

ISSUE 1; April 2016

### Description

- Tight stability, hermetically sealed oscillator in a 3.2 x 2.5mm SMD package.



### Frequency Parameters

- Frequency 4.0MHz to 54.0MHz
- Frequency Stability  $\pm 10.00\text{ppm}$  to  $\pm 15.00\text{ppm}$
- 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: 10.0MHz, 12.0MHz, 12.2880MHz, 16.0MHz, 17.17760MHz, 18.4320MHz, 20.0MHz, 22.11840MHz, 24.0MHz, 25.0MHz, 26.0MHz, 27.0MHz, 30.0MHz, 32.0MHz, 33.0MHz, 38.40MHz, 40.0MHz, 44.0MHz, 44.5450MHz, 44.550MHz, 48.0MHz, 50.0MHz.

### Electrical Parameters

- Supply Voltage 3.0V  $\pm 10\%$

### Operating Temperature Ranges

- -20 to 70°C
- -40 to 85°C

### Output Details

- Output Compatibility CMOS
- Drive Capability 15pF

### Output Control

- Logic '1' (>70%Vs) to pad 1 enables oscillator output. Logic '0' (<30%Vs) 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

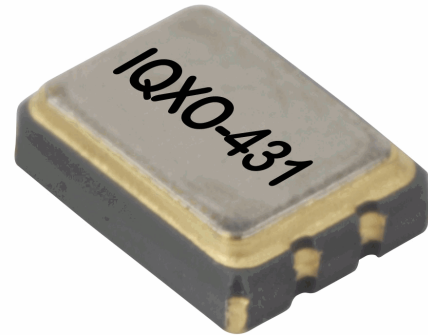
- Period Jitter (RMS 1σ): 3ps typ

### Environmental Parameters

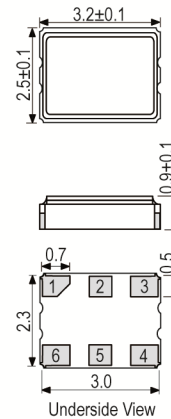
- Storage Temperature Range: -40 to 85°C
- Drop: 100cm drop (3 times) onto hard wooden board.
- Vibration: Frequency 10Hz-55Hz, amplitude 1.5mm (10Hz-36Hz), 4G (36Hz-55Hz), sweep time 1min/oct, duration 2hrs in 3 mutually perpendicular planes.

### Manufacturing Details

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



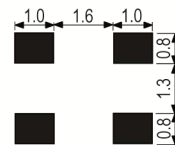
### Outline (mm)



### Pad Connections

1. E/D
2. N/C
3. GND
4. Output
5. N/C
6. +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  
10.0MHz IQXO-431  
CMOS  $\pm 15$ ppm  $-40$  to  $85$ C 3.0V

#### 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 3.0V $\pm 10\%$

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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