

# OX-B/OY-B Type

## High Precision 3.2 X 2.5 / 2.5 X 2.0 mm SMD Crystal Oscillator

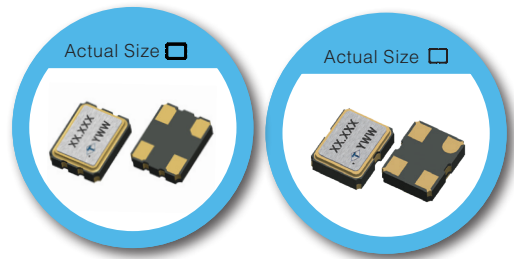
### FEATURE

- Tight frequency stability:  $\pm 10\text{ppm}$  over  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$  :  $\pm 15\text{ppm}$  over  $-40^{\circ}\text{C}$  to  $95^{\circ}\text{C}$
- Operation supply voltage: 1.8V, 2.5V, 3.3V
- LVCOMS Output Logic
- Wide frequency range : 2.5MHz~60MHz

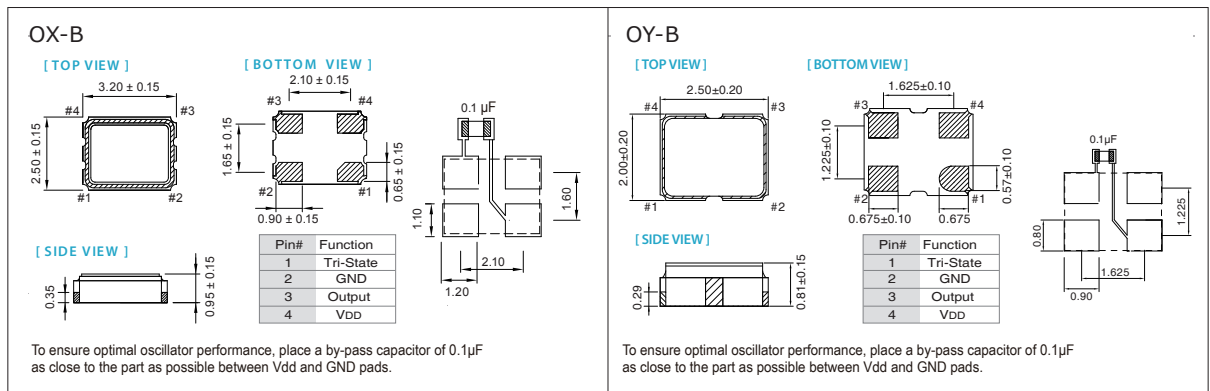
### TYPICAL APPLICATION

- Wireless Connectivity
- Mobile device
- Smart meter

### DIMENSION & SOLDER PAD LAYOUT (mm)



**RoHS Compliant**



### ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		Unit	
	Min.	Max.	Min.	Max.	Min.	Max.		
Supply Voltage Variation	$V_{DD}-10\%$	$V_{DD}-10\%$	$V_{DD}-10\%$	$V_{DD}-10\%$	$V_{DD}-5\%$	$V_{DD}+5\%$	V	
Frequency Range	2.5	60	2.5	60	2.5	60	MHz	
Standard Frequency	24, 25, 32						MHz	
Supply Current (@15pf Loading)	-	6	-	5	-	4	mA	
Output Level	Output logic	CMOS		CMOS		CMOS		
	Output High	$90\%V_{DD}$	-	$90\%V_{DD}$	-	$90\%V_{DD}$	-	V
	Output Low	-	$10\%V_{DD}$	-	$10\%V_{DD}$	-	$10\%V_{DD}$	V
Transition Time for Standard	Rise Time	-	6	-	6	-	6	nSec
	Fall Time	-	6	-	6	-	6	nSec
Duty Cycle	45	55	45	55	40	60	%	
Start-up Time	-	2	-	2	-	2	mSec	
Tri-State	Output Enable	$0.7 \times V_{DD}$	-	$0.7 \times V_{DD}$	-	$0.7 \times V_{DD}$	-	V
	Output Disable	-	$0.3 \times V_{DD}$	-	$0.3 \times V_{DD}$	-	$0.3 \times V_{DD}$	
Stand by Current	-	10	-	10	-	10	$\mu\text{A}$	
Output Loading	-	15	-	15	-	15	pf	
RMS Phase Jitter (12kHz to 20MHz)	-	0.5	-	0.5	-	0.5	pSec	
Aging (@ 25°C, 1 <sup>st</sup> Year)	$\pm 3$						ppm	
Storage Temp. Range	-55	+125	-55	+125	-55	+125	$^{\circ}\text{C}$	

### FREQ. STABILITY vs. TEMP. RANGE

Temp.( $^{\circ}\text{C}$ )	ppm		
	$\pm 10$	$\pm 15$	$\pm 20$
-20 ~ +70	○	○	○
-30 ~ +85	○	○	○
-40 ~ +85	○	○	○
-40 ~ +95	×	○	○

\*O: Available  $\Delta$ : Conditional X: Not available

\*Inclusive of calibration @ 25  $^{\circ}\text{C}$  ,operating temperature range,input Voltage variation,load variation.

Note: not all combination of options are available. Other specifications may be available upon request. Specifications subject to change without notice.