

IQXO-415 Professional Oscillator

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Delivery Options

- Please contact our sales office for current leadtimes

Output Compatibility

- Tri-state HCMOS/TTL
- Drive Capability: 50pF or 10TTL

Package Outline

- 14-pin DIL compatible resistance welded enclosure, hermetically sealed with glass to metal seal. Available over 0 to 70°C (IQXO-415) or -40 to 85°C (IQXO-415I)

Frequency Tolerance @ 25°C

- ± 5 ppm or ± 10 ppm

Frequency Stability Inclusive Of:-

- Frequency Tolerance (as above)
- Voltage Variation: $\leq \pm 0.5$ ppm
- Load Variation: $\leq \pm 0.5$ ppm (< 60.0MHz)
- Load Variation: $\leq \pm 1.0$ ppm (≥ 60.0 MHz)
- Ageing for 5 years: $\leq \pm 5$ ppm

Operating Temperature Ranges

- 0 to 70°C (IQXO-415)
- -40 to 85°C (IQXO-415I)

Storage Temperature Range

- -55 to 125°C

Environmental Specification

- Acceleration: 490m/s² for 1 minute in the 'Y₁' plane
- Bump: 4000 bumps at 390m/s² in each of the three mutually perpendicular planes
- Hermetic Seal: not to exceed 1×10^{-8} mBar litres of Helium leakage
- Humidity: steady state: in accordance with test Ca of IEC 60068-2-3, for 56 days at 40°C at a relative humidity of 93%, cyclic: in accordance with test Db variant 1 of IEC 60068-2-30, at severity b), 55°C for six cycles
- Shock: 981m/s² for 6ms, three shocks in each direction along the three mutually perpendicular planes
- Solderability: BS2011 test TA
- Thermal Shock: 10 cycles from -55 to 125°C
- Vibration: 10 to 60Hz 0.75mm displacement, 60 to 2000Hz 98.1m/s² acceleration, 30 minutes in each of three mutually perpendicular planes

Tri-state Operation

- 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
- Disable current 50 μ A typical

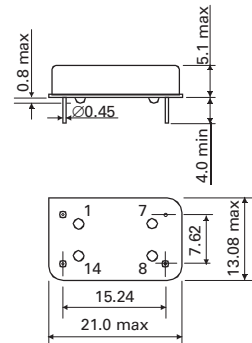
Marking

- Model number
- Frequency Stability Code
- Frequency Tolerance Code (Optional)
- Frequency
- Date Code (Year/Week)

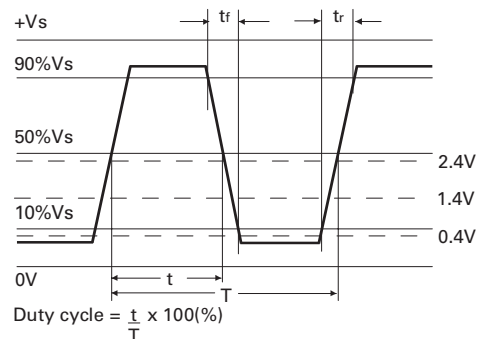
Minimum Order Information Required

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

Outline in mm



Output Waveform - HCMOS/TTL

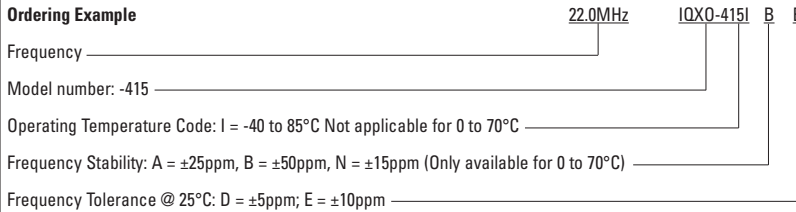


Electrical Specifications - maximum limiting values when measured in HCMOS test circuit.

Frequency Range	Frequency Stability	Supply Voltage	Supply Current	Rise Time(t_r)	Fall Time(t_f)	Duty Cycle	Model Number
250kHz to < 8.0MHz	$\pm 15\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$	$5V \pm 0.5V$	5mA	10ns	10ns	45/55%	IQX0-415, -415I
8.0 to < 23.0MHz	$\pm 15\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$	$5V \pm 0.5V$	10mA	5ns	5ns	45/55%	IQX0-415, -415I
23.0 to 80.0MHz	$\pm 15\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$	$5V \pm 0.5V$	65mA	3ns	3ns	45/55%	IQX0-415, -415I

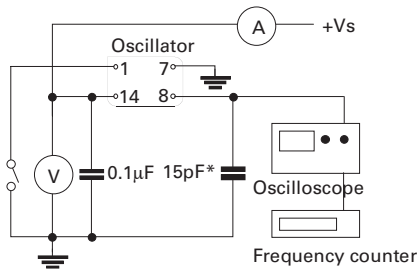
Please note that variations to the above specification are considered upon request; please contact our sales office.

Ordering Example



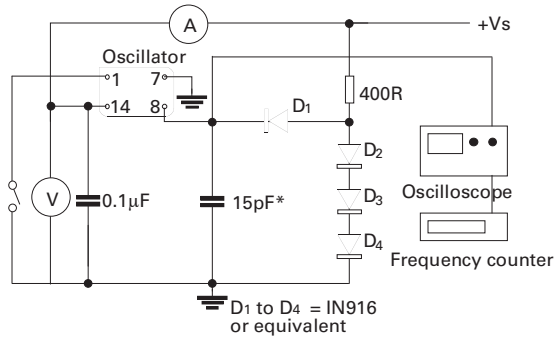
Please note: Code combination N E is not available

Test Circuit - HCMOS



*Inclusive of jiggling & equipment capacitance

Test Circuit - TTL



*Inclusive of jiggling & equipment capacitance

LEADED SPX0s