

# OC Type

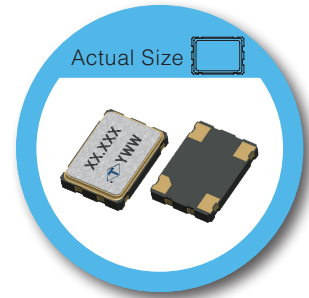
## 7.0 x 5.0 mm SMD Crystal Oscillator

### FEATURE

- Conforms to AEC-Q200
- Typical 7.0 x 5.0 x 1.3 mm ceramic SMD package.
- Output frequency up to 166MHz
- Tri-state enable/disable.

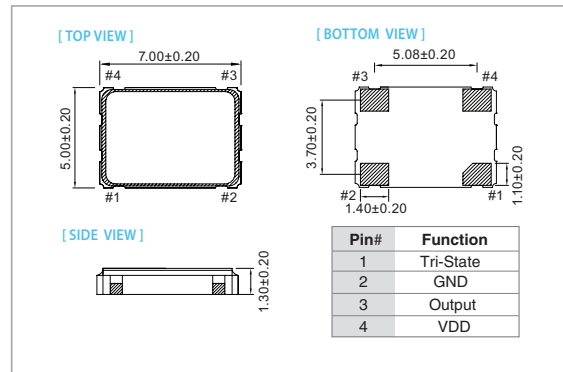
### TYPICAL APPLICATION

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

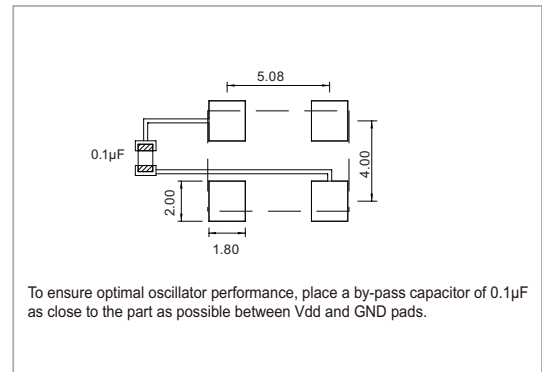


RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
<b>Supply Voltage Variation(VDD)</b>	VDD-10%	VDD+10%	VDD-10%	VDD+10%	VDD-10%	VDD+10%	V
<b>Frequency Range</b>	0.0137	166	0.0137	133	0.0137	125	MHz
<b>Standard Frequency</b>	2.048, 25, 26, 27, 50, 66, 667, 100, 125						
<b>Supply Current</b>							
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	–	–	
<b>Output Level (CMOS)</b> Output High (Logic “1”)	2.97	–	2.25	–	1.62	–	V
Output Low (Logic “0”)	–	0.33	–	0.25	–	0.18	
<b>Transition Time: Rise/Fall Time</b>							
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	
<b>Start Time</b>	–	5	–	5	–	5	mSec
<b>Output Drive Capability (CL)</b>	–	15	–	15	–	15	pF
<b>Tri-State (Input to Pin1)</b> Enable (High voltage or floating)	2.31	–	1.75	–	1.26	–	V
Disable (Low voltage or GND)	–	0.99	–	0.75	–	0.54	
<b>Period Jitter (Pk-Pk)</b>	–	40	–	40	–	40	pSec
<b>RMS Phase Jitter (Integrated 12 kHz~20 MHz)</b>	–	1	–	1	–	1	pSec
<b>Standby Current</b>	–	10	–	10	–	10	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.

+ Transition times are measured between 10% and 90% of VDD, 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 (1<sup>st</sup> year), shock, and vibration

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