



Model 250TR7z5G18
250 Watts CW
7.5GHz–18GHz

The Model 250TR7z5G18 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.

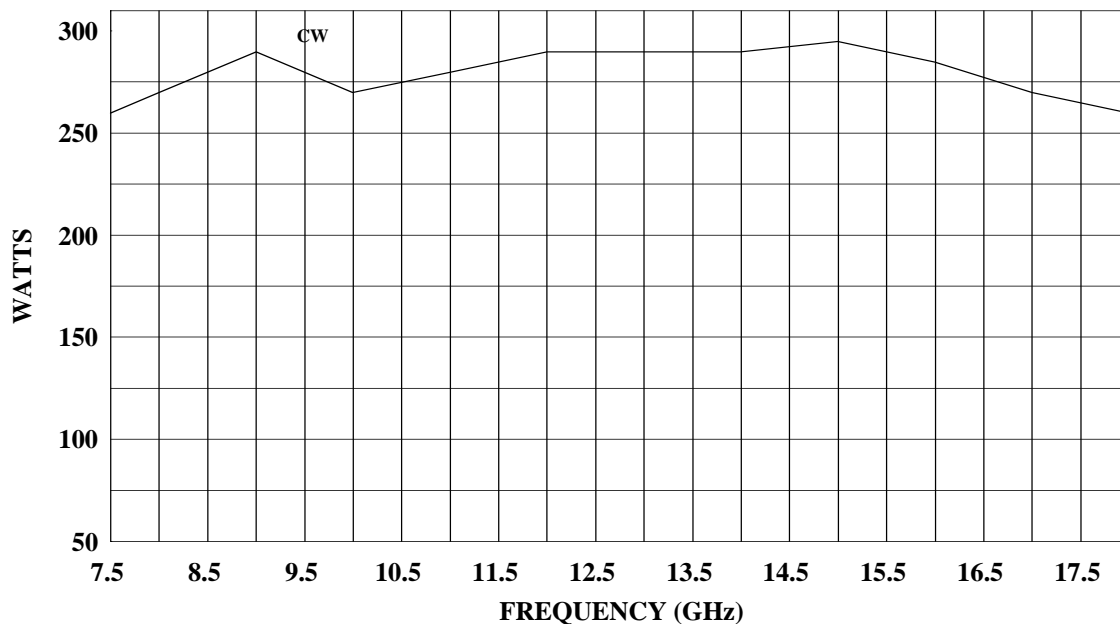
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0 dBm input, VSWR protection, gain control, RF output sample port, 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 250TR7z5G18 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.

250T7z5G18 TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 250TR7z5G18

POWER (fundamental), CW @ OUTPUT FLANGE

Nominal 280 watts
Minimum 250 watts

FLATNESS ± 12 dB maximum

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 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 70 dBm/Hz maximum, Minus 72dBm/Hz typical

HARMONIC DISTORTION Below 10 GHz, minus 5 dBc maximum, minus 7 dBc typical
10-12 GHz, minus 8 dBc maximum, minus 12 dBc typical
Above 12 GHz, minus 20 dBc maximum, minus 30 dBc typical

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

CONNECTORS

RF input Type N precision female on rear panel
RF output Type WRD -750D24 waveguide flange on rear panel
RF output sample port Type N precision 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 68.6 cm, 19 x 10.5 (6U) x 27 in

WEIGHT (approximate) 39 kg, 85 lb