

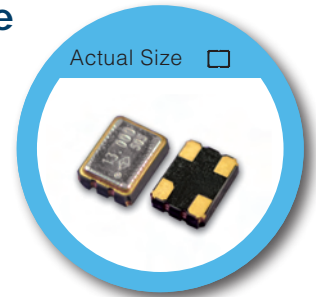
3.2 x 2.5 mm SMD Crystal Oscillator – PX Type

FEATURE

- Typical 3.2 x 2.5 x 1.05 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V
- Packing: Tape & Reel, 3000 pcs per Reel.

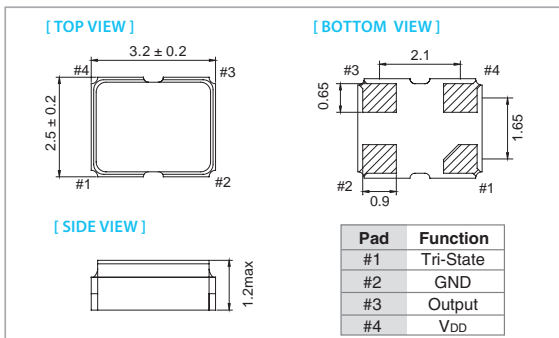
TYPICAL APPLICATION

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

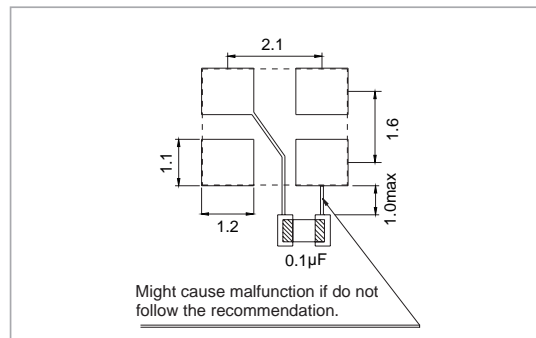


RoHS Compliant Standard

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	3.3 V		2.5 V		1.8 V		unit	
	Min.	Max.	Min.	Max.	Min.	Max.		
Supply Voltage Variation (V _{DD}) 10%	2.97	3.63	2.25	2.75	1.62	1.98	V	
Frequency Range	1	200	1	166	11	133	MHz	
V _{DD} Sensitivity (±10 %)	-2	2	-2	2	-2	2	ppm	
Supply Current	1 MHz ≤ Fo < 30MHz	–	10	–	8	–	6	mA
	30 MHz ≤ Fo < 75MHz	–	15	–	10	–	8	
	75 MHz ≤ Fo < 133MHz	–	20	–	15	–	12	
	133 MHz ≤ Fo < 166MHz	–	22	–	15	–	–	
	166 MHz ≤ Fo ≤ 200MHz	–	25	–	–	–	–	
Duty Cycle	45	55	45	55	45	55	%	
Output Level (CMOS)							V	
Output High (Logic "1")	90%V _{DD}	–	90%V _{DD}	–	90%V _{DD}	–		
Output Low (Logic "0")	–	10%V _{DD}	–	10%V _{DD}	–	10%V _{DD}		
Transition Time: Rise/Fall Time ⁺							nSec	
1 MHz ≤ Fo < 10 MHz	–	3	–	4	–	5		
10 MHz ≤ Fo	–	2	–	3	–	4		
Start Time	–	2	–	2	–	2	mSec	
Tri-State (Input to Pin 1)							V	
Enable	0.7 V _{DD}	–	0.7 V _{DD}	–	0.7 V _{DD}	–		
Disable	–	0.3 V _{DD}	–	0.3 V _{DD}	–	0.3 V _{DD}		
Absolute Clock Period Jitter							pSec	
Specific Frequency [*]	–	40	–	40	–	40		
Others	–	200	–	200	–	200		
Standby Current	–	15	–	15	–	15	µA	
Aging	–	±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_{DD}, with an output load of 15pF.

^{*} Specific frequency including 4.0, 6.0, 8.0, 12.0, 13.0, 16.0, 19.2, 20.0, 24.0, 26.0, 32.0, 38.4 and 40.0MHz

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm		
	±20	±25	±50
-10 ~ +60	○	○	○
-20 ~ +70	△	○	○
-40 ~ +85	×	△	○

* ○: Available △: Conditional X: Not available

* Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1st year), shock, and vibration