Model 200T8G18A
M1 through M7
200 Watts CW
7.5GHz–18GHz

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.

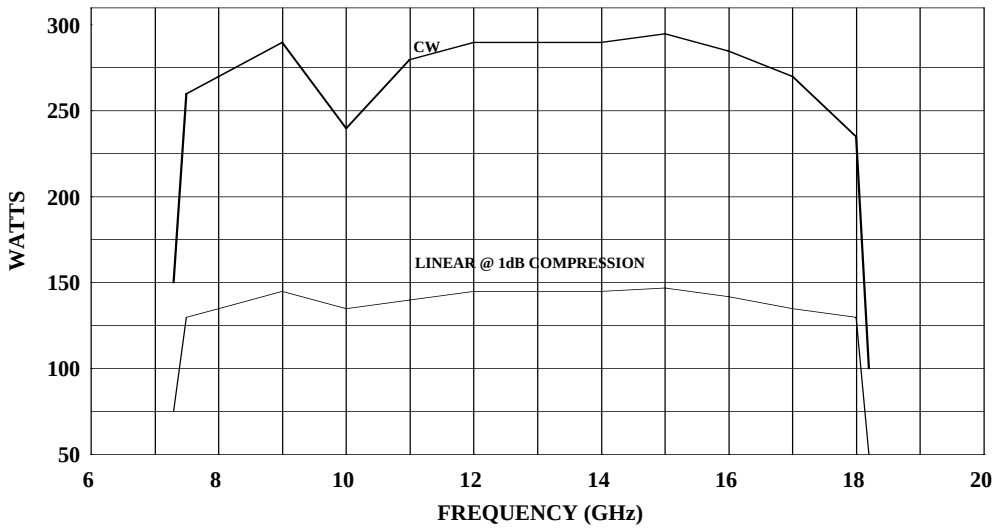
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features 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

POWER (fundamental), CW @ OUTPUT FLANGE	
Nominal	267 watts
Minimum	200 watts
Linear @ 1 dB Compression	50 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 70 dBm/Hz (maximum), Minus 72 dBm/Hz (typical)
(pulse off)	Minus 140 dBm/Hz (typical)
HARMONIC DISTORTION	Below 10 GHz, minus 5 dBc max., minus 8 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.
SIZE AND WEIGHT	See Model Configurations

MODEL CONFIGURATIONS

E Must select one enclosure type from the following [E1 or E2 or E2S]:

E1 removable outer enclosure, size 19.8 x 11.7 x 27 in., 50.3 x 29.7 x 27 cm; add 14kg (30 lbs) to weight of E2.

E2 without outer enclosure, size 19 x 10.5 x 27 in, 48.3 x 26.7 x 68.6 cm; weight 39kg (85 lbs).

E2S without outer enclosure; slides and front handles installed for rack mounting; size same as E2, add 3kg (5 lbs) to weight of E2.

E2H without outer enclosure, with added carry handles on the sides and pull handles on the front. Size and weight same as E2.

S May select a special feature (extra cost) [S1R]

S1R Reflected sample port on rear panel, type N female connector. Forward and reflected sample port calibration data supplied on disk in Excel format at 51 points, evenly spaced over the specified frequency range.

Model Number	Features	
	E	**S**
200T8G18A	E1	-
200T8G18AM1	E2	
200T8G18AM2	E2S	-
200T8G18AM3	E2H	
200T8G18AM4	E2	S1R
200T8G18AM5	E1	S1R
200T8G18AM6	E2S	S1R
200T8G18AM7	E2H	S1R