



**Model 200T26z5G40A,  
M1 thru M5  
200 Watts CW  
26.5GHz–40GHz**

The Model 200T26z5G40A 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 subsystem provides a conservative 200 watts minimum at the amplifier output connector. Stated power specifications are at the fundamental frequency.

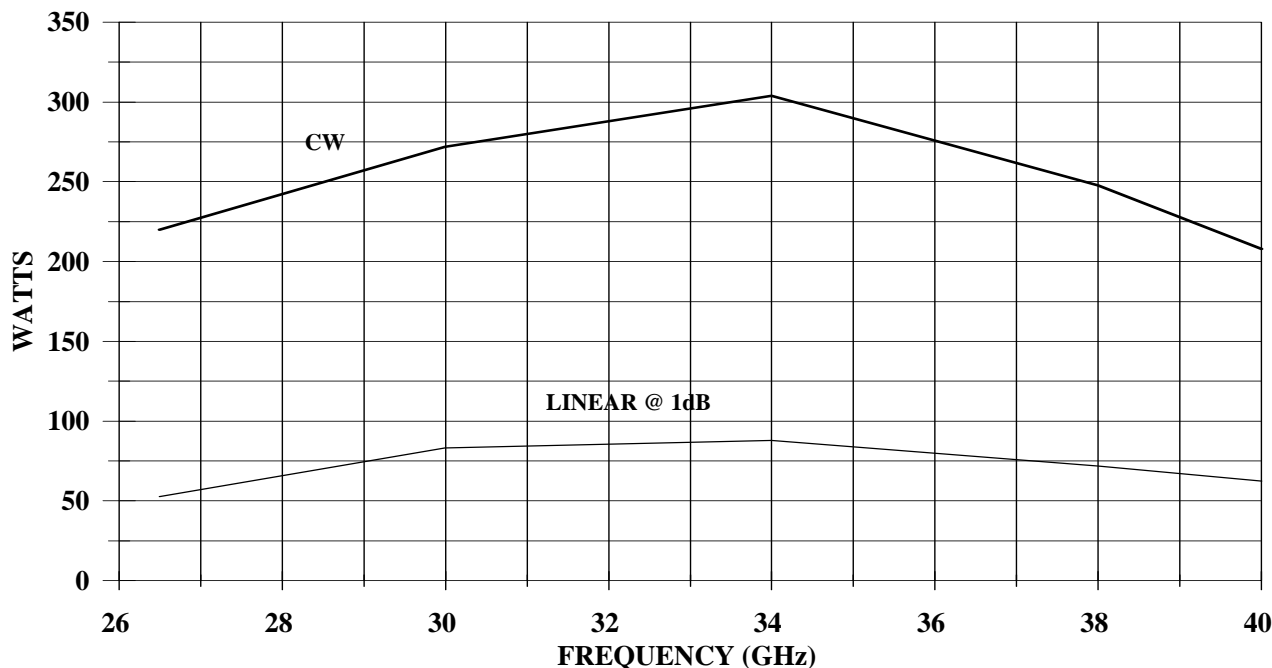
The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0dBm input, VSWR protection, gain control, forward and reflected RF output sample ports, 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.

The rated power is developed by efficiently power combining the outputs from two 120 watts (nominal) 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 200T26z5G40A 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. This sub-octave amplifier features moderate harmonic content.

See Model Configurations for alternative packaging.

**Model 200T26z5G40A Typical Power Output**



## SPECIFICATIONS, 200T26z5G40A

### POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal ..... 225 watts  
 Minimum ..... 200 watts  
 Linear @ 1 dB Compression ..... 50 watts minimum

FLATNESS ..... ± 10 dB maximum

FREQUENCY RESPONSE ..... 26.5 – 40 GHz instantaneously

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

GAIN (at maximum setting) ..... 53 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 40 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.

### VIDEO PULSE CAPABILITY

Pulse Width: ..... 0.1 microseconds min  
 Pulse Rate (PRF): ..... 10 kHz max  
 Duty Cycle: ..... Some restrictions apply. Contact AR with application requirements.  
 RF Rise and Fall: ..... 100 ns max (10% to 90%)  
 Delay: ..... 500 ns max from pulse input to RF90%  
 Pulse width distortion: ..... 200 ns max (50% points of output pulse width compared to 50% points of input pulse width)  
 Noise Power Density, (pulse off): ..... Minus 140 dBm/Hz (typical)  
 Pulse Off Isolation: ..... 80 dB minimum, 90 dB typical  
 Pulse Input: ..... TTL Level, 50 Ohm nominal termination, high level enables RF when video pulsing mode is selected.

NOISE POWER DENSITY ..... Minus 70 dBm/Hz (maximum)  
 Minus 75 dBm/Hz (typical)

HARMONIC DISTORTION ..... Minus 20 dBc maximum  
 Minus 30 dBc typical

PRIMARY POWER ..... 190-260 VAC, 50/60 Hz single phase, 3 kVA maximum

### CONNECTORS

RF input ..... Type K female on rear panel  
 RF output ..... Type WR-28 waveguide flange on rear panel  
 RF output sample ports ..... Type K female on rear panel  
 GPIB ..... IEEE-488 on rear panel  
 Interlock ..... DB-15 female on rear panel  
 Video ..... BNC female on rear panel

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

WEIGHT (approximate) ..... 91 kg, 200 lbs

SIZE (W x H x D) ..... 50.3 x 43 x 81 cm, 19.8 x 17 x 32 in.

### 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 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>200T26z5G40A</b>	E 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 200T26z5G40AM2 would have option E3H front handles installed.