

Extended Operating Temperature Range Crystal Oscillator

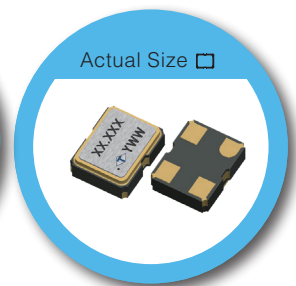
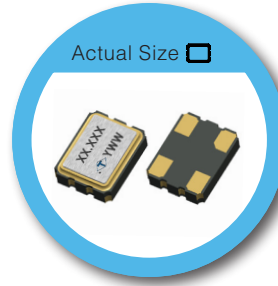
OX/OY Series 3.2 x 2.5 / 2.5 x 2.0 mm SMD Crystal Oscillator

FEATURE

- Extended Industrial Operating Temperature Range -55°C ~+125°C.
- Low jitter and phase noise(25ps Pk-Pk Period jitter, typical)
- Tight symmetry (45 to 55%) available.
- Operation voltage : 1.8V, 2.5V, 3.3V.
- Tri-state enable/disable.

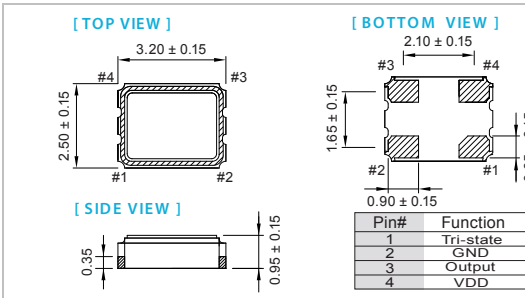
TYPICAL APPLICATION

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

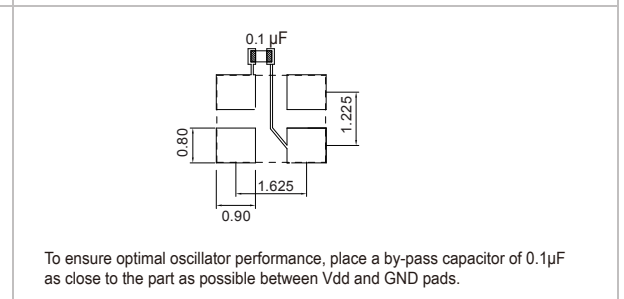
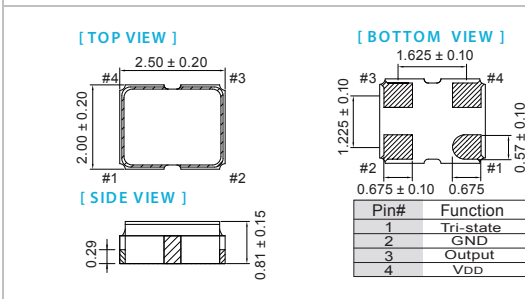
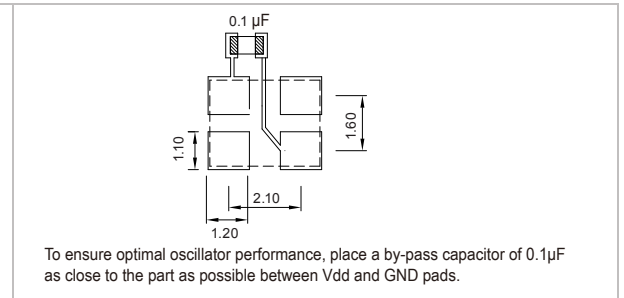


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



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	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	V
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	V
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	ppm			
		±30	±40	±50	±100
-40~+85	○	○	○	○	○
-40~+105	△	○	○	○	○
-40~+125	×	△	○	○	○
-55~+125	×	×	△	○	○

* 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.