



## 100T40G50

- M1-M5
- 100 Watts CW
- 40GHz-50GHz

### Features

The Model 100T40G50 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 subsystem provides a conservative 100 watts minimum, measured at the amplifier output flange. Stated power specifications are at the fundamental frequency.

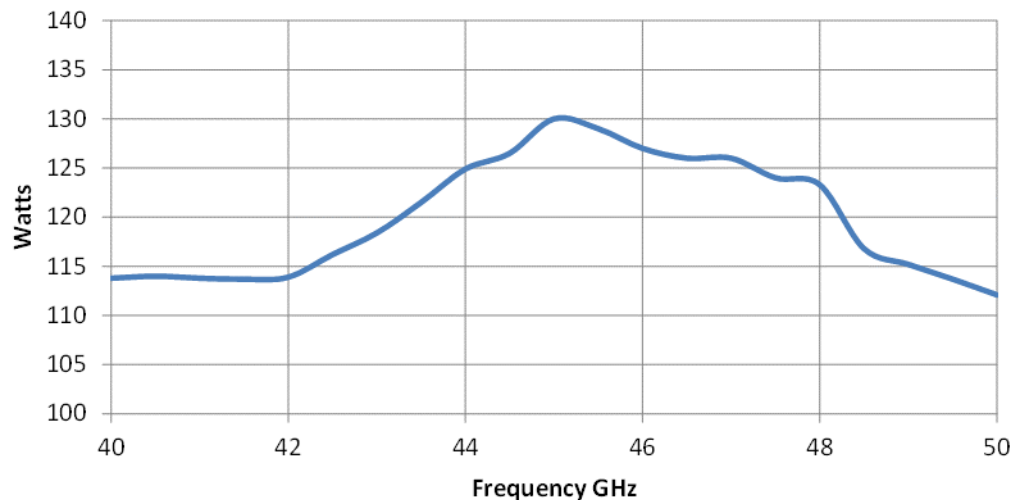
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0 dBm input, VSWR protection, gain control, RF output sample ports, 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. The rated power is developed by efficiently power combining the outputs from two microwave tubes that are factory-matched in gain and phase.

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 100T40G50 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.

Model 100T40G50 Typical Power Output



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## Specifications

**POWER (fundamental), CW@OUTPUT FLANGE:** Minimum, 100 watts

**FLATNESS:** ±8 dB maximum at rated power

**FREQUENCY RESPONSE:** 40-50 GHz instantaneously

**INPUT FOR RATED OUTPUT:** 1.0 milliwatt maximum

**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

**MODULATION CAPABILITY:** Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal. AM peak envelope power limited to specified power.

**HARMONIC DISTORTION:** Minus 22 dBc typical

**SPURIOUS RESPONSE (non-harmonic):** Minus 40 dBc typical (excluding harmonics)

**PRIMARY POWER:** 190-260 VAC; 50/60 Hz single phase; 1.5 KVA maximum

### CONNECTORS:

RF input: 2.4mm female, front panel  
RF output: Type WR-22 waveguide flange, rear panel, all tapped

RF output sample ports (forward and reflected): 2.4mm female, rear panel

Remote Interface: IEEE-488

Interlock: DB-15 (f), rear panel

**SIZE (W x H x D):** 50.3 x 43 x 76 cm (19.8 x 17 x 30 in.)

**WEIGHT (approximate):** 82 kg (180 lb)

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

**TEMPERATURE:** 0-50°C operating, (derate 2°C per 1000 feet above 3000 ft)

**HUMIDITY:** To 95% RH without condensation

**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 49 x 40 (9U) x 76 cm, 19 x 15.75 (9U) x 30 in. Subtract approximately 14 kg, 30 lbs, for removal of outer enclosure.

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

**E3H Handles:** Front handles installed.

Model Number	Features
<b>100T40G50</b>	<b>E</b> Base model
<b>M1</b>	E1C
<b>M2</b>	E3H
<b>M3</b>	E1C & E3H
<b>M4</b>	E1C & E2S
<b>M5</b>	E1C & E2S & E3H

Model number example: Model 100T40G50M2 would have option E3H front handles installed.