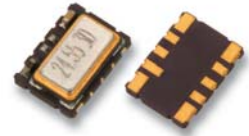



TC-Type Voltage Controlled Temperature Compensated Crystal Oscillator

RoHS Compliant Standard

FEATURE

1. Typical 7.0 x 5.0 x 1.85mm ceramic SMD package.
2. Frequency vs Temperature: $\pm 1.0\text{ppm}$ @ $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$.
3. Pulling: $\pm 20\text{ppm}$ max. @ $V_c = 1.5 \pm 1\text{V}$ (Optional).
4. Aging: $\pm 1\text{ppm/year}$.
5. V_c range: 0.5V to 2.5V.
6. Packing: Tape & Reel, 1000/3000 pcs per Reel, 1~99 pcs per Bulk/Tape.



Actual Size 

ORDERING INFORMATION

T	C	C	A	D	C	S	-	N	F	-	?
TCXO	Package (mm)	Supply Voltage(V) & Pin Form	Pulling Range (ppm)	Freq. Stability (ppm)	Temp. Range ($^{\circ}\text{C}$)	Output Logic and Symmetry	Dash	Appearance	Lead Free	Dash	Freq.(MHz)
	7x5	C: 5 E: 2.8~3.3	A: ± 5 B: ± 8 C: ± 10 D: ± 12 E: ± 15 F: ± 20 G: ± 25 T: TCXO	A: ± 0.5 B: ± 1.0 P: ± 1.5 C: ± 2.0 D: ± 2.5 E: ± 3.0 F: ± 4.0 G: ± 5.0	B: 0~+55 I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+85	S: Clipped Sine Wave @10K Ω /10pF		N: Normal	F: RoHS Compliant		xx.xxxxxx

Ordering Example: TCCADCS-NF-10.000000 MHz

VCTCXO C-TYPE; V_{DD} : 5V; Pulling Range: $\pm 5\text{ppm}$; Freq. Stability: $\pm 2.5\text{ppm}$; Temp. Range: -20°C to $+70^{\circ}\text{C}$; Clipped Sine Wave; Normal Appearance; Lead Free; Freq. 10.000000MHz.

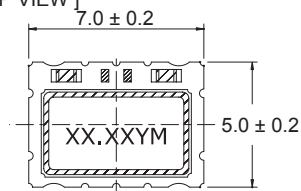
FREQ. STABILITY vs. TEMP. RANGE

Temp.($^{\circ}\text{C}$)	ppm	A: ± 0.5	B: ± 1.0	P: ± 1.5	C: ± 2.0	D: ± 2.5
B	0~ +55	○	○	○	○	○
I	-10~ +60	△	○	○	○	○
C	-20~ +70	△"	○	○	○	○
L	-40~ +85	△"	○	○	○	○

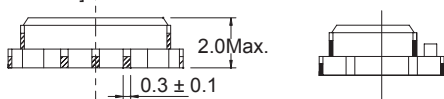
○: Standard △: Available (case by case) ×: Not available
" 10 ~26 MHz available.

OUTLINE DRAWING

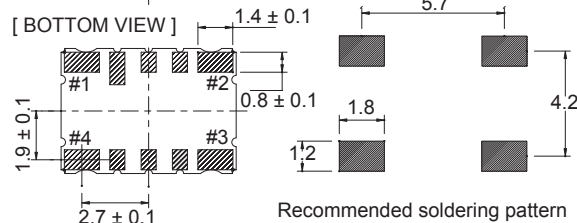
[TOP VIEW]



[SIDE VIEW]



[BOTTOM VIEW]



Recommended soldering pattern UNIT : mm

Pin	Function
#1	VCON:VC-TCXO GND:TCXO
#2	GND
#3	OUTPUT
#4	V_{DD}

VCTCXO / TCXO

ELECTRICAL SPECIFICATION

Parameter	Min.		Max.		Unit
	5.0	2.8	5.0	2.8	V
Supply Voltage Variation(V_{DD}) 5%	4.75	2.66	5.25	2.94	V
Frequency Range	10.000		40.000*		MHz
Operating Temp. Range	Refer to Ordering Information				°C
Frequency Stability	Refer to Ordering Information				ppm
Frequency Stability					
Vs Supply Voltage(±5%) change	—		±0.2		ppm
Vs Load(±10%) change	—		±0.2		
Vs Aging	—		±1.0		ppm/year
Supply Current					
10.000MHz ≤ F _o < 15.000MHz	—		1.5		mA
15.000MHz ≤ F _o < 26.000MHz	—		2.0		
26.000MHz ≤ F _o < 40.000MHz	—		2.5		
Output Level (Clipped Sine)	0.8		—		Vp-p
Load	10KΩ/10pF				
Vc Input Impedance	1.0		—		MΩ
Phase Noise @13.0MHz					
100Hz	-115			dbc/Hz	
1KHz	-135				
10KHz	-148				
Start Time	—		2		mSec
Storage Temp. Range	-55		125		°C

*36.000 ~ 40.000 MHz only for VDD = 2.8 ~ 3.3V.