

OX Type

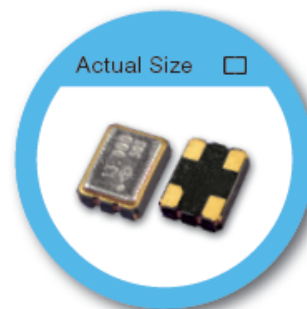
3.2 x 2.5 mm SMD Crystal Oscillator

FEATURE

- Typical 3.2x2.5x1.05 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V
- Tri-state enable/disable

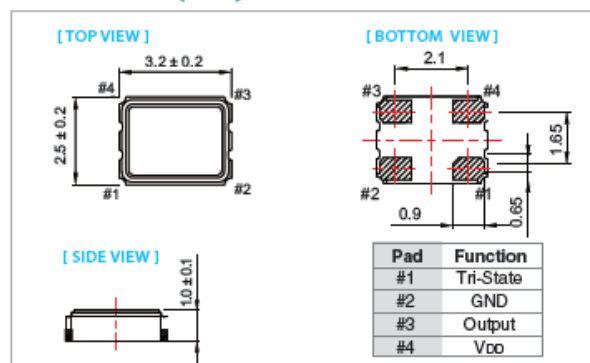
TYPICAL APPLICATION

- WLAN/WiMax,
- Mobile Phone
- DSC, Set-top Box, HDTV

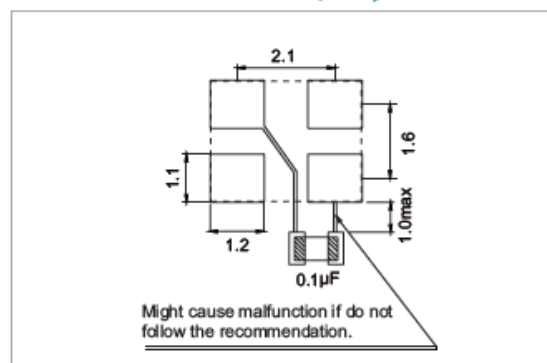


RoHS Compliant Standard

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	0.032768	125	0.032768	125	0.032768	125	MHz
Standard Frequency	24, 26, 32, 38.4, 40						
Supply Current F ₀ = 0.032768KHz 1MHz ≤ F ₀ <100MHz 100MHz ≤ F ₀ <125MHz	—	3	—	2	—	1.5	mA
	—	15	—	10	—	7	
	—	25	—	20	—	12	
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS) Output High (Logic "1") Output Low (Logic "0")	90%V _{DD}	—	90%V _{DD}	—	90%V _{DD}	—	V
	—	10%V _{DD}	—	10%V _{DD}	—	10%V _{DD}	
Transition Time: Rise/Fall Time ⁺ F ₀ = 0.032768KHz 1MHz ≤ F ₀ < 20MHz 20MHz ≤ F ₀ < 125MHz	—	50	—	50	—	50	nSec
	—	3	—	4	—	5	
	—	2	—	3	—	4	
Start Time	—	2	—	2	—	2	mSec
Tri-State(Input to Pin 1) Enable (High voltage or floating) Disable (Low voltage or GND)	0.7 V _{DD}	—	0.7 V _{DD}	—	0.7 V _{DD}	—	V
	—	0.3 V _{DD}	—	0.3 V _{DD}	—	0.3 V _{DD}	
Absolute Clock Period Jitter	—	40	—	40	—	40	pSec
RMS Phase Jitter (Integrated 12KHz ~ 20MHz)	—	1	—	1	—	1	pSec
Standby Current	—	15	—	15	—	15	μA
Aging (@ 25°C 1st year)	—	±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.

Packing: Tape & Reel, 3000pcs per Reel.

FREQ. STABILITY vs. TEMP. RANGE

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

* O: Available △: Conditional X: Not available

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