

CPI 1.0 kW X-Band TWT Amplifier

Compact

Provides 1000 watts of power in the 8.0 to 12.75 GHz frequency band in a compact 19-inch, rack-mount, dual drawer configuration for wideband testing.

Efficient and Reliable

Employs a CPI dual-depressed collector helix traveling wave tube which increases efficiency by a nominal 20% over conventional single collector TWTs, and a power supply designed with a minimum number of parts for maximum uptime.

Simple to Operate

Integrated microprocessor control lets the user adjust and monitor all operating parameters from one easy-to-read local or remote panel, using straightforward menu-driven commands.

Safety

Conforms to international safety and EMC compliance standards.

Easy to Maintain

Modular design provides for easy installation and maintainability in the field.

Worldwide Support

Backed by more than four decades of RF engineering experience, and CPI's world wide 24-hour customer support network that includes more than twenty regional factory service centers.



Model VZX-2783C1

CPI 1.0 kW X-Band TWT Amplifier
for **Instrumentation Applications**

OPTIONS

- Mimic Remote Control Panel



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1.0 kW TWT High Power Amplifier

Specification	Model VZX-2783C1
Frequency	8.0 to 12.75 GHz
TWT Model Number	VTX6389A2
Output Power, TWT Output Power, Flange	1200 W min. 1000 W min.
Bandwidth	4.75 GHz
Gain	63 dB min. at rated power output 66 dB typ. at small signal
RF Level Adjust Range	0 to 20 dB continuous
Output Power Adjustability	±0.1 dB
Gain Stability	±0.25 dB/24 hr typ. (at constant drive and temp.)
Small Signal Gain Slope	0.02 dB/MHz max.
Small Signal Gain Variation	8.0 dB pk-pk max. over the 4.75 GHz frequency band
Input VSWR	2.5:1 typ. (1.5:1 max. with option A, input isolator)
Output VSWR	2.5:1 typ
Load VSWR	1.67:1 max. for full spec compliance, (8-18 GHz); any value without damage
Residual AM	-45 dBc up to 4 kHz; -20 [1.25 +log F (kHz)] dBc, 4 kHz to 500 kHz (F in kHz); -80 dBc above 500 kHz
Spurious Output	-40 dBc max. (at rated power with load VSWR maximum of 1.67:1 max. over 8 to 18 GHz)
Harmonic Content	-10 dBc typ.
Prime Power	3 phase, 5 wire 208/120 V ±10%, or 380-415/220-240 V ±10%, 47-63 Hz; 5 wires are: Phase 1, 2 & 3, neutral and ground connection
Power Factor	0.90 min. (at 50 Hz)
Power Consumption	6.9 kVA (typical) 7.5 kVA max.
Ambient Temperature	0° to +40°C operating -40° to +70°C non-operating
Relative Humidity	95% non-condensing
Altitude	Up to 10,000 ft (3000 m) with standard adiabatic derating of 2°/1000 ft.
Shock and Vibration	Designed to meet conditions normally encountered in the laboratory
Acoustic Noise	72 dBA one meter from front panel
Cooling (TWT)	Forced air with integral blower and power supply fan. Maximum external pressure loss allowable: 0.25 inch water gauge.
RF Input Connection	Type N female
RF Output Connection	WRD-750 waveguide
RF Power Monitors	Type-N female
Dimensions (W x H x D) RF Drawer Power Supply	19 x 19.2 x 28 in. (483 x 488 x 711 mm) 19 x 10.4 x 31 in. (483 x 264 x 787 mm)
Weight RF Drawer Power Supply Interconnect Cables	100 lbs (45 kg) nom. 115 lbs (52 kg) nom. 10 lbs (4.5 kg) nom.