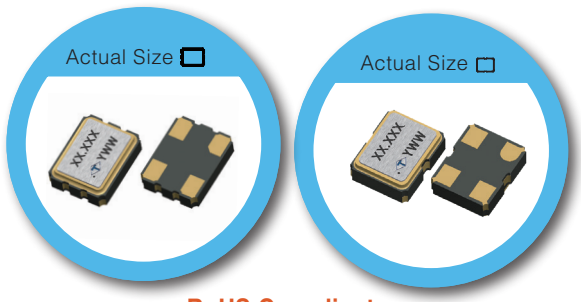
TAITIEN
Our Performance, Your Reputation

Extended Operating Temperature Range Crystal Oscillator

OX/OY Series 3.2 x 2.5 / 2.5 x 2.0 mm SMD Crystal Oscillator

FEATURE

- Extended Industrial Operating Temperature Range -55°C ~+125°C.
- Low jitter and phase noise
- Tight symmetry (45 to 55%) available.
- Operation voltage : 1.8V, 2.5V, 3.3V.
- Tri-state enable/disable.

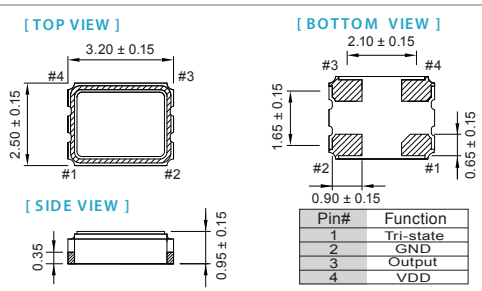


RoHS Compliant

TYPICAL APPLICATION

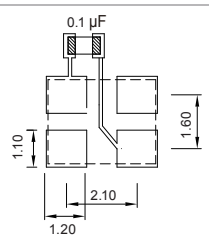
- Extreme environment applications.
- Oil drilling, geothermal.
- Commercial space, car/aircraft engine, aerospace & military.
- Industrial instrumentation.
- Automotive.

DIMENSION (mm)

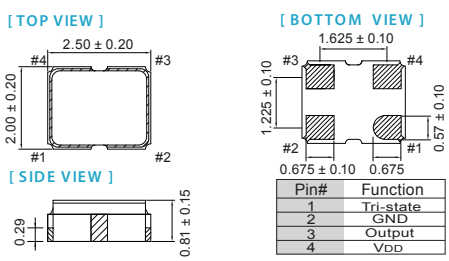


Pin#	Function
1	Tri-state
2	GND
3	Output
4	VDD

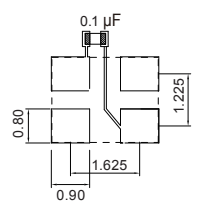
SOLDER PAD LAYOUT (mm)



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.



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



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.

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	1.25	100	1.25	100	1.25	100	MHz
Supply Current Fo ≦ 80 MHz	--	10	--	8	--	5	mA
Fo > 80 MHz	--	15	--	10	--	8	
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+	–	3	--	4	–	5	nSec
Start Time	--	2	--	2	--	2	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	
Period Jitter(pk-pk)	--	40	--	40	--	40	pSec
RMS Phase Jitter (integrated 12kHz ~ 20MHz)	--	1	--	1	--	1	pSec
Aging (@25°C 1st year)	--	±3	--	±3	--	±3	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	±30	±40	±50	±100
-40~+85	○	○	○	○
-40~+105	△	○	○	○
-40~+125	×	△	○	○
-55~+125	×	×	△	○

* ○: Available △:Conditional ×: 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.