IQXO-22,-23 Commercial Oscillator

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Delivery Options

- Please contact our sales office for current leadtimes and refer also to our stock list.

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 $1x10^{-8}$ 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: $981 m/s^2$ 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

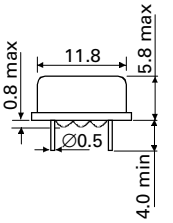
Marking

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

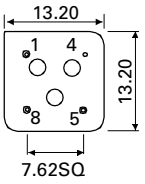
Minimum Order Information Required

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

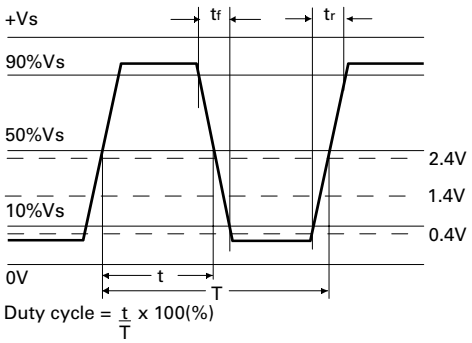
Outline in mm



Pin connections
1. N/C or Enable/Disable.
4. GND
5. Output
8. +Vs



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

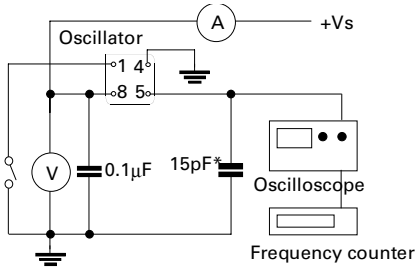
Model number -22, -22I = Non tri-state & -23, -23I = Tri-state

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

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

Please note that the rise and fall times listed are the maximum values we specify to cover various frequency breaks. In practise the actual values are generally lower depending upon the spot frequency chosen. For typical values please contact our sales office.

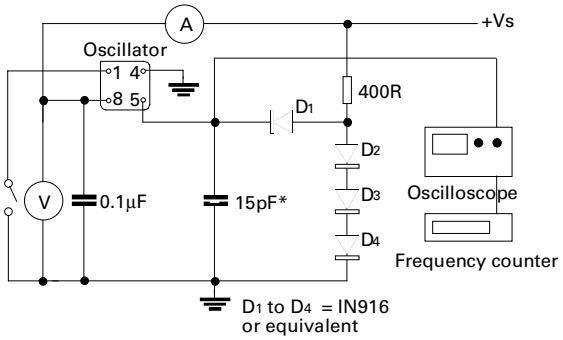
Test Circuit - HCMOS



*Inclusive of jigging & equipment capacitance

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

Test Circuit - TTL



*Inclusive of jigging & equipment capacitance

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