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MODEL 1000T1G2B
M1, M2, M3, M4
1000 WATTS CW
1 - 2.5 GHz

The Model 1000T1G2B 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. Reliable TWT subsystems provide a conservative 1000 watts minimum at the amplifier output connector over most of the frequency range. Stated power specifications are at the fundamental frequency.

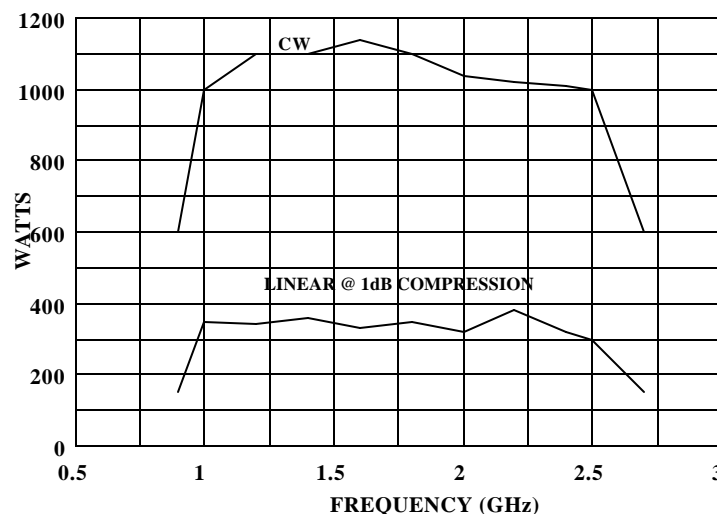
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0dBm input, VSWR protection, gain control, RF output sample 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.

The rated power is developed by efficiently power combining the outputs from two 535 watts (nominal) microwave tubes that are factory matched in gain and phase to offer moderate harmonic levels without added filters. Amplifier includes wheels, leveling feet and lifting hooks.

The Model 1000T1G2B 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. Unit is CE marked to comply with EMC European Directive 89/336/EEC for operation inside a shielded room.

Refer to the Model Configuration Chart for alternative configurations.

1000T1G2B TYPICAL POWER OUTPUT



SPECIFICATIONS

Model 1000T1G2B

POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal.....	1100 watts
Minimum.....	925 watts 1-1.2 GHz, 1000 watts 1.2-2.5GHz
Linear @ 1 dB Compression	250 watts minimum
FLATNESS	±8 dB maximum, equalized for ±3 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 72 dBm/Hz (maximum) Minus 77 dBm/Hz (typical)
HARMONIC DISTORTION	Minus 20dBc maximum, Minus 28dBc typical
PRIMARY POWER	See Model Configuration
CONNECTORS	
RF input.....	Type N female
RF output.....	7-16 DIN female on rear panel
RF output sample port.....	Type N female
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.
WEIGHT (approximate)	318 kg (700 lb)
SIZE (WxHxD)	56 x 160 x 82.3 cm 22.1 x 63 x 32.4 in

MODEL CONFIGURATIONS

Model Number	Primary Power	RF input and RF output sample port connector location	Features
1000T1G2B	190-255 VAC, 3 phase, delta (4 wire) 50/60 Hz 8.0 KVA maximum	rear panel	
1000T1G2BM1	360-435 VAC, 3 phase, WYE (5 wire) 50/60 Hz 8.0 KVA maximum	rear panel	
1000T1G2BM2	See Individual Specification Sheet. Version offers 400 Hz primary power, a blanking input and extended low frequency operation at reduced power output.		
1000T1G2BM3	360-435 VAC, 3 phase, WYE (5 wire) 50/60 Hz 8.0 KVA maximum	front panel	RF connectors have protective metal covers
1000T1G2BM4	See Individual Specification Sheet. Version offers reduced harmonics using switched external filters and other special features.		

