

ISSUE 1; February 2017

Description

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

Frequency Parameters

- Frequency 9.5MHz to 622.08MHz
- Frequency Stability ± 20.00 ppm to ± 100.00 ppm
- Ageing ± 3 ppm max per year @ 25°C

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$
- Start up time: 10ms max

Frequency Adjustment

- Pulling ± 100 ppm min
- Control Voltage 1.65V ± 1.65 V
- Input Impedance <80MHz 60k Ω typ, ≥ 80 MHz 2M Ω m
- Linearity: $\pm 10\%$ max

Operating Temperature Ranges

- 0 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility LVDS
- Drive Capability 100 Ω
- 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

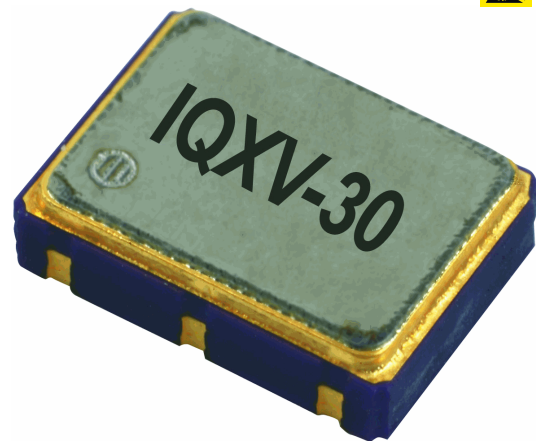
- Tri-State:
Logic '1' to pad 2 (70%Vs min) enables oscillator output
Logic '0' to pad 2 (30%Vs max) disables oscillator output,
oscillator goes to the high impedance state
No connection to pad 2, enables oscillator output

Noise Parameters

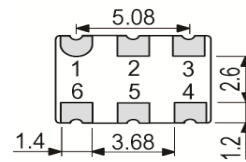
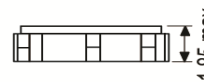
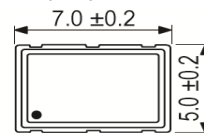
- Phase Jitter (12kHz to 20MHz):
9.5 to <80MHz 1ps max
80 to 622.08MHz 4ps max

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)

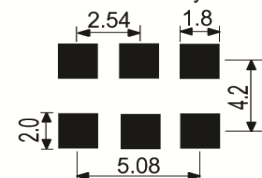


Underside View

Pad Connections

- Voltage Control
- Tri-State
- GND
- Output 1
- Output 2
- +Vs

Solder Pad Layout



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Ordering Information

- Frequency*
Model*
Output
Frequency Stability*
Operating Temperature Range*
Supply Voltage
Pullability
(*minimum required)
- Example:
100.0MHz IQXV-30
LVDS ± 50 ppm 0 to 70C 3.3V ± 100 ppm

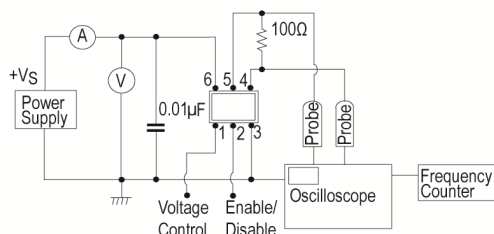
Compliance

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

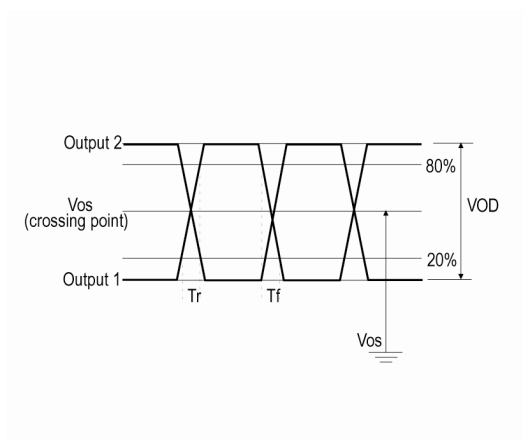
Packaging Details

- Pack Style: Cutt Cut tape
Pack Size: 100
- 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

Test Circuit



Wave Form



Electrical Specification - maximum limiting values 3.3V $\pm 5\%$

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%
80.0MHz	622.08MHz	0 to 70	± 20.0	80	1	45/55%
		-40 to 85	± 50.0	80	1	45/55%

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