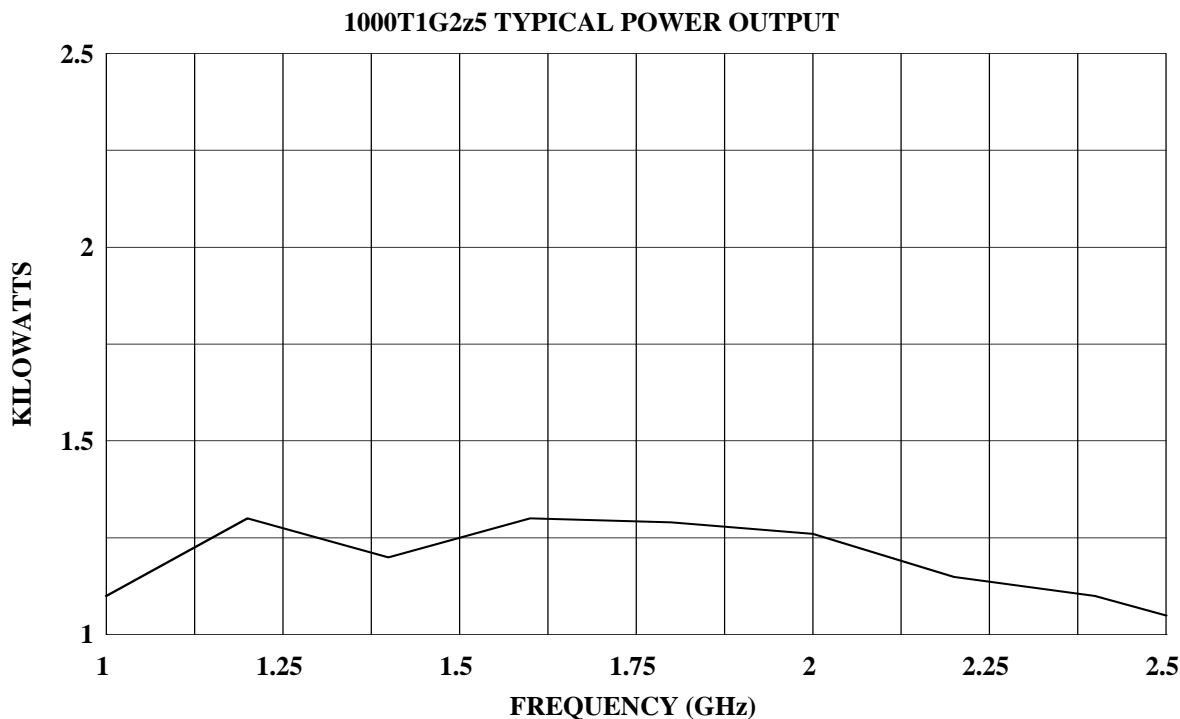
**Model 1000T1G2z5**  
**M1 through M11**  
**1000 Watts CW**  
**1GHz–2.5GHz**

The Model 1000T1G2z5 is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for applications where instantaneous bandwidth, high gain and high power output are required. A reliable TWT provides a conservative 1000 watts minimum at the amplifier output connector over most of the frequency range. Stated power specifications are at the fundamental frequency.

The amplifier's front panel digital display shows forward and reflected output 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 reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0dBm input, VSWR protection, gain control, RF output sample ports, 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.

The Model 1000T1G2z5 provides readily available RF power for a variety of applications in Test and Measurement, (including EMC RF susceptibility testing), Industrial and University Research and Development, and Service applications.

Refer to the Model Configurations for package, prime power selection, and special features.



## SPECIFICATIONS, MODEL 1000T1G2z5

### POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal ..... 1100 watts  
 Minimum ..... 1000 watts

FLATNESS ..... ±15 dB maximum, ±8 dB maximum at rated power

FREQUENCY RESPONSE ..... 1 - 2.5 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 2.0:1 maximum

OUTPUT IMPEDANCE ..... 50 ohms, VSWR 2.5:1 typical

MISMATCH TOLERANCE ..... Output power foldback protection at reflected power exceeding 200 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.

MODULATION CAPABILITY ..... Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal. AM peak envelope power limited to specified power.

NOISE POWER DENSITY ..... Minus 70 dBm/Hz (maximum)  
 Minus 80 dBm/Hz (typical)

HARMONIC DISTORTION ..... Minus 0 dBc maximum, Minus 3 dBc typical

PRIMARY POWER ..... See Model Configurations

### CONNECTORS

RF input ..... Type N female on rear panel  
 RF output ..... Type 7-16 DIN female on rear panel  
 RF output sample ports (forward and reflected) ..... Type N 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.

SIZE (W x H x D) ..... 50.8 x 25.4 x 68.6 cm, 20 x 10 x 27 in

WEIGHT (approximate) ..... 55 kg, 120 lbs.

## MODEL CONFIGURATIONS, 1000T1G2z5

- E** **Package Alternatives.** May select an alternative from the following [E1C or (E1C and E2S) and/or E3H]:
- E1C** **Cabinet:** Without outer enclosure, 50.8 x 22.2(5U) x 66.1 cm, 20 x 8.75(5U) x 26 in. Subtract approximately 14 kg, 30 lbs, for removal of outer enclosure.
- E2S** **Slides:** slides installed, add approximately 2 kg, 5 lbs .
- E3H** **Handles:** Front pull handles installed.
- P** **Prime Power:** Must select one primary power from the following [P1 or P2]
- P1** **208V, US:** 208 ±10% VAC, 3 phase, delta (4 wire) 50/60 Hz, 8 KVA maximum
- P2** **400V, Europe:** 360-435 VAC, 3 phase, WYE (5 wire) 50/60 Hz, 8KVA maximum. CE marked to comply with EMC European Directive 89/336/EEC for operation inside a shielded room.
- S** **Special Features:** May select a special feature (extra cost) from the following [S1F and/or S2R and/or S3C and/or S4C]
- S1F** **Front panel connectors:** Input, forward and reflected power sample ports on front panel, not on rear panel.
- S2R** **Remote interface:** RS-232 serial, DB-9 female connector on rear panel. Replaces built-in IEEE-488 GPIB interface.

- S3C** **Connector:** RF output connector 1 5/8 EIA on rear panel.
- S4C** **Covers:** RF connectors have protective metal covers

Model Number	Features		
	E	P	S
<b>1000T1G2z5</b>	Base model	P1	–
<b>M1</b>	E1C	P1	–
<b>M2</b>	E3H	P1	–
<b>M3</b>	E1C & E3H	P1	–
<b>M4</b>	E1C & E2S	P1	–
<b>M5</b>	E1C & E2S & E3H	P1	–
<b>M6</b>	–	P2	–
<b>M7</b>	E1C	P2	–
<b>M8</b>	E3H	P2	–
<b>M9</b>	E1C & E3H	P2	–
<b>M10</b>	E1C & E2S	P2	–
<b>M11</b>	E1C & E2S & E3H	P2	–

Example: Model 1000T1G2z5M2 would have option E3H front pull handles installed, and prime power 208 VAC.