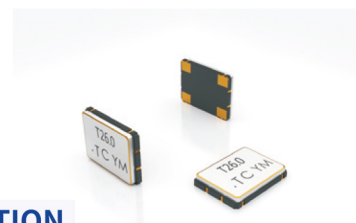


## 5.6 TC7050

### 7.0 x 5.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator



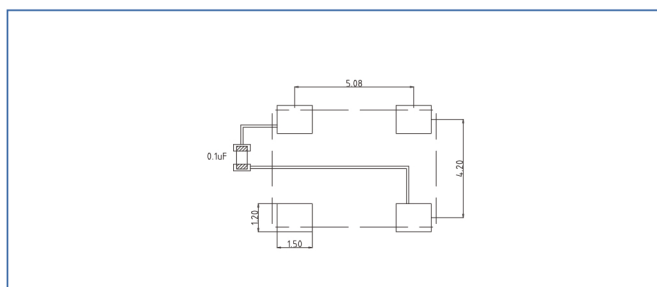
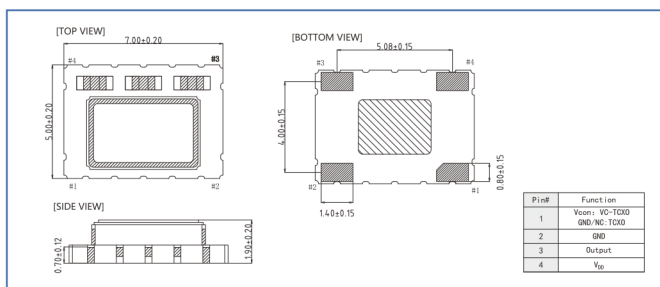
#### FEATURES

- Typical 7.0 x 5.0 x 1.9 mm ceramic SMD package
- High Precision for -40 ~ +85°C, ±0.28ppm, -40 ~ +105°C, ±2ppm
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional

#### TYPICAL APPLICATION

- Femtocell, Base Stations
- WLAN/WiMAX/WIFI, Wireless Communications

#### DIMENSIONS



#### ELECTRICAL SPECIFICATION

Parameter		5.0V		3.3V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)		Vdd-5%	Vdd+5%	Vdd-5%	Vdd+5%	V
Frequency Range		5	52	5	52	MHz
Standard Frequency(for COMS)		10, 12.8, 16.384, 19.2, 19.44, 20, 25, 26				
Frequency Tolerance (at 25°C)		—	±2.0	—	±2.0	ppm
Frequency stability	Vs Supply Voltage (±5%) change	—	±0.1	—	±0.05	ppm
	Vs Load (±10%) change	—	±0.05	—	±0.05	
	Vs Aging (@1st year)	—	±1.0	—	±1.0	ppm
Supply Current(CMOS output)		—	6	—	6	mA
Output Level (Clipped sine wave)		—	3.5	—	3.5	
Output Level(CMOS)	Output High	90%Vdd	—	90%Vdd	—	V
	Output Low	—	10%Vdd	—	10%Vdd	
CMOS	Duty	45	55	45	55	%
Output Level(Clipped sine)		0.8	—	0.8	—	Vp-p
Load(CMOS)		15pF		15pF		pF
Load(Clipped sine)		10KΩ // 10pF		10KΩ // 10pF		
Control Voltage Range(VCTCXO)		0.5	2.5	0.5	2.5	V
Pulling Range(VCTCXO)		±5.0	—	±5.0	—	ppm
Vc Input Impedance		100	—	100	—	KΩ
Phase Noise @ 19.2 MHz	100 Hz	-130		-130		dBc/Hz
	1 KHz	-145		-145		
	10 KHz	-154		-154		
Start time		—	2	—	2	mSec
Storage Temp. Range		-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.  
 \*Frequency at 25°C, 1 hour after reflow.

## FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C) \ ppm	±0.05	±0.1	±0.14	±0.2	±0.28	±0.5	±2
-10 ~ +70	○	○	○	○	○	○	○
-20 ~ +85	×	○	○	○	○	○	○
-40 ~ +85	×	×	×	△	○	○	○
-40 ~ +95	×	×	×	×	×	△	○
-40 ~ +105	×	×	×	×	×	×	○

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

Note: not all combination of options are available. Other specifications may be available upon request.  
 Specifications subject to change without notice.