

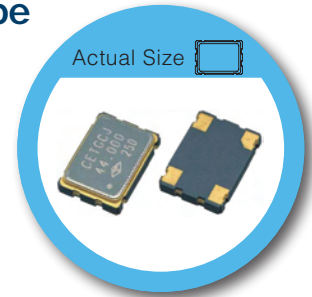
## 7.0 x 5.0 mm SMD Crystal Oscillator – OC Type

### FEATURE

- Typical 7.0 x 5.0 x 1.3 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Packing: Tape & Reel, 1000/3000pcs per Reel.
- Realize the standby function with Tri-State

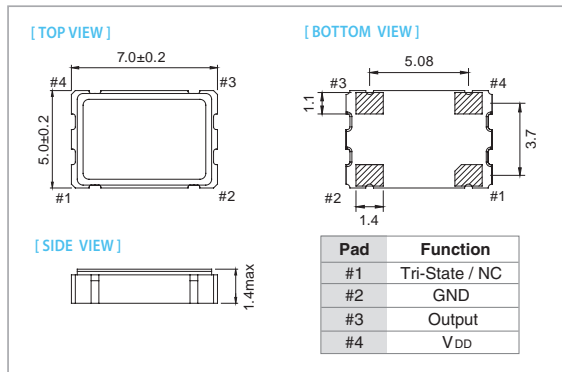
### TYPICAL APPLICATION

- xDSL, WLAN, Fiber/10G-Bit Ethernet
- Notebook, PDA
- PC main board, VGA card

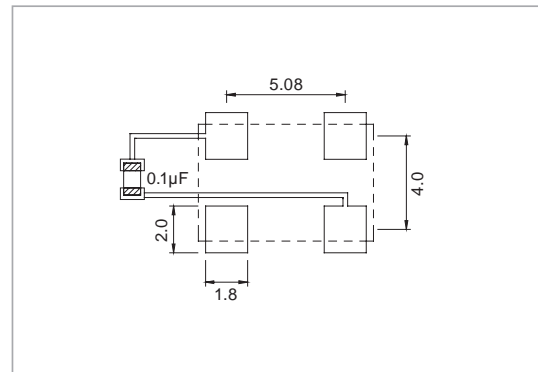


RoHS Compliant Standard

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
<b>Supply Voltage Variation(V<sub>DD</sub>) 10%</b>	2.97	3.63	2.25	2.75	1.62	1.98	V
<b>Frequency Range</b>	0.012	156.25	0.012	133	0.048	125	MHz
<b>Supply Current</b>							mA
F <sub>0</sub> = 0.032768MHz	–	3	–	2	–	2	
0.3125MHz ≤ F <sub>0</sub> < 35.328MHz (A1)	–	7	–	6	–	5	
30MHz ≤ F <sub>0</sub> < 50MHz (A3)	–	15	–	13	–	10	
50MHz ≤ F <sub>0</sub> < 75MHz	–	20	–	18	–	15	
75MHz ≤ F <sub>0</sub> < 100MHz	–	25	–	20	–	18	
100MHz ≤ F <sub>0</sub> < 133MHz	–	35	–	30	–	20	
133MHz ≤ F <sub>0</sub> < 156.25MHz	–	45	–	40	–	–	
<b>Output Level (CMOS) Output High (Logic "1")</b>	90%V <sub>DD</sub>	–	90%V <sub>DD</sub>	–	90%V <sub>DD</sub>	–	V
<b>Output Low (Logic "0")</b>	–	10%V <sub>DD</sub>	–	10%V <sub>DD</sub>	–	10%V <sub>DD</sub>	
<b>Transition Time: Rise/Fall time</b>							nSec
F <sub>0</sub> = 0.032768MHz	–	200	–	200	–	200	
0.3125MHz ≤ F <sub>0</sub> < 50MHz	–	6	–	5	–	4	
50MHz ≤ F <sub>0</sub> < 100MHz	–	5	–	4	–	3	
100MHz ≤ F <sub>0</sub> < 125MHz	–	4	–	3	–	2	
125MHz ≤ F <sub>0</sub> < 156.25MHz	–	3	–	2	–	–	
<b>Start Time</b>	–	5	–	5	–	5	mSec
<b>Output Drive Capability (CL)</b>	–	15	–	15	–	15	pF
<b>Tri-State Enable</b>	0.7 V <sub>DD</sub>	–	0.7 V <sub>DD</sub>	–	0.7 V <sub>DD</sub>	–	V
<b>Disable</b>	–	0.3 V <sub>DD</sub>	–	0.3 V <sub>DD</sub>	–	0.3 V <sub>DD</sub>	
<b>Absolute Clock Period Jitter</b>	–	40	–	40	–	40	pSec
<b>RMS Phase Jitter (Integrated 12KHz~20MHz)</b>	–	1	–	1	–	1	pSec
<b>Standby Current</b>	–	10	–	10	–	10	µA
<b>Aging</b>	–	±3	–	±3	–	±3	ppm
<b>Storage Temp. Range</b>	–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<sub>DD</sub>, 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 (1<sup>st</sup> year), shock, and vibration