



70T40G50

- 70 Watts CW
- 40GHz–50GHz

Features

The Model 70T40G50 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 provides a conservative 70 watts minimum from 40–45GHz, and 50 watts minimum from 45–50GHz, 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.

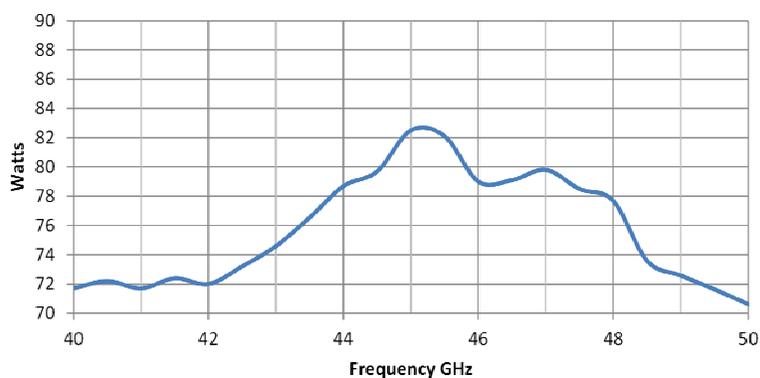
Modular design of the power supply and RF components allow for easy access and repair. Use of a switching mode power supply results in significant weight reduction.

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 70T40G50 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.

See Model Configuration for package alternatives and other special features.

70T40G50 Typical Power Output



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Specifications

POWER (fundamental), CW@OUTPUT FLANGE:
Minimum 70 watts, 40GHz–45GHz
50 watts, 45GHz–50GHz

FLATNESS: ±3 dB maximum at rated power

FREQUENCY RESPONSE: 40–50 GHz instantaneously

INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum

GAIN (at maximum setting): 47 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 fold-back 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.

HARMONIC DISTORTION: Minus 15 dBc typical

SPURIOUS RESPONSE (non-harmonic): Minus 50 dBc typical (excluding harmonics)

PRIMARY POWER: 190-260 VAC; 50/60 Hz single phase; 1 KVA maximum

CONNECTORS:

RF input: 2.4mm female, rear

RF output: Type WR-22 waveguide flange, rear, all tapped

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

Remote Interface IEEE-488

Interlock: DB-15 (f), rear

SIZE (W x H x D): 48.26 x 16.5 x 76.2 cm (19 x 6.5 x 30 in.)

WEIGHT (approximate): 42 kg (93 lbs)

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

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, size 48 x 13.3 (3U) x 69 cm, 19 x 5.25 (3U) x 27 in. Subtract approximately 10 kg, 22 lbs, for removal of outer enclosure.

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

E3H Handles: Front handles installed.

Model Number	Features
70T40G50	Base model
M1	E1C
M2	E3H
M3	E1C & E3H
M4	E1C & E2S
M5	E1C & E2S & E3H

Model number example: Model 70T40G50M2 would have option E3H front handles installed.