

Enhanced Stability Crystal Oscillator

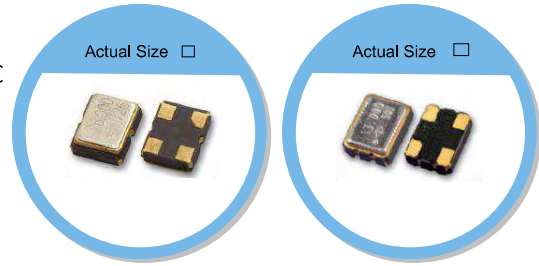
OX-A/OY-A Series-3.2 X 2.5 / 2.5 X 2.0 mm SMD Crystal Oscillator

FEATURE

- Tight Tolerance: ± 4 ppm accuracy @25°C, ± 4 ppm over -40°C to +85°C
- LVCMOS Output Logic
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V.
- Tri-state enable/disable.
- Femto second phase jitter and -152dBc/Hz at 10kHz offset.

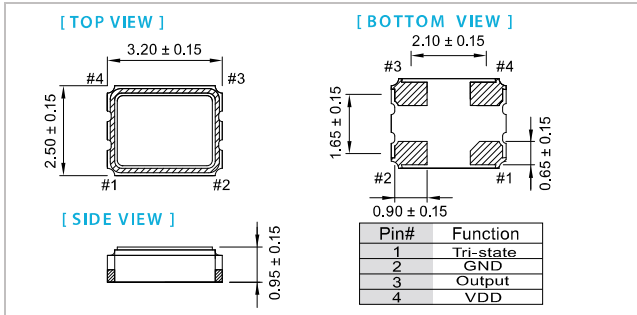
TYPICAL APPLICATION

- Wireless Connectivity
- Video Distribution

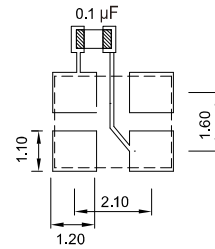


RoHS Compliant

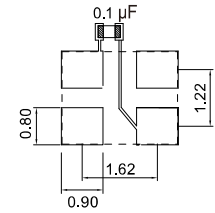
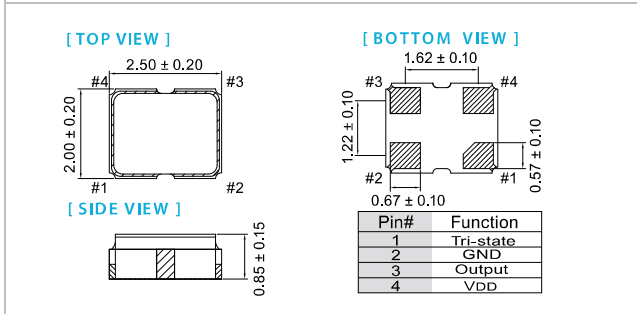
DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.



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ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		Unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	VDD-10%	VDD+10%	VDD-10%	VDD+10%	VDD-10%	VDD+10%	V
Frequency Range	19	60	19	60	19	60	MHz
Supply Current	19 \leq Fo \leq 60 MHz		--	7	--	5	mA
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS)	Output High (Logic ⁺ 1 ⁺)		2.25		1.62		V
	Output Low (Logic ⁺ 0 ⁺)		0.33		0.25		
Transition Time: Rise/Fall Time+	8		8		8		nSec
Start Time	5		5		5		mSec
Tri-State(Input to Pin 1)	2.31		1.75		1.26		V
	Disable (Low voltage or GND)		0.99		0.75		
RMS Phase Jitter (integrated 12 kHz ~ 20 MHz)	1		1		1		pSec
Phase Noise @ 26 MHz	-90		-90		-90		dBc/Hz
	-115		-115		-115		
	-136		-136		-136		
	-152		-152		-152		
Aging (@25°C 1st year)	± 1		± 1		± 1		ppm
Storage Temp. Range	-55	125	-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position
 +Transition times are measured between 10% and 90% of VDD, with an output load of 15pF

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm		
	± 5	± 10	± 15
-10 ~ +60	○	○	○
-20 ~ +70	△	○	○
-40 ~ +85	×	○	○

* O: Available △: Conditional X: Not available

* Inclusive of calibration @ 25°C, operating temperature range, input voltage variation, load variation, aging (1st year), shock, and vibration

Note: not all combination of options are available. Other specifications may be available upon request.