

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: 10µA max

### Output Levels

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

### Noise Parameters

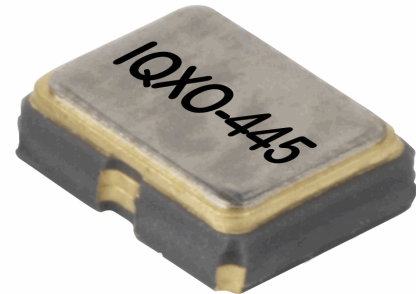
- Period Jitter (RMS 1σ): 3ps typ

### Environmental Parameters

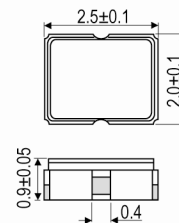
- Storage Temperature Range: -40 to 85°C
- Drop: 100cm drop (3 times) onto hard wooden board.
- Vibration: Frequency 10Hz-55Hz, amplitude 1.5mm (10Hz-36Hz), 4G (36Hz-55Hz), sweep time 1min/oct, duration 2hrs in 3 mutually perpendicular planes.

### Manufacturing Details

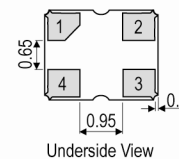
- Maximum Process Temperature: 260°C (10secs max)



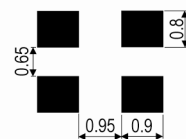
### Outline (mm)



Pad Connections:  
 1. Enable/Disable  
 2. GND  
 3. Output  
 4. +Vs



Solder Pad Layout



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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  $\pm 15$ 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 $\pm 10$ %

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	$\pm 10.0$	7	5	45/55%
		-40 to 85	$\pm 10.0$	7	5	45/55%

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

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