

Model 40T18G26A
M1 through M7
40 Watts CW
18GHz–26.5GHz

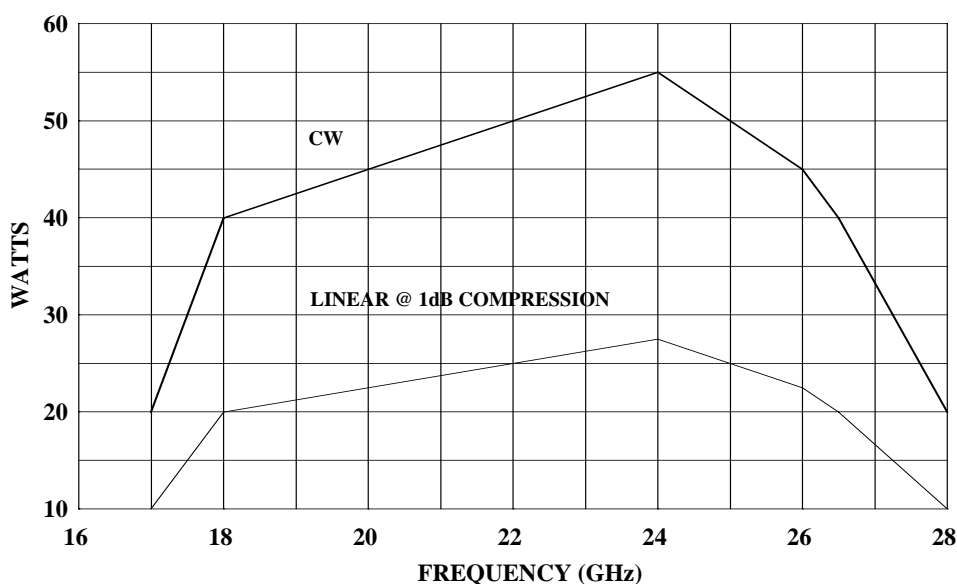
The Model 40T18G26A is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for applications where wide instantaneous bandwidth, high gain and moderate power output are required. A reliable TWT provides a conservative 40 watts minimum at the amplifier 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 40T18G26A 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. These sub-octave amplifiers feature moderate harmonic content.

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

40T18G26A TYPICAL POWER OUTPUT



SPECIFICATIONS, 40T18G26A

POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal	45 watts
Minimum	40 watts
Linear @ 1 dB Compression	10 watts minimum

FLATNESS..... ± 8 dB maximum

FREQUENCY RESPONSE 18 - 26.5 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 20 dBc maximum
Minus 28 dBc typical

PRIMARY POWER 99-260 VAC
50/60 Hz single phase
850 VA maximum

CONNECTORS

RF input	Type K female on rear panel
RF output	Type WR-42 waveguide flange on rear panel
RF output sample port	Type K female on rear panel
GPIO	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 See Model Configuration

SIZE (W x H x D)..... See Model Configurations

MODEL CONFIGURATIONS

Model Number	Description	Weight	Size (W x H x D)	Features
40T18G26A	With removable enclosure	37 kg (80 lb)	50.3 x 16.5 x 68.6 cm 19.3 x 6.5 x 27 in	
40T18G26AM1	Enclosure removed for rack mounting	30 kg (65 lb)	48.3 x 13.3 x 68.6 cm 19.0 x 5.25 x 27 in	
40T18G26AM2	Enclosure removed for rack mounting - slides and front handles installed	32 kg (70 lb)	48.3 x 13.3 x 68.6 cm 19.0 x 5.25 x 27 in	
40T18G26AM3	See Individual Specification Sheet. Version offers external isolator for extended operation at high VSWR, and other special features.			
40T18G26AM4	Enclosure removed for rack mounting, flatness ± 4 dB max at rated power	30 kg (65 lb)	48.3 x 13.3 x 68.6 cm 19.0 x 5.25 x 27 in	
40T18G26AM5	With removable enclosure	37 kg (80 lb)	50.3 x 16.5 x 68.6 cm 19.3 x 6.5 x 27 in	1
40T18G26AM6	Enclosure removed for rack mounting	30 kg (65 lb)	48.3 x 13.3 x 68.6 cm 19.0 x 5.25 x 27 in	1
40T18G26AM7	Enclosure removed for rack mounting - slides and front handles installed	32 kg (70 lb)	48.3 x 13.3 x 68.6 cm 19.0 x 5.25 x 27 in	1

Feature 1: Reflected power port, type K female connector on rear panel. Forward and reflected sample port calibration data supplied on disk in Excel format at 51 points, evenly spaced over specified frequency response.