



160 School House Road, Souderton, PA 18964-9990 USA
Phone 215-723-8181 • FAX 215-723-5688

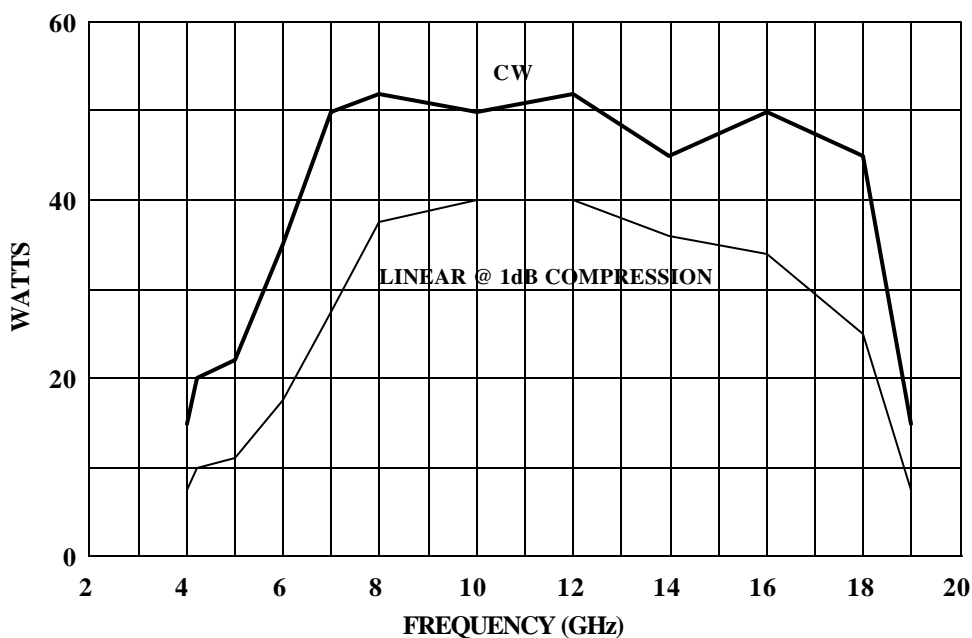
MODEL 20T4G18
M1, M2
20 WATTS CW
4.2 - 18 GHz

The Model 20T4G18 is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for applications where wide instantaneous bandwidth, high gain and moderate power output are required. A reliable micro TWT provides a conservative 20 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, 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.

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 20T4G18 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.

20T4G18 TYPICAL POWER OUTPUT



SPECIFICATIONS

Model 20T4G18

POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal..... 42 watts
 Minimum..... 20 watts
 Linear @ 1dB Compression 10 watts minimum

FLATNESS..... ±9 dB maximum, 4.2 - 18 GHz
 ±5dB maximum, 8.0 - 18 GHz

FREQUENCY RESPONSE..... 4.2 - 18 GHz instantaneously

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

GAIN (at maximum setting)..... 43 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 20 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 80 dBm/Hz (maximum)
 Minus 90 dBm/Hz (typical)

HARMONIC DISTORTION (at 20 watts) 4.2-4.5GHz; Minus 0dBc maximum, Minus 1dBc typical
 4.5-5GHz; Minus 1dBc maximum, Minus 2dBc typical
 5-7GHz; Minus 2.5dBc maximum, Minus 4dBc typical
 7- 10 GHz; Minus 5dBc maximum, Minus 9dBc typical
 10 - 12 GHz; Minus 8dBc maximum, Minus 12dBc typical
 Above 12 GHz; Minus 20dBc maximum, Minus 30dBc typical

PRIMARY POWER..... 99-260 VAC
 50/60 Hz single phase,
 600 VA maximum

CONNECTORS

RF input..... Type N female on rear panel
 RF output..... Type TNC 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

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

MODEL CONFIGURATION

MODEL NUMBER	DESCRIPTION	WEIGHT	SIZE (H x W x D)
20T4G18	With removable enclosure	32 kg (70lb)	50.3 x 29.7 x 68.6 cm 19.8 x 6.5 x 27 in
20T4G18M1	Enclosure removed for rack mounting, slides and front handles installed	25 kg (55lb)	48.3 x 13.3 x 68.6 cm 19.0 x 5.25 x 27 in
20T4G18M2	Shipped without an outer cabinet	23 kg (50lb)	48.3 x 13.3 x 68.6 cm 19.0 x 5.25 x 27 in

