

# 35.75 GHz Emitter VZQ2974A5

## DESCRIPTION

The model **VZQ2974A5** is a self contained 35.75 GHz Emitter consisting of an air-cooled Extended Interaction Klystron (EIK), power supply modulator, cooling system, input and output RF components, and supporting electronics for control, monitoring and system protection contained in a wheeled cabinet. Remote operation is available through an interface to a laptop computer using the software provided. This equipment comes with a full complement of operating, control and protective equipment and supporting documentation.

## SPECIFICATIONS

Operating Frequency:	35.75 GHz
Bandwidth (-3dB)	100 MHz
Output Power:	2.0 kW peak 1.0 kW at band edges
Harmonic Distortion:	-20dBc maximum
Noise Figure:	35dB maximum
Duty Cycle:	25% maximum
Pulse Width:	Variable; 200nsec to 15 $\mu$ sec
PRF:	Variable; 0 to 20kHz
RF Output Connection:	WR-28 with UG-599/U flange
Dimensions:	55" H x 23" W x 32" D
Weight:	550 lbs.
Primary Power:	220 VAC, 50/60Hz, single phase
Operating Temperature:	+5° to +40° Celsius

## FEATURES

- Internal timing for Pulse width and PRF triggering or remote triggering and synchronization via external TTL inputs.
- Front panel control or remote control via rear panel mounted, IEEE-488 bus.
- Internal forced air cooling permitting continuous full power operation.



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**Amplifier Protection:**

Over-temperature  
RF output mismatch  
Waveguide arc

**Front Panel Fault / Alarm Display:**

High Reflected Power  
Waveguide Arc  
Tube Over-temperature  
Excessive Duty Cycle

**Front Panel Gage / LCD or Controller Values:**

Forward RF Power  
Reverse RF Power  
Body Current  
Cathode Voltage  
Beam Current  
Power Supply Temperature  
RF Frequency  
RF Attenuator Setting

**Available accessories:**

- Source oscillator with power and frequency adjustment
- High power rated bi-directional coupler
- Integrated dry air pump providing positive air flow within the waveguide.

**CPI Canada** has developed and manufactured millimetre wave klystrons for over 35 years. We specialize in pulsed and CW devices from 17 GHz to 220 GHz. Many of these pulsed or CW EIKs may be configured for use in high power threat emitter service or customized as required.

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The values listed represent typical performance from testing.  
Formal controlled specifications, with minimum and maximum values,  
for use in equipment design, may be obtained from CPI.

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