

ISSUE 1; September 2014 - RoHS 2011/65/EU
Description

- Temperature compensated crystal oscillator in a ceramic package with a metal lid, not hermetically sealed


Frequency Parameters

- Frequency: 13.0MHz to 52.0MHz
- Frequency Stability: $\pm 1.00\text{ppm}$ to $\pm 2.00\text{ppm}$
- Ageing: $\pm 1\text{ppm}$ max per year
- Load Variation (@ $\pm 10\%$): $\pm 0.1\text{ppm}$ max
- Supply Voltage Variation (@ $\pm 5\%$): $\pm 0.2\text{ppm}$ max

Electrical Parameters

- Supply Voltage: 3.0V $\pm 5\%$

Operating Temperature Ranges

- 10 to 75°C
- 20 to 80°C
- 30 to 85°C

Output Details

- Output Compatibility: Clipped Sine
- Drive Capability: 10k Ω /10pF

Output Levels

- 0.8V pk-pk min

Noise Parameters

- Harmonics: -5dBc max

Environmental Parameters

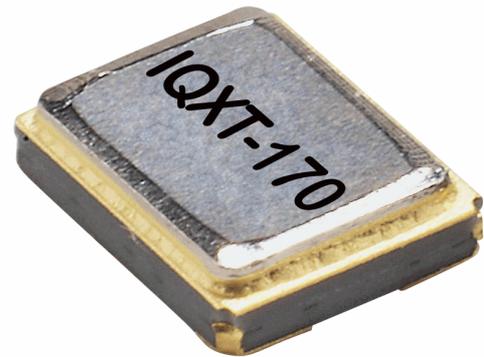
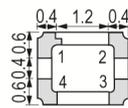
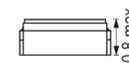
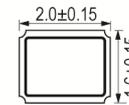
- Storage Temperature Range: -40 to 85°C
- Drop: A test piece (100g) made of teflon is dropped 3 cycles (1 cycle: 6 directions) from a height of 150cm onto a hard board
- Vibration: 1.5mm amplitude, 10Hz-55Hz-10Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane (total 6hrs)

Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability*
- Operating Temperature Range*
- Supply Voltage (*minimum required)
- Example
13.0MHz IQXT-170
Clipped Sine $\pm 2.0\text{ppm}$ -30 to 85C 3.0V

Compliance

- RoHS Status: Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): 1

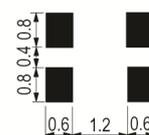
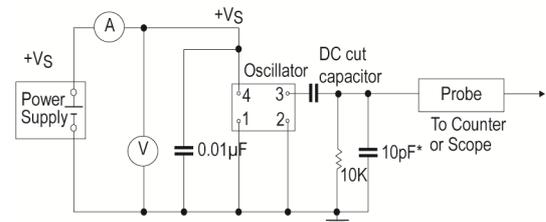

Outline (mm)


Underside View

Pad Connections

- GND
- GND
- Output
- +Vs

Notes: a 0.01 μF capacitor between Vs & GND is recommended. Connect a DC-cut capacitor $\geq 1\text{nF}$ to the line-out terminal of the oscillator

Solder Pad Layout

Test Circuit


* Inclusive of jiggig and equipment capacitance

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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: 4,000

Electrical Specification - maximum limiting values 3.0V ±5%

Frequency Min	Frequency Max	Temperature Range	Stability (min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
13.0MHz	52.0MHz	-10 to 75	±1.0	2	-	-
		-20 to 80	±1.0	2	-	-
		-30 to 85	±1.0	2	-	-

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