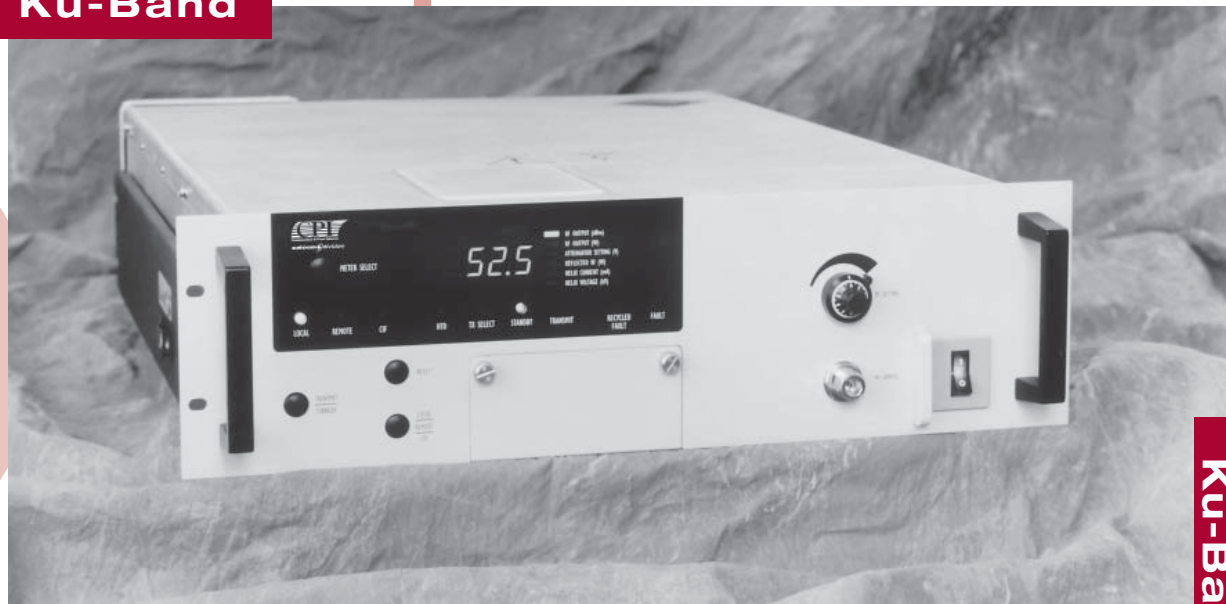


200W Compact Low Power Amplifier for Satellite Communications

Ku-Band

The VZU-6992EC

200 Watt TWT
Low Power
Amplifier-
high efficiency
in a compact
package.



Compact

Provides 200 watts of power in a 3 rack unit package, digital ready, for wideband, single- and multi-carrier satellite service in the 13.75-14.5 GHz frequency band. Ideal for transportable and fixed earth station applications where space and prime power are at a premium.

Efficient

Employs a high efficiency dual-depressed collector helix traveling wave tube backed by many years of field-proven experience in airborne and military applications.

Simple to Operate

User-friendly microprocessor-controlled logic with integrated computer interface. Digital metering, pin diode attenuation and optional integrated linearizer for improved intermodulation performance.

Global Applications

Meets International Safety Standard EN-60215, Electromagnetic Compatibility 89/336/EEC and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements.

Easy to Maintain

Modular design and built-in fault diagnostic capability with convenient and clearly visible indicators behind front panel door for easy maintainability in the field.

Worldwide Support

Backed by over three decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes fourteen regional factory Service Centers.

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Ku-Band

200W Compact Low Power Amplifier

SPECIFICATIONS, VZU-6992EC

Electrical

| | |
|------------------------------------|--|
| TWT Model Number | VTU-6395M2 |
| Frequency | 13.75 to 14.50 GHz |
| Output Power | |
| TWT | 200W min. (53.01 dBm) |
| Flange | 175W min. (52.43 dBm) |
| Bandwidth | 750 MHz |
| Gain | 73 dB min. at rated power output; 75 dB min. at small signal |
| RF Level Adjust Range | 0 to 20 dB |
| Gain Stability | ±0.25 dB/24hr max. (at constant drive and temp.) |
| Small Signal Gain Slope | ±0.015 dB/MHz max. |
| Small Signal Gain Variation (max.) | 1.0 dB pk-pk across any 80 MHz band; 2.5 dB pk-pk across the 750 MHz band |
| Input VSWR | 1.3:1 max. |
| Output VSWR | 1.3:1 max. |
| Load VSWR | 2.0:1 max. operational; any value for operation without damage |
| Residual AM | -50 dBc below 10 kHz -20[1.3 +log F(kHz)] dBc, 10 kHz to 500 kHz -85 dBc above 500 kHz |
| Phase Noise | |
| IESS Phase Noise Profile | -6 dBc |
| AC Fundamental | -36 dBc |
| Sum of All Spurs | -47 dBc |
| AM/PM Conversion | 2°/dB max. for a single carrier at 8 dB below rated power |
| Harmonic Output | -60 dBc at rated power, second and third harmonics |
| Noise and Spurious (at rated gain) | <-150 dBW/4 kHz from 10.9 to 12.7 GHz <-65 dBW/4 kHz from 13.75 to 18.0 GHz <-105 dBW/4 kHz from 18.0 to 26.0 GHz <-125 dBW/4 kHz from 26.0 to 40.0 GHz |
| Noise Figure | 10 dB max. |
| Intermodulation | -24 dBc max. with two equal carriers at total output power 7 dB (4 dB with optional integral linearizer) below rated single-carrier output |

Electrical (continued)

| | |
|----------------------------------|---|
| Group Delay (in any 80 MHz band) | 0.01 ns/MHz linear max. 0.001 ns/MHz ² parabolic max. 0.5 ns pk-pk ripple max. |
| Primary Power | 100 - 240 VAC ±10%, single phase 47- 63 Hz |
| Power Consumption | 0.85 kVA, typ. 1.0 kVA, max. |
| Power Factor | 0.95 min. |

Environmental (Operating)

| | |
|---------------------|--|
| Ambient Temperature | -10° to +50°C operating -40° to +70°C non-operating |
| Relative Humidity | 95% non-condensing |
| Altitude | 10,000 ft. with standard adiabatic derating of 2°C/1000 ft., operating; 40,000 ft., non-operating |
| Shock and Vibration | Designed for normal transportation environment per Section 514.4 MIL-STD-810E. Designed to withstand 20G at 11 ms (1/2 sine pulse) in non-operating configuration. |
| Acoustic Noise | 65 dBA @ 3 ft. from amplifier |

Mechanical

| | |
|------------------------|--|
| Cooling (TWT) | Forced air with integral blower Rear air intake & exhaust |
| RF Input Connection | Type N female |
| RF Output Connection | WR 75 waveguide flange, grooved with UNC 2B 6-32 threaded holes |
| RF Output Monitor | Type N female |
| Dimensions (W x H x D) | 19 x 5.25 x 24 in. (483 x 133 x 610 mm) |
| Weight | 60 lbs (27.3 kg) max. |

OPTIONS:

- *Remote Control Panel*
- *Integral Linearizer*
- *Redundant and Power Combined Subsystems*
- *Extended Frequency (12.75 to 14.5 GHz, Model Number VZU-6992EB)*
- *External Receive Band Reject Filter (Increases loss by a minimum of 75 dB up to 12.7 GHz for standard band and a minimum of 50 dB up to 11.7 GHz for extended band)*



For more detailed information, please refer to the corresponding CPI Technical Description.

Note: Specifications may change without notice as a result of additional data or product refinement.

Please contact CPI before using this information for system design.



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