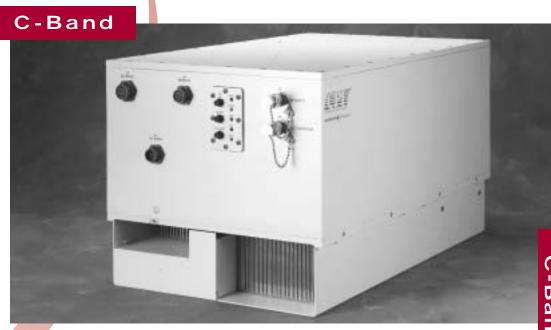
750W Outdoor TWT Medium Power Amplifier for Satellite Communications

The VZC-6967V7

750 Watt TWT Medium
Power Amplifier —
high efficiency in an
environmentally sealed
compact package
designed for outdoor
operation



Plays in the Rain

Provides 750 watts of power in a rugged and compact weatherproof package, digital ready, for wideband, single- and multi-carrier satellite service in the 5.85 - 6.65 GHz frequency band. Ideal for transportable and fixed earth station applications.

Cost Effective and Efficient

Mounting at the antenna improves performance through minimized cable losses and saves cost in system design. Employs a high efficiency, dual-depressed collector helix traveling wave tube, reducing operating costs.

Reliable

Designed and built to survive in extremely adverse environmental conditions and features increased cooling margin for longer life.

Simple to Operate

User-friendly microprocessor-controlled logic with integrated RS422/485 computer interface. Digital metering, pin diode attenuation and optional integrated linearizer for improved intermodulation performance.

Easy to Maintain

Modular design and built-in fault diagnostic capability via remote monitor and control.

Global Applications

Meets International Safety Standard EN-60215, Electromagnetic Compatibility 89/336/EEC and Harmonic Standard EN-60555-2 to satisfy worldwide requirements.

Worldwide Support

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



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OPTIONS:

- Integral Linearizer
- · Remote Control Panel
- Redundant and Power Combined Subsystems
- Extended Frequency (5.850 to 7.100 GHz; Model Number VZC-6967VE)
- External Receive Band Reject Filter (increases loss by a minimum of 70 dB up to 4.8 GHz)

SPECIFICATIONS, VZC-6967V7 Electrical

Frequency 5.850-6.650 GHz

Output Power
TWT 750 W min.
Flange 650 W min.

Bandwidth 800 MHz

Gain 73 dB min. at rated power
78 dB min. at small signal

78 dB min. at small signal

RF Level Adjust Range 0 to 20 dB (via PIN diode attenuator)

±0.25 dB/24 hrs. max.

±0.02 dB/MHz max.

Gain Stability
At constant drive & temp.

 $\begin{array}{c} \text{(after 30 min. warmup)} \\ \text{Over temp., constant drive,} \\ \text{(any frequency)} \\ \end{array} \begin{array}{c} \pm 1.0 \text{ dB over oper. temp. range} \\ \pm 0.75 \text{ dB over } \pm 10^{\circ}\text{C} \end{array}$

Small Signal Gain Slope Small Signal Gain Variation Across any 40 MHz band

Across any 40 MHz band 0.5 dB pk-pk max.

Across the 800 MHz band 2.5 dB pk-pk max.

Input VSWR 1.3:1 max.
Output VSWR 1.3:1 max.

Load VSWRContinuous operation2.0:1Full spec compliance1.5:1Operation without damageAny value

Residual AM, max -50 dBc below 10 kHz

-20 (1.5 + log F kHz) dBc, 10 kHz to 500 kHz -85 dBc above 500 kHz

Phase Noise

IESS-308/309 6 dB below mask

phase noise continuous

Noise and Spurious

AC fundamentals related -36 dBc Sum of spurs (370 Hz to 1 MHz) -47 dBc

AM/PM Conversion 2.5°/dB max. for a single-carrier

at 6 dB below rated power. With optional integral linearizer, can be tuned to 1.0 deg/dB max.

Harmonic Output -60 dBc at rated power, second and third harmonics

<-130 dBW/4 kHz, 3.4 to 4.2 GHz

<-65 dBW/4 kHz, 4.2 to 12.0 GHz <-110 dBW/4 kHz, 12.0 to 40.0 GHz

Noise Figure 10 dB max.; 15 dB max.

with optional integral linearizer

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 40 MHz band)

0.01 ns/MHz linear max. 0.001 ns/MHz sq. parabolic max.

0.5 ns pk-pk ripple max.

Primary Power

Voltage Frequency Single phase, 200-240 VAC $\pm 10\%$

47-63 Hz

Power Consumption 2.3 kVA typ.

(at saturated RF output power)

2.5 kVA max.

Power Factor 95 min.

Inrush Current 200% max.

Environmental

Ambient Temperature -40° to + 50°C operating -40° to + 70°C non-operating

Relative Humidity 100% condensing

Altitude 10,000 ft. with standard adiabatic

derating of 2°C/1000 ft., operating; 50,000 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 condition.

Acoustic Noise 68 dBA (as measured at 3 ft.)

Mechanical

Cooling Forced air w/ integral blower.

RF Output Connection CPR-137 waveguide flange, grooved, threaded UNF 2B 10-32

RF Output Monitor Type N female
Dimensions (W x H x D) 14.5 x 13.1 x 24 in.

(368 x 333 x 610)

Weight 82 lbs (37.3 kg) max.

Heat Dissipation

 Into Hub
 200 W

 Ducted
 2000 W





KEEPING YOU ON THE AIR not up in the air

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.



Communications & Power Industries