



Model 40T18G40
M1 through M3
40 Watts CW
18GHz–40GHz

The Model 40T18G40 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 TWT provides a conservative 40 watts minimum at the amplifier output connector. Stated power specifications are at the fundamental frequency.

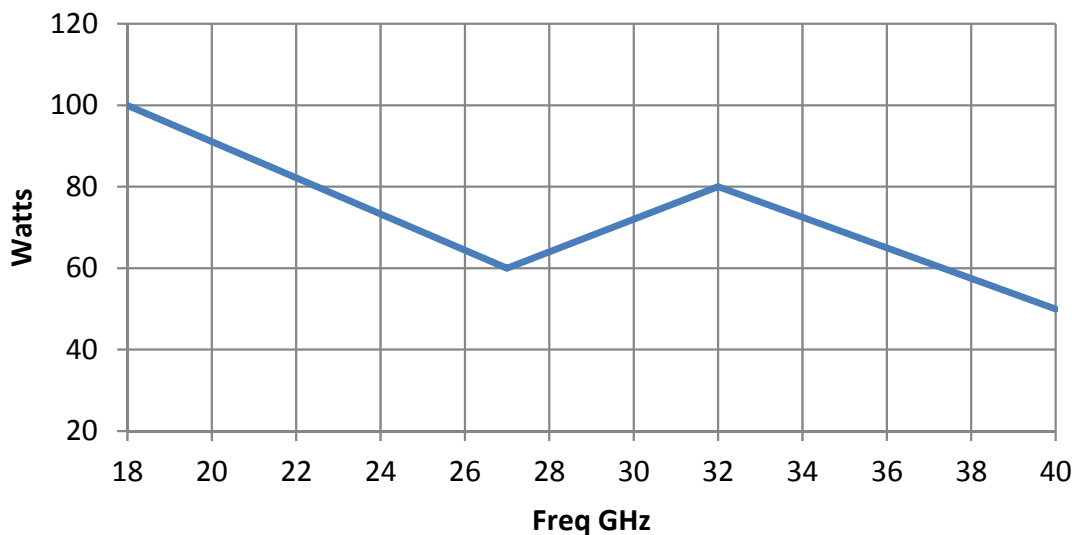
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 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, the unit is designed for benchtop use but can be removed from the cabinet for rack mounting. The Model 40T18G40 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.

The export classification for this equipment is ITAR. The export of this equipment is governed by the U.S. International Traffic in Arms Regulations (ITAR). This equipment must not be transferred to a foreign person/entity without proper authorization of the U.S. Government. Violations may result in administrative, civil or criminal penalties.

Refer to Model Configuration Chart for alternative configurations and special features.

40T18G40 Typical Power Output



SPECIFICATIONS, 40T18G40

POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal	70 watts
Minimum	40 watts
Linear @ 1 dB Compression	10 watts minimum

FLATNESS.....± 10 dB maximum

FREQUENCY RESPONSE..... 18 – 40 GHz instantaneously

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

GAIN (at maximum setting).....46 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 10 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 60 dBm/Hz (maximum)
Minus 65 dBm/Hz (typical) See Model Configurations

HARMONIC DISTORTION.....Minus 3 dBc typical (at 18 GHz)

PRIMARY POWER.....190-265 VAC single phase, 47-63 Hz, 1.0 kVA typical

CONNECTORS

RF input	Type K female on rear panel
RF output	Type WRD-180 waveguide flange on rear panel
RF output forward and reflected sample ports.....	Type K female on rear panel
GPIB	IEEE-488 on rear panel
Interlock	DB-15 female on rear panel

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

WEIGHT.....30 kg, 65 lbs

SIZE (W x H x D).....50.3 x 16.5 x 68.6 cm, 19.8 x 6.5 x 27 in

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MODEL CONFIGURATIONS, 40T18G40

E Package Alternatives. May select an alternative from the following [E1C or (E1C and E2S) and/or E3H]:

E1C Cabinet: Without outer enclosure for rack mounting, size (W x H x D) 48.3 x 13.3 (3U) x 63.5 cm, 19.0 x 5.25 (3U) x 25 in, Subtract approximately 7 kg, 15 lbs, for removal of outer enclosure.

E2S Slides: slides installed, add approximately 2 kg, 5 lbs.

E3H Handles: Front pull handles installed.

Model Number	Features	
	E	S
40T18G40	Base model	-
M1	E1C	-
M2	E1C & E2S & E3H	-

Model number example: Model 40T18G40M1 would have option E1C, no outer enclosure.