

## Description

- LVPECL output crystal oscillator using a high frequency fundamental crystal to give very low jitter. Hermetically sealed ceramic package with a seam sealed metal lid.
- Model IQXO-624
- Model Issue number 2
- Note: Operating temperature ranges -40 to 105°C and -40 to 125°C are intended for industrial use and not for safety critical applications such as automotive. Please contact IQD for alternative options.

## Frequency Parameters

- Frequency 100.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range -40.00 to 105.00°C
- Ageing  $\pm 3\text{ppm}$  max per year @ 25°C

## Electrical Parameters

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

## Output Details

- Output Compatibility LVPECL
- Rise and Fall Time 0.5ns max
- Duty Cycle 45/55% max
- Output Voltage Levels:  
Output Low (VOL): 1.680V max  
Output High (VOH): 2.275V min

## Output Control

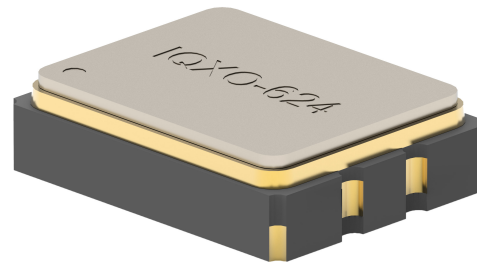
- Standby Operation:  
Logic '1' (70% Vs min) to pad 1 enables oscillator output.  
Logic '0' (30% Vs max) to pad 1 disables oscillator output.  
No connection to pad 1 enables oscillator output due to internal pull-up resistor.
- Standby Current: 10 $\mu$ A max
- Start-up Time: 10ms max

## Noise Parameters

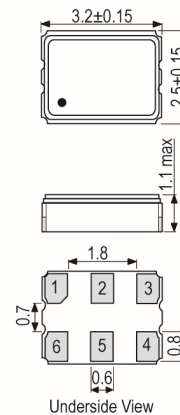
- Phase Jitter (12kHz to 20MHz): 300fs rms max
- Phase Jitter (12kHz to 20MHz):  
@100MHz: 155fs rms typ  
@125MHz: 132fs rms typ  
@156.25MHz: 106fs rms typ

## Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: 1500G, 0.5ms, 3 times for each surface, total 18 times.
- Vibration: Freq. range: 20~2000Hz, peak to peak amplitude: 1.52mm, peak acceleration: 20G (196m/s<sup>2</sup>), 3 direction(X, Y,Z), each cycle: 20min, 4 cycles for each direction.



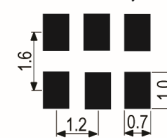
## Outline (mm)



## Pad Connections

- Standby Operation
- N/C
- GND
- Output +
- Output -
- +Vs

## Solder Pad Layout



## CONTACT INFORMATION:

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### Manufacturing Details

- RoHS Terminations                      Au over Ni
- RoHS Reflow Temp                        260°C max for 10sec mac

### Compliance

- RoHS Status (2015/863/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: 3,000
- *Alternative packing option available*

## 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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