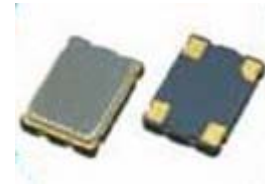


## 7.0 x 5.0 mm SMD Crystal Oscillator

### FEATURE

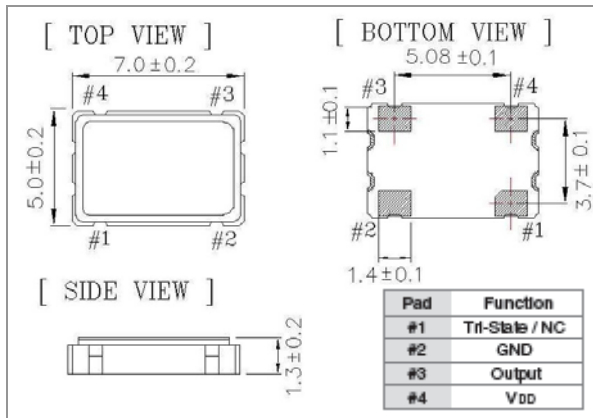
- Typical 7.0 x 5.0 x 1.3 mm ceramic SMD package.
- Output frequency up to 200 MHz
- Tri-state enable/disable



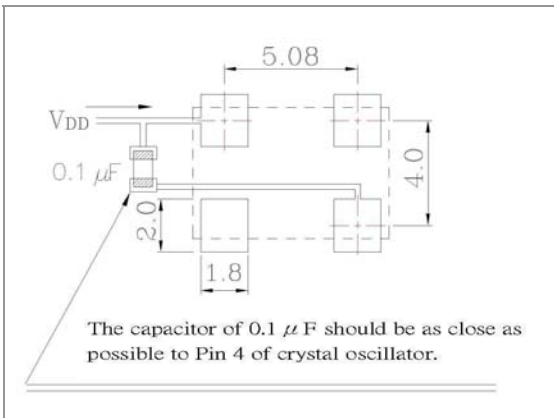
### TYPICAL APPLICATION

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

### DIMENSION (mm)



### 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	0.0137	166	0.0137	133	0.0137	125	MHz
Standard Frequency	2,048,25,26,27,50,66,667,100,125						MHz
Supply Current							
13.7KHz ≤ F0 ≤ 70KHz	-	1	-	0.5	-	0.1	mA
0.3125MHz ≤ F0 ≤ 35.328MHz (A1)	-	10	-	8	-	7	
30MHz ≤ F0 < 75MHz	-	20	-	18	-	15	
75MHz ≤ F0 < 133MHz	-	35	-	30	-	25	
133MHz ≤ F0	-	45	-	40	-	-	
Output Level (CMOS)							
Output High (Logic "1")	90%VDD	-	90%VDD	-	90%VDD	-	V
Output Low (Logic "0")	-	10%VDD	-	10%VDD	-	10%VDD	
Transition Time: Rise/Fall Time							
13.7KHz ≤ F0 ≤ 70KHz	-	50	-	50	-	50	nSec
0.3125MHz ≤ F0 < 100MHz	-	5	-	5	-	5	
100MHz ≤ F0	-	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 floatig)	0.7VDD	-	0.7VDD	-	0.7VDD	-	V
Disable (Low voltage or GND)	-	0.3VDD	-	0.3VDD	-	0.3VDD	
Absolute Clock Period Jitter	-	40	-	40	-	40	pSec
RMS Phase Jitter (Integrated 12KHz~20MHz)	-	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 VDD, with an output load of 15pF. \* Output waveform CMOS only.  
 Packing: Tape & Reel, 1000/3000pcs per Reel.

### 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

# **Series TC7**

## **7.0X5.0MM SMD Crystal Oscillator**

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Specifications subject to change without notice