Model 20T4G18A,
M1, M2
20 Watts CW
4.2-18GHz

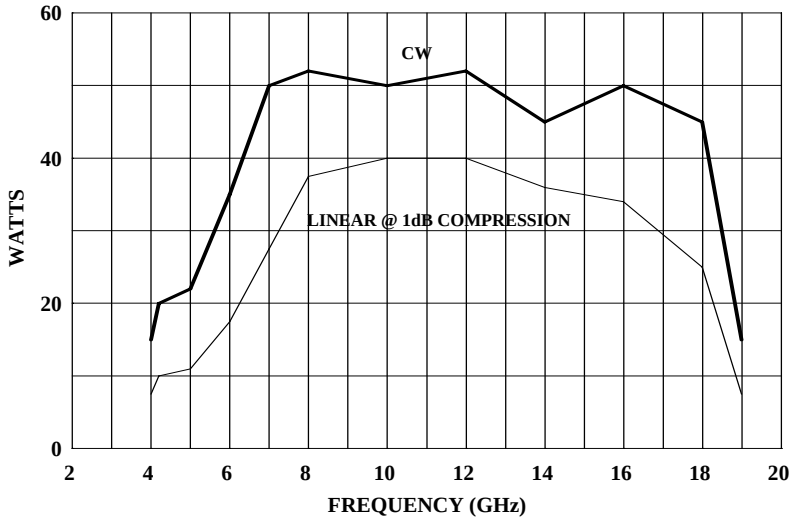
The Model 20T4G18A is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for applications where wide instantaneous bandwidth, high gain and moderate power output are required. A reliable micro TWT provides a conservative 20 watts minimum at the amplifier 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, 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.

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 20T4G18A 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.

20T4G18A TYPICAL POWER OUTPUT



SPECIFICATIONS
Model 20T4G18A

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 VAC maximumn

CONNECTORS
- RF input ..... Type N precision female on rear panel
- RF output ..... Type N precision female on rear panel
- RF output sample port ..... Type N precision 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

E — Must select one enclosure type from the following [E1 or E2 or E2S]:

E1 — Removable outer enclosure, size 19.8 x 6.5 x 27 in., 50.3 x 16.5 x 68.6 cm. Add approximately 15 lbs, 7 kg to weight of E2.

E2 — Without outer enclosure size 19.0 x 5.25 x 27 in., 48.3 x 13.3 x 68.6 cm. Weight approximately 55 lbs, 25 kg.

E2S — Enclosure removed for rack mounting: slides and front handles installed, size same as E2. Add approximately 5 lbs, 2 kg to weight of E2.

Model	Feature
20T4G18A	E1
20T4G18AM1	E2
20T4G18AM2	E2S