

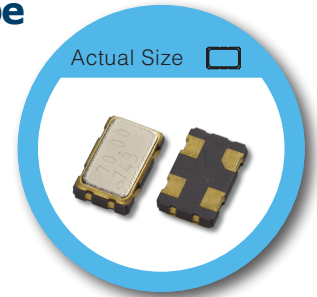
5.0 x 3.2 mm SMD Crystal Oscillator – OV Type

FEATURE

- Typical 5.0 x 3.2 x 1.2 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Packing: Tape & Reel, 1000/2000/3000/5000pcs per Reel.
- Realize the standby function with Tri-State

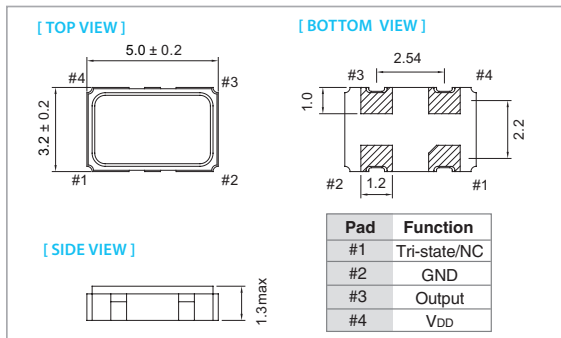
TYPICAL APPLICATION

- GPS, Mobile Phone,
- WLAN, Wireless, Fiber/10G-Bit Ethernet
- Notebook, PDA, DSC

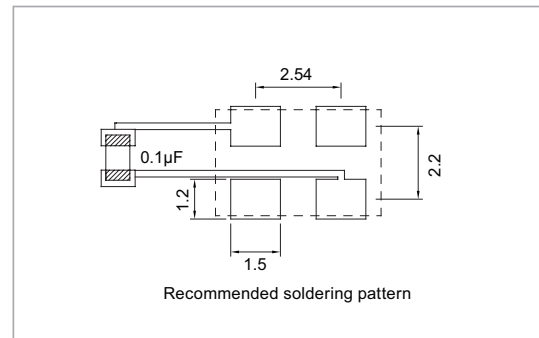


RoHS Compliant Standard

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		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	0.0216	125	0.0216	125	0.0216	125	MHz
Supply Current							
F ₀ = 0.032768MHz	-	3	-	2	-	1.5	mA
0.3125MHz ≤ F ₀ < 20MHz	-	5	-	4	-	3	
20MHz ≤ F ₀ < 35.328MHz	-	7	-	6	-	5	
35.328MHz ≤ F ₀ < 50MHz (A1)	-	10	-	9	-	8	
40MHz ≤ F ₀ < 50MHz (A3)	-	15	-	13	-	10	
50MHz ≤ F ₀ < 75MHz	-	20	-	18	-	15	
75MHz ≤ F ₀ < 100MHz	-	25	-	20	-	18	
100MHz ≤ F ₀ < 125MHz	-	35	-	30	-	20	
Output Level (CMOS) Output High (Logic "1")	90%V _{DD}	-	90%V _{DD}	-	90%V _{DD}	-	V
Output Low (Logic "0")	-	10%V _{DD}	-	10%V _{DD}	-	10%V _{DD}	
Transition Time: Rise/Fall Time							
≤ F ₀ = 0.032768MHz	-	200	-	200	-	200	nSec
0.3125MHz ≤ F ₀ < 50MHz	-	6	-	5	-	4	
50MHz ≤ F ₀ < 100MHz	-	5	-	4	-	3	
100MHz ≤ F ₀ < 125MHz	-	4	-	3	-	2	
Start Time	-	5	-	5	-	5	mSec
Output Drive Capability (CL)	-	15	-	15	-	15	pF
Tri-State (Input to Pin 1)							
Enable	0.7 V _{DD}	-	0.7 V _{DD}	-	0.7 V _{DD}	-	V
Disable	-	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	-	10	-	10	-	10	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. Output waveform CMOS only.

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