

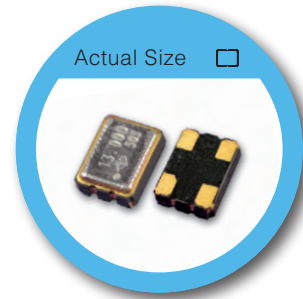
## 3.2 x 2.5 mm SMD Crystal Oscillator – OX Type

### FEATURE

- Typical 3.2x2.5x1.05 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V
- Packing: Tape & Reel, 3000pcs per Reel.

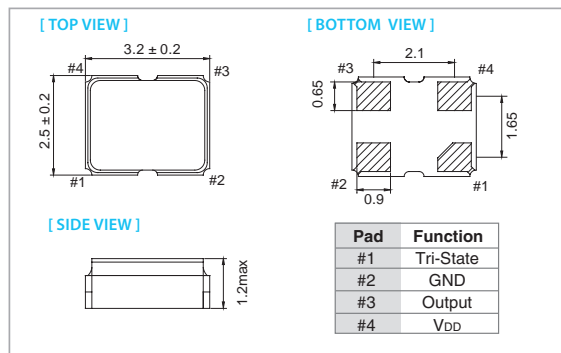
### TYPICAL APPLICATION

- WLAN/WiMax,
- Mobile Phone
- DSC, Set-top Box, HDTV

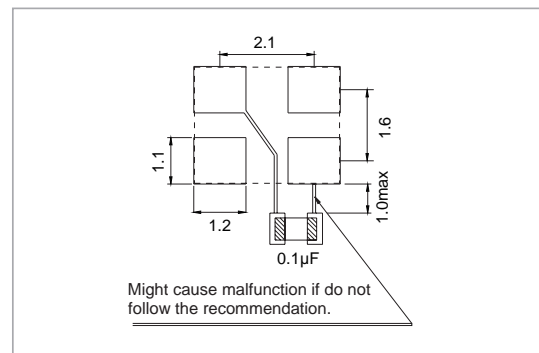


RoHS Compliant Standard

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	3.3 V		2.5 V		1.8 V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (V <sub>DD</sub> ) 10%	2.97	3.63	2.25	2.75	1.62	1.98	V
Frequency Range	1	125	1	125	1	125	MHz
Standard Frequency	24, 26, 32, 38.4, 40						
Supply Current	1MHz ≤ F <sub>0</sub> < 100MHz		1MHz ≤ F <sub>0</sub> < 100MHz		1MHz ≤ F <sub>0</sub> < 100MHz		mA
	100MHz ≤ F <sub>0</sub> < 125MHz		100MHz ≤ F <sub>0</sub> < 125MHz		100MHz ≤ F <sub>0</sub> < 125MHz		
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS)	Output High (Logic "1")		Output High (Logic "1")		Output High (Logic "1")		V
	Output Low (Logic "0")		Output Low (Logic "0")		Output Low (Logic "0")		
Transition Time: Rise/Fall Time <sup>+</sup>	1MHz ≤ F <sub>0</sub> < 20MHz		1MHz ≤ F <sub>0</sub> < 20MHz		1MHz ≤ F <sub>0</sub> < 20MHz		nSec
	20MHz ≤ F <sub>0</sub> < 125MHz		20MHz ≤ F <sub>0</sub> < 125MHz		20MHz ≤ F <sub>0</sub> < 125MHz		
Start Time	-	2	-	2	-	2	mSec
Tri-State (Input to Pin 1)	Enable		Enable		Enable		V
	Disable		Disable		Disable		
Absolute Clock Period Jitter	-	40	-	40	-	40	pSec
RMS Phase Jitter (Integrated 12KHz ~ 20MHz)	-	1	-	1	-	1	pSec
Standby Current	-	15	-	15	-	15	µA
Aging	-	±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 V<sub>DD</sub>, with an output load of 15pF.

### FREQ. STABILITY vs. TEMP. RANGE

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

\* ○: Available △: Conditional X: Not available

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