

OV Type

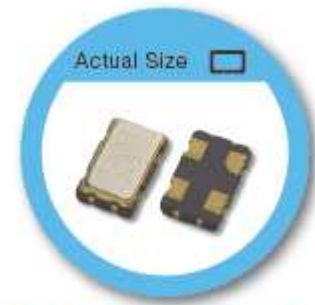
5.0 x 3.2 mm SMD Crystal Oscillator

FEATURE

- Typical 5.0 x 3.2 x 1.2 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Realize the standby function with Tri-State

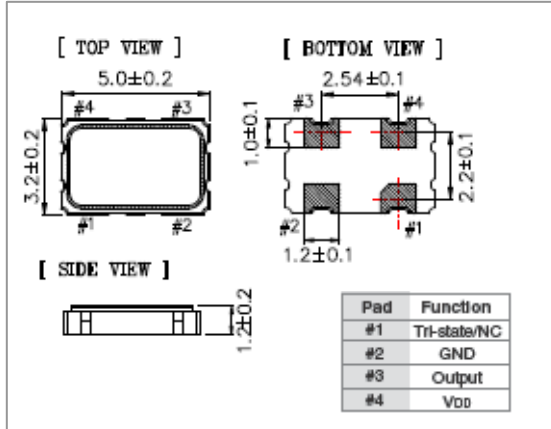
TYPICAL APPLICATION

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

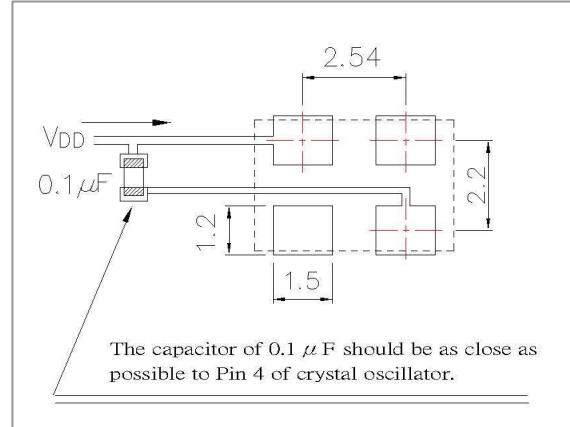


RoHS Compliant Standard

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	0.0137	125	0.0137	133	0.0137	125	MHz
Standard Frequency	2.048, 25, 26, 27, 50, 66.667, 100, 125						MHz
Supply Current							
13.7KHz \leq F ₀ \leq 93 KHz	-	1	-	0.5	-	0.1	mA
0.3125MHz \leq F ₀ \leq 50 MHz (A1)	-	10	-	8	-	7	
40MHz \leq F ₀ < 75MHz	-	20	-	18	-	15	
75MHz \leq F ₀ < 133MHz	-	35	-	30	-	25	
133MHz \leq F ₀	-	45	-	40	-	-	
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 ⁺							
13.7KHz \leq F ₀ \leq 70KHz	-	50	-	50	-	50	nSec
0.3125MHz \leq F ₀ < 100MHz	-	5	-	5	-	5	
100MHz \leq F ₀	-	3	-	3	-	3	
Start Time	-	5	-	5	-	5	mSec
Output Drive Capability (CL)	-	15	-	15	-	15	pF
Tri-State (Input to Pin1) Enable (High voltage or floatig)	0.7V _{DD}	-	0.7V _{DD}	-	0.7V _{DD}	-	V
Disable (Low voltage or GND)	-	0.3V _{DD}	-	0.3V _{DD}	-	0.3V _{DD}	
Absolute Clock Period Jitter	-	40	-	40	-	40	pSec
RMS Phase Jitter (Integrated 12KHz~20MHz)	-	1	-	1	-	1	pSec
Standby Current	-	10	-	10	-	10	μ A
Aging (@ 25°C 1st year)	-	\pm 3	-	\pm 3	-	\pm 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.

Packing: Tape & Reel, 1000/3000pcs per Reel.

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	\pm 20	\pm 25	\pm 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