

P4-U Type Frequency up to 125MHz

Ultra-Small FASTXO 1.2 x 1.0 mm SMD

Crystal Oscillator

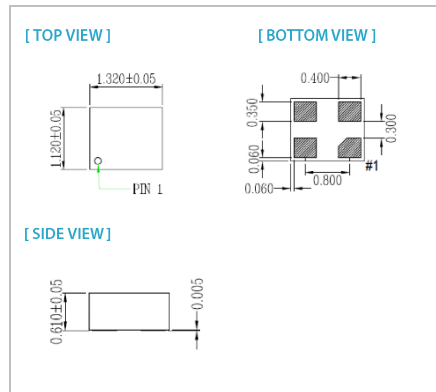
FEATURES

- Typical 1.2 x 1.0 x 0.65mm 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
- Low Current Consumption
- Pb-free/RoHS Compliant

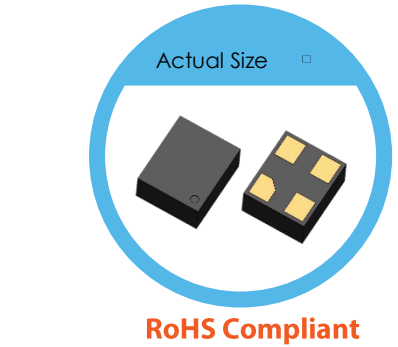
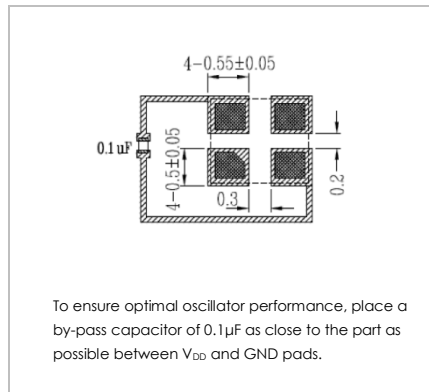
TYPICAL APPLICATION

- Wearable Device, SmartPhone,
- Game Console, IoT, Mobile Device

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



PIN FUNCTION (mm)

PIN#	FUNCTION	Type	Function and Remarks		
1	OE (Tri-State)	Input	Output Control pin. Reference as below table		
			Input Level	Oscillation	Outputs
			"H"	Enable	Enable: Specified Frequency
			"L"	Disable	Disable: Hi-Z
2	GND	Power-	GND pin		
3	OUT	Output	Frequency Output		
4	V _{DD}	Power+	Power Supply, V _{DD} pin		

ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		Unit	Test Condition
	Min.	Max.	Min.	Max.	Min.	Max.		
Supply Voltage Variation (V _{DD})	V _{DD} - 5%	V _{DD} + 5%	V _{DD} - 5%	V _{DD} + 5%	V _{DD} - 5%	V _{DD} + 5%	V	
Frequency Range	1	125	1	125	1	125	MHz	
V _{DD} Sensitivity ($\pm 5\%$)	-2	2	-2	2	-2	2	ppm	
Supply Current (@15pf Loading)	1 MHz \leq Fo < 30 MHz		-		25		20	mA
	30 MHz \leq Fo < 75 MHz		-		23		20	mA
	75 MHz \leq Fo < 125 MHz		-		25		23	mA
Output Level	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: Rise/Fall Time	1 MHz \leq Fo < 10 MHz	-	3	-	4	-	4	nSec
	10 MHz \leq Fo < 125 MHz	-	2	-	3	-	3	nSec
Duty Cycle	45	55	45	55	45	55	%	
Startup Time	-	5	-	5	-	5	5	mSec
Tri-State	Output Enable	0.7 x V _{DD}	-	0.7 x V _{DD}	-	0.7 x V _{DD}	-	V
	Output Disable	-	0.3 x V _{DD}	-	0.3 x V _{DD}	-	0.3 x V _{DD}	V
RMS Phase Jitter (offset 12 kHz~20 MHz @ 50MHz)	Integer Mode	-	1.5	-	1.5	-	1.5	pSec
	Fractional Mode	-	2.0	-	2.0	v	2.0	pSec
Stand by Current (@PD Mode)	-	400	-	400	-	400	µA	
Stand by Current (@OE Mode)	-	20	-	20	-	20	mA	
Output Loading	15		15		15		15	pf
Aging (@25°C, 1 st year)	-	± 3	-	± 3	-	± 3	ppm	
Storage Temp. Range	-55	+125	-55	+125	-55	+125	°C	

FREQ. STABILITY vs. TEMP. RANGE

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

○: Available △: 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.