

IQVCXO-161 LEADED VCXO

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Description

- A 14 pin DIL voltage controlled crystal oscillator (VCXO) in a hermetically sealed metal package

Package Outline

- 14-pin DIL

Frequency Range

- 1 to 90MHz

Output Compatibility & Load

- HCMOS/TTL
- Drive Capability: 15pF/10TTL max

Standard Frequency Stabilities

- $\pm 25\text{ppm}$, $\pm 50\text{ppm}$ @ $V_c = 2.5\text{V}$ (inclusive of supply voltage and output load variations over the operating temperature range)

Operating Temperature Ranges

- 0 to 70°C (IQVCXO-161)
- -20 to 70°C (IQVCXO-161S)
- -40 to 85°C (available 30 to 90MHz only) (IQVCXO-161I)

Storage Temperature Range

- -40 to 85°C

Voltage Control (pin 1)

- 2.5V $\pm 2.0\text{V}$

Pullability

- $\pm 100\text{ppm}$ min

Modulation Bandwidth

- >15kHz

Environmental Specification

- Terminal Strength: 0.91kg max. force perpendicular to top & bottom
- Hermetic Seal: not to exceed 1×10^{-8} mBar litres of Helium leakage
- Solderability: MIL-STD-202E, Method 208C
- Vibration: 10 to 55Hz 0.76mm displacement, sweep 60 seconds, duration 2 hours
- Rapid Change of Temperature over Operating Temperature Range: 10 cycles
- Shock: 981m/s² for 6ms, three shocks in each direction along the three mutually perpendicular planes

Marking Includes

- Model Number + Frequency + Operating Temperature Code (if applicable) + Frequency Stability Code + Date Code

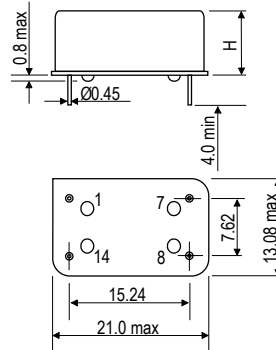
Packaging

- Bulk

Minimum Order Information Required

- Frequency + Model Number + Operating Temperature Code + Frequency Stability

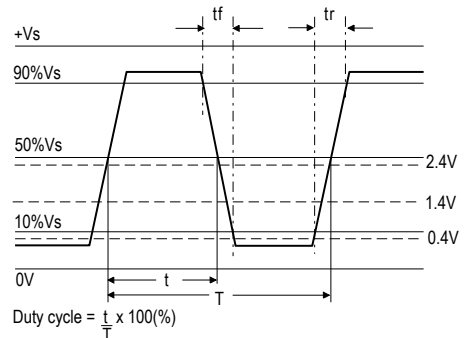
Outline (mm)



Pin Connections
 1. Voltage Control
 7. GND
 8. Output
 14. +Vs

Frequency Range	Height (H)
1.0 to < 30.0MHz	5.1 max
30.0 to 90.0MHz	8.0 max

Output Waveform



VCXOs

Electrical Specification - maximum limiting value

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Pullability	Rise Time (tr)	Fall Time (tf)	Duty Cycle	Model Number
1.0 to < 24.0MHz	±25ppm, ±50ppm	5.0 ±0.25V	15mA	±100ppm min	10ns	10ns	40/60%	IQVCXO-161
24.0 to < 30.0MHz			40mA					
30.0 to 90.0MHz			30mA		5ns	5ns		

Ordering Example 22.0MHz IQVCXO-161 S B

Frequency _____

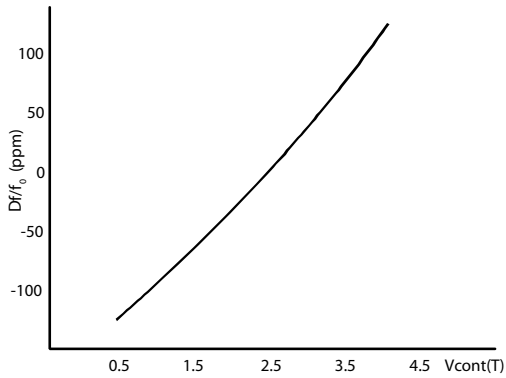
Model No. _____

Operating Temperature Code: I* = -40 to 85°C; S = -20 to 70°C; not applicable for 0 to 70°C _____

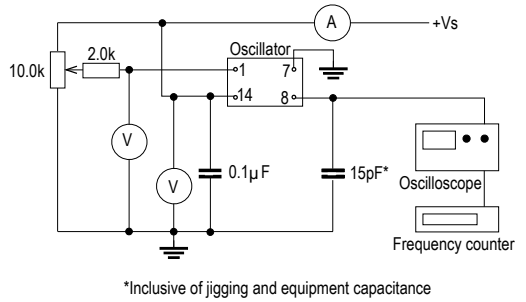
Frequency Stability: A = ±25ppm; B = ±50ppm _____

* Please note: Available 30 to 90MHz only

Typical Voltage Control Curve @25°C & 20.0MHz



Test Circuit



VCXOs