

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.

satcom division

811 Hansen Way
P.O. Box 51625, Palo Alto, CA 94303

tel: +1 (650) 846-3803
fax: +1 (650) 424-1744

e-mail: marketing@satcom.cpii.com
www.cpii.com/satcom

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.

Environmental (operating)

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

Mechanical

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.

Heat and Acoustic

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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