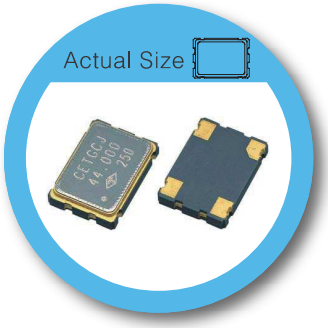
OC Type
7.0 x 5.0 mm SMD Crystal Oscillator

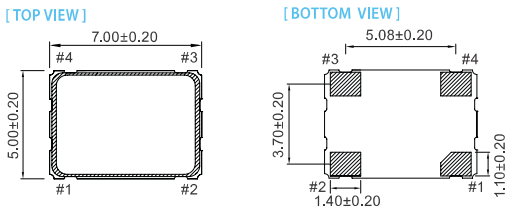


RoHS Compliant

FEATURE
- Typical 7.0 x 5.0 x 1.3 mm ceramic SMD package.
- Output frequency up to 166MHz
- Tr-state enable/disable.

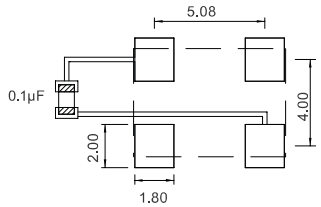
TYPICAL APPLICATION
- xDSL, WLAN, Fiber/10G-Bit Ethernet
- Notebook, PDA
- PC main board, VGA card

DIMENSION (mm)



Pin#	Function
1	Tri-State
2	GND
3	Output
4	VDD

SOLDER PAD LAYOUT (mm)



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation(V_{DD})	V_{DD}-10%	V_{DD}+10%	V_{DD}-10%	V_{DD}+10%	V_{DD}-10%	V_{DD}+10%	V
Frequency Range	0.0137	166	0.0137	133	0.0137	125	MHz
Standard Frequency	2.048, 25, 26, 27, 50, 66, 667, 100, 125						
Supply Current							
13.7 kHz ≦ Fo ≦ 70 kHz	–	1	–	1	–	1	mA
0.3125 MHz ≦ Fo < 35.328 MHz (A1)	–	10	–	8	–	7	
30 MHz ≦ Fo < 75 MHz	–	20	–	18	–	15	
75 MHz ≦ Fo < 133 MHz	–	35	–	30	–	25	
133 MHz ≦ Fo	–	45	–	40	–	–	
Output Level (CMOS) Output High (Logic "1")	2.97	–	2.25	–	1.62	–	V
Output Low (Logic "0")	–	0.33	–	0.25	–	0.18	
Transition Time:Rise/Fall Time							
13.7 kHz ≦ Fo ≦ 70 kHz	–	50	–	50	–	50	nSec
0.3125 MHz ≦ Fo < 100 MHz	–	5	–	5	–	5	
100 MHz ≦ Fo	–	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 floating)	2.31	–	1.75	–	1.26	–	V
Disable (Low voltage or GND)	–	0.99	–	0.75	–	0.54	
Period Jitter(Pk-Pk)	–	40	–	40	–	40	pSec
RMS Phase Jitter (Integrated 12 kHz~20 MHz)	–	1	–	1	–	1	pSec
Standby Current	–	10	–	10		10	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.

FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C) \ ppm	±20	±25	±50
-10 ~ +60	○	○	○
-20 ~ +70	△	○	○
-40 ~ +85	△	○	○
-40 ~ +125	×	×	○

* ○: Available △:Conditional X: Not available
* Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1st year), shock, and vibration

Note: not all combination of options are available. Other specifications may be available upon request.