

# OC-M Type

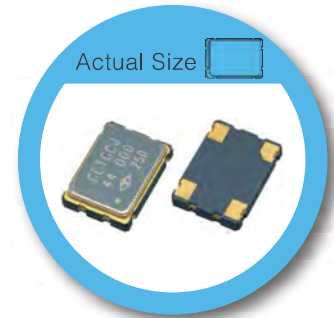
## 7.0 x 5.0 mm SMD Crystal Oscillator

### FEATURE

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

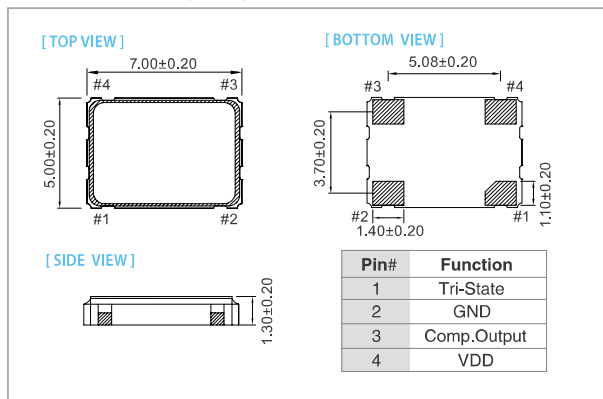
### TYPICAL APPLICATION

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

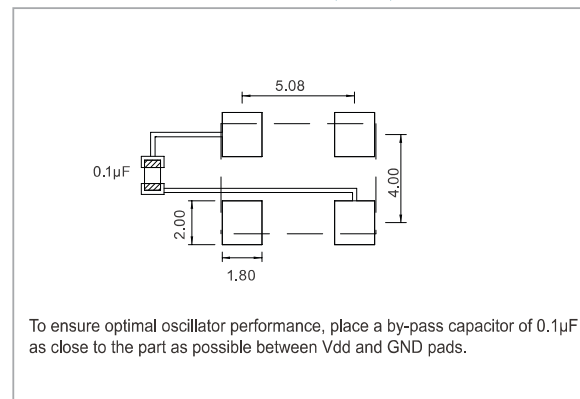


RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	3.3 V		2.5 V		1.8 V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
<b>Supply Voltage Variation (V<sub>DD</sub>)</b>	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V <sub>DD</sub> -10%	V <sub>DD</sub> +10%	V
<b>Frequency Range</b>	2.048	200	2.048	166	2.048	110	MHz
<b>V<sub>DD</sub> Sensitivity (±10 %)</b>	-2	2	-2	2	-2	2	ppm
<b>Supply Current</b>	2.048 MHz ≤ F <sub>o</sub> ≤ 110 MHz	—	20	—	15	—	mA
	110 MHz < F <sub>o</sub> ≤ 166 MHz	—	25	—	20	—	
	166 MHz < F <sub>o</sub> ≤ 200 MHz	—	30	—	—	—	
<b>Duty Cycle</b>	40	60	40	60	40	60	%
<b>Output Level (CMOS)</b>	Output High (Logic "1")	2.97	—	2.25	—	1.62	V
	Output Low (Logic "0")	—	0.33	—	0.25	—	
<b>Transition Time: Rise/Fall Time<sup>+</sup></b>	2.048 MHz ≤ F <sub>o</sub> ≤ 200 MHz						nSec
	—	5	—	5	—	5	
<b>Start Time</b>	—	5	—	5	—	5	mSec
<b>Tri-State (Input to Pin 1)</b>	Enable (High voltage or floating)	2.31	—	1.75	—	1.26	V
	Disable (Low voltage or GND)	—	0.99	—	0.75	—	
<b>Period Jitter (Pk-Pk)</b>	Specific Frequency"	—	40	—	40	—	pSec
	Others	—	200	—	200	—	
<b>Standby Current</b>	—	15	—	15	—	15	µA
<b>Aging ( @ 25°C 1st year)</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.

<sup>+</sup> Transition times are measured between 10% and 90% of V<sub>DD</sub>, with an output load of 15pF.

<sup>''</sup> 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 (1<sup>st</sup> year), shock, and vibration