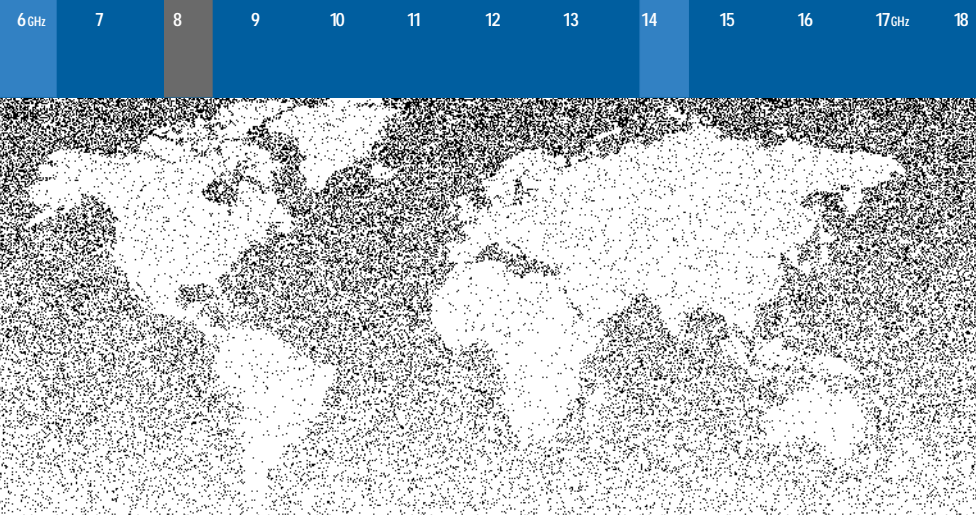


Model 400C/Ku Dual Band TWT Amplifier



C-band and Ku-band power from a single amplifier provides worldwide satellite uplinking flexibility. The efficient power supply, wide-band TWT and easy to use controls — housed in a compact, ruggedized rack-mounted enclosure — make this system ideally suited for fly-away and other mobile applications.

■ Dual Band Power

This wideband amplifier provides a minimum of 325 watts of output flange power at either C-band (5.9 – 6.4 GHz) or Ku-band (14.0 – 14.5 GHz) uplink frequencies by simple exchange of external filters.

X-band capability (7.9 – 8.4 GHz) is available as an option.

■ Linear C-Band

Optimized C-band performance of the TWT allows digital operation at levels up to 4 dB higher than standard tubes.



Modular design reduces cost of long-term maintenance.

■ Ease of Operation

is provided by a 20-character by 4-line fluorescent display and straight-forward four button control. Complete monitoring is provided, including forward and reverse power, TWT voltages and currents, and operating temperatures.

■ In-The-Field Reliability

is ensured by ETM's rigorous testing program. Every ETM amplifier is subject to an environmental burn-in that includes temperature cycling, multiple cold starts from -20°C, and, as required, shock and vibration testing.

■ Long Term Value

ETM backs this amplifier with a full 2 year/9000 hour warranty designed specifically to benefit the satellite newsgathering professional. After the warranty period, ETM's easy to service modular power supply design and module trade-in program keep your maintenance costs low.

■ Service, Service, Service

Every ETM product is backed by worldwide service provided 24 hours a day, 7 days a week. (800) 883-4ETM or outside North America: (510) 797-1100.

Model 400C/Ku Dual Band TWT Amplifier

Specifications

| | | | |
|---|--|-------------------------------|---|
| Frequency Range | 5.850 – 6.425 GHz, C Band 13.75 – 14.50 GHz, Ku Band 7.9 – 8.4 GHz, X Band (optional) | RF Connectors | Input: N-type; rear panel (SMA optional) Output: WRD-580; rear panel Sample Port: N-type; rear panel (SMA optional) |
| Output Power at the Amplifier Flange | 325 watts, minimum | Metering | Vacuum Fluorescent Display, 4-line, 20-character |
| Amplifier Gain | 60 dB min., Ku Band 50 dB min., C-Band | Monitored Parameters | Forward Power (dBm, watts, graph), Reverse Power (dBm, watts, graph), Cathode Voltage, Helix Current, Filament Voltage, Filament Current, Collector Voltage, Grid Voltage, Cabinet Temperature (°C or °F), TWT Baseplate Temperature (°C or °F) |
| Gain Variation | 4 dB max. – across each band 2 dB max. – optional | User-Settable Warnings | Over Forward Power, Under Forward Power, Over Reverse Power, Over Helix Current, Over Cabinet Temperature, Over Baseplate Temperature |
| Gain Slope | .03 dB max. – over any 40 MHz | Altitude | Up to 10,000 ft (derate 2°C/1,000 ft. above 3,000 ft.) |
| Gain Stability | .25 dB/24-hours – any frequency with constant drive | Temperature | Operating Temperature: 0° to 50°C Storage Temperature: -40° to 70°C |
| Gain Adjustment | 0 – 35 dB – continuously adjustable | Shock and Vibration | Equal to Mobile Van or Antenna Pedestal |
| Intermodulation Products | C-Band: -24 dBc at 3 dB backoff Ku-Band: -24 dBc at 7 dB backoff | Cooling | Built-in forced air, rear intake and rear exhaust |
| AM-to-PM Conversion | 6°/dB at rated power | A-C Power | 99 – 255 vac, single-phase, 50/60 Hz, 1800 VA |
| Harmonic Output | Harmonic Filter dependent | Mechanical | 19" wide x 5.25" high x 24" deep, 69 lbs |
| Residual AM | -50dBc to 4kHz max. 4kHz to 500kHz -20(1.15 + logF) (F in kHz) max. -85dBc above 500kHz | Interface | RS-422/RS-485 |
| Phase Noise | meets limits 1 & 2 of IESS-308 | Certification | Meets requirements of ETS 300-327 |
| Noise and Spurious Outputs | -65 dBW/4 kHz max. | | |
| Group Delay (in any 40-Mhz band) | Linear: .05 nSec/MHz Parabolic: .01 nSec/MHz (squared) Ripple: .50 nSec/MHz (peak-to-peak) | | |
| Input VSWR | 1.20:1 max. | | |
| Output VSWR | 1.50:1 max. | | |
| Load VSWR | 1.50:1 max. – for spec. compliance 2.00:1 max. – continuous operation | | |



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