

ISSUE 1; November 2017

### Description

- Simple Packaged Crystal Oscillator (SPXO) with a LVDS output in a hermetically sealed ceramic package with a metal lid.



### Frequency Parameters

- Frequency: 40.0MHz to 250.0MHz
- Frequency Stability:  $\pm 25.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 2\text{ppm}$  max per year @ 25°C
- Frequency Stability: Inclusive of tolerance @ 25°C, operating temperature range, supply voltage variation and load variation.

### Electrical Parameters

- Supply Voltage Options ( $\pm 5\%$ ): 2.5V & 3.3V
- Start Up Time: 10ms max

### Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

### Output Details

- Output Compatibility: LVDS
- Drive Capability: 100Ω
- Differential Output Voltage (Vod): 0.33V typ @ 1.25V
- Differential Output Voltage Swing (Vopp): 0.25V pk-pk min
- Offset Voltage (Vos): 1.125V to 1.375V (1.25V typ)

### Output Control

- Logic '1' (>70% Vs) to pad 1 enables oscillator output
- Logic '0' (<30% Vs) to pad 1 disables oscillator output; the oscillator output goes to the high impedance state
- No connection to pad 1 enables oscillator output
- Standby Current: 10μA max
- Output Enable Time: 10ms max
- Output Disable Time: 200ns max

### Noise Parameters

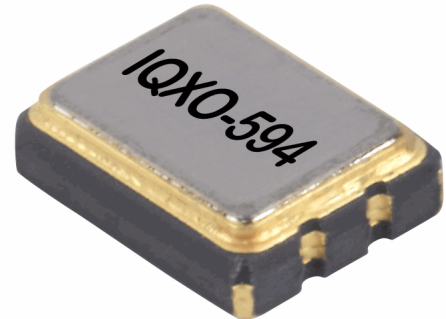
- Phase Jitter (12kHz to 20MHz): 1ps rms max

### Environmental Parameters

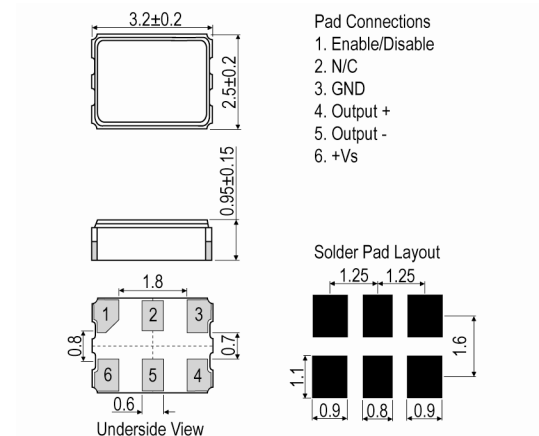
- Storage Temperature Range: -55 to 125°C
- Drop: 75cm drop (3 times) onto hard wooden board
- Vibration: MIL-STD-202F, Method 204D, Test Condition D: 20G (10Hz-2000Hz), 4hrs in 3 mutually perpendicular planes (total 12hrs)

### Ordering Information

- Frequency\*
- Model\*
- Output
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage\*
- (\*minimum required)
- Example
- 100.0MHz IQXO-594-1
- LVDS  $\pm 50\text{ppm}$  -10 to 70C 3.3V



### Outline (mm)



### Sales Office Contact Details:

UK: +44 (0)1460 270200

Germany: 0800 1808 443

France: 0800 901 383

USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

### 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: 2,000
- Pack Style: Bulk Loose in bulk pack  
Pack Size: 100

### Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability Min	Current Draw	Rise & Fall Time (80/20%)	Duty Cycle
		°C	ppm	mA	ns	%
40.0MHz	170.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	20 20	- 0.4	45/55% 45/55%
170.000001MHz	250.0MHz	-10 to 70 -40 to 85	±50.0 ±50.0	20 20	0.4 0.4	45/55% 45/55%

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

[Click to view latest version on our website.](#)

### Sales Office Contact Details:

UK: +44 (0)1460 270200  
Germany: 0800 1808 443

France: 0800 901 383  
USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)