

# Compact Medium Power Amplifier for Test and Measurement Applications

7.5 to 12.0 GHz

The VZX-6993J4  
-POBO  
400 Watt TWT  
Compact Medium  
Power Amplifier.



## Compact

Three rack units tall (5.25 in/133 mm).

## Versatile

Ultra wide-band, automatic fault recycle, user friendly microprocessor-controlled logic with integrated computer interface, VSWR soft-fail protection, digital metering, quiet operation for a laboratory environment.

IEEE interface and an integral solid state preamplifier are included as standard features.

## Efficient

Utilizes dual-depressed collector helix traveling wave tube for maximum 1.5 kVA operation.

## Power Output

7.5 - 12.0 GHz 400 Watts (min)

## Global Applications

230 VAC operation. Designed to meet International Safety Standard EN61010 and Electromagnetic Compatibility 89/336/EEC.

## Easy to Maintain

Modular design and built-in fault diagnostic capability backed by CPI's worldwide 24-hour customer support network that includes 9 regional factory Service Centers.



INSTRUMENTATION  
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Communications & Power Industries Canada, Inc.  
45 River Drive / Georgetown, Ontario / Canada L7G 2J4  
Hot Line Telephone: 1-800-267-JETSAT  
TEL: 905-877-0161 / FAX: 905-877-5327  
E-MAIL: [marketing@cmp.cpii.com](mailto:marketing@cmp.cpii.com)  
WEB: [www.cpii.com/cmp](http://www.cpii.com/cmp)

7.5 to 12.0 GHz

400W Compact Medium Power Amplifier

## OPTIONS:

- *Input Isolator (-1 dB gain)*
- *Remote Control Panel*
- *115 VAC External Step-Up Transformer*

## SPECIFICATIONS, VZX-6993J4-POBO

### Electrical

TWT Model Number	0101968100
Frequency	7.5 to 12.0 GHz
Output Power	
TWT	400 W min. (typical 450 W)
Flange	375 W min. (typical 425 W)
Gain	53.5 dB min. at rated power output; 55.5 dB min. at small signal
RF Level Adjust	0 to 20 dB
Gain Stability	±0.25 dB/24hr. max. (after 30 min. warmup and at constant drive and temperature)
Gain Variation	12 dB pk-to-pk, typical
Input VSWR	2.5:1 typical 1.5:1 max. (with optional input isolator)
Output VSWR	2.5:1 typical
Load VSWR	1.5:1 max. for full spec compliance 2.0:1 max. continuous operation
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	Meets IESS 308/309 with 3 dB margin
Noise and Spurious	-50 dBc typical excluding harmonics
Noise Figure	15 dB max.
Harmonic Content	-3 dBc typical at lower band edge decreasing to -15 dBc typical at upper band edge
Primary Power	
Voltage	220-240 VAC ±10%, single phase
Frequency	47-63 Hz
Power Consumption	1.4 kVA typical 1.5 kVA max.
Inrush Current	200% max.

### Environmental (operating)

Ambient Temperature	-10° to +40°C operating
Relative Humidity	95% non-condensing
Altitude	10,000 ft. with standard adiabatic derating of 2°C/1000 ft., operating
Shock and Vibration	As normally encountered in a protected engineering laboratory environment
Acoustic Noise	65 dBA @ 3 ft. from amplifier

### Mechanical

Cooling (TWT)	Forced air with integral blower. Rear air intake & exhaust.
RF Connectors	
Input	Type-N female
Output	WRD-112
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	70 lbs (32 kg)
Safety	Designed to meet EN61010



**KEEPING YOU ON THE AIR**  
*not up in the air*



**INSTRUMENTATION  
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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.