VSTAR 30 Millimeter TWT Amplifier

for Testing and Measurement Applications

Ka-Band

VZA-6902J1

40 Watt split mount millimeter wave TWT power amplifier—environmentally sealed compact design for indoor or outdoor operation

Split Mount

The split mount configuration provides for direct feed mounting to minimize waveguide RF losses. The power supply maintains the convenience of a rack mounted unit with built-in monitors and controls located up to 12 meters away.

Versatile

Ultra wide-band, automatic fault recycle, user friendly microprocessor-controlled logic with integrated RS-422/485 computer interface. IEEE interface and other options available.

Easy to Maintain

Automatic sequencing of voltages and filament time delay. The power supply HV outputs to the appropriate TWT label voltages are automatically set with an integrated, individualized TWT personality interface module.

Global Applications

Meets International Safety Standard EN-60215, Electromagnetic Compatibility 2004/108/EC and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements. Universal input voltage

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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SPECIFICATIONS,
40 W Ka-band Outdoor LPA

Electrical

Model Number	VZA-6902J1
Frequency	26.5 - 40.0 GHz
Output Power	
TWT	40 W min.
Flange	39 W min.
Bandwidth	13.5 GHz, instantaneous
RF Level Adjust Range	0 to 20 dB
Attenuator Step Size	0.1 dB typ.
Gain at rated power	46 dBm min.
Gain Variation	±5.0 dB over 13.5 GHz, typ. at 6 dB backoff
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	1.7:1 typ, 2.4:1 max.
Output	1.35:1 typ, 1.50:1 max.
Load	2.0:1 max.; no degradation, infinite VSWR without damage
Phase Noise	-120 dBc/Hz max. from 1 to 350 MHz, -6 dB below IESS-308 below 1 MHz (-21 dBc/Hz typ.)
Noise and Spurious	-50 dBc
Noise Power Out	+23 dBm max. total
Primary Power	Single phase, 100-264 VAC ± 10%, 47-63 Hz
Power Consumption	700 VA typ, 1200 VA max.
Power Factor	0.95 min.

Environmental (operating)

Ambient Temperature	RF Unit: -10°C to +50°C (+65°C with solar loading); Power Supply: -10°C to +50°
Relative Humidity	RF Unit: 100% condensing; Power Supply: 95% non-condensing standard
Altitude	10,000 ft with standard adiabatic derating of 2°C/1000 ft
Shock and Vibration	As encountered in normal transportation

Mechanical

Cooling	Forced air with integral blower
RF Input Connection	WR-28 waveguide flange
RF Output Connection	WR-28 waveugide flange
RF Output Monitor	Type K Female
Dimensions (WxHxD)	RF unit 8.5 x 12.83 x 20 in. (216 x 324 x 508 mm.); PS unit 19 x 5.25 x 24 in. (483 x 133 x 610 mm.)
Weight	RF unit 40 lbs max. (18.2 kg); PS unit 50 lbs max. (22.7 kg)
HV Cables/LV Cables	2.5 meters - 0 cm/+30 cm

Heat and Acoustic

Heat Dissipation	450 W typ.
Acoustic	65 dBA typ.

OPTIONS:

- *Input Isolator*
- *IEEE-488 Interface*
- *RS-232 Interface*
- *Interconnect cable to 12 meters*

CE 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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