



## Description

- Voltage controlled crystal oscillator in a ceramic package with a hermetically sealed metal lid
- Model IQXV-56
- Model Issue number 1

## Frequency Parameters

- Frequency 32.0MHz
- Frequency Stability  $\pm 50.00\text{ppm}$
- Operating Temperature Range  $-40.00$  to  $85.00^\circ\text{C}$
- Ageing (@  $25^\circ\text{C}$ ):  $\pm 3\text{ppm max}$

## Electrical Parameters

- Supply Voltage  $3.3\text{V} \pm 5\%$
- Current Draw  $15.00\text{mA}$

## Frequency Adjustment

- Pulling  $\pm 150\text{ppm min}$
- Control Voltage  $1.65\text{V} \pm 1.65\text{V}$
- Input Impedence  $100\text{k}\Omega \text{ min}$
- Linearity:  $\pm 10\% \text{ max}$

## Output Details

- Output Compatability HCMOS
- Drive Capability  $15\text{pF max}$
- Rise and Fall Time  $8.0\text{ns max}$
- Duty Cycle  $45/55\%$
- Start Up Time:  $10\text{ms max}$

## Output Control

- Standby Operation:  
Logic '1' ( $>70\% V_s$ ) to pad 2 enables oscillator output  
Logic '0' ( $<30\% V_s$ ) to pad 2 disables oscillator output: when disabled the oscillator output goes to the high impedance state  
No connection pad 2 enables oscillator output

## Output Levels

- VoH:  $>90\%$  of  $V_s$
- VoL:  $<10\%$  of  $V_s$

## Noise Parameters

- Period Jitter (pk-pk):  $100\text{ps max}$
- Period Jitter (one sigma):  $25\text{ps max}$

## Environmental Parameters

- Storage Temperature Range:  $-55$  to  $125^\circ\text{C}$
- Drop:  $1.2\text{m}$  drop (3 times) onto a hard surface
- Vibration:  $1.5\text{mm}$  amplitude,  $10\text{-}55\text{-}10\text{Hz}$ , full sine wave,  $2\text{mins}$  in 3 mutually perpendicular planes, duration  $2\text{hrs}$  in each plane

## Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



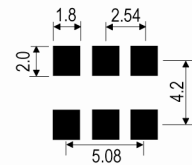
## Outline (mm)



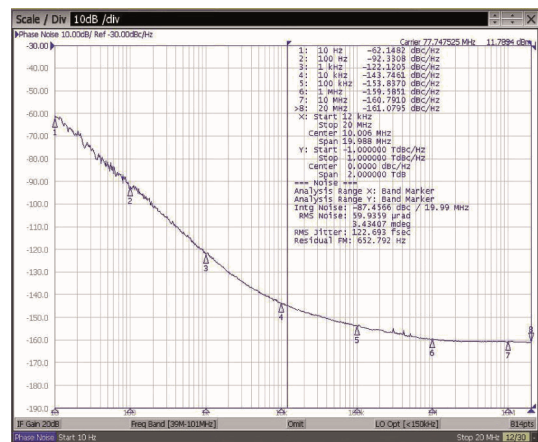
Underside View

- Pad Connections
1. Voltage Control
  2. Standby Operation
  3. GND
  4. Output
  5. N/C
  6. +Vs

## Solder Pad Layout



## Typical Phase Noise Plot @ 77.76MHz



## 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)

**Packaging Details**

- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 1
- *Alternative packing option available*

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