



Model 2000T2G8, M1
2000 Watts CW
2.5GHz–7.5GHz

The Model 2000T2G8 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 2000 watts minimum at the amplifier output connector. Stated power specifications are at fundamental frequency.

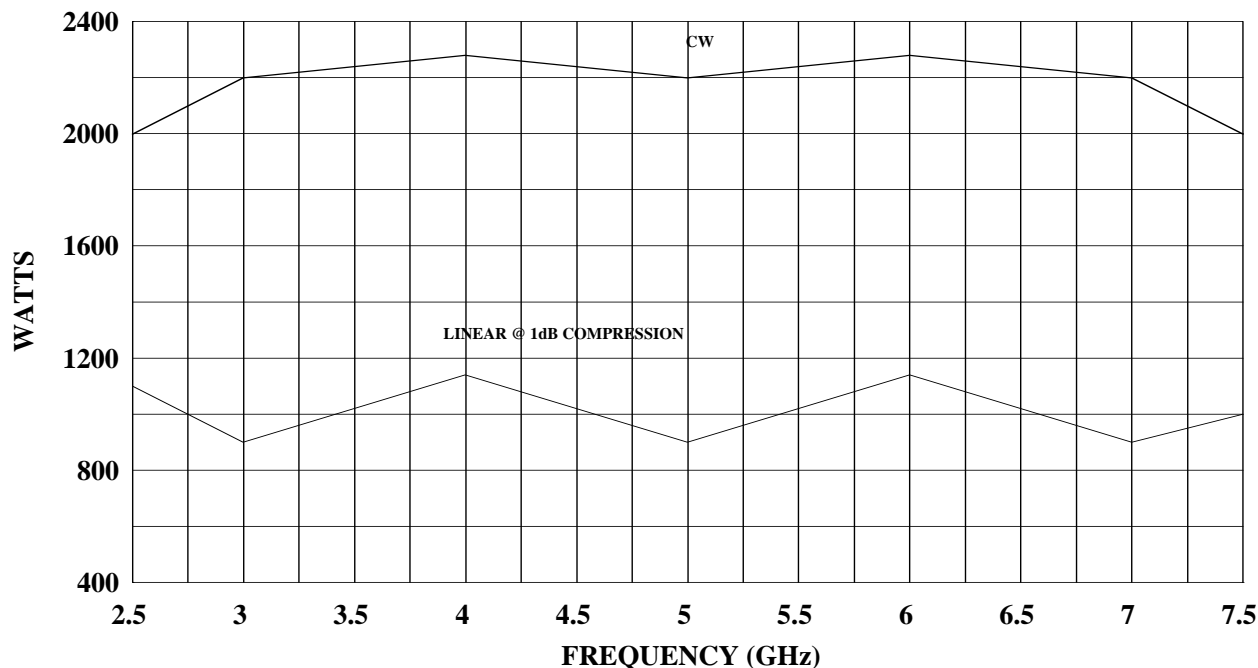
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features 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 six 500 watts (nominal) microwave amplifiers that are factory matched in gain and phase.

The Model 2000T2G8 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 chart for alternative configurations.

2000T2G8 TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 2000T2G8

POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal 2200 watts
 Minimum 2000 watts
 Linear @ 1 dB Compression 500 watts minimum

FLATNESS ±8 dB maximum, equalized for
 ±5 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 2.0:1 maximum

OUTPUT IMPEDANCE 50 ohms, VSWR 2.5:1 typical

MISMATCH TOLERANCE Output power foldback protection at reflected power exceeding 400 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 85 dBm/Hz (maximum)
 Minus 95 dBm/Hz (typical)

HARMONIC DISTORTION Minus 15 dBc maximum, Minus 22 dBc typical, minus 20 dBc maximum when used with supplied external filter (see SIZE note).

PRIMARY POWER See Model Configurations

CONNECTORS

RF input Type N female on rear panel
 RF output Type WRD-250D30 waveguide flange 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

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

WEIGHT 409 kg (900 lbs)

SIZE (W x H x D) Two, each 56 x 150 x 82.3 cm (22.1 x 59 x 32.4 in)
 NOTE: External filters will add approximately 25.4 cm (10") to the depth of the output cabinet.

MODEL CONFIGURATIONS

Model Number	Primary Power
2000T2G8	190-255 VAC, 3 phase, delta (4 wire) 50/60 Hz, 22 KVA maximum
2000T2G8M1	360-435 VAC, 3 phase, WYE (5 wire) 50/60 Hz, 22 KVA maximum