

# IQVCXO-161

ISSUE 6; 23 AUGUST 1998

## Delivery Options

- Please contact our sales office for current leadtimes

## Output Compatibility

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

## Package Outline

- 14 pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seals

## Standard Frequency Stabilities

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

## Operating Temperature Ranges

- 0 to 70°C
- -20 to 70°C
- -40 to 85°C (available 30.0 to 90.0MHz only)

## Storage Temperature Range

- -40 to 85°C

## Environmental Specification

- Terminal Strength: 0.91kg max. Force perpendicular to top & bottom
- Hermetic Seal: not to exceed  $1 \times 10^{-8}$  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/s<sup>2</sup> for 6ms, three shocks in each direction along the three mutually perpendicular planes

## Output Frequency Change

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

## Voltage Control Pin 1

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

## Modulation Bandwidth

- >15kHz

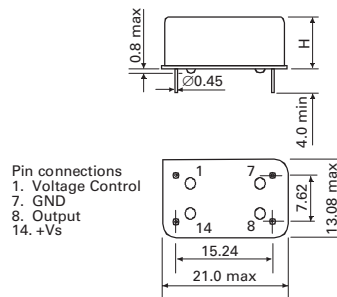
## Marking

- Model number
- Frequency Stability Code
- Frequency Tolerance Code (Optional)
- Frequency
- Date Code (Year/Week)

## Minimum Order Information Required

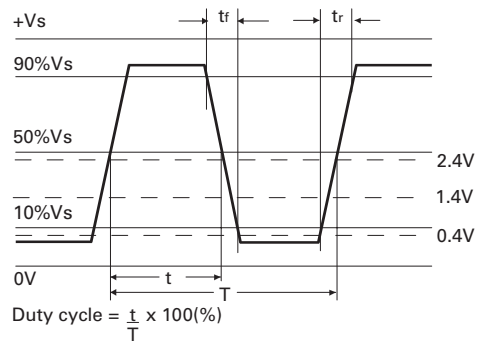
- Frequency + Model Number + Operating Temperature + Frequency Stability

## Outline in mm



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

## Output Waveform - HCMOS/TTL



**Electrical Specifications - maximum limiting values when measured in HCMOS test circuit.**

Frequency Range	Frequency Stability	Supply Voltage	Output Frequency Change	Supply Current	Rise Time( $t_r$ )	Fall Time( $t_f$ )	Duty Cycle	Model Number
1.0 to < 24.0MHz	$\pm 25$ ppm $\pm 50$ ppm	5V $\pm 0.25$ V	$\pm 100$ ppm	15mA	10ns	10ns	40/60%	IQVCXO-161
24.0 to < 30.0MHz	$\pm 25$ ppm $\pm 50$ ppm	5V $\pm 0.25$ V	$\pm 100$ ppm	40mA	10ns	10ns	40/60%	IQVCXO-161
30.0 to 90.0MHz	$\pm 25$ ppm $\pm 50$ ppm	5V $\pm 0.25$ V	$\pm 100$ ppm	30mA	5ns	5ns	40/60%	IQVCXO-161

**Ordering Example** 22.0MHz IQVCXO-161 S B

Frequency \_\_\_\_\_

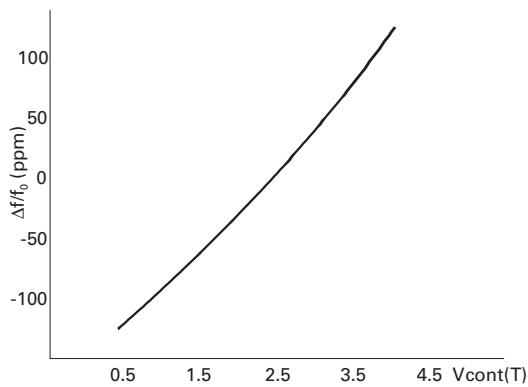
Model number \_\_\_\_\_

Operating Temperature Code: \*X = -40 to 85°C, S = -20 to 70°C, Not applicable for 0 to 70°C \_\_\_\_\_

Frequency Stability: A =  $\pm 25$ ppm, B =  $\pm 50$ ppm \_\_\_\_\_

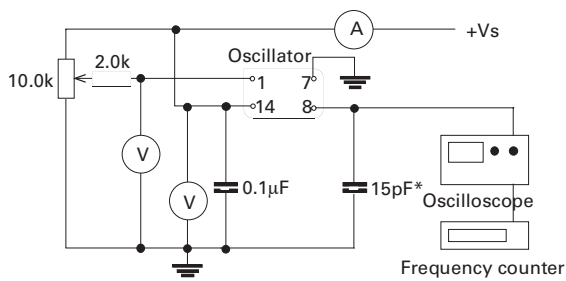
\*Please note: Available 30.0 to 90.0MHz only

**Typical Voltage Control Curve @ 25°C & 20.0MHz**



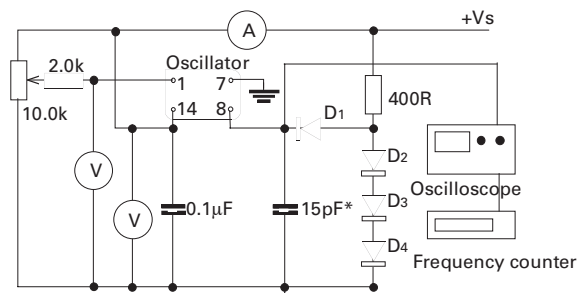
LEADED VCXOs

**Test Circuit - HCMOS**



\*Inclusive of jigging & equipment capacitance

**Test Circuit - TTL**



\*Inclusive of jigging & equipment capacitance