

IQXO-331, -336 Commercial Oscillator

ISSUE 5 ; 4 JUNE 2004

Delivery Options

- Please contact our sales office for current leadtimes

Output Compatibility

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

Package Outline

- 14-pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seal. Available over 0 to 70°C (IQXO-331, -336) or -40 to 85°C (IQXO-331I, -336I)

Standard 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

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

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

- Logic '0' to pin 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state
- No connection or Logic '1' to pin 1 enables oscillator output
- Maximum 'pull-down' resistance required to disable output = 20k Ω

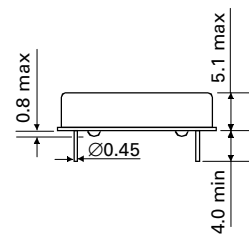
Marking

- Model number + Operating Temperature Code (if applicable)
- Frequency Stability Code
- Frequency Tolerance Code (Optional)
- Frequency
- Date Code (Year/Week)

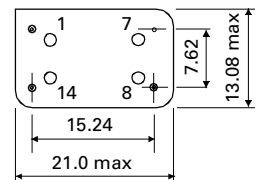
Minimum Order Information Required

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

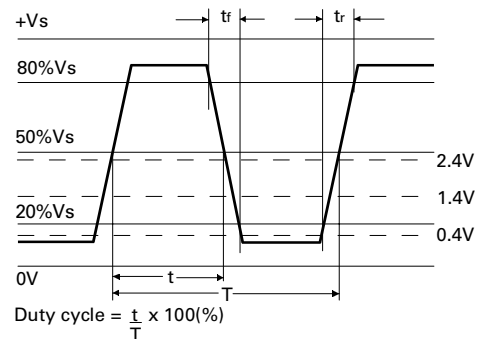
Outline in mm



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



Output Waveform - AC/MOS/TTL



Electrical Specifications - maximum limiting values when measured in AC MOS test circuit.

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time(t_r)	Fall Time(t_f)	Duty Cycle	Model Number
70.0 to < 90.0MHz	$\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	$5\text{V}\pm 0.25\text{V}$	45mA	3ns	3ns	40/60%	IQXO-331, -331I -336, -336I
90.0 to < 115.0MHz	$\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	$5\text{V}\pm 0.25\text{V}$	60mA	3ns	3ns	40/60%	IQXO-331, -331I -336, -336I
115.0 to 150.0MHz	$\pm 25\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	$5\text{V}\pm 0.25\text{V}$	65mA	3ns	3ns	40/60%	IQXO-331, -331I -336, -336I

Ordering Example

Frequency 75.0MHz

Model number: -331, -331I = Tri-state , -336, -336I = Non tri-state

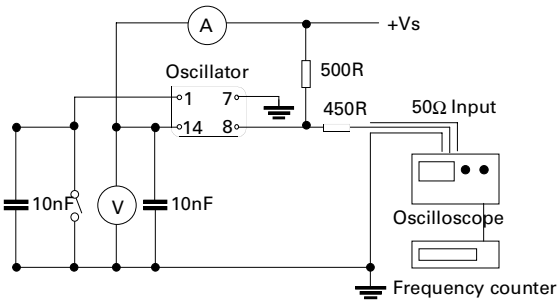
Operating Temperature Code: I = -40 to 85°C Not applicable for 0 to 70°C

Frequency Stability: A = $\pm 25\text{ppm}$, B = $\pm 50\text{ppm}$, C = $\pm 100\text{ppm}$

IQXO-331I B

LEADED SMDs

Test Circuit - AC MOS



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