

TC Type

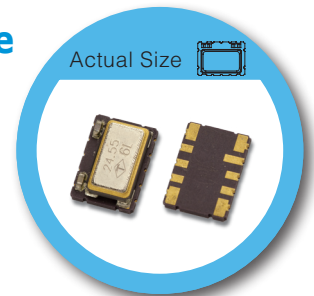
7.0 x 5.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

FEATURE

- Typical 7.0x5.0x1.85 mm ceramic SMD package.
- For automatic assembly.
- Compactness and light weight.
- Low power consumption.
- VCTCXO available.

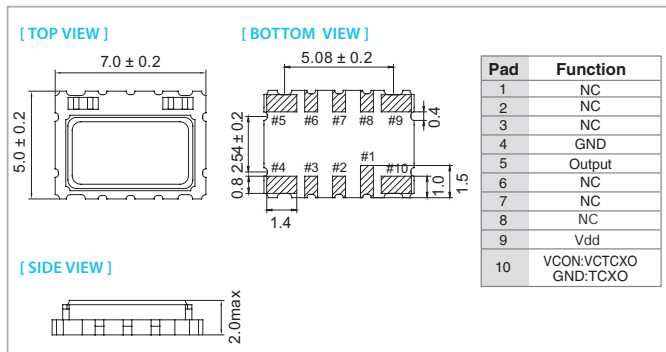
TYPICAL APPLICATION

- Femtocell , Base Stations
- WLAN/WiMax/WIFI, Wireless Communications
- Mobile Phone

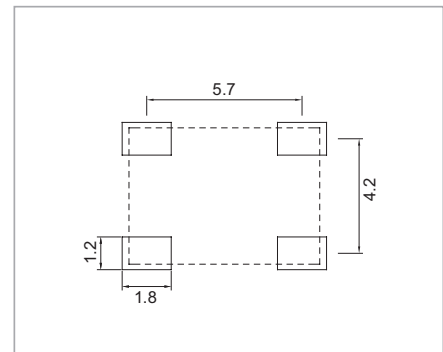


RoHS Compliant Standard

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	5.0 V		3.3 V		Unit
	Min.	Max.	Min.	Max.	
Supply Voltage Variation (V _{DD}) 5%	4.75	5.25	3.13	3.47	V
Frequency Range	10	50	10	50	MHz
Frequency Tolerance*	-	±2.0	-	±2.0	ppm
Frequency stability					
Vs Supply Voltage (±5%) change (Clipped Sine Wave)	-	±0.2	-	±0.2	ppm
Vs Supply Voltage (±5%) change (CMOS)	-	±0.3	-	±0.3	
Vs Load (±10%) change	-	±0.2	-	±0.2	
Vs Aging (@ 1st year)	-	±1.0	-	±1.0	
Supply Current					mA
10 MHz ≤ F _o < 15 MHz	-	1.5	-	1.5	
15 MHz ≤ F _o < 26 MHz	-	2.0	-	2.0	
26 MHz ≤ F _o ≤ 50 MHz (CMOS)	-	6	-	6	
26 MHz ≤ F _o ≤ 50 MHz (Clipped Sine Wave)	-	3.5	-	3.5	
Output Level (Clipped sine wave)	0.8	-	0.8	-	V _{p-p}
Output Level (CMOS)					V
Output High (Logic "1")	90% V _{DD}	-	90% V _{DD}	-	
Output Low (Logic "0")	-	10% V _{DD}	-	10% V _{DD}	
Duty	45	55	45	55	%
Load (Clipped Sine Wave)	10 KΩ // 10pF		10 KΩ // 10pF		
Load (CMOS)	15pF		15pF		
Control Voltage Range (VCTCXO)	0.5	2.5	0.5	2.5	V
Pulling Range (VCTCXO)	±5.0	-	±5.0	-	ppm
Vc Input Impedance (VCTCXO)	100	-	100	-	KΩ
Phase Noise @ 13.0 MHz					dBc / Hz
100 Hz	-	-115	-	-115	
1 KHz	-	-135	-	-135	
10 KHz	-	-148	-	-148	
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.

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

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	
	±0.5	±1.0
0 ~ +55	○	○
-10 ~ +60	○	○
-20 ~ +70	○	○
-30 ~ +85	△	○
-40 ~ +85	△	○

* ○: Available △: Conditional X: Not available

" 10~26MHz and Pulling <8ppm available