VSTAR® 30 Millimeter TWT Amplifier

for Test and Measurement Applications

K-Band

VZK-6901J1

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-61010, and Electromagnetic Compatibility 89/336/EEC to satisfy worldwide requirements. Universal input voltage range.

Worldwide Support

Backed by over two decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes 9 regional factory Service Centers.

CPI wireless solutions
INSTRUMENTATION
AMPLIFIERS

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OPTIONS:

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

SPECIFICATIONS, VZK-6901J1

Electrical

TWT Model Number	VTK-6193D series
Frequency	18.0 to 26.5 GHz
Output Power	
TWT	40W min.
Flange	39W min.
Bandwidth	8.5 GHz, instantaneous
Gain	
at rated power	46 dB min.
Gain Control Range	20 dB min.
Gain Variation	
at 6 dB backoff	±5 dB over 8.5 GHz, typ.
Gain Stability	±0.25 dB/24 hr. max.at constant drive and temperature (after 1 hour warmup period)
Input VSWR	1.7:1 typ.; 2.4:1 max. 1.35:1 typ.; 1.5:1 max., (with optional input isolator)
Output VSWR	2.0:1 typ.; 2.7:1 max.
Load VSWR	2.0:1 max.; no degradation, infinite VSWR without damage
Phase Noise	
1.0 to 350 MHz	-120 dBc/Hz max.
Below 1.0 MHz	-6 dB below IESS 308 (-21 dB typ.)
Spurious	-50 dBc
Noise Power Out	+23 dBm max. total
Primary Power	100 to 264 VAC, 47 to 63 Hz, single phase
Power Consumption	700 VA typ.; 1200 VA max.
Power Factor	.95 min.

Environmental (Operating)

Ambient Temperature	
RF unit	-10 to +50°C (+65 with solar loading)
PS unit	-10 to +50°C
Relative Humidity	
RF unit	100% condensing
PS unit	95% non-condensing
Altitude	10,000 ft. with standard adiabatic derating of 2°C/1,000 ft. operating
Shock and Vibration	As encountered in normal transportation
Acoustic Noise	Meets EN61010 requirements

Mechanical

Cooling	Forced air
RF Connectors	
Input and Output	WR-42 waveguide flange
RF Output Monitor	Type K female
Dimensions, (W x H x D)	
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 (Standard amplifier, no options)	
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.

CE

ISO 9001

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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