

ISSUE 1; June 2016

Description

- Tight stability, hermetically sealed oscillator in a 2.5 x 2.0mm SMD package.



Frequency Parameters

- Frequency 4.0MHz to 54.0MHz
- Frequency Stability $\pm 10.00\text{ppm}$ to $\pm 20.00\text{ppm}$
- Frequency Stability is inclusive of tolerance @ 25°C, operating temperature range, supply voltage variation, load variation and ageing in 1st year @ 25°C.
- Developed Frequencies: 8.0MHz, 10.0MHz, 25.0MHz, 26.0MHz, 40.0MHz, 50.0MHz, 54.0MHz.

Electrical Parameters

- Supply Voltage 3.3V $\pm 10\%$

Operating Temperature Ranges

- -20 to 70°C
- -40 to 85°C

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF

Output Control

- Logic '1' ($\geq 70\%V_s$) to pad 1 enables oscillator output. Logic '0' ($\leq 30\%V_s$) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state. No connection to pad 1 enables oscillator output.
- Standby Current: 10 μ A max

Output Levels

- VoH: 90%Vs min
- VoL: 10%Vs max

Noise Parameters

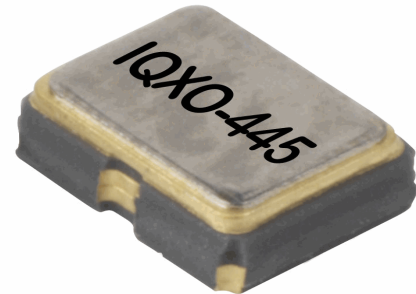
- Period Jitter (RMS 1 σ): 3ps typ

Environmental Parameters

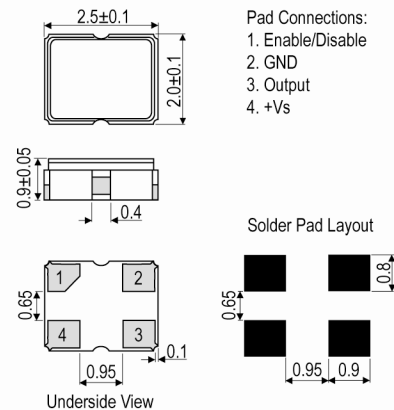
- Storage Temperature Range: -40 to 85°C
- Drop: 100cm drop (3 times) onto hard wooden board.
- Vibration: Frequency 10Hz-55Hz, amplitude 1.5mm (10Hz-36Hz), 4G (36Hz-55Hz), sweep time 1min/oct, duration 2hrs in 3 mutually perpendicular planes.

Manufacturing Details

- Maximum Process Temperature: 260°C (10secs max)



Outline (mm)



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Ordering Information

- Frequency*
Model*
Output Compatibility
Frequency Stability (over operating temperature range)*
Operating Temperature Range*
Supply Voltage
(*minimum required)
- Example
8.0MHz IQXO-445
CMOS ± 15 ppm -40 to 85 C 3.3V

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Electrical Specification - maximum limiting values 3.3V ± 10 %

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
4.0MHz	54.0MHz	-20 to 70	± 10.0	7	5	45/55%
		-40 to 85	± 10.0	7	5	45/55%

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