

TV Type Voltage Controlled Temperature Compensated Crystal Oscillator

FEATURE

1. Typical 5.0 x 3.2 x 1.15mm SMD.
2. VC-TCXO for personal cellular phone.
3. For automatic assembly.
4. Compactness and light weight.
5. Low power consumption.
6. VCTCXO available.
7. Packing: Tape & Reel 1000/2000/3000/5000 pcs per reel, 1 ~99 pcs bulk / tape.

RoHS Compliant Standard



Actual size

ORDERING INFORMATION

T	V	E	C	D	D	S	A	N	L	-	?
TCXO	Package (mm)	Supply Voltage(V)	Pulling range (ppm)	Freq. Stability (PPM)	Temp. Range (°C)	Output Logic and Symmetry	Oscillator Mode	Appearance	Marking	Dash	Freq. (MHz)
	5x3.2	C: 5 E: 2.8~3.3	A:±5 E:±15 B:±8 F:±20 C:±10 G:±25 D:±12 T:TCXO Vcon range: 0.5V to 2.5V	A: ±0.5 D: ±2.5 B: ±1.0 E: ±3.0 P: ±1.5 F: ±4.0 C: ±2.0 G: ±5.0	B: 0~+55 I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+85	S:Clipped sine wave @10K /10PF	A:AT Fundamental T:AT3 rd Overtone	N : Normal	L:Laser Marking (RoHS compliant standard)		xx.xxxxxx

Ordering example: TVECDDSANL-13.000000 MHz

VCTCXO V-TYPE VCC:3.3V, Frequency Stability: ±2.5ppm, -30°C to +85°C, pulling range: +/-10ppm, Clipped sine, AT fundamental, Laser Marking, Freq. 13.000MHZ

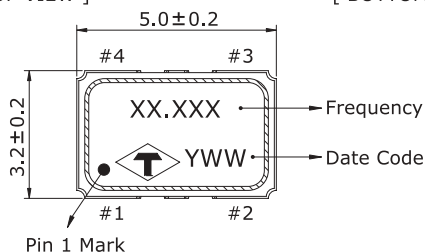
FREQ. STABILITY vs. TEMP.RANGE

Temp.(°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	X	○	○	○	○
L	-40 ~ +85	X	○	○	○	○

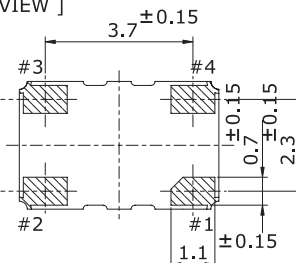
○:Standard △:Available (case by case) X:Not available

OUTLINE DRAWING

[TOP VIEW]

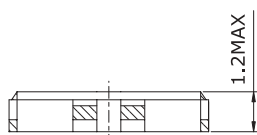


[BOTTOM VIEW]

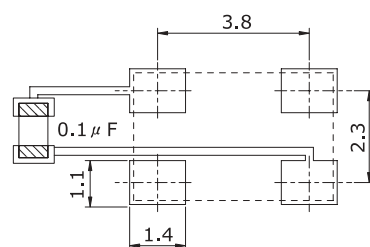


PIN	Function
#1	VCON:VC-TCXO GND:TCXO
#2	GND
#3	OUTPUT
#4	VDD

[SIDE VIEW]



UNIT : mm



Recommended soldering pattern

ELECTRICAL SPECIFICATION

Parameter	Min.		Max.		Unit
	5.0	2.8	5.0	2.8	
Supply Voltage Variation(VDD) 5%	4.75	2.66	5.25	2.94	V
Frequency Range	10		26		MHz
Standard Frequency	13.0、14.4、16.3676、16.8、19.2、19.68、20.0、26.0				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		ppm
Vs Aging	—		±1.0		ppm/year
Supply Current					
10.000MHz ≤ Fo < 15.000MHz	—		1.5		mA
15.000MHz ≤ Fo < 26.000MHz	—		2.0		
Output Level (Clipped sine)	0.8		—		Vp-p
Load	10KΩ//10pF±10%				
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