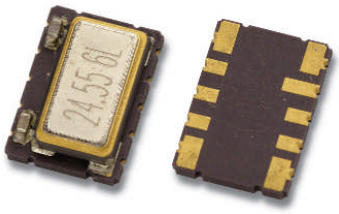
TC SERIES



The TC series of oscillators feature an industry standard 7x5mm ceramic package designed for automatic assembly where space is at a premium and good frequency stability is required. This model is capable of +/-0.5ppm @ -30C ~ +85C, has very low power consumption, Clipped Sine Wave output, and VCTCXO pulling capability is optional. Popular uses of the TC series include Mobile Phones, WLAN, Telecommunication, Networking, and Satellite Communication.

Features:

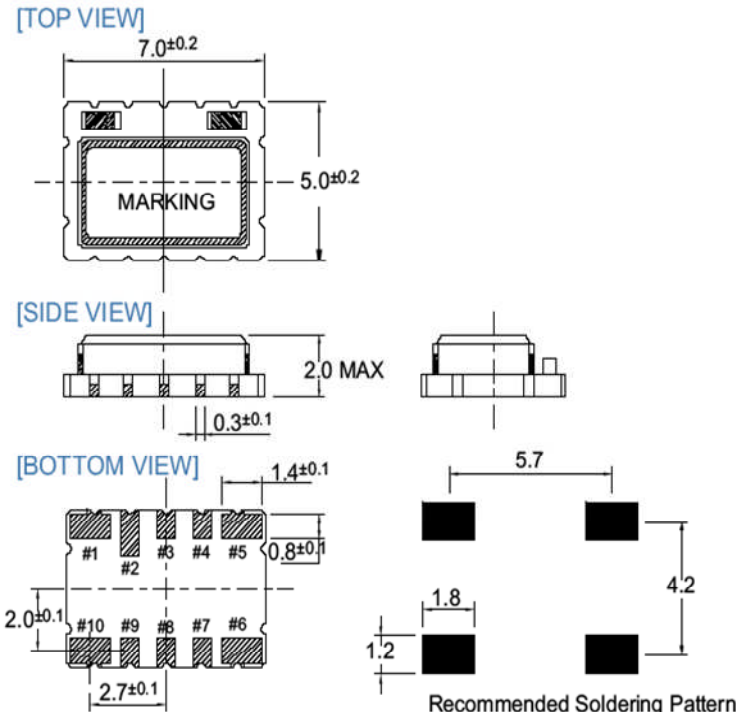
- Typical 7.0 x 5.0 x 1.85 mm ceramic SMD package
- For automatic assembly
- Compactness and light weight
- Low power consumption
- VCTCXO available
- Packing: Tape & Reel 1000/3000 pcs per reel

Ordering Information

TCXO	Package (mm)	Supply Voltage (V)	Pulling Range (ppm)	Freq. Stability (ppm)	Temp. Range (°C)	Output Logic and Symmetry	Oscillator Mode	Appearance	Lead Free	Freq. (MHz)
TC Series	L: 7.0 W: 5.0 H: 1.85	5 2.8~3.3	±5 ±8 ±10 ±12 ±15 ±20 ±25 TCXO	±0.5 ±1.0 ±1.5 ±2.0 ±2.5 ±3.0 ±4.0 ±5.0	0~+55 -10~+60 -20~+70 -30~+85 -40~+85	Clipped Sine Wave @10KΩ// 10pF	AT Fundamental * Not selectable by customer	Normal	RoHS Compliant	XX.XXXXXX

Ordering Example: TC series; V_{DD}:5v; Pulling Range: ±5ppm; Freq. Stability: ±2.5ppm; Temp. Range: -20°C to +70°C; Clipped Sine Wave; AT Fundamental; Normal Appearance; RoH Compliant; Freq.: 10.000000MHz.

Outline Drawing



Freq. Stability vs. TEMP. Range

ppb / Temp. (°C)	±0.5	±1.0
0 ~ +55	O	O
-10 ~ +60	O	O
-20 ~ +70	O	O
-30 ~ +85	O	O
-40 ~ +85	△ ”	O

O = Standard △ = Available (case by case) X = Not available
”10~26MHz and Pulling < 10 ppm available

PIN CONNECTIONS	
PIN	FUNCTION
1	VCON: VCTCXO GND: TCXO
2	NC
3	NC
4	NC
5	GND
6	OUTPUT
7	NC
8	NC
9	NC
10	V_{DD}

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		40*		MHz
Operating Temperature Range	Refer to Ordering Information				ºC
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 ≦ Fo < 15.000MHz	-		1.5		mA
15.000MHz ≦ Fo < 26.000MHz	-		2.0		
26.000MHz ≦ Fo < 40.000MHz	-		2.5		
Output Level (Clipped Sine Wave)	0.8		-		Vp-p
Load	10KΩ//10pF				
Vc Input Impedance	1.0		-		MΩ
Phase Noise @13.0MHz					dBc/Hz
100 Hz	-115				
1 KHz	-135				
10 KHz	-148				
Start Time	-		2		mSec
Storage Temperature Range	-55		125		ºC

*26.000 ~ 40.000 MHz only for V_{DD} = 2.8~3.3V