

# OV Type

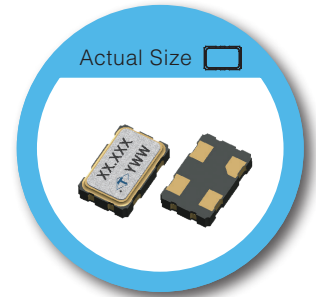
## 5.0 x 3.2 mm SMD Crystal Oscillator

### FEATURE

- Typical 5.0 x 3.2 x 1.2 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Realize the standby function with Tri-State

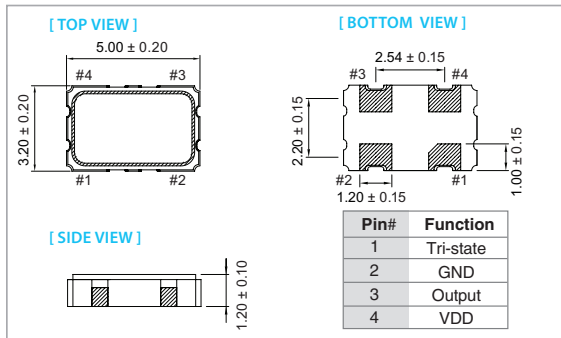
### TYPICAL APPLICATION

- GPS, Mobile Phone
- WLAN, Wireless, Fiber/10Gbit Ethernet
- Notebook, PDA, DSC

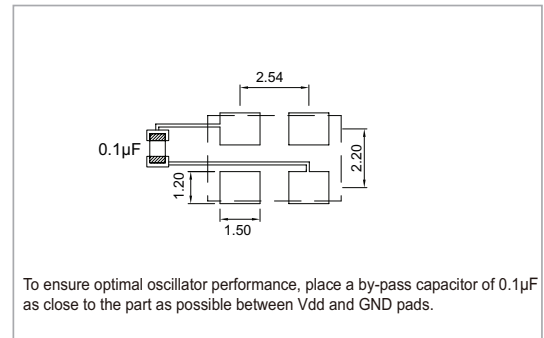


RoHS Compliant

### 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(V <sub>DD</sub> )	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V
Frequency Range	0.0137	160	0.0137	160	0.0137	135	MHz
Supply Frequency	2.048, 25, 26, 27, 50, 66.667, 100, 125						MHz
Supply Current							
13.7 kHz ≤ Fo ≤ 93 kHz	—	1	—	1	—	1	mA
0.3125 MHz ≤ Fo < 50 MHz (A1)	—	10	—	8	—	7	
40 MHz ≤ Fo < 75 MHz	—	20	—	18	—	15	
75 MHz ≤ Fo < 135 MHz	—	35	—	30	—	25	
135 MHz ≤ Fo	—	45	—	40	—	—	
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							
13.7 kHz ≤ Fo ≤ 93 kHz	—	50	—	50	—	50	nSec
0.3125 MHz ≤ Fo < 100 MHz	—	5	—	5	—	5	
100 MHz ≤ Fo	—	3	—	3	—	3	
Start Time	—	5	—	5	—	5	mSec
Output Drive Capability (CL)	—	15	—	15	—	15	pF
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 12 kHz-20 MHz)	—	1	—	1	—	1	pSec
Standby Current	—	10	—	10	—	10	µA
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 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	△	○	○
-40 ~ +125	×	×	○

\* ○: 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

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