

IQXO-331, -336 CLOCK OSCILLATORS

ISSUE 8; 18 NOVEMBER 2008 - RoHS 2002/95/EC

Description

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

Package Outline

- 14-pin DIL

Frequency Range

- 70MHz to 150MHz

Output Compatibility & Load

- AC MOS/TTL
- Drive Capability: 50pF max (70.0 to 110.0MHz)
15pF max (>110.0 to 150.0MHz)
10TTL
- Non tri-state (IQXO-336, -336I)
- Tri-state (IQXO-331, 331I)

Frequency Stabilities

- $\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$ (over operating temperature range)

Operating Temperature Ranges

- 0 to 70°C (IQXO-331, -336)
- -40 to 85°C (IQXO-331I, -336I)

Storage Temperature Range

- -55 to 125°C

Tri-state Operation (IQXO-331, -331I)

- No connection or Logic '1' to pin 1 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 = 20k Ω

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 + Operating Temperature Code (if applicable) + Frequency Stability Code + Frequency Tolerance Code (Optional) + Frequency + Date Code

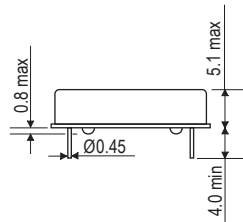
Packaging

- Bulk

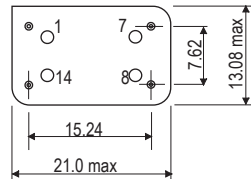
Minimum Order Information Required

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

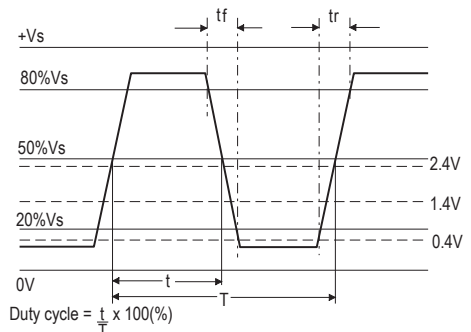
Outline (mm)



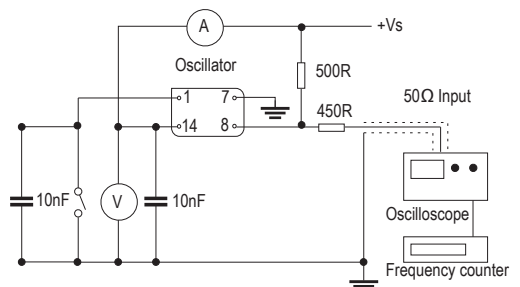
Pin connections
1. N/C or Enable/Disable
7. GND
8. Output
14. +Vs



Output Waveform



Test Circuit



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

Electrical Specifications - maximum limiting values

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time (tr) (20-80%)	Fall Time (tf) (80-20%)	Duty Cycle	Model Number
70.0MHz to <90.0MHz	±25ppm, ±50ppm, ±100ppm	5V ±0.25V	45mA	3ns	3ns	40/60%	IQXO-331, -331I, -336, -336I
90.0MHz to <115.0MHz			60mA				
115.0MHz to 150.0MHz			65mA				
Ordering Example							75.0MHz IQXO-331 I B
Frequency _____							
Model number: -331, -331I = Tri-state, -336, -336I = Non tri-state _____							
Operating Temperature Code: I = -40 to 85°C Not applicable for 0 to 70°C _____							
Frequency Stability: A = ±25ppm, B = ±50ppm, C = ±100ppm _____							