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MODEL 200T1G3A
M1, M2, M3, M4
200 WATTS CW
.8 - 2.8 GHz

The Model 200T1G3A 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 connector. Stated power specifications are at fundamental frequency.

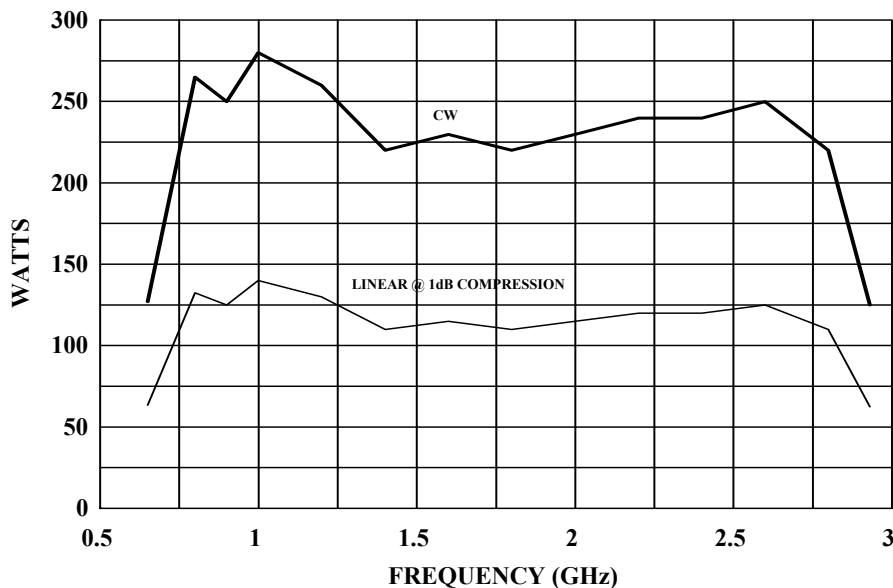
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0dBm input, VSWR protection, gain control, external video pulsing, 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 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 200T1G3A 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 packaging alternatives and special features.

200T1G3A TYPICAL POWER OUTPUT



SPECIFICATIONS
Model 200T1G3A

POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal.....	242 watts
Minimum.....	200 watts
Linear @ 1dB Compression.....	100 watts minimum
FLATNESS.....	±12 dB maximum, equalized for ±5 dB maximum at rated power
FREQUENCY RESPONSE8-2.8 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 2.5:1 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).....	100kHz max
RF Rise and Fall.....	30 ns max (10% to 90%)
Delay.....	300 ns max from pulse input to RF90%
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..... Minus 3 dBc maximum, Minus 4.5 dBc typical

PRIMARY POWER.....	190 – 260VAC
	50/60 Hz, single phase
	2.5 KVA maximum

CONNECTORS

RF input.....	Type N female on rear panel
RF output.....	Type N female on rear panel
RF output sample port.....	Type N female on rear panel
GPIB.....	IEEE-488 (f)
Interlock.....	DB-15 female 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)
200T1G3A	With removable enclosure	59 kg (130 lb)	50.3 x 29.7 x 76.2 cm 19.8 x 11.7 x 30 in
200T1G3AM1	Shipped without an outer cabinet	46 kg (100 lb)	48.3 x 26.7 x 76.2 cm 19.0 x 10.5 x 30 in
200T1G3AM2	Enclosure removed for rack mounting - slides and front handles installed	48 kg (105 lb)	48.3 x 26.7 x 76.2 cm 19.0 x 10.5 x 30 in
200T1G3AM3	Shipped without an outer cabinet. Reflected power sample port. Type N female connector on rear panel. Forward and reflected sample port calibration data supplied on disk in Excel format at 51 points, equally spaced between .8GHz to 2.8GHz.	46 kg (100 lb)	48.3 x 26.7 x 76.2 cm 19.0 x 10.5 x 30 in
200T1G3AM4	Enclosure removed for rack mounting - slides and front handles installed. Reflected power sample port. Type N female connector on rear panel. Forward and reflected sample port calibration data supplied on disk in Excel format at 51 points, equally spaced between .8GHz to 2.8GHz.	48 kg (105 lb)	48.3 x 26.7 x 76.2 cm 19.0 x 10.5 x 30 in