

**Model 2000T8G18,  
M1  
2000 Watts CW  
7.5GHz–18GHz**

The Model 2000T8G18 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.

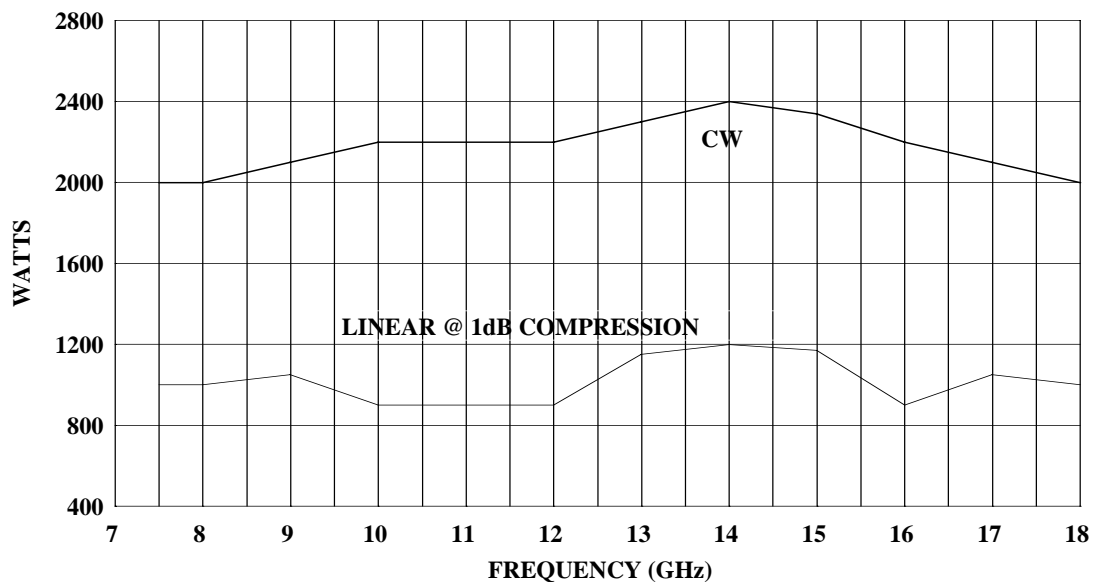
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0 dBm 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 2000T8G18 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 Configuration chart for alternative configurations.

**2000T8G18 TYPICAL POWER OUTPUT**



## SPECIFICATIONS, 2000T8G18

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

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

FLATNESS..... ±11 dB maximum, equalized for  
 ±5 dB maximum at rated power

FREQUENCY RESPONSE ..... 7.5 - 18 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 70 dBm/Hz (maximum)  
 Minus 72 dBm/Hz (typical)

HARMONIC DISTORTION..... Minus 20 dBc (maximum)  
 Minus 27 dBc (typical)

PRIMARY POWER ..... See Model Configuration

### CONNECTORS

RF input ..... Type N female on rear panel  
 RF output ..... Type WRD 750D24 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 ..... 1182 kg (2600 lb)

SIZE (W x H x D)..... Four Cabinets each 56 x 160 x 82.3 cm (22.1 x 63 x 32.4 in)

## MODEL CONFIGURATIONS

**P** Must select one primary power from the following [P1 or P2]

P1 190-255 VAC, 3 phase, delta (4 wire)  
 50/60 Hz 22 KVA maximum

P2 360-435 VAC, 3 phase, WYE (5 wire)  
 50/60 Hz 22 KVA maximum. CE marked to comply with  
 EMC European Directive 89/336/EEC for operation inside  
 a shielded room.

Model	Features
<b>2000T8G18</b>	<b>P</b>
2000T8G18	P1
2000T8G18M1	P2