

IQXO-331, -336 Commercial Oscillator

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Recommended For New Designs

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)
10 TTL
- Tri-state (IQXO-331, -331I)
- Non tri-state (IQXO-336, -336I)

Package Outline

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

Standard Frequency Stabilities

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

Frequency Tolerance at 25°C (Optional)

- ± 5 ppm, ± 10 ppm, ± 25 ppm

Operating Temperature Range

- 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/s^2 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 = $20\text{k}\Omega$

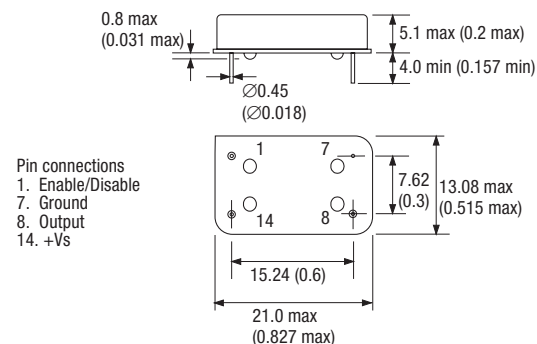
Marking

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

Minimum Order Information Required

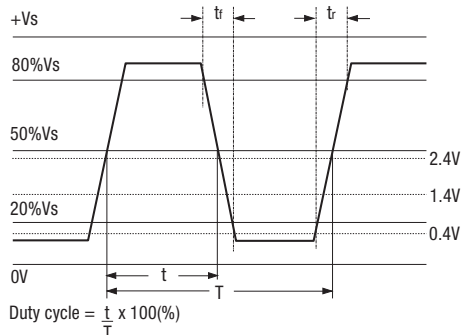
- Frequency + Model Number + Operating Temperature Code (if applicable) + Frequency Stability

Outline in mm (inches)



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

Output Waveform - AC/MOS/TTL



Electrical Specification – 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	± 25 ppm, ± 50 ppm, ± 100 ppm	5V ± 0.25 V	45mA	3ns	3ns	40/60%	IQXO-331, -3311, -336, -336I
90.0 to < 115.0MHz	± 25 ppm, ± 50 ppm, ± 100 ppm	5V ± 0.25 V	60mA	3ns	3ns	40/60%	IQXO-331, -3311, -336, -336I
115.0 to 150.0MHz	± 25 ppm, ± 50 ppm, ± 100 ppm	5V ± 0.25 V	65mA	3ns	3ns	40/60%	IQXO-331, -3311, -336, -336I

Ordering Example

75.0MHz IQXO-3311 B F

Frequency _____

Model No: -331, -3311 = Tri-state -336, -336I = Non tri-state _____

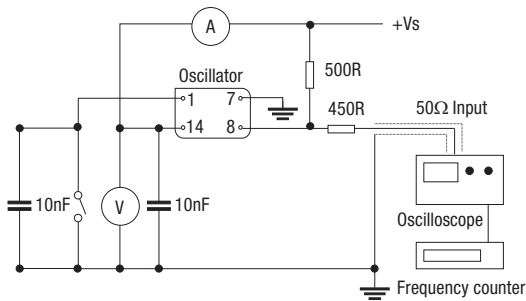
Operating Temperature Code: I = -40 to 85°C Not applicable for 0 to 70°C _____

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

Frequency Tolerance @ 25°C: D = ± 5 ppm; E = ± 10 ppm; F = ± 25 ppm _____

Please note: Code combination A F is not available

Test Circuit - AC MOS



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

SPXOs