

PZ-U Type Frequency up to 200MHz

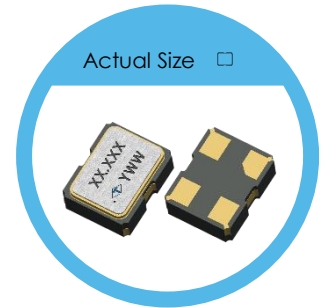
FASTXO 2.0 x 1.6 mm SMD Crystal Oscillator

FEATURES

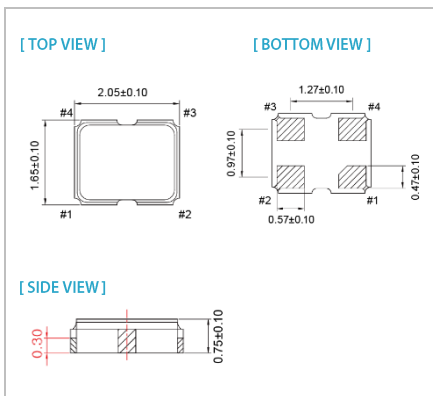
- Conforms to AEC-Q100
- Typical 2.05 x 1.65 x 0.75mm Ceramic SMD Package
- Operation Supply Voltage: 1.8V, 2.5V, 3.3V
- FASTXO Series, Fast Delivery at Any Frequency
- Frequency Stability ± 20 ppm over -40°C to 105°C
- Tri-State Enable/Disable
- Pb-free/RoHS Compliant

TYPICAL APPLICATION

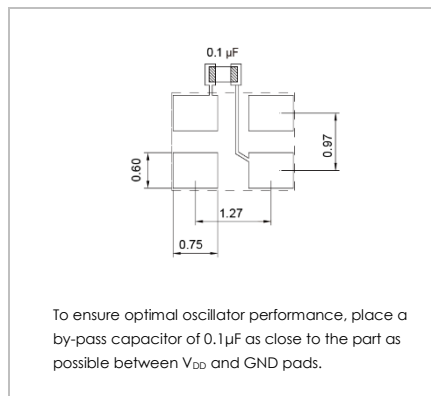
- Wearable Device, SmartPhone
- Game Console, IoT


 Actual Size
RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



PIN FUNCTION (mm)

PIN#	FUNCTION
1	Tri-State
2	GND
3	Output
4	V_{DD}

ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		Unit	Test Condition
	Min.	Max.	Min.	Max.	Min.	Max.		
Supply Voltage Variation (V_{DD})	$V_{\text{DD}} - 5\%$	$V_{\text{DD}} + 5\%$	$V_{\text{DD}} - 5\%$	$V_{\text{DD}} + 5\%$	$V_{\text{DD}} - 5\%$	$V_{\text{DD}} + 5\%$	V	
Frequency Range	1	200	1	200	1	125	MHz	
V_{DD} Sensitivity ($\pm 5\%$)	-2	2	-2	2	-2	2	ppm	
Supply Current (@15pf Loading)	$1 \text{ MHz} \leq F_o < 30 \text{ MHz}$	27	27	27	25	25	mA	
	$30 \text{ MHz} \leq F_o < 75 \text{ MHz}$	27	27	27	25	25	mA	
	$75 \text{ MHz} \leq F_o < 125 \text{ MHz}$	30	30	30	25	25	mA	
	$125 \text{ MHz} \leq F_o < 170 \text{ MHz}$	35	35	35	35		mA	
	$170 \text{ MHz} \leq F_o \leq 200 \text{ MHz}$	40	35	35			mA	
Output Level	Output High	$90\% V_{\text{DD}}$	$90\% V_{\text{DD}}$	$90\% V_{\text{DD}}$	$90\% V_{\text{DD}}$	$90\% V_{\text{DD}}$	V	
	Output Low	$10\% V_{\text{DD}}$	$10\% V_{\text{DD}}$	$10\% V_{\text{DD}}$	$10\% V_{\text{DD}}$	$10\% V_{\text{DD}}$	V	
Transition Time: Rise/Fall Time	$1 \text{ MHz} \leq F_o < 10 \text{ MHz}$	3	4	4	4	4	nSec	
	$10 \text{ MHz} \leq F_o < 125 \text{ MHz}$	2	3	3	3	3	nSec	
	$125 \text{ MHz} \leq F_o < 200 \text{ MHz}$	2	2	2	2	2	nSec	
Duty Cycle	45	55	45	55	45	55	%	
Startup Time		8	8	8	8	8	mSec	
Tri-State	Output Enable	$0.7 \times V_{\text{DD}}$	$0.7 \times V_{\text{DD}}$	$0.7 \times V_{\text{DD}}$	$0.7 \times V_{\text{DD}}$	$0.7 \times V_{\text{DD}}$	V	
	Output Disable		$0.3 \times V_{\text{DD}}$	$0.3 \times V_{\text{DD}}$	$0.3 \times V_{\text{DD}}$	$0.3 \times V_{\text{DD}}$	V	
RMS Phase Jitter (offset 12 kHz~20 MHz @ 50MHz)	Integer Mode	1.5	1.5	1.5	1.5	1.5	pSec	
	Fractional Mode	2.0	2.0	2.0	2.0	2.0	pSec	
Stand by Current (@PD Mode)		400	400	400	400	400	μA	
Stand by Current (@OE Mode)		25	25	25	25	25	mA	
Output Loading		15	15	15	15	15	pf	
Aging (@25°C, 1 st year)		± 3	± 3	± 3	± 3	± 3	ppm	
Storage Temp. Range	-55	+125	-55	+125	-55	+125	$^{\circ}\text{C}$	

FREQ. STABILITY vs. TEMP. RANGE

Temp.($^{\circ}\text{C}$)	ppm				
		± 15	± 20	± 25	± 50
-20 ~ +70	Δ	\circ	\circ	\circ	\circ
-40 ~ +85	X	Δ	\circ	\circ	\circ
-40 ~ +105	X	Δ	\circ	\circ	\circ
-40 ~ +125	X	X	X	X	\circ

\circ : Available Δ :Conditional x: Not Available
 Inclusive of calibration @ 25°C ,operating temperature range,input Voltage variation,load variation,aging (1st year),shock,and vibration

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

Specifications subject to change without notice.