IQXO-149 CLOCK OSCILLATORS

ISSUE 15; 1 NOVEMBER 2008 - RoHS 2002/95/EC

Description

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

Fast Make Capability

- Please see CFPP-149 series Programmable Oscillators for nearest equivalent fast make parts

Package Outline

- 14-pin DIL

Frequency Range

- 500kHz to 160MHz

Output Compatibility & Load

- Tri-state HCMOS/TTL
- Drive Capability: 50pF max or 10TTL (<70.0MHz)
  30pF max (70.0 to 160.0MHz)

Frequency Stabilities

- ±25ppm, ±50ppm, ±100ppm (over operating temperature range)

Operating Temperature Ranges

- 0 to 70°C (IQXO-149)
- –40 to 85°C (IQXO-149I)

Storage Temperature Range

- –55 to 125°C

Tri-state Operation

- No connection or Logic '1' to pin enables oscillator output
- Logic '0' to pin 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- Maximum 'pull-down' resistance required to disable output = 20kΩ
- Disable current 50µA typical

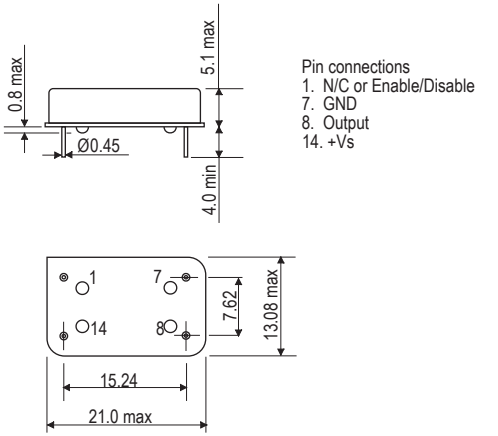
Environmental

- Terminal Strength: 0.91kg max force perpendicular to top & bottom
- Hermetic Seal: not to exceed $1x10^{-8}$ 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

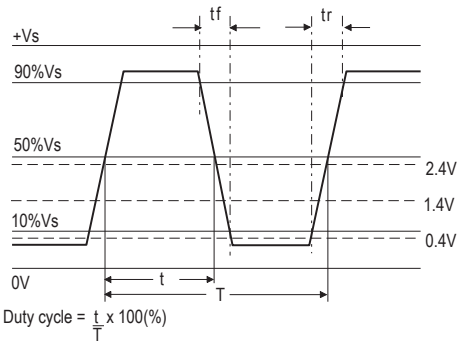
Marking Includes

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

Outline (mm)



Output Waveform



Packaging

- Bulk

Minimum Order Information Required

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

IQD Frequency Products Ltd, Station Road, Crewkerne, Somerset TA18 8AR, United Kingdom
Tel: +44 (1460) 270200; Fax: +44 (1460) 72578;
Email: info@iqdfrequencyproducts.com Web: www.iqdfrequencyproducts.com

Electrical Specifications - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr)	Fall Time (tf)	Duty Cycle	Model Number
500.0kHz to <5.0MHz	±25ppm, ±50ppm, ±100ppm	5V ±0.25V	20mA	15ns	15ns	45/55%	IQXO-149, 149I
5.0MHz to <16.0MHz				10ns	10ns		
16.0MHz to <30.0MHz			30mA				
30.0MHz to <50.0MHz			40mA	8ns	8ns		
50.0MHz to <70.0MHz			50mA	6ns	6ns	40/60%	
70.0MHz to <160.0MHz			70mA	5ns	5ns		

Ordering Example 22.0MHz IQXO-149 I B

Frequency:

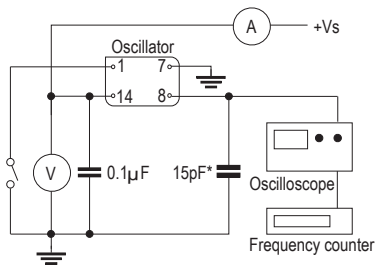
Model number:

Operating Temperature Code: I = –40 to 85°C Not applicable for 0 to 70°C

Frequency Stability: A = ±25ppm, B = ±50ppm, C = ±100ppm

Please note that the rise and fall times listed are the maximum values we specify to cover various frequency breaks.
In practice the actual values are generally lower depending upon the spot frequency chosen. For typical values please contact our sales office.

Test Circuit



*Inclusive of jigging and equipment capacitance

Note: Pin 1 = No connection on non tri-state models

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