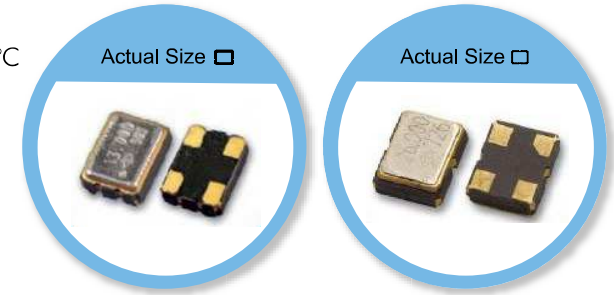
TAITIEN
Our Performance, Your Reputation

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.

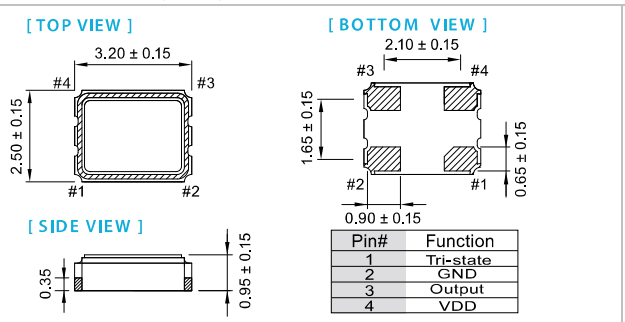


TYPICAL APPLICATION

- Wireless Connectivity
- Video Distribution

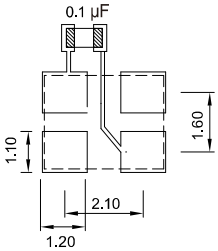
RoHS Compliant

DIMENSION (mm)

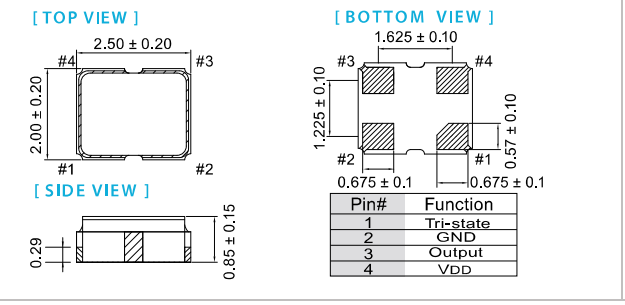


Pin#	Function
1	Tri-state
2	GND
3	Output
4	VDD

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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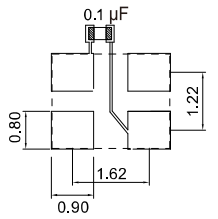

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ELECTRICAL SPECIFICATION

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 ≦Fo≦60 MHz	–	10	–	7	–	5	mA
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS) Output High (Logic"1")	2.97	–	2.25	–	1.62	–	V
Output Low (Logic"0")	–	0.33	–	0.25	–	0.18	
Transition Time: Rise/Fall Time+	–	8	–	8	–	8	nSec
Start Time	–	5	–	5	–	5	mSec
Tri-State(Input to Pin 1) Enable (High voltage or floating)	2.31	–	1.75	–	1.26	–	V
Disable (Low voltage or GND)	–	0.99	–	0.75	–	0.54	
RMS Phase Jitter (integrated 12 kHz ~ 20 MHz)	–	1	–	1	–	1	pSec
Phase Noise @ 26 MHz 10 Hz	-90		-90		-90		dBc/Hz
100 Hz	-115		-115		-115		dBc/Hz
1 kHz	-136		-136		-136		dBc/Hz
10 kHz	-152		-152		-152		dBc/Hz
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

ppm / Temp. (°C)	±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.