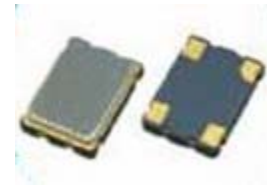


## 7.0 x 5.0 mm SMD Crystal Oscillator

### FEATURE

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

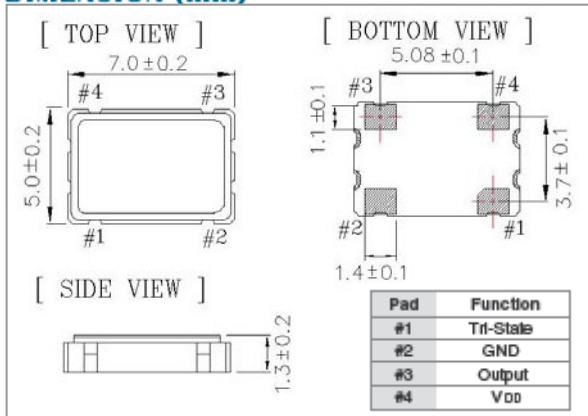


### TYPICAL APPLICATION

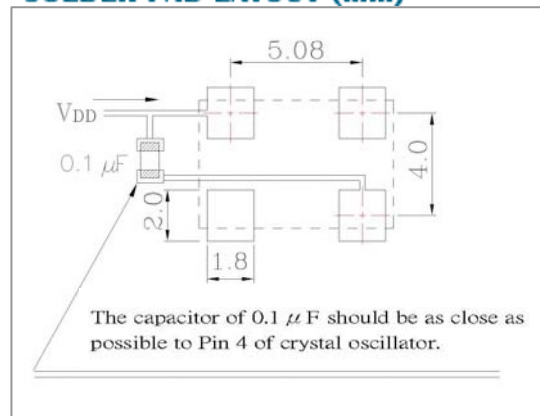
- xDSL, WLAN, Fiber/10G-Bit Ethernet
- Notebook, PDA
- PC main board, VGA card

**RoHS Compliant Standard**

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		Unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD) 10%	2.97	3.63	2.25	2.75	1.62	1.98	V
Frequency Range	1	200	1	166	11	110	MHz
Standard Frequency	75,100,125,150,200						MHz
VDD Sensitivity ( $\pm 10\%$ )	-2	2	-2	2	-2	2	ppm
Supply Current	1MHz $\leq$ FO $\leq$ 110MHz		110MHz < FO $\leq$ 166MHz		166MHz < FO $\leq$ 200MHz		mA
	-	20	-	15	-	10	
	-	25	-	20	-	-	
	-	30	-	-	-	-	
Duty Cycle	40	60	40	60	40	60	%
Output Level (CMOS)							
Output High (Logic "1")	90%VDD	-	90%VDD	-	90%VDD	-	V
Output High (Logic "0")	-	10%VDD	-	10%VDD	-	10%VDD	
Transition Time: Rise/Fall Time <sup>+</sup>							
1MHz $\leq$ FO $\leq$ 200MHz	-	5	-	5	-	5	nSec
Start Time	-	5	-	5	-	5	mSec
Tri-State (Input to Pin1)							
Enable (High voltage or floatig)	0.7VDD	-	0.7VDD	-	0.7VDD	-	V
Disable (Low voltage or GND)	-	0.3VDD	-	0.3VDD	-	0.3VDD	
Absolute Clock Period Jitter							
Specific Frequency"	-	40	-	40	-	40	pSec
Others	-	200	-	200	-	200	
Standby Current	-	15	-	15	-	15	$\mu$ A
Aging ( @25°C 1st year)	-	$\pm 3$	-	$\pm 3$	-	$\pm 3$	ppm
Storage Temp. Range	-55	125	-55	125	-55	125	$^{\circ}$ 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 VDD, with an output load of 15pF.

<sup>\*</sup> Specific frequency including 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

Packing: Tape & Reel, 1000/3000pcs per Reel.

### FREQ. STABILITY vs. TEMP. RANGE

Temp. ( $^{\circ}$ C)	ppm	$\pm 20$	$\pm 25$	$\pm 50$
-10 - +60		○	○	○
-20 - +70		△	○	○
-40 - +85		△	○	○

\* ○: Available △: Conditional X: Not available

\* Inclusive of calibration @ 25  $^{\circ}$ C, operating temperature range, input voltage variation, load variation, aging (1<sup>st</sup> year), shock, and vibration

# Series TH7

## 7.0X5.0MM SMD Crystal Oscillator

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Specifications subject to change without notice