

IQXO-350 CLOCK OSCILLATORS

ISSUE 19; 1 NOVEMBER 2008 - RoHS 2002/95/EC

Outline (mm)

Description

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

Package Outline

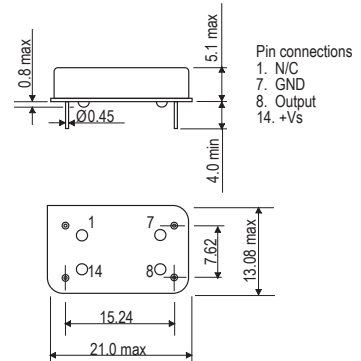
- 14-pin DIL

Frequency Range

- 1kHz to 160MHz

Output Compatibility & Load

- HC MOS/TTL
- Drive Capability: 50pF max or 10TTL (<70MHz)
30pF max (>70 to 160MHz)
15pF max (1 to < 100kHz)



Standard Frequency Stabilities

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

Operating Temperature Ranges

- 0 to 70°C (IQXO-350)
- 40 to 85°C (IQXO-350I)

Storage Temperature Range

- 55 to 125°C

Environmental Specification

- Terminal Strength: 0.91kg max force perpendicular to top and 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

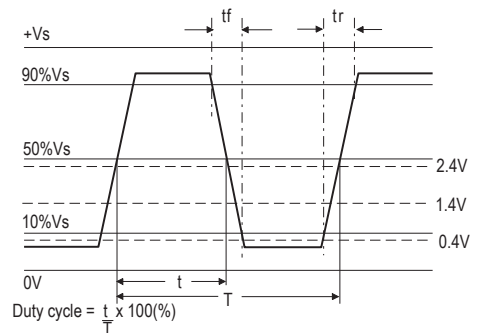
Packaging

- Bulk

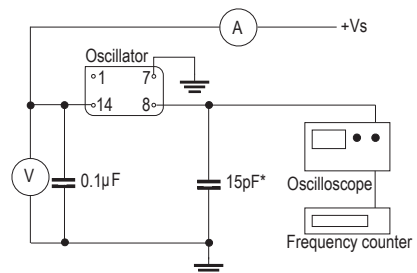
Minimum Order Information Required

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

Output Waveform



Test Circuit



*Inclusive of jiggling and equipment capacitance

Electrical Specifications - maximum limiting values

| Frequency Range | Frequency Stability | Supply Voltage | Supply Current | Rise Time (tr) | Fall Time (tf) | Duty Cycle | Model Number |
|-----------------------|-------------------------|----------------|----------------|----------------|----------------|------------|----------------|
| 1.0kHz to <100.0kHz | ±25ppm, ±50ppm, ±100ppm | 5V ±0.25V | 10mA | 10ns | 10ns | 45/55% | IQXO-350, 350I |
| 100.0kHz to <250.0kHz | | | | 15ns | 15ns | | |
| 250.0kHz to <5.0MHz | | | 30mA | 10ns | 10ns | | |
| 5.0MHz to <16.0MHz | | | 15mA | | | | |
| 16.0MHz to <30.0MHz | | | 30mA | 8ns | 8ns | | |
| 30.0MHz to <50.0MHz | | | 40mA | | | | |
| 50.0MHz to <70.0MHz | | | 50mA | 6ns | 6ns | 40/60% | |
| 70.0MHz to <160.0MHz | | | 70mA | 5ns | 5ns | | |

Ordering Example 22.0MHz IQXO-350 I B

Frequency _____

Model number: -350, 350I _____

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.

CLOCK OSCILLATORS