

The VC-TXO-23SM is a VC (Voltage Controlled) TCXO (Temperature Compensated Crystal Oscillator) featuring tight stability of ± 2.5 ppm with a voltage control tuning range of ± 9 ppm minimum.

Obsolete/End of Life Date 8/30/2021

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



- Low profile
- 3.2 x 2.5 mm Footprint
- Highly stable output
- PbFree/RoHS Compliant

Parameters	Conditions	VC-TXO-23SM			Units
		MIN	TYP	MAX	
Frequency Range		10.000		40.000	MHz
Initial Frequency Tolerance	+25°C $\pm 2^\circ\text{C}$			± 1.5	PPM
Frequency Stability	Option A -10 ~ +70°C			± 2.5	PPM
	Option B -30 ~ +75°C			± 2.5	PPM
	Option C -30 ~ +85°C			± 5.0	PPM
Input Voltage Change	± 3.0 VDC $\pm 5\%$			± 0.3	PPM
Load Change	10k Ω $\pm 10\%$ / 10pF $\pm 10\%$			± 0.2	PPM
Aging	Per Year @ +25°C $\pm 3^\circ\text{C}$			± 1.0	PPM
Storage Temperature		-40		+85	$^\circ\text{C}$
Supply Voltage		+2.85	+3.0	+3.15	V DC
Input Current	Without Load			1.5	mA
Output Level		0.8			Vp-p
Output Load	10k Ω // 10pF				
Output Waveform	Clipped sine wave (DC-Coupling)				
Frequency Control Range	+1.5 VDC $\pm 1\text{V}$ Positive Slope	± 9		± 15	PPM
Control Voltage		+0.5	+1.5	+2.5	VDC
SSB Phase Noise	-130 dBc/Hz at 1 KHz offset				
Startup Time				3.5	ms
IR Reflow Resistance				± 1.0	PPM
Reflow Condition	+250°C $\pm 10^\circ\text{C}$ for 10 seconds				

Part Numbering Guide: VC-TXO-23SM-192-B

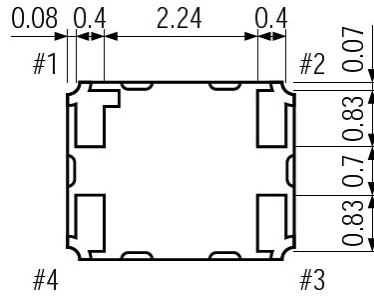
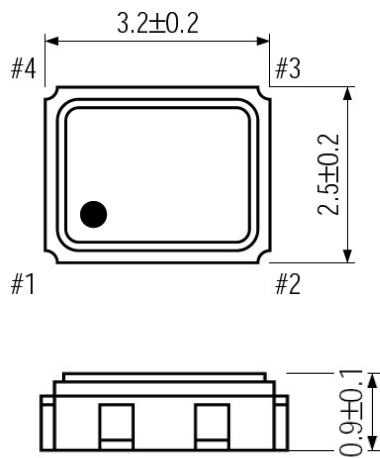
Series	-	Frequency Abbreviations	-	Frequency Stability
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VC-TXO-23SM

100 = 10.000 MHz
 192 = 19.200 MHz
 196.8 = 19.680 MHz
 198 = 19.800 MHz
 200 = 20.000 MHz
 260 = 26.000 MHz

A = ± 2.5 ppm -10 ~ +75°C
 B = ± 2.5 ppm -30 ~ +75°C
 C = ± 5.0 ppm -30 ~ +85°C

Package Dimensions (mm)



Pin Connections	
#1	V Control
#2	Ground
#3	Output
#4	+VDC

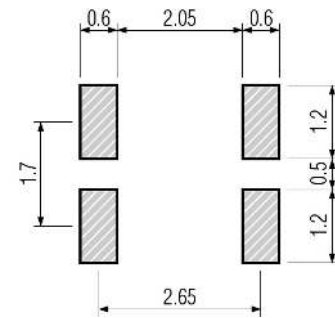
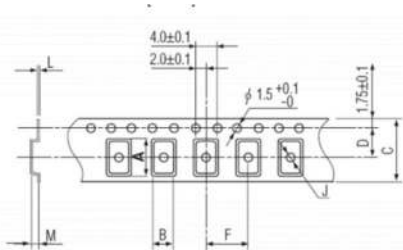


Figure 2) Land Pattern

Figure 1) Top, Side, and Bottom views



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
3.5	2.8	8.0	3.5	4.0	1.1	0.25	1.0	180	1000

Figure 3) Pocket Tape Dimensions

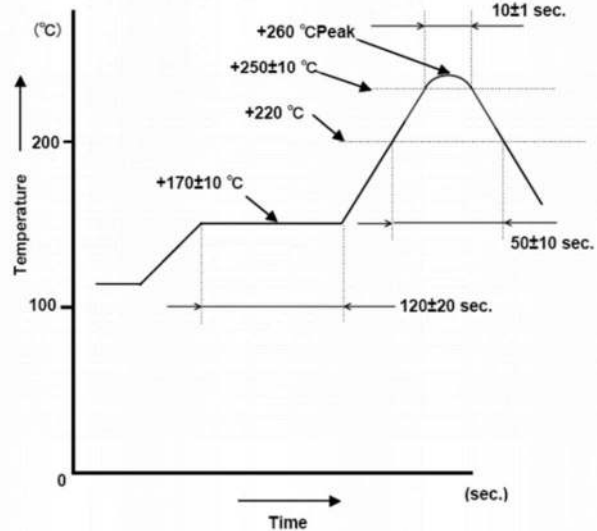


Figure 4) Suggested Reflow Profile

Package Data	
Item	Description
Lid	Metal
Base	Ceramic
Sealing	Seam
Terminal	Tungsten (metalized)
Plating	Gold/Nickel (Surface)/(Under)
RoHS	Compliant (Pb Free)