IQXO-22,-23 Commercial Oscillator

ISSUE 16; 1 SEPTEMBER 2001

Delivery Options

- Please contact our sales office for current leadtimes and refer also to our stock list on page 30
- Express Manufacturing Service, subject to piece part stock availability

Output Compatibility

- HCMOS/TTL
- Drive Capability: 50pF or 10TTL (<70.0MHz)
  30pF (70.0 to 160.0MHz)
- Non tri-state (IQXO-22, -22I)
- Tri-state (IQXO-23, -23I)

Package Outline

- 8-pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seal. Available over 0 to 70°C (IQXO-22, -23) or -40 to 85°C (IQXO-22I, -23I)

Standard Frequency Stabilities

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

Operating Temperature Ranges

- 0 to 70°C (IQXO-22, -23)
- –40 to 85°C (IQXO-22I, -23I)

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-23, -23I)

- 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 = 20kΩ
- Disable current 50µA typical

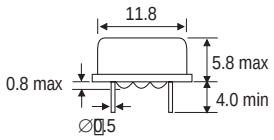
Marking

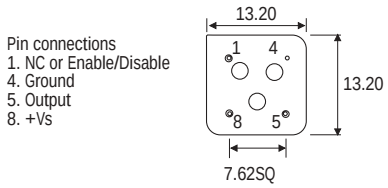
- Model number + Operating Temperature Code (if applicable)
- Frequency Stability Code
- Frequency
- Date Code (Year/Week)

Minimum Order Information Required

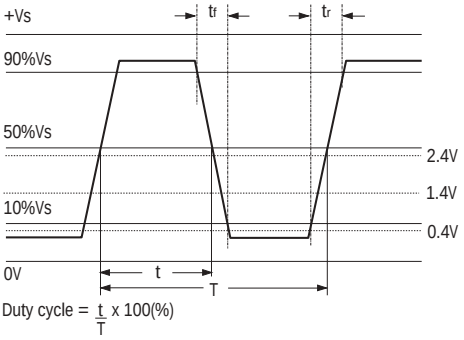
- Frequency + Model Number + Operating Temperature (if applicable) + Frequency Stability

Outline in mm





Output Waveform - HCMOS/TTL



Electrical Specifications - 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
500.0kHz to < 5.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	20mA	15ns	15ns	45/55%	IQXO-22, -22I, -23,-23I
5.0 to < 16.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	20mA	10ns	10ns	45/55%	IQXO-22, -22I, -23,-23I
16 to < 30.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	30mA	10ns	10ns	45/55%	IQXO-22, -22I, -23,-23I
30 to < 50.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	40mA	8ns	8ns	45/55%	IQXO-22, -22I, -23,-23I
50 to < 70.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	50mA	6ns	6ns	40/60%	IQXO-22, -22I, -23,-23I
70 to 160.0MHz	±25ppm, ±50ppm, ±100ppm	5V±0.25V	70mA	5ns	5ns	40/60%	IQXO-22, -22I, -23,-23I

Ordering Example 22.0MHz IQXO-22I B

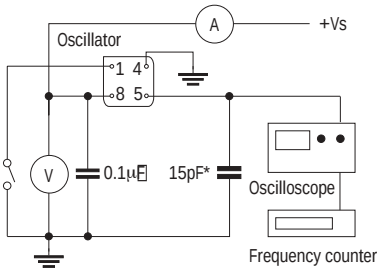
Frequency

Model number -22, -22I = Non tri-state & -23, -23I = Tri-state

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

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

Test Circuit - HCMOS



*Inclusive of jigging & equipment capacitance

Test Circuit - TTL