



ISSUE 9; February 2012 - RoHS 2011/65/EU

Description

- 5V supply crystal oscillator in an 8-pin DIL metal package, hermetically sealed
- Meets military temperature range and tough environmental specifications
- See IQXO-86 for screened product
- See IQXO-87 for product with Standby Operation
- See IQXO-88 for screened product with Standby Operation
- For standard parts that meet tough environmental specifications please see our IQXO-35
- For standard parts in this package please see our IQXO-22

Frequency Range

- Frequency 0.25 to 72.0MHz

Supply Voltage

- Voltage 5.0V ±10%
- Frequency Tolerance 10ppm to 25ppm

Ageing

- Ageing ±5ppm max per year

Output Compatibility & Load

- Output Compatibility HCMOS/TTL
- Drive Capability 50pF or 10TTL

Frequency Stabilities

- Frequency Stability ±50ppm, ±100ppm

Operating Temperature Ranges

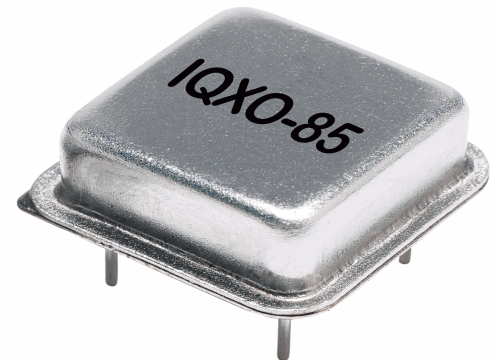
- 55 to 125°C

Environmental Parameters

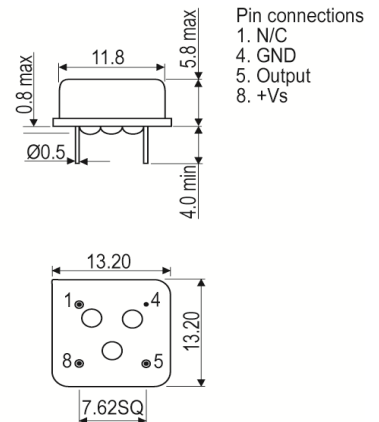
- Bump: 4000 bumps at 391m/s² in each of 3 mutually perpendicular planes
- Shock: 981m/s², 6ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 10Hz-60Hz, 0.75mm amplitude, 60Hz-2000Hz, 98.1m/s², 30mins in each of 3 mutually perpendicular planes
- Humidity:
 - Steady State: In accordance 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 6 cycles
- Solderability: In accordance with Test Ta of IEC 60068
- Hermetic Seal: Not to exceed 1 x 10⁻⁸ mBar litres of Helium leakage
- Storage Temperature Range: -55 to 125°C

Ordering Information (*minimum required)

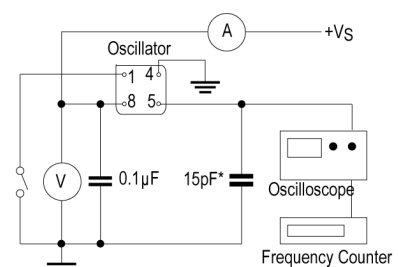
- Frequency*
- Model*
- Output
- Frequency Tolerance*
- Frequency Stability*
- Operating Temperature Range
- Supply Voltage
- (*minimum required)



Outline (mm)



Test Circuit



*Inclusive of jigging and equipment capacitance

Note: Pin 1 = No connection on non standby option models

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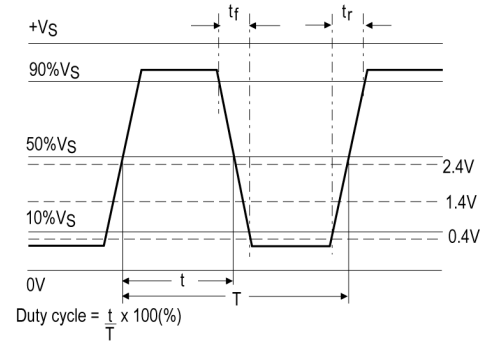


- Example
20.0MHz IQXO-85
HCMOS ±10ppm ±50ppm -55 to 125C 5.0V

Packing Details

- Pack Style: **Bulk** Loose in bulk pack
- Pack Size 40
- Alternative packing options available

Output Waveform



Electrical Specification - maximum limiting values 5.0V ±10%

Frequency Range	Temp Range	Stability		Current Draw	Rise & Fall (10 to 90%)	Duty Cycle %
		Min	Max			
0.25 to <8.0MHz	-55 to 125°C	±50ppm	±100ppm	5.0mA	10ns	45/55%
8.00 to <23.0MHz	-55 to 125°C	±50ppm	±100ppm	10.0mA	5ns	40/60%
23.00 to <48.0MHz	-55 to 125°C	±50ppm	±100ppm	50.0mA	5ns	40/60%
48.00 to <72.0MHz	-55 to 125°C	±50ppm	±100ppm	65.0mA	3ns	40/60%

This document was correct at the time of printing; please contact your local sales office for the latest version

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