150W CW TWT Power Amplifier

for EMI/EMC Testing & Communications

Ka-Band

The VZA-2790J1 Series

150 watt CW Ka-band TWT Power Amplifier—Environmentally sealed compact design for outdoor operation

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 2004/108/EC 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 more than twenty regional factory service centers.

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Ka-Band
150W CW TWT Power Amplifier

SPECIFICATIONS, Ka-band TWTA

Electrical

Model Number	VZA-2790J1
Frequency	26.5 - 40.0 GHz
Output Power	
TWT	150 W
Flange	100 W, min., 125 W typ.
Bandwidth	13.5 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	±0.25 dB/24 hours max. (after 30 minute warm-up)
drive and temperature)	±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-28F (WR-34 optional)
RF Output Connection	WR-34G (WR-28 optional)
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*

Quality Management System - ISO 9001:2008

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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