

PC Type

7.0 x 5.0 mm SMD Crystal Oscillator

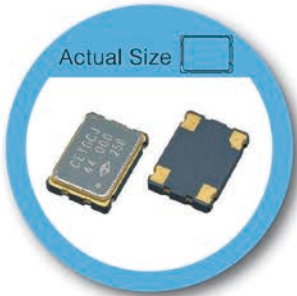
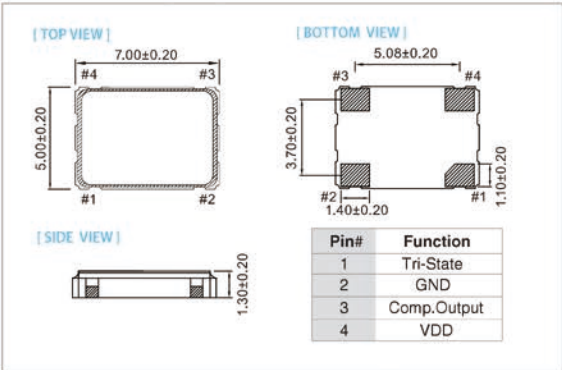
FEATURE

- Typical 7.0 x 5.0 x 1.3 mm ceramic SMD package.
- Output frequency up to 200 MHz
- Tri-state enable/disable

TYPICAL APPLICATION

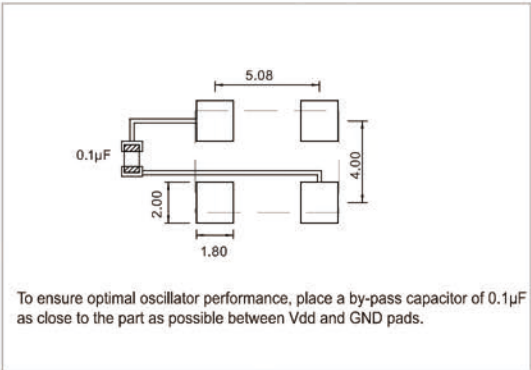
- xDSL, WLAN, Fiber/10G-Bit Ethernet
- Notebook, PDA
- PC main board, VGA card

DIMENSION (mm)



RoHS Compliant

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 (VDD)	VDD-10%	VDD+10%	VDD-10%	VDD+10%	VDD-10%	VDD+10%	V
Frequency Range	2.048	200	2.048	166	2.048	110	MHz
VDD Sensitivity (±10 %)	-2	2	-2	2	-2	2	ppm
Supply Current	2.048 MHz≤Fo≤110 MHz	—	20	—	15	—	mA
	110 MHz<Fo≤166 MHz	—	25	—	20	—	
	166 MHz<Fo≤200 MHz	—	30	—	—	—	
Duty Cycle	40	60	40	60	40	60	%
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 ⁺							
2.048 MHz ≤ Fo ≤ 200 MHz	—	5	—	5	—	5	nSec
Start Time	—	5	—	5	—	5	mSec
Tri-State(Input to Pin 1)							
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)							
Specific Frequency [°]	—	40	—	40	—	40	pSec
Others	—	200	—	200	—	200	
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 VDD, with an output load of 15pF.

[°] Specific frequencies include 4.0, 6.0, 8.0, 12.0, 13.0, 16.0, 19.2, 20.0, 24.0, 26.0, 32.0, 38.4 and 40.0MHz

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

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