IQVCXO-172, -173, -174

ISSUE 8; 18 MAY 1998

Delivery Options

- Please contact our sales office for current leadtimes

Output Compatibility

- HCMOS/LS TTL

Package Outlines

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

Standard Frequency Stabilities

- ±25ppm, ±50ppm , ±100ppm @ V_C=2.5V (inclusive of supply voltage & output load variations over the operating temperature range)

Operating Temperature Range

- 0 to 70°C

Storage Temperature Range

- −30 to 85°C

Output Frequency Change

- ±50ppm min (IQVCXO-172)
- ±100ppm min (IQVCXO-173)
- ±200ppm min (IQVCXO-174)
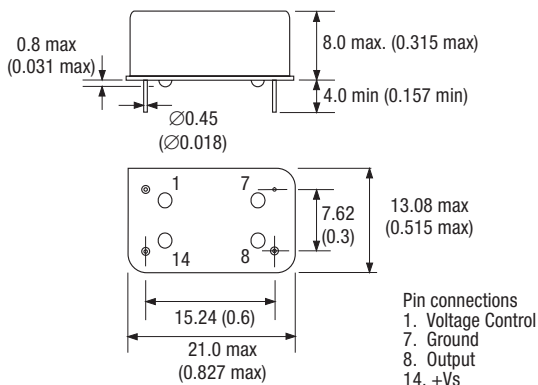
Voltage Control Pin 1

- 2.5V ±2.0V

Marking

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

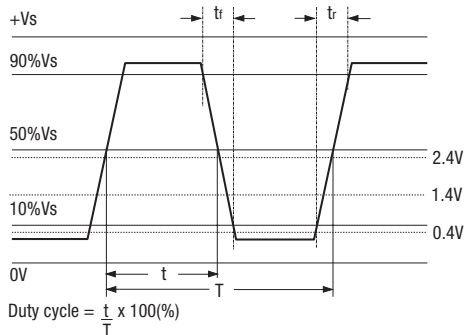### Minimum Order Information Required

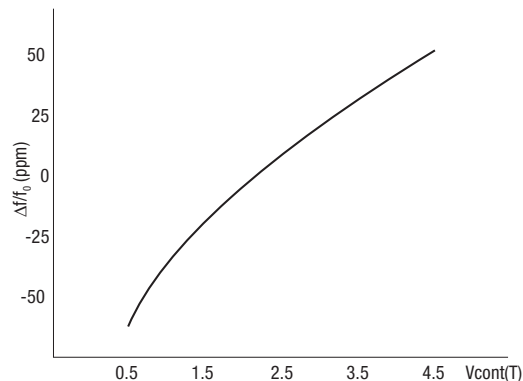- Frequency + Model Number + Frequency Stability

Outline in mm (inches)

0.8 max (0.031 max)

8.0 max. (0.315 max)

4.0 min (0.157 min)

∅0.45 (∅0.018)

7.62 (0.3)

13.08 max (0.515 max)

15.24 (0.6)

21.0 max (0.827 max)

Pin connections
1. Voltage Control
7. Ground
8. Output
14. +Vs

Output Waveform - HCMOS/LS TTL

+Vs

tr   tr

90%Vs

50%Vs   2.4V

1.4V

10%Vs   0.4V

0V

t

T

Duty cycle = $\frac{t}{T}$ x 100(%)

Typical Voltage Control Curve @ 25°C & 20.0MHz (IQVCXO-172)

$\Delta f/f_0$ (ppm)

50

25

0

-25
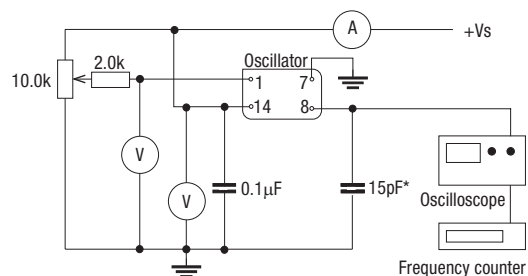
-50

0.5   1.5   2.5   3.5   4.5   Vcont(T)

Electrical Specification – maximum limiting values when measured in HCMOS test circuit

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Output Frequency Change	Rise Time (t_r)	Fall Time (t_f)	Duty Cycle	Model Number
1.0 to < 24.0MHz	±25ppm	5V±0.25V	20mA	±50ppm min	10ns	10ns	40/60%	IQVCXO-172
1.0 to < 24.0MHz	±25ppm ±50ppm	5V±0.25V	20mA	±100ppm min	10ns	10ns	40/60%	IQVCXO-173
1.0 to < 24.0MHz	±25ppm ±50ppm ±100ppm	5V±0.25V	20mA	±200ppm min	10ns	10ns	40/60%	IQVCXO-174
24.0 to 45.0MHz	±25ppm	5V±0.25V	40mA	±50ppm min	10ns	10ns	40/60%	IQVCXO-172
24.0 to 45.0MHz	±25ppm ±50ppm	5V±0.25V	40mA	±100ppm min	10ns	10ns	40/60%	IQVCXO-173
24.0 to 45.0MHz	±25ppm ±50ppm ±100ppm	5V±0.25V	40mA	±200ppm min	10ns	10ns	40/60%	IQVCXO-174

Ordering Example   22.0MHz   IQVCXO-172   A

Frequency ——————————————————————————————┘   │   │
Model No ——┘   │
Frequency Stability: A = ±25ppm, B = ±50ppm, C = ±100ppm ————————┘

Test Circuit - LS TTL

D_1 to D_4 = IN4148 or equivalent
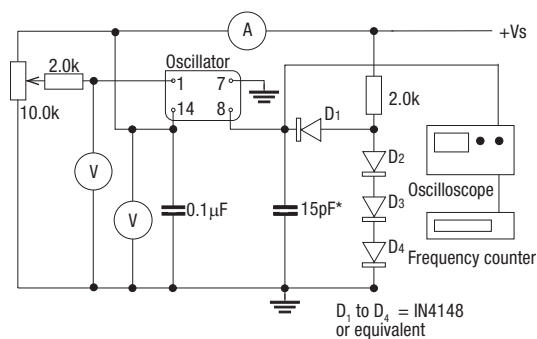
*Inclusive of jigging & equipment capacitance

Test Circuit - HCMOS

*Inclusive of jigging & equipment capacitance