

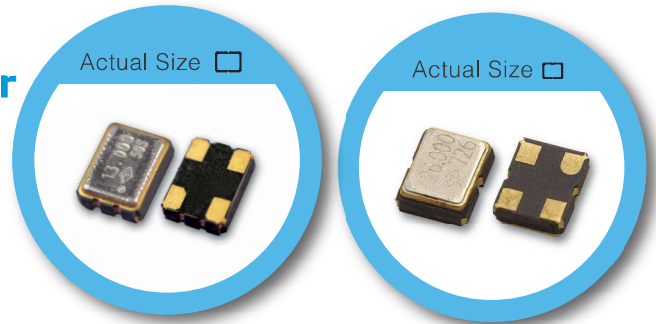
32.768kHz Series OX / OY Type 3.2 x 2.5 / 2.5 x 2.0 mm SMD Oscillator

FEATURE

- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V
- Tri-state enable/disable
- Built-in ASIC enables reduction of current consumption.

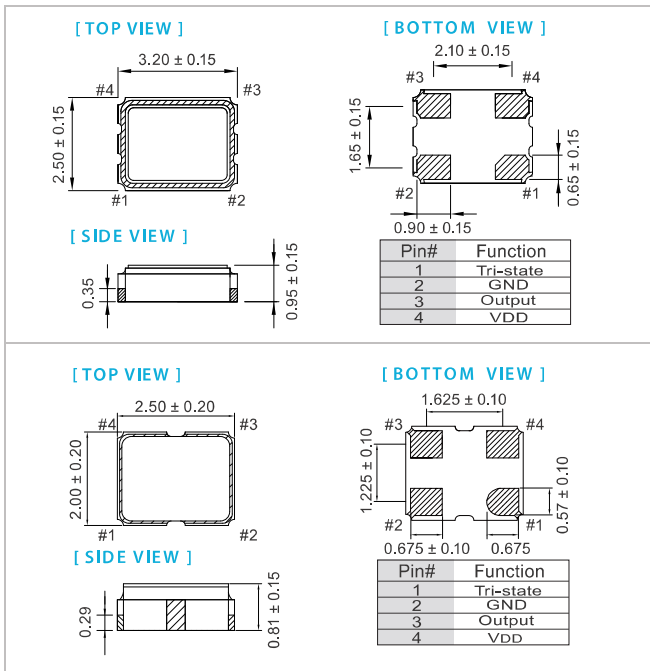
TYPICAL APPLICATION

- Typically used for real time clock application.
- Mobile Phone
- DSC, Set-top Box, HDTV
- Car navigation systems.

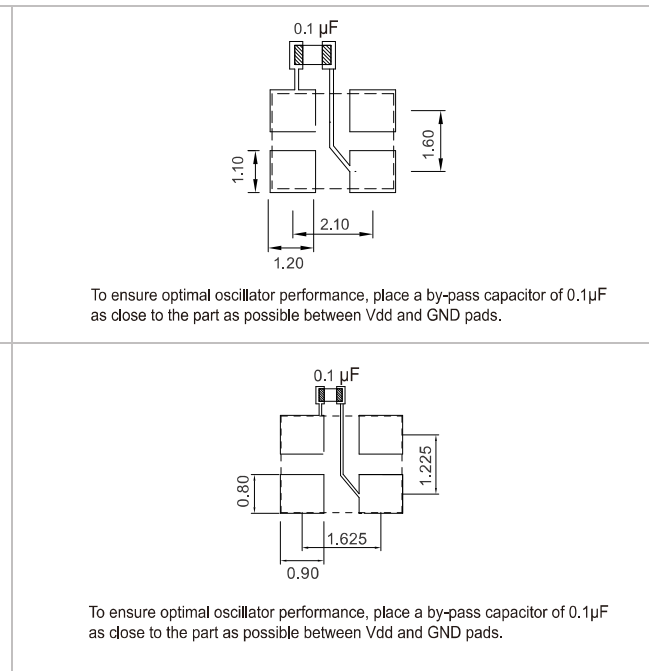


RoHS Compliant

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
Supply Current (@ 15pF load)	—	70	—	66	—	63	µA
(@ no load)	—	65	—	62	—	60	µA
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+	—	50	—	50	—	50	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	
Aging (@ 25°C 1 st 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, within output load of 15pF

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	±20	±25	±40	±50
-10~+60	○	○	○	○	○
-20~+70	△	○	○	○	○
-40~+85	×	△	○	○	○
-40~+105	×	×	○	○	○
-40~+125	×	×	△	○	○

* ○: Available △: Conditional ×: Not available

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

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