

# PY-U Type Crystal Oscillator

## FASTXO 2.5 x 2.0 mm SMD XO Frequency up to 200MHz

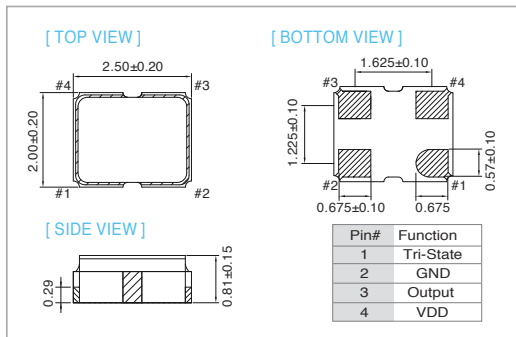
### FEATURE

- Typical 2.5 x 2.0 x 0.81 mm ceramic SMD package
- Operation supply voltage: 1.8V, 2.5V and 3.3V
- FASTXO series, Fast delivery at any frequency
- Tri-State Enable/Disable
- Frequency Stability  $\pm 20\text{ppm}$  over  $-40^{\circ}\text{C}$  to  $105^{\circ}\text{C}$
- Pb-free/RoHS compliant

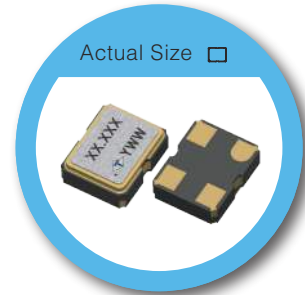
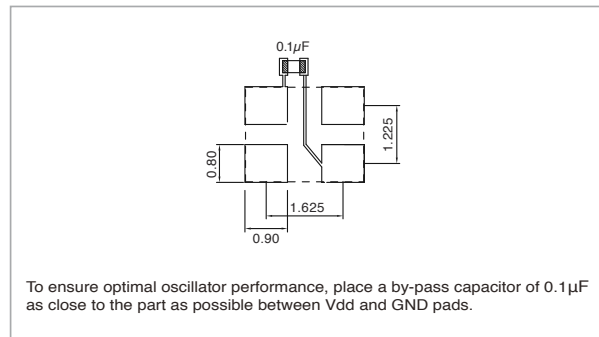
### TYPICAL APPLICATION

- Computer Peripherals
- Set-top Box , HDTV
- DSC, PDA

### DIMENSION (mm)



### 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 <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V	
Frequency Range	1	200	1	200	1	125	MHz	
V <sub>DD</sub> Sensitivity (±5%)	-2	2	-2	2	-2	2	ppm	
Supply Current (@15pf Loading)	1MHz ≤ F <sub>o</sub> < 30MHz	-	27	-	27	-	25	mA
	30MHz ≤ F <sub>o</sub> < 75MHz	-	27	-	27	-	25	
	75MHz ≤ F <sub>o</sub> < 125MHz	-	30	-	30	-	25	
	125MHz ≤ F <sub>o</sub> < 170MHz	-	35	-	35	-	-	
	170MHz ≤ F <sub>o</sub> ≤ 200MHz	-	40	-	35	-	-	
Output Level	Output High	90% V <sub>DD</sub>	-	90% V <sub>DD</sub>	-	90% V <sub>DD</sub>	V	
	Output Low	-	10% V <sub>DD</sub>	-	10% V <sub>DD</sub>	-	10% V <sub>DD</sub>	
Transition Time	1MHz ≤ F <sub>o</sub> < 10MHz	-	3	-	4	-	4	
	Rise Time / Fall Time	10MHz ≤ F <sub>o</sub> < 125MHz	-	2	-	3	-	3
		125MHz ≤ F <sub>o</sub> < 200MHz	-	2	-	2	-	-
Duty Cycle	45	55	45	55	45	55	%	
Startup Time	-	8	-	8	-	8	mSec	
Tri-State	Output Enable	0.7 x V <sub>DD</sub>	-	0.7 x V <sub>DD</sub>	-	0.7 x V <sub>DD</sub>	V	
	Output Disable	-	0.3 x V <sub>DD</sub>	-	0.3 x V <sub>DD</sub>	-	0.3 x V <sub>DD</sub>	
Stand by Current (@PD Mode)	-	400	-	400	-	400	µA	
Stand by Current (@OE Mode)	-	20	-	20	-	20	mA	
Output Loading	15		15		15		pf	
RMS Phase Jitter offset 12kHz to 20MHz @50MHz	Integer Mode	-	1.5	-	1.5	-	1.5	pSec
	Fractional Mode	-	2.0	-	2.0	-	2.0	
Aging (@ 25°C, First Year)	±3		±3		±3		ppm	
Storage Temp. Range	-55	125	-55	125	-55	125	°C	

### FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm			
	±15	±20	±25	±50
-20~+70	△	○	○	○
-40~+85	×	△	○	○
-40~+105	×	△	○	○

\*O: 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.