IQXO-350 Commercial Oscillator

ISSUE 16; 19 OCTOBER 1999

Delivery Options

- Common frequencies are available from stock. Please see p34 for details
- 3 day Express Manufacturing Service, subject to piece part stock availability.

Output Compatibility

- HCMOS/TTL
- Drive Capability: 50pF or 10 TTL
  (1.0 to < 100.0kHz 15pF or 10 LS TTL only)

Package Outline

- 14-pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seals. Available over 0 to 70°C (IQXO-350) or –40 to 85°C (IQXO-350I)

Standard Frequency Stabilities

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

Frequency Tolerance at 25°C (Optional)

- ±5ppm, ±10ppm, ±25ppm

Operating Temperature Range

- 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 & 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

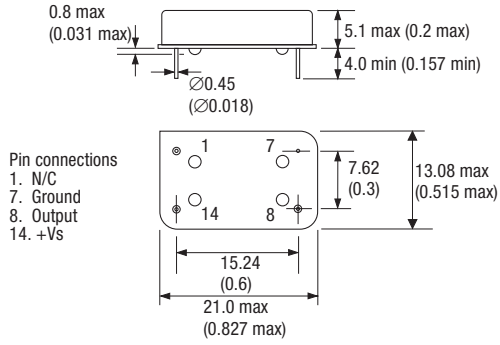
Marking

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

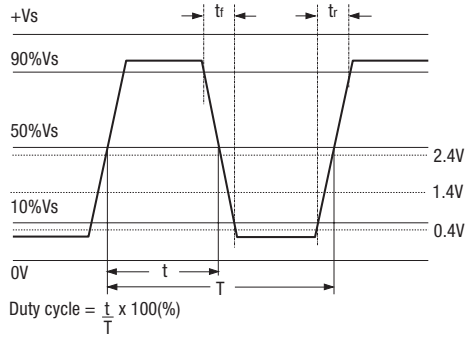
Minimum Order Information Required

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

Outline in mm (inches)



Output Waveform - HCMOS/TTL/LS TTL



Electrical Specification – maximum limiting values when measured in HCMOS test circuit

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	*Rise Time (t_r)	*Fall Time (t_f)	**Duty Cycle	Model Number
1.0 to < 100.0kHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	10mA	10ns	10ns	45/55%	IQXO-350, -350I
100.0 to < 250.0kHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	10mA	15ns	15ns	45/55%	IQXO-350, -350I
250.0kHz to < 5.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	30mA	15ns	15ns	45/55%	IQXO-350, -350I
5.0 to < 16.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	15mA	10ns	10ns	45/55%	IQXO-350, -350I
16.0 to < 30.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	30mA	10ns	10ns	45/55%	IQXO-350, -350I
30.0 to < 50.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	40mA	8ns	8ns	45/55%	IQXO-350, -350I
50.0 to 80.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	50mA	6ns	6ns	40/60%	IQXO-350, -350I

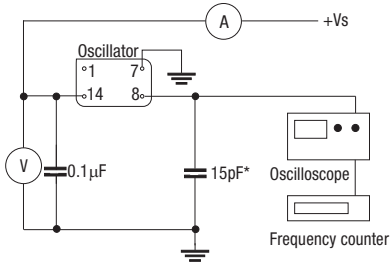
Ordering Example 22.0MHz IQXO-350I B F

Frequency
Model No
Operating Temperature Code: I = –40 to 85°C Not applicable for 0 to 70°C
Frequency Stability: A = ±25ppm; B = ±50ppm; C = ±100ppm
Frequency Tolerance @ 25°C: D = ±5ppm; E = ±10ppm; F = ±25ppm

Please note: Code combination A F is not available

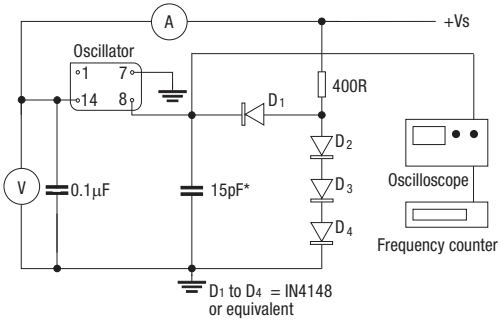
* Rise & Fall times will be 6ns max in TTL cct.
** Duty Cycle will be 40/60% in TTL cct for ≥5.0MHz

Test Circuit - HCMOS



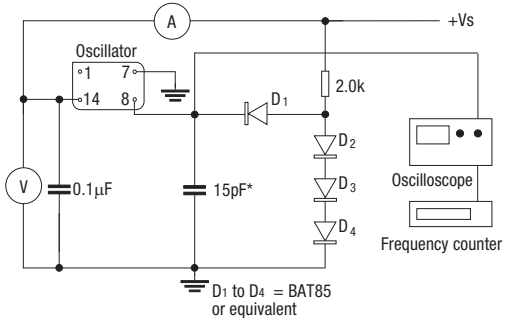
*Inclusive of jigging & equipment capacitance

Test Circuit - TTL



*Inclusive of jigging & equipment capacitance

Test Circuit - LS TTL



*Inclusive of jigging & equipment capacitance

SPXOs