# **CPI 500W S/C-Band TWT Amplifier**

for Instrumentation Applications

### The VZS/C-2780C2

500 watt TWT
High Power Amplifier
features high
efficiency, small
size and an integral
computer interface.



Provides 500 watts of power in the 2.0 to 8.0 GHz frequency band in a compact 19-inch rack-mount dual drawer configuration for wideband testing.

## **Efficient and Reliable**

Employs CPI dual-depressed collector helix traveling wave tubes, increasing 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. Includes a built-in interface and serial bus for operation from the station computer.



### 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 over two decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes fifteen regional factory service centers.



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### OPTIONS & COMPANION PRODUCTS:

• Mimic Remote Control Panel

### SPECIFICATIONS, VZS/C-2780C2

#### Electrical

Frequency 2.0 to 8.0 GHz TWT Model Number VTG6292 (modified)

**Output Power** 

Residual AM

TWT 320 W min. (each) Flange 500 W min. Bandwidth 6.0 GHz

Gain 57 dB min. at rated power output;

57 dB typ. at small signal

RF Level Adjust 0 to 20 dB continuous

Output Power Adjustability ±0.1 dB

Gain Stability (typical) ±0.25 dB/24 hr max.

(at constant drive and temp.)

Small Signal Gain Slope 0.02 dB/MHz max.

Small Signal Gain Variation 10.0 dB pk-pk max. over the

6 GHz bandwidth (typical) Input/Output VSWR

Load VSWR 2.0:1 max. for full spec compliance;

-45 dBc up to 4 kHz;

any value without damage

 $-20 [1.25 + \log F (kHz)] dBc$ 4 kHz to 500 kHz (F in kHz); -80 dBc above 500 kHz

Harmonic Content -6 dBc typ. at 8 GHz Primary Power  $208/120 \text{ V} \pm 10\%$ , or

3 phase, 5 wire 380-415/220-240 V ±10%, 47-63 Hz;

> 5 wires are: Phase 1, 2 & 3, neutral and ground connection. Neutral (wire 5

can be used if available)

Power Factor 0.90 min. (at 50 Hz)

**Power Consumption** 6.9 kVA typ.

7.5 kVA max.

### **Environmental (Operating)**

**Ambient Temperature** -10° to +40°C operating

-20° 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

### Mechanical

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** Type SC female **RF Power Monitors** Type-N female

Dimensions (W x H x D)

RF Drawer 19 x 17.5 x 28 in.

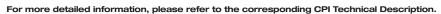
(483 x 445 x 711 mm) Power Supply 19 x 8.75 x 24 in. (483 x 223 x 610 mm)

Weight

RF Drawer 180 lbs (82 kg) Power Supply 100 lbs (45 kg) Interconnect 10 lbs (4.5 kg)







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.





