

ISSUE 1; April 2016

**Description**

- LVDS output Voltage Controlled Crystal Oscillator
- Wide pulling range of  $\pm 100\text{ppm}$  min
- Ceramic package with a sealed metal lid, hermetically sealed

**Frequency Parameters**

- Frequency: 9.5MHz to 79.999999MHz
- Frequency Stability:  $\pm 20.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 3\text{ppm}$  max per year @ 25°C

**Electrical Parameters**

- Supply Voltage: 2.5V  $\pm 5\%$
- Start up time: 10ms max

**Frequency Adjustment**

- Pulling:  $\pm 100\text{ppm}$  min
- Control Voltage: 1.25V  $\pm 1.25\text{V}$
- Input Impedence: 60k $\Omega$  typ
- Linearity:  $\pm 10\%$  max

**Operating Temperature Ranges**

- 0 to 70°C
- 40 to 85°C

**Output Details**

- Output Compatability: LVDS
- Drive Capability: 100 $\Omega$
- Output Voltage Logic Low 1.1V max
- Output Voltage Logic High 1.4V min
- Differential Output Voltage: 247 to 454mV, 350mV typ
- Offset Voltage: 1.125 to 1.375V, 1.2V typ

**Output Control**

- Tri-State:
  - Logic '1' to pad 2 (70%Vs min) enables oscillator output
  - Logic '0' to pad 2 (30%Vs max) disables oscillator output, oscillator goes to the high impedance state
  - No connection to pad 2, enables oscillator output

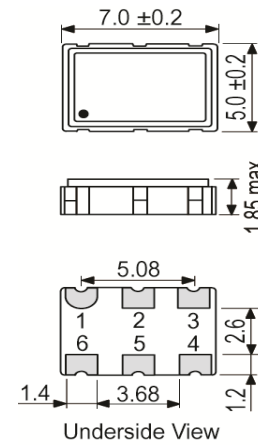
**Noise Parameters**


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

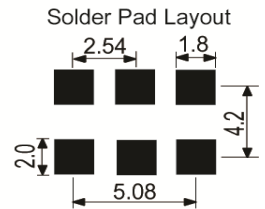
**Environmental Parameters**

- Storage Temperature Range: -55 to 125°C
- Drop: 120cm drop (3 times) onto hard wooden board
- Vibration: MIL-STD-883, Method 2007, Test Condition A: 10Hz-55Hz-10Hz, 1.5mm amplitude, full sine, 2min per cycle, 3 mutually perpendicular planes, 2hrs duration in each plane

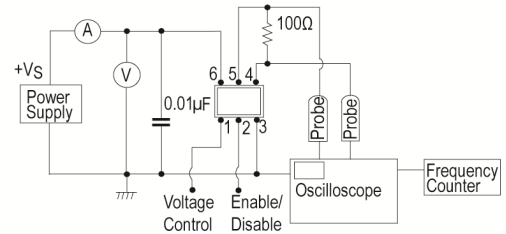
**Outline (mm)**



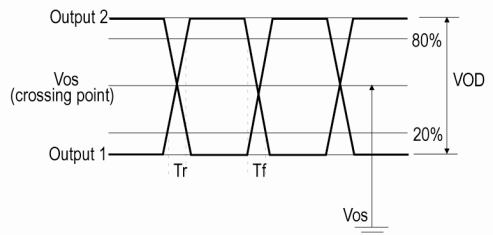
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- Pad Connections**
1. Voltage Control
  2. Tri-State
  3. GND
  4. Output 1
  5. Output 2
  6. +Vs



**Test Circuit**



**Wave Form**



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**Ordering Information**

- Frequency\*  
Model\*  
Output  
Frequency Stability\*  
Operating Temperature Range\*  
Supply Voltage  
Pullability  
(\*minimum required)
- Example:  
50.0MHz IQXV-31  
LVDS ±50ppm 0 to 70C 2.5V ±100ppm

**Compliance**

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

**Packaging Details**

- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 100
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000

**Electrical Specification - maximum limiting values 2.5V ±5%**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
9.5MHz	79.999999MHz	0 to 70	±20.0	80	1	45/55%
		-40 to 85	±50.0	80	1	45/55%

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