

The Model 200T8G18A is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for applications where instantaneous bandwidth and high gain are required. A reliable 250 watt TWT provides a conservative 200 watts minimum at the amplifier output flange. Stated power specifications are at the fundamental frequency.

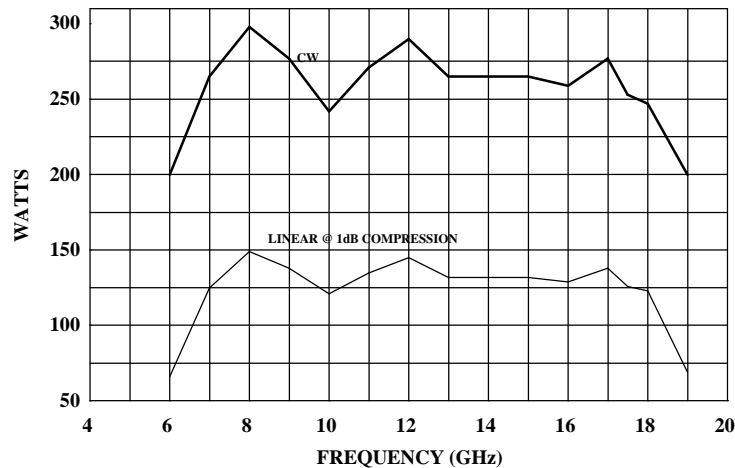
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0 dBm input, VSWR protection, gain control, RF output sample port, plus monitoring of TWT helix current, cathode voltage, collector voltage, external video pulsing, 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 external video pulsing feature reduces prime power use for pulse applications.

Housed in a stylish contemporary cabinet. This unit is designed for benchtop use, but can be removed from the cabinet for rack mounting. The Model 200T8G18A 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.

See Model Configuration for package alternatives and other special features.

200T8G18A TYPICAL POWER OUTPUT



SPECIFICATIONS
Model 200T8G18A

POWER (fundamental), CW @ OUTPUT FLANGE	
Nominal.....	267 watts
Minimum	200 watts
Linear @ 1 dB Compression.....	100 watts minimum
FLATNESS	±12 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)	53 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 40 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.
VIDEO PULSE CAPABILITY	
Pulse Width.....	0.05 microseconds min
Pulse Rate (PRF).....	100 KHz max
RF Rise and Fall.....	30 ns max (10% to 90%)
Delay	300 ns max from pulse input to RF 90%
Pulse width distortion.....	±30 ns max (50% points of output pulse width compared to 50% points of input pulse width)
NOISE POWER DENSITY (pulse on)	Minus 72 dBm/Hz (maximum) Minus 77 dBm/Hz (typical)
(pulse off).....	Minus 140 dBm/Hz (typical)
HARMONIC DISTORTION	Below 10 GHz, minus 5 dBc max., minus 9 dBc typ. 10-12 GHz, minus 8 dBc max., minus 12 dBc typ. Above 12 GHz, minus 20 dBc max., minus 30 dBc typ.
PRIMARY POWER	190-260 VAC 50/60 Hz single phase 2.0 KVA maximum
CONNECTORS	
RF input.....	Type N female on rear panel
RF output.....	Type WRD -750D24 waveguide flange on rear panel
RF output sample port.....	Type N female on rear panel
GPIB.....	IEEE-488 (f) on rear panel
Interlock.....	DB-15 (f) on rear panel
Video.....	BNC-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)
200T8G18A	With removable enclosure	52 kg (115 lb)	50.3 x 29.7 x 68.6 cm 19.8 x 11.7 x 27 in
200T8G18AM1	Shipped without an outer cabinet	39 kg (85 lb)	48.3 x 26.7 x 68.6 cm 19.0 x 10.5 x 27 in
200T8G18AM2	Enclosure removed for rack mounting – slides and front handles installed	41 kg (90 lb)	48.3 x 26.7 x 68.6 cm 19.0 x 10.5 x 27 in
200T8G18AM3	Enclosure removed, with added carry handles on the sides and pull handles on the front	39 kg (85 lb)	48.3 x 26.7 x 68.6 cm 19.0 x 10.5 x 27 in
200T8G18AM4	Shipped without an outer cabinet. Supplied with reflected power coupled port with Type N- (f) connector and customer-specified coupled port calibration frequencies.	39 kg (85 lb)	48.3 x 26.7 x 68.6 cm 19.0 x 10.5 x 27 in