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MODEL 250T8G18
M1, M2
250 WATTS CW
7.5 - 18 GHz

The Model 250T8G18 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 TWT provides a conservative 250 watts minimum at the amplifier output flange. Stated power specifications are at the fundamental frequency.

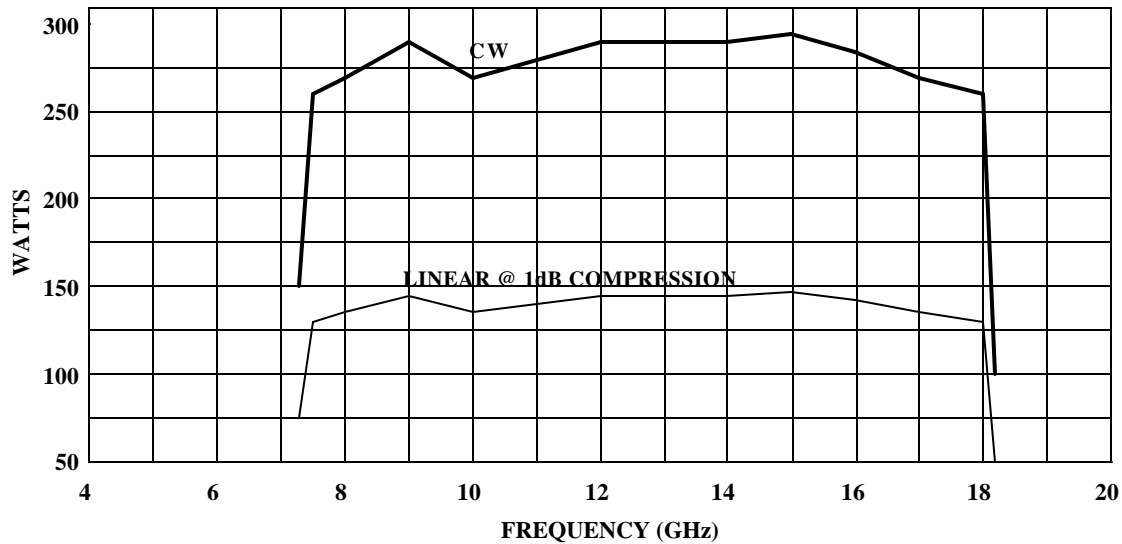
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features 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 250T8G18 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.

250T8G18 TYPICAL POWER OUTPUT



SPECIFICATIONS

Model 250T8G18

POWER (fundamental), CW @ OUTPUT FLANGE

Nominal.....	300 watts
Minimum	250 watts
Linear @ 1dB Compression.....	130 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)..... 54 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 50 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).....	100kHz 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 7 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
 2.5 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)
250T8G18	With removable enclosure	52 kg (115 lb)	50.3 x 29.7 x 68.6 cm 19.8 x 11.7 x 27 in
250T8G18M1	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
250T8G18M2	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