

ISSUE 1; March 2016

**Description**

- Voltage controlled crystal oscillator in a ceramic package with a hermetically sealed metal lid

**Frequency Parameters**

- Frequency 1.0MHz to 60.0MHz
- Frequency Stability  $\pm 20.00\text{ppm}$  to  $\pm 50.00\text{ppm}$
- Ageing (@ 25°C):  $\pm 3\text{ppm}$  max

**Electrical Parameters**

- Supply Voltage 2.5V  $\pm 5\%$

**Frequency Adjustment**

- Pulling  $\pm 100\text{ppm}$  min
- Control Voltage 1.25V  $\pm 1.05\text{V}$
- Input Impedance 2M $\Omega$  min
- Linearity:  $\pm 10\%$  max

**Operating Temperature Ranges**

- 0 to 70°C
- -40 to 85°C

**Output Details**

- Output Compatability HCMOS
- Drive Capability 15pF max
- Start Up Time: 10ms max

**Output Control**

- Standby Operation:  
 Logic '1' (>70% Vs) to pad 2 enables oscillator output  
 Logic '0' (<30% Vs) 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**

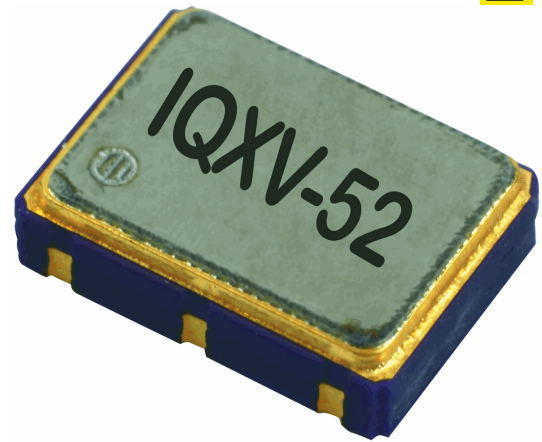
- VoH: >90% of Vs
- VoL: <10% of Vs

**Noise Parameters**

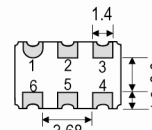
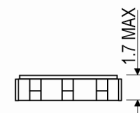
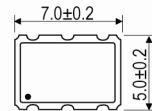
- Period Jitter (pk-pk): 100ps max
- Period Jitter (one sigma): 25ps max

**Environmental Parameters**

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



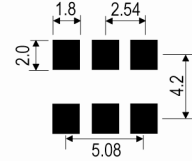
**Outline (mm)**



Underside View

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

**Solder Pad Layout**



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### Ordering Information

- Frequency\*
- Model\*
- Output
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Supply Voltage
- Pullability
- (\*minimum required)
- Example
- 10.0MHz IQXV-52
- HCMOS  $\pm 50$ ppm -40 to 85C 2.5V  $\pm 100$ ppm min

### 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
- Pack Style: Bulk      Loose in bulk pack
- Pack Size: 1

### Electrical Specification - maximum limiting values 2.5V $\pm 5\%$

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	20.0MHz	0 to 70	$\pm 20.0$	10	10	45/55%
		-40 to 85	$\pm 25.0$	10	10	45/55%
20.000001MHz	40.0MHz	0 to 70	$\pm 20.0$	15	8	45/55%
		-40 to 85	$\pm 25.0$	15	8	45/55%
40.000001MHz	60.0MHz	0 to 70	$\pm 20.0$	25	5	45/55%
		-40 to 85	$\pm 25.0$	25	5	45/55%

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