



Model 250TR1G2z5
250 Watts CW
1GHz–2.5GHz

The Model 250TR1G2z5 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 connector. Stated power specifications are at the fundamental frequency.

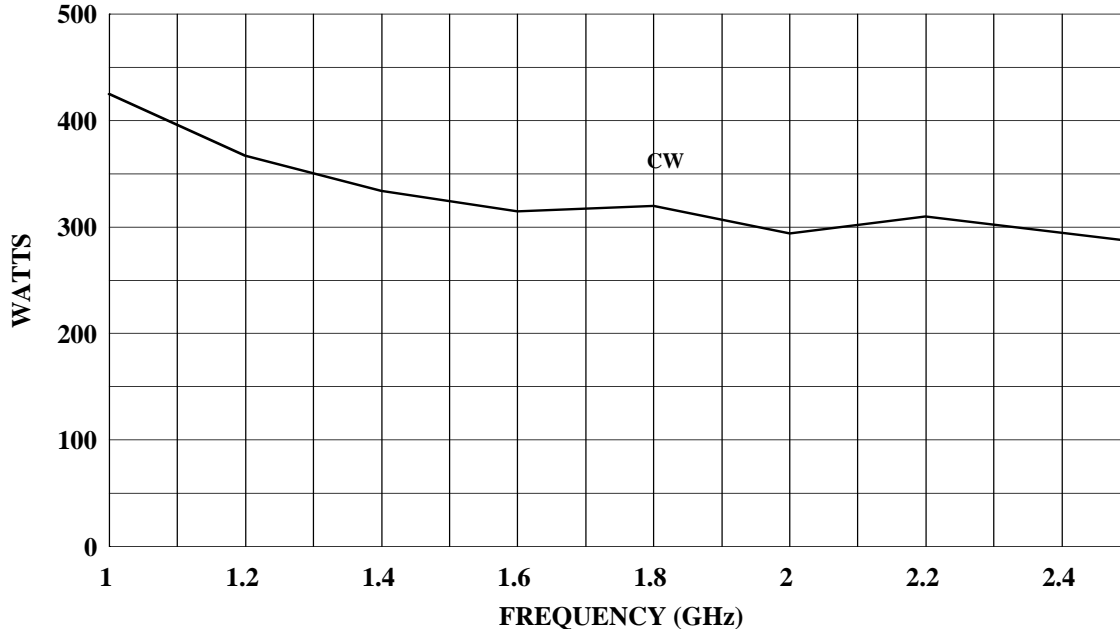
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features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

This unit is designed for 19 inch rack mounting, offers four side mounted carry handles, plus non-slip feet for bench top use. Model 250TR1G2z5 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.

Contact AR RF/Microwave Instrumentation for information on other models with alternative packaging and features.

250TR1G2z5 TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 250TR1G2z5

POWER (fundamental), CW @ OUTPUT FLANGE

Nominal 300 watts
Minimum 250 watts

FLATNESS ± 12 dB maximum

FREQUENCY RESPONSE 1-2.5 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 fold back 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.

NOISE POWER DENSITY Minus 72 dBm/Hz maximum, Minus 77 dBm/Hz typical

HARMONIC DISTORTION Minus 3 dBc maximum, minus 4.5 dBc typical

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 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

COOLING Forced air (self contained fans), air entry and exit in rear.

SIZE (W x H x D) 48.3 x 26.7 (6U) x 76.2 cm, 19 x 10.5 (6U) x 30 in

WEIGHT (approximate) 46 kg, 100 lb