

ISSUE 1; February 2017

**Description**

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

**Frequency Parameters**

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

**Electrical Parameters**

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

**Frequency Adjustment**

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

**Operating Temperature Ranges**

- 0 to 70°C
- -40 to 85°C

**Output Details**

- Output Compatibility 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

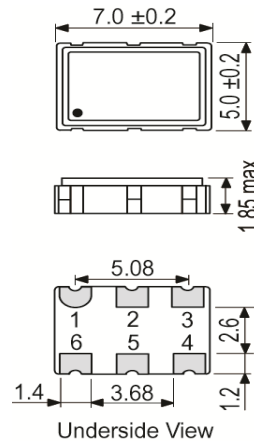
**Noise Parameters**

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

**Environmental Parameters**

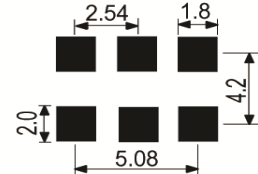
- Storage Temperature Range: -55 to 125°C
- Drop: 120cm drop (3 times) onto hard wooden board
- Vibration: MIL-STD-883, Method 2007, Test Condition A:  
10Hz-55Hz-10Hz, 1.5mm amplitude, full sine, 2min per cycle,  
3 mutually perpendicular planes, 2hrs duration in each plane

**Outline (mm)**

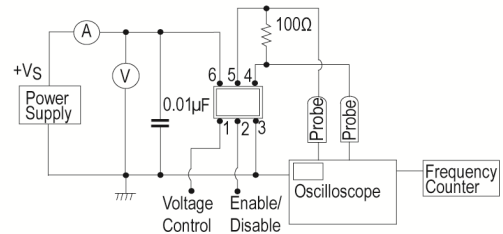


- Pad Connections
1. Voltage Control
  2. Tri-State
  3. GND
  4. Output 1
  5. Output 2
  6. +Vs

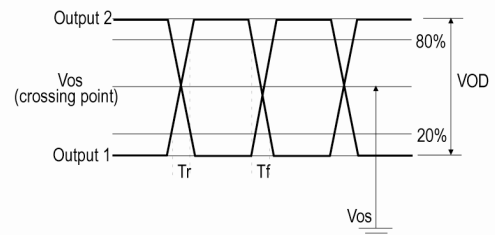
**Solder Pad Layout**



**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 (JDEC-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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