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MODEL 300T2G8
M1, M2, M3, M4, M5
300 WATTS CW
2.5 - 7.5 GHz

The Model 300T2G8 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 300 watts minimum at the amplifier output connector. Stated power specifications are at the fundamental frequency.

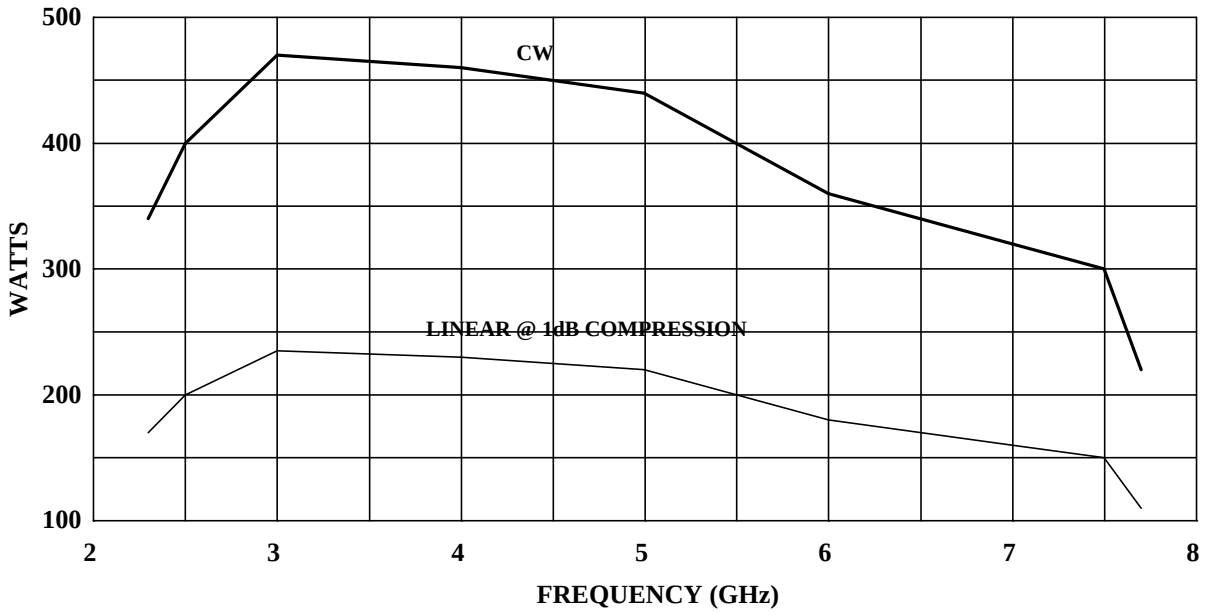
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0 dBm input, VSWR protection, gain control, 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 300T2G8 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.

300T2G8 TYPICAL POWER OUTPUT



SPECIFICATIONS
Model 300T2G8M1, M2, M3, M4, M5

POWER (fundamental), CW, @ OUTPUT CONNECTOR
- *Nominal* ..... *350 watts*
- *Minimum* ..... *300 watts*
- *Linear @ 1 dB Compression* ..... *100 watts minimum*

FLATNESS ..... *±12 dB maximum, equalized for ±5 dB maximum at rated power*

FREQUENCY RESPONSE ..... *2.5-7.5 GHz instantaneously*

INPUT FOR RATED OUTPUT ..... *1.0 milliwatt maximum*

GAIN (at maximum setting) ..... *55 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 60 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 (50% points of output pulse width compared to 50% point of input pulse width*)

NOISE POWER DENSITY
(pulse on) ..... *Minus 85 dBm/Hz (maximum)*
Minus 90 dBm/Hz (typical)
(pulse off) ..... *Minus 140 dBm/Hz (typical)*

HARMONIC DISTORTION ..... *Minus 3.0 dBc maximum, Minus 4.5 dBc typical*

PRIMARY POWER ..... *190-260 VAC*
50/60 Hz single phase
3.0 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) 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)*
300T2G8	*With removable enclosure*	*54 kg (120 lb)*	*50.3 x 29.7 x 68.6 cm* *19.8 x 11.7 x 27 in*
300T2G8M1	*Shipped without an outer cabinet*	*41 kg (90 lb)*	*48.3 x 26.7 x 68.6 cm* *19.0 x 10.5 x 27 in*
300T2G8M2	*Enclosure removed for rack mounting – slides and front handles installed*	*43 kg (95 lb)*	*48.3 x 26.7 x 68.6 cm* *19.0 x 10.5 x 27 in*
300T2G8M3, M4, M5	*See individual Specification Sheet*		