

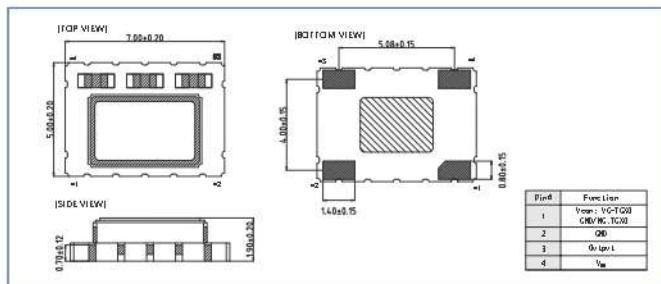
## 5.7 TC7050

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

#### FEATURES

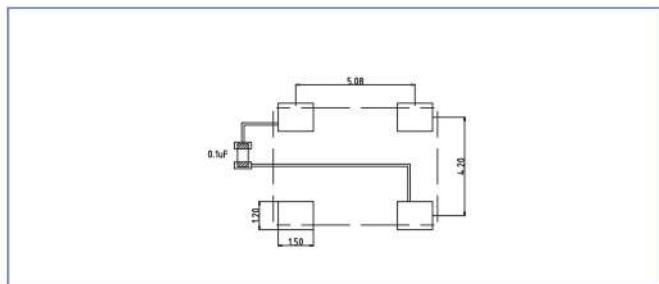
- Typical 7.0 x 5.0 x 1.9 mm ceramic SMD package
- High Precision for -40 ~ +85°C,  $\pm 0.28\text{ppm}$ ,  
-40 ~ +105°C,  $\pm 2\text{ppm}$
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional

#### DIMENSIONS



#### TYPICAL APPLICATION

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



#### ELECTRICAL SPECIFICATION

Parameter	5.0V		3.3V		Unit	
	Min.	Max.	Min.	Max.		
Supply Voltage Variation (VDD)	V <sub>DD</sub> -5%	V <sub>DD</sub> +5%	V <sub>DD</sub> -5%	V <sub>DD</sub> +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*	—	$\pm 2.0$	—	$\pm 2.0$	ppm	
Frequency stability	Vs Supply Voltage ( $\pm 5\%$ ) change	—	$\pm 0.1$	—	$\pm 0.05$	
	Vs Load ( $\pm 10\%$ ) change	—	$\pm 0.05$	—	$\pm 0.05$	
	Vs Aging (@1st year)	—	$\pm 1.0$	—	$\pm 1.0$	
Supply Current(CMOS output)	—	6	—	6	mA	
Output Level (Clipped sine wave)	—	3.5	—	3.5		
Output Level(CMOS)	Output High	90%V <sub>DD</sub>	—	90%V <sub>DD</sub>	V	
	Output Low	—	10%V <sub>DD</sub>	—		
CMOS	Duty	45	55	45	55	%
Output Level(Clipped sine)	0.8	—	0.8	—	V <sub>p-p</sub>	
Load(CMOS)	15pF		15pF		pF	
Load(Clipped sine)	10K $\Omega$ // 10pF		10K $\Omega$ // 10pF			
Control Voltage Range(VCTCXO)	0.5	2.5	0.5	2.5	V	
Pulling Range(VCTCXO)	$\pm 5.0$	—	$\pm 5.0$	—	ppm	
V <sub>c</sub> Input Impedance	100	—	100	—	K $\Omega$	
Phase Noise @ 19.2 MHz	100 Hz	-130		-130		
	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.



# TCXO

## 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	×	×	×	×	×	×	○

\*o: Available Δ: 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.