

Amplifiers

## 40T18G40

- M1 through M3
- 40 Watts CW
- 18GHz-40GHz

### Features

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.

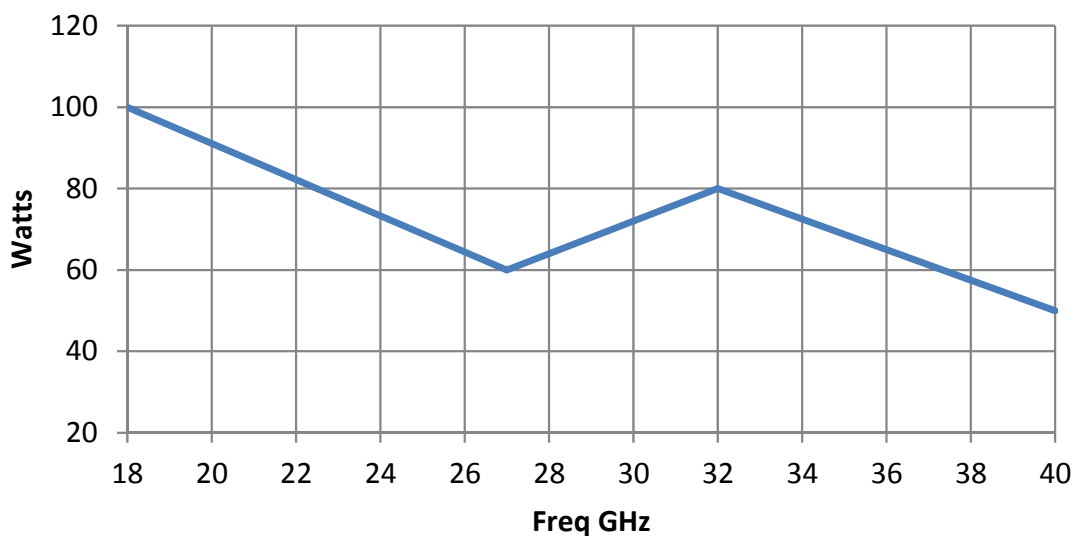
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features 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 EAR99. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

40T18G40 Typical Power Output



AR RF/Microwave  
Instrumentation  
160 School House Rd  
Souderton, PA 18964  
215-723-8181

For an applications engineer call: 800.933.8181

www.arworld.us



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- M1 through M3
- 40 Watts CW
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## Specifications

**POWER (fundamental), CW @ OUTPUT CONNECTOR:**  
 Nominal 70 watts  
 Minimum 40 watts  
 Linear @ 1dB 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 & reflected sample ports Type K female on rear panel  
 GPIB IEEE-488 on rear panel  
 Interlock DB-15 (f) on rear panel

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

**WEIGHT:** 30 kg (65 lbs)

**SIZE:** 50.3 x 16.5 x 68.6 cm (19.8 x 6.5 x 27 in)

**EXPORT CLASSIFICATION:** EAR99

## Model Configurations

- 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	Features	
	E	S
<b>40T18G40</b>	Base model	-
<b>M1</b>	E1C	-
<b>M2</b>	E1C & E2S & E3H	-

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