

ISSUE 1; December 2023

Description

- Voltage controlled crystal oscillator (VCXO) in a ceramic package with a hermetically sealed metal lid.
- Developed Frequencies: 27MHz, 50MHz



Frequency Parameters

- Frequency: 1.0MHz to 52.0MHz
- Frequency Stability: $\pm 25.00\text{ppm}$
- Ageing: $\pm 3\text{ppm}$ max per year @ 25°C
- Frequency Stability over operating temperature range: inclusive of tolerance at 25°C $\pm 3^\circ\text{C}$

Electrical Parameters

- Supply Voltage: 3.3V $\pm 10\%$
- Start Up Time: 10ms max

Frequency Adjustment

- Pulling: $\pm 100\text{ppm}$ min
- Control Voltage: 1.65V $\pm 1.5\text{V}$
- Input Impedance: 2M Ω min
- Slope: Positive
- Linearity: $\pm 10\%$ max

Operating Temperature Ranges

- -40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max
- Output Voltage High: 90%Vs min
Output Voltage Low: 10%Vs max

Noise Parameters

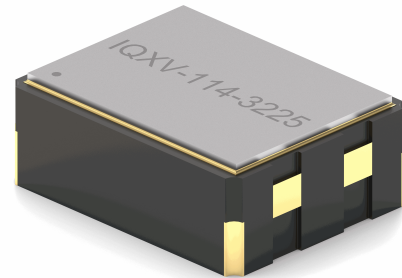
- Phase Noise (typ @ 25MHz & @ 25°C):
 - 79dBc/Hz @ 10Hz
 - 114dBc/Hz @ 100Hz
 - 132dBc/Hz @ 1kHz
 - 145dBc/Hz @ 10kHz
 - 150dBc/Hz @ 100kHz
 - 152dBc/Hz @ 1MHz

Environmental Parameters

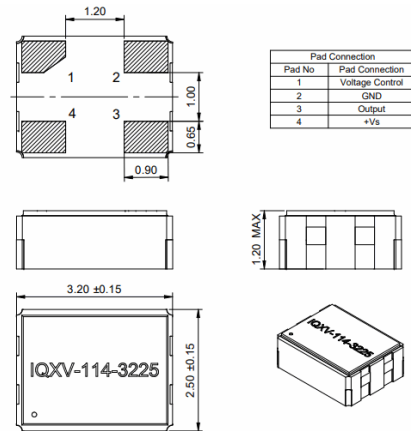
- Storage Temperature Range: -55 to 125°C
- Vibration (MIL-STD-883F:2007.3): frequency range 20~2000Hz, pk-pk amplitude 1.52mm, peak acceleration 20g, sweep time 20minutes/axis, total test time 4 hours.
- Drop Test (JIS-C0044): specimen is dropped from a height of 75cm min as a free fall object onto a hard wooden plate of 30mm min thickness.

Manufacturing Details

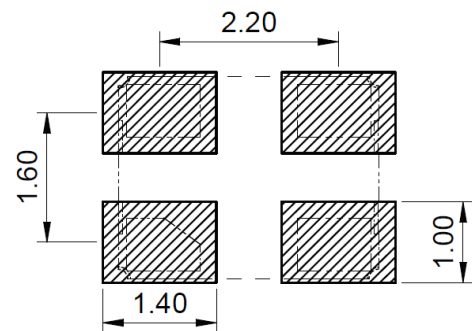
- RoHS Terminations: Ni 1.27 μm ~8.89 μm , Au 0.3 μm ~1.0 μm
- RoHS Reflow: 260°C max peak, 255°C for 30s max



Outline (mm)



Recommended 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
 20.0MHz IQXV-114-3225 3.3V
 CMOS ±25ppm -40 to 85C ±100ppm min

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 1

Packaging Details

- Tape & reel in accordance with EIA-481
 Quantities below the standard reel size to be supplied on cut tape.

 Standard Reel Quantity: 1,000 Pieces

Electrical Specification - maximum limiting values 3.3V ±10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time (10-90%)	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	52.0MHz	-40 to 85	±25.0	30	5	40/60

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