

Amplifiers

200T26z5G40A

- M1 through M7
- 200 Watts CW
- 26.5GHz–40GHz

Features

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.

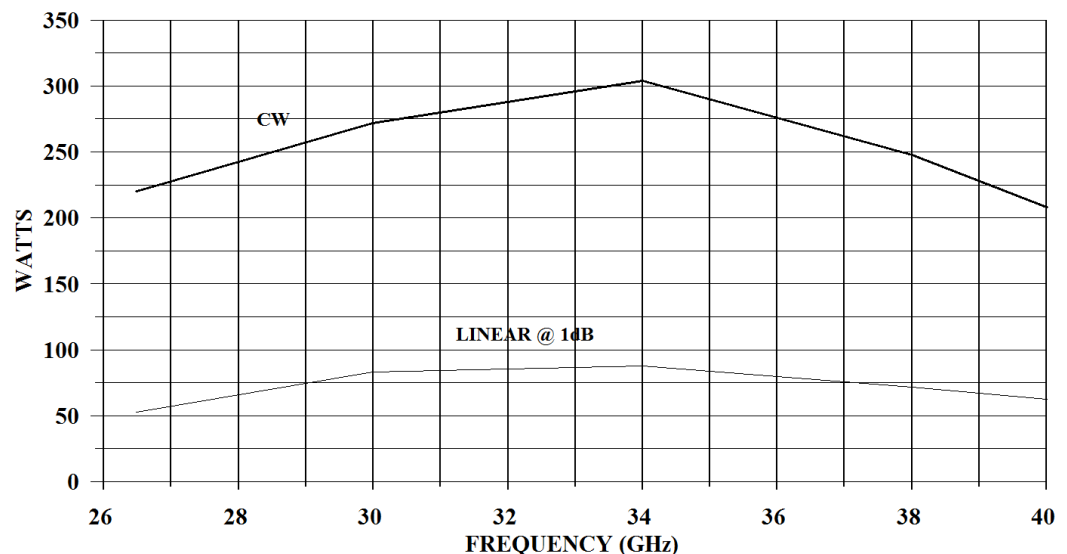
The rated power is developed by efficiently power combining the outputs from two 120 watts (nominal) microwave tubes that are factory matched in gain and phase.

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.

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 Configurations for alternative packaging.

Model 200T26z5G40 Typical Power Output



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Specifications**POWER (fundamental), CW
@ OUTPUT CONNECTOR:**

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

FLATNESS: ± 10 dB maximum**FREQUENCY RESPONSE:** 26z5–40 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.

NOISE POWER DENSITY:

Minus 70 dBm/Hz (maximum)

Minus 75 dBm/Hz (typical)

HARMONIC DISTORTION:

Minus 20 dBc maximum

Minus 30 dBc typical

VIDEO PULSE CAPABILITY:

Pulse Width	0.1 microseconds min
Pulse Rate (PRF)	10kHz max
Duty Cycle:	Some restrictions apply. Contact AR with application requirements.
RF Rise and Fall Delay	100 ns max (10% to 90%) 500 ns max from pulse input to RF 90%
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.

PRIMARY POWER: 190-265 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 (f) on rear panel
Video	BNC female on rear panel

COOLING: Forced air (self contained fans), air entry and exit in rear.**WEIGHT:** 91 kg (200 lbs)**SIZE:** 50.3 x 43 x 81 cm (19.8 x 17 x 32 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, 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.
	Special Features: May select a special feature (extra cost) from the following:
S1F	Front Panel Connectors: RF Input connector, and Output Sample Port connector on front panel.
S2E	Ethernet Remote Interface: Removes IEEE-488 GIB interface and replace with RJ-45 Ethernet on rear panel.

Model Number	Features
200T26z5G40A	Base model
M1	E1C
M2	E3H & S1F
M3	E1C & E3H
M4	E1C & E2S
M5	E1C & E2S & E3H
M6	E3H
M7	E1C, E2S, E3H, S2E

Model number example: Model 200T26z5G40AM6 would have option E3H front handles installed.