

### Description

- LVDS output crystal oscillator in a hermetically sealed ceramic package with a seam sealed metal lid.
- Model IQXO-618-33
- Model Issue number 5

### Frequency Parameters

- Frequency 125.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $105.00^\circ\text{C}$
- Ageing  $\pm 3\text{ppm}$  max per year at  $25^\circ\text{C}$

### Electrical Parameters

- Supply Voltage  $3.3\text{V} \pm 5\%$
- Current Draw  $50.000\text{mA}$  max

### Output Details

- Output Compatibility LVDS
- Drive Capability  $100\Omega$
- Rise & Fall Time (20 - 80%)  $0.5\text{ns}$  max
- Duty Cycle  $45/55\%$  max
- Differential Output Voltage (VoD):  $0.247\text{V}$  min,  $0.33\text{V}$  typ,  $0.454\text{V}$  max
- Offset Voltage (VoS):  $1.125\text{V}$  min,  $1.25\text{V}$  typ,  $1.375\text{V}$  max.
- Output Voltage Levels:  
Output Low (VoL):  $0.9\text{V}$  min  
Output High (VoH):  $1.6\text{V}$  max

### Output Control

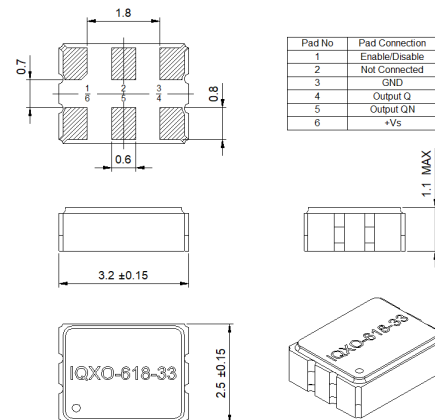
- Standby Operation:  
Logic '1' ( $\geq 70\%$  Vs) to pad 1 enables oscillator output.  
Logic '0' ( $\leq 30\%$  Vs) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state.  
No connection to pad 1 enables oscillator output.
- Start-up Time:  $10\text{ms}$  max
- Standby Current:  $10\mu\text{A}$  max

### Noise Parameters

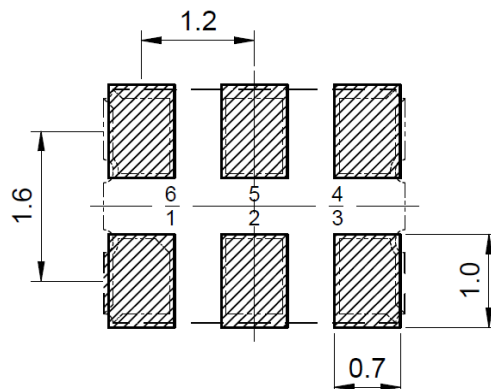
- Phase Jitter (12kHz to 20MHz):  $300\text{fs}$  rms max
- Phase Jitter (12kHz to 20MHz):  
@100MHz:  $137\text{fs}$  rms typ  
@125MHz:  $118\text{fs}$  rms typ  
@156.25MHz:  $83\text{fs}$  rms typ



### Outline (mm)



### Recommended Solder Pad Layout



### CONTACT INFORMATION:

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### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Drop Test (JIS-C0044): The specimen is measured for frequency before the test. It is then dropped from a height of 100cm min as a free fall object onto a hard wooden plate of thickness 30mm min.
- Vibration (MIL-STD-883F : 2007.3): The specimen is measured for frequency before the test. Test in X,Y and Z axes for the vibration test. Frequency range: 20~2000Hz, peak to peak amplitude: 1.52mm, peak acceleration: 20G, sweep time: 20 minute/axis, perpendicular total test time: 4 hours.
- RoHS Terminations
- RoHS Reflow Temp                      260°C max for 10s max

### Compliance

- RoHS Status (2015/863/EU)            Compliant
- REACH Status                            Compliant
- MSL Rating (JDEC-STD-033):        Not Applicable

### Packaging Details

- Tape & reel in accordance with EIA-481  
Quantities below the standard reel size to be supplied on cut tape  
Standard Quantity: 3,000 Pieces
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### USEFUL LINKS

**Toolbox:**

[www.we-online.com/toolbox](http://www.we-online.com/toolbox)

**Product Catalog:**

[www.we-online.com/products](http://www.we-online.com/products)

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