

TT Type High Precision TCXO

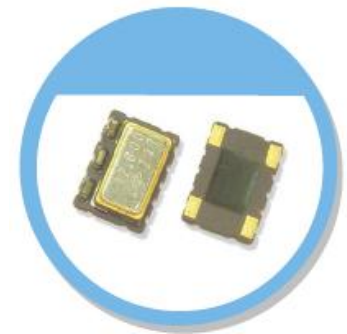
7.0 x 5.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

FEATURE

- Typical 7.0x5.0x1.9 mm ceramic SMD package
- High Precision for -40°C ~+85°C, ± 0.2 ppm
- CMOS and Clipped Sine wave (without DC-cut capacitor) output optional

TYPICAL APPLICATION

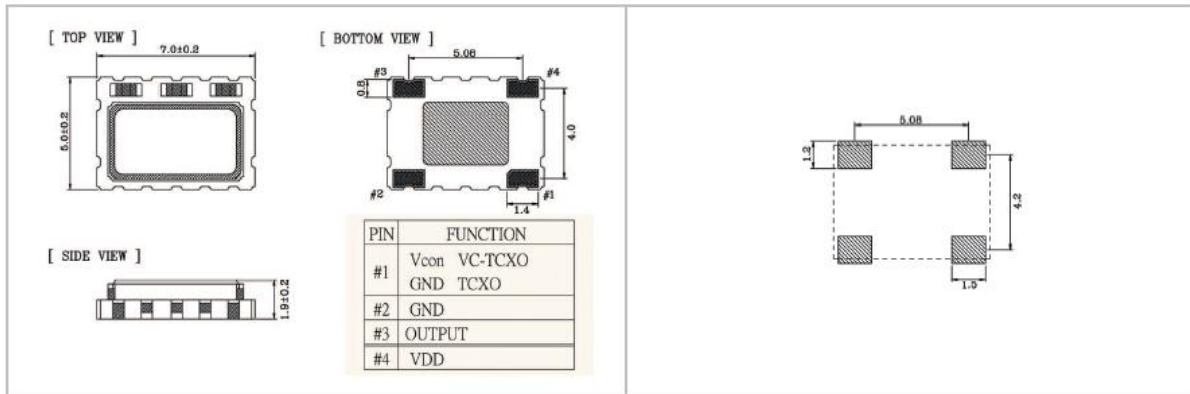
- Femtocell, Base Stations
- WLAN/WiMAX/WiFi, Wireless Communications



DIMENSION (mm)

SOLDER PAD LAYOUT (mm)

RoHS Compliant Standard



ELECTRICAL SPECIFICATION

Parameter	5.0V		3.3V		Unit
	Min.	Max	Min.	Max.	
Supply Voltage Variation (VDD) 5%	4.75	5.25	2.97	3.63	V
Frequency Range	5	40	5	40	MHz
Standard Frequency	10, 12.8, 16.384, 19.2, 19.44, 20, 25, 26				
Frequency Tolerance*	-	±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/year
Supply Current (CMOS output)	-	6	-	6	mA
Supply Current (Clipped Sine Wave)	-	3.5	-	3.5	
Output Level (CMOS)					V
Output High (Logic “1”)	90%VDD	-	90%VDD	-	
Output Low (Logic “0”)	-	10%VDD	-	10%VDD	
Duty	45	55	45	55	%
Output Level (Clipped Sine Wave)	0.8	-	0.8	-	Vp-p
Load (CMOS)	15pF		15pF		
Load (Clipped Sine Wave)	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 (VCTCXO)	100	-	100	-	KΩ
Phase Noise @ 12.8 MHz (Typ.)					
100 Hz	-130				dBc/Hz
1 KHz	-145				
10 KHz	-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 2 times reflow.

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

FREQ. STABILITY vs.TEMP. RANGE

ppm (°C)	± 0.05	± 0.1	± 0.14	± 0.2	± 0.28
0~+55	○	○	○	○	○
-10~+60	○	○	○	○	○
-20~+70	△	○	○	○	○
-40~+85	X	X	X	○	○

* O: Available △:Conditional X: Not available

Specifications subject to change without notice

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