# Model 130T26z5G40A, M1 thru M7
# 130 Watts CW
# 26.5GHz–40GHz

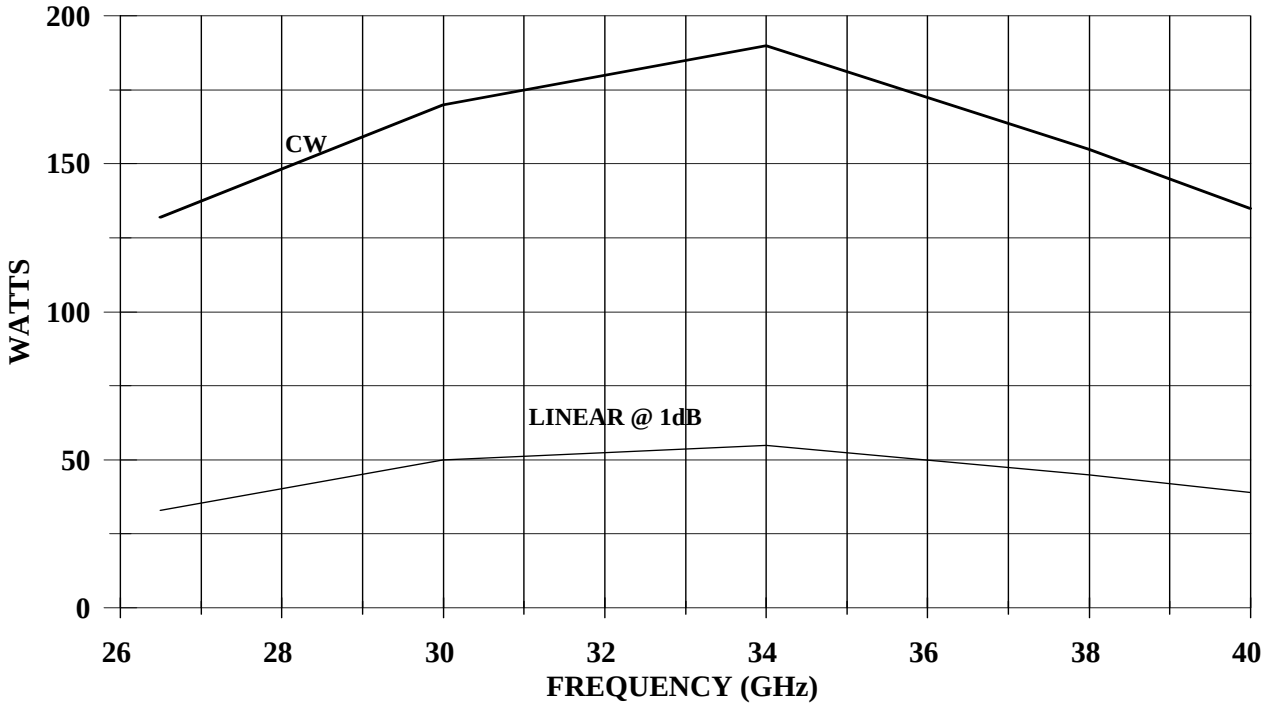
The Model 130T26z5G40A is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for applications where wide instantaneous bandwidth, high gain and moderate power output are required. A reliable TWT provides a conservative 130 watts minimum at the amplifier 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 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 130T26z5G40A 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 and special features.

130T26z5G40A TYPICAL POWER OUTPUT



## SPECIFICATIONS, 130T26z5G40A

| | |
|---|---|
| POWER (fundamental), CW, @ OUTPUT CONNECTOR | |
| Nominal | 150 watts |
| Minimum | 130 watts |
| Linear @ 1 dB Compression | 30 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) | 52 dB minimum |
| GAIN ADJUSTMENT (continuous range) | 35 dB minimum |
| INPUT IMPEDANCE | 50 ohms, VSWR 2.0:1 maximum |
| OUTPUT IMPEDANCE | 50 ohms, VSWR 2.0:1 maximum |
| MISMATCH TOLERANCE | Output power foldback 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. |
| NOISE POWER DENSITY | Minus 70 dBm/Hz (maximum)<br>Minus 75 dBm/Hz (typical) |
| HARMONIC DISTORTION | Minus 15 dBc maximum<br>Minus 20 dBc typical |
| PRIMARY POWER | 190-260 VAC, 50/60 Hz single phase, 0.8 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 |
| COOLING | Forced air (self contained fans), air entry and exit in rear |
| TEMPERATURE | 0 to 45°C operating |
| HUMIDITY | Up to 95% (without condensation) |
| WEIGHT(approximate) | 36 kg, 80 lbs |
| SIZE (W x H x D) | 50.3 x 16.5 x 68.6 cm, 19.8 x 6.5 x 27 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 14.6 (3U) x 68.6 cm, 19 x 5.75 (3U) x 27 in., Subtract approximately 6 kg, 15 lbs, for removal of outer enclosure.

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

E3H **Handles**: Front handles installed.

**S** **May select** a special feature (extra cost) from the following [S1V]:

S1V **Video Pulse Capability** to offer blanking for use for noise quieting. See Video Pulse Capability table below.

| Model Number | Features E | S |
|---|---|---|
| 130T26z5G40A | Base model | – |
| M1 | E1C | – |
| M2 | E3H | – |
| M3 | E1C & E3H | – |
| M4 | E1C & E2S | – |
| M5 | E1C & E2S & E3H | – |
| M6 | – | S1V |
| M7 | E3H | S1V |

Model number example: Model 130T26z5G40AM2 would have option E3H front handles installed.

### S1V, Video Pulse Capability Table

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: ..... 350 ns max from pulse input to RF90%
Pulse width distortion: ..... ±150 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.
Connector, Video ..... BNC female on rear panel