

# 40W CW TWT Power Amplifier for EMI/EMC Testing & Communications

**Q-Band**

## The New VZQ-2791J1 Series

40 watt CW (50 W  
nom.) Q-band TWT  
Power Amplifier—  
Environmentally  
sealed compact  
design for outdoor  
operation



### Plays in the Rain

Rugged, compact and lightweight amplifier designed for outdoor use.

### Efficient and Cost Effective

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

### Simple to Operate

User-friendly microprocessor-controlled logic with integrated RS422/485 computer interface. Digital metering is standard.

### 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-61000-3-2 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 fifteen regional factory service centers.

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**Q-Band**

**40W CW TWT Power Amplifier**

## SPECIFICATIONS, Q-band Indoor/Outdoor TWTA

### Electrical

Model Number	VZQ-2791J1
Frequency	40.0 - 50.0 GHz
Output Power	
TWT	50 W
Flange	40 W, min., 50 W typ.
Bandwidth	10.0 GHz
RF Level Adjust Range	0 to 20 dB
Attenuator Step Size	0.1 dB typ.
Gain	
at rated power	50 dB min.
at small signal	53 dB min.
Small Signal Gain Variation	±5.0 dB pk-pk across the full bandwidth
Gain Stability (at constant drive and temperature)	±0.25 dB/24 hours max. (after 30 minute warm-up) ±1.0 dB over temperature range
VSWR	
Input	2:1
Output	2:1
Load	1.5:1 max.; no degradation, infinite VSWR without damage
Phase Noise	IESS 308 continuous mask
AM/PM Conversion	2.5°/dB max. for a single carrier up to 6 dB below rated power (1.0°/dB up to 3 dB OBO with linearizer)
Noise and Spurious	-50 dBc
Noise Figure	10 dB typ.
Primary Power	Single phase, 100-240 VAC ± 10%, 47-63 Hz
Power Consumption	650 VA typ, at saturated RF output power; 750 VA max.
Power Factor	0.95 min.
<b>Environmental (operating)</b>	
Ambient Temperature	-40°C to +45°C
Relative Humidity	100% condensing with outdoor option, 95% non-condensing standard
Altitude	10,000 ft with standard adiabatic derating of 2°C/1000 ft
Shock and Vibration	20 g peak estimated, truck transportation
<b>Mechanical</b>	
Cooling	Forced air with integral blower
RF Input Connection	WR-22F
RF Output Connection	WR-32G
RF Output Monitor	2.9 mm SMA Female
Dimensions (WxHxD)	10.25 x 9.5 x 20 inches (261 x 242 x 508 mm)
Weight	52 lbs (23.6 kg) max.
<b>Heat and Acoustic</b>	
Heat Dissipation	450 W typ.
Acoustic	65 dBA typ.

### OPTIONS:

- Ethernet Interface
- Outdoor Operation



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

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