# **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)</li>

#### **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<sup>-8</sup> 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<sup>2</sup> for 6ms, three shocks in each direction along the three mutually perpendicular planes

## Marking

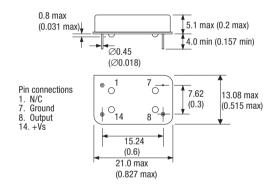
- Model number (+ Operating Temperature Code; if applicable)
- Frequency Stability Code
- Frequency Tolerance Code (Optional)
- Frequency

Date code (Year/Week)

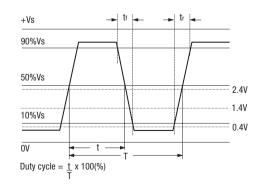
## **Minimum Order Information Required**

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

# Outline in mm (inches)



## **Output Waveform - HCMOS/TTL/LS TTL**



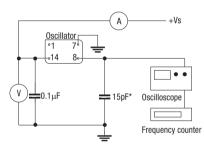
Frequency Range	Frequency Stability	Supply Voltage	Supply Current	*Rise Time (t <sub>r</sub> )	*Fall Time (t <sub>f</sub> )	**Duty Cycle	Model Number
1.0 to < 100.0kHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	10mA	10ns	10ns	45/55%	IQXO-350, -350I
100.0 to < 250.0kHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	10mA	15ns	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 Frequency	e			22.0MHz <u>IQX</u>	<u>(O-3501 B F</u>		
Operating Temper Frequency Stability	ature Code: I = –40 to 8 y: A = ±25ppm; B = ±50 nce @ 25°C: D = ±5ppr	)ppm; C = ±100ppm					
Please note: Code	combination A F is not	available					

## Electrical Specification - maximum limiting values when measured in HCMOS test circuit

\* Rise & Fall times will be 6ns max in TTL cct.

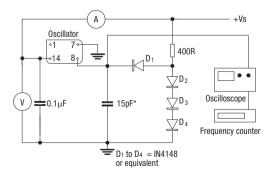
\*\* Duty Cycle will be 40/60% in TTL cct for ≥5.0MHz

## **Test Circuit - HCMOS**



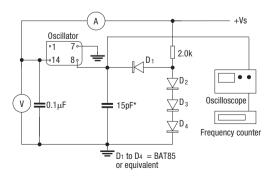
\*Inclusive of jigging & equipment capacitance

## Test Circuit - TTL



\*Inclusive of jigging & equipment capacitance

## Test Circuit - LS TTL



\*Inclusive of jigging & equipment capacitance