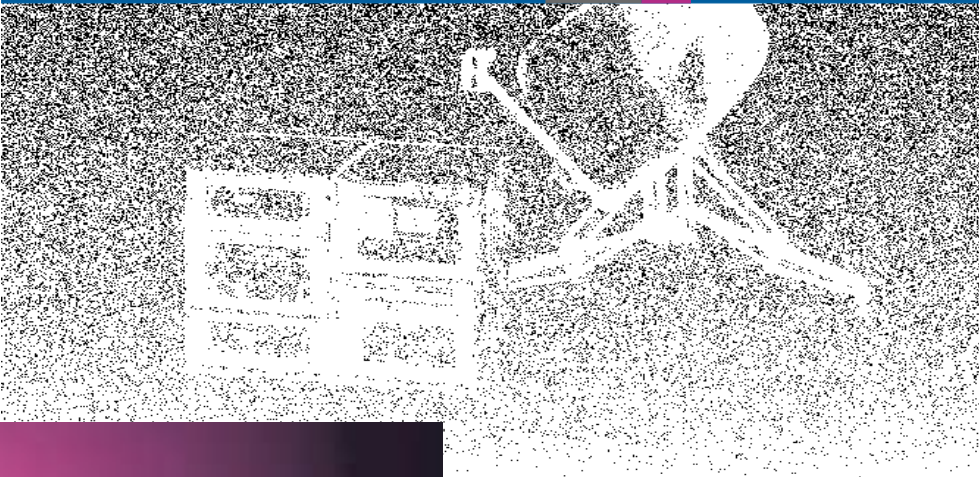




## Models 125Ku, 400Ku & 500Ku Ku-Band TWT Amplifiers



ETM's Ku-band satellite uplink amplifiers packaged in ruggedized three rack-unit enclosures have been designed specifically for the demands of fly-away, truck and other mobile applications. Easy to read displays allow the microprocessor control to clearly communicate detailed status and monitoring information. These ETM amplifiers combine the latest technology, ETM's 27 years of TWT experience, and design features based on in-the-field operation.

■ **Universal Power Input** is achieved through the use of a wide input (99 to 255 vac, 50/60 Hz) power factor correction circuit. This circuit also reduces the power consumption and has enabled ETM to certify the unit to the European standards for earth stations described in ETS 300-327.



*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 these amplifiers 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.

# Models 125Ku, 400Ku & 500Ku Ku-Band TWT Amplifiers

## Specifications

<b>Frequency Range</b>	13.75 – 14.5 GHz (standard) 12.75 – 14.5 GHz (optional)
<b>Amplifier Gain</b>	60 dB min.
<b>Gain Variation</b>	4 dB max. 2 dB max. – optional
<b>Gain Slope</b>	.03 dB max. – over any 40 MHz
<b>Gain Stability</b>	.25 dB/24-hours – any frequency with constant drive
<b>Gain Adjustment</b>	0 – 35 dB – continuously adjustable
<b>Intermodulation Products</b>	-24 dBc at 7 dB backoff
<b>AM-to-PM Conversion</b>	6°/dB at rated power
<b>Harmonic Output</b>	-60 dBc
<b>Residual AM</b>	-50dBc to 4kHz max. 4kHz to 500kHz -20(1.15 + logF) (F in kHz) max. -85dBc above 500kHz
<b>Phase Noise</b>	meets limits 1 & 2 of IESS-308
<b>Noise and Spurious Outputs</b>	-65 dBW/4 kHz max.
<b>Group Delay (in any 40-Mhz band)</b>	Linear: .05 nSec/MHz Parabolic: .01 nSec/MHz (squared) Ripple: .50nSec/MHz (peak-to-peak)
<b>Input VSWR</b>	1.20:1 max.
<b>Output VSWR</b>	1.50:1 max.
<b>Load VSWR</b>	1.50:1 max. – for spec. compliance 2.00:1 max. – continuous operation

## All Models

<b>RF Connectors</b>	Input: N-type; rear panel (SMA optional) Output: WR-75; rear panel Sample Port: N-type ; rear panel (SMA optional)
<b>Metering</b>	Vacuum Fluorescent Display, 4-line, 20-character
<b>Monitored Parameters</b>	Forward Power (dBm, watts, graph), Reverse Power (dBm, watts, graph, % fwd pwr), Cathode Voltage, Helix Current, Filament Voltage, Filament Current, Collector Voltage, Grid Voltage (500Ku only), Cabinet Temperature (°C or °F), TWT Baseplate Temperature (°C or °F)
<b>User-Settable Warnings</b>	Over Forward Power, Under Forward Power, Over Reverse Power, Over Helix Current, Over Cabinet Temperature, Over Baseplate Temperature
<b>Altitude</b>	Up to 10,000 ft (derate 2°C/1,000 ft. above 3,000 ft.)
<b>Temperature</b>	Operating Temperature: 0° to 50°C Storage Temperature: -40° to 70°C
<b>Shock and Vibration</b>	Equal to Mobile Van or Antenna Pedestal
<b>Cooling</b>	Built-in forced air, rear intake and rear exhaust
<b>Interface</b>	RS-422/RS-485
<b>Certification</b>	Meets requirements of ETS 300-327

### 125 Ku

<b>Output Power at the Amplifier Flange</b>	120 watts, typical 100 watts, minimum
<b>A-C Power</b>	99 – 255 vac, single-phase, 50/60 Hz, 550 VA
<b>Mechanical</b>	19" wide x 5.25" high x 24" deep, 53 lbs

### 400 Ku

<b>Output Power at the Amplifier Flange</b>	375 watts, typical 350 watts, minimum
<b>A-C Power</b>	99 – 255 vac, single-phase, 50/60 Hz, 1400 VA
<b>Mechanical</b>	19" wide x 5.25" high x 24" deep, 67 lbs

### 500 Ku

<b>Output Power at the Amplifier Flange</b>	485 watts, typical 450 watts, minimum
<b>A-C Power</b>	99 – 255 vac, single-phase, 50/60 Hz, 1800 VA
<b>Mechanical</b>	19" wide x 5.25" high x 24" deep, 67 lbs



35451 Dumbarton Court      Outside USA: (510) 797-1100  
Newark, CA 94560          Fax: (510) 797-4358  
Tel.: (800) 883-4ETM        www.etm-inc.com