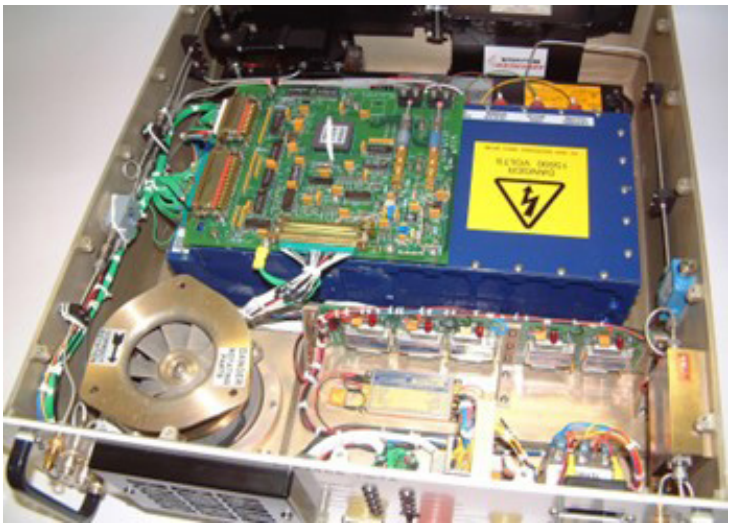
Helix-Based TWTA

PTX7981

CPI Electron Device Business - Traveling Wave Tube Transmitter (TWTA)



PTX7981 Power Amplifier Module (PAM)

The PTX7981 power amplifier module (PAM) is a packaged medium-power microwave transmitter. The PAM integrates a high voltage power-supply unit (HVPSU), traveling wave tube (TWT) assembly, RF preamplifier, phase shifter, and waveguide output coupler within its chassis assembly.

All component are designed and manufactured for use in harsh military environments, ensuring high reliability and ease of maintenance.

The unit includes a reverse power protection circuit. Its control interface allows remote operation and status monitoring, providing multiple diagnostic outputs for testing purposes.

To learn more about CPI EDB's transmitter capabilities, contact CPI EDB at ElectronDevices@cpi-edb.com or call +44 (0)20 8573 5555

FEATURES:

- Frequency: 9.0 GHz to 9.5 GHz typical
- Output power: 8000 W
- Duty cycle: Up to 5%
- Weight: 66.1 lbs (30 kgs) max

BENEFITS:

- Excellent thermal management
- High electrical efficiency
- High reliability

APPLICATIONS:

- Military radar
- Ground mobile
- Naval
- Airborne

Specification

The PAM can be supplied for operation at alternative peak power and average power combinations depending upon the TWT selected.

The PTX7981 variant has typical operation as follows:

Electrical

Frequency range	X-band (typically 9.0 - 9.5 GHz)
Peak output power	8000 Watts
Gain	60 dB max
Duty cycle	Up to 5%
Pulse length	200 ns to 50 µs
PRF	50 kHz max
Maximum spurious FM	-90 dBc
Maximum random FM measured in 100 Hz bandwidth	-120 dBc/Hz
Prime power	3 phase, 4 wire 115 VAC line-neutral 400 H
TWT/Gun type	Gridded helix or ring loop construction

Mechanical

Mechanical outline	Dimensions 560 W x 380 L x 210 H (mm approx)
Weight	66.1 lbs (30 kgs) max
Cooling	Conduction cooled
Mounting	The unit can be supplied with or without chassis slide rails

Application

Military radar, ground mobile, naval or airborne

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