

- ▶ Low Profile
- ▶ 3.2 x 2.5 mm Footprint
- ▶ Highly stable output
- ▶ Pb Free/RoHS Compliant

# VC-TXO-23SM

## SMD VC-TCXO

The miniature VC-TXO-23SM is a compact SMD VC-TCXO. The 3.2 x 2.5 x 0.9 mm ceramic package is ideal for today's SMD manufacturing environment.

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	VC-TXO-23SM			UNITS
		MIN	TYP	MAX	
Frequency Range		10.000		40.000	MHz
Initial Frequency Tolerance	@ +25°C ±2°C			± 1.5	ppm
Stability Option A	-10 ~ +70°C			± 2.5	ppm
Stability Option B	-30 ~ +75°C			± 2.5	ppm
Stability Option C	-30 ~ +85°C			± 5.0	ppm
Input Voltage Change	+3.0VDC ±5%			± 0.3	ppm
Load Change	10KΩ±10%/10 pF ±10%			± 0.2	ppm
Aging	per year @ +25°C ±3°C			± 1.0	ppm
Storage Temperature		-40		+85	mA
Supply Voltage		+2.85	+3.0	+3.15	V DC
Input Current	Without Load			1.5	mA
Output Level		0.8			V p-p
Output Load	10KΩ/10 pF				
Output Waveform	Clipped sine wave (DC-coupling)				
Frequency Control Range	+1.5V DC ±1V Positive Slope	± 9		± 15	ppm
Control Voltage		+0.5	+1.5	+2.5	V DC
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 ±10°C for 10 sec				

#### Developed Frequencies

10.000 MHz, 19.200 MHz, 19.680 MHz, 20.000 MHz & 26.000 MHz

### DIMENSIONS (mm)

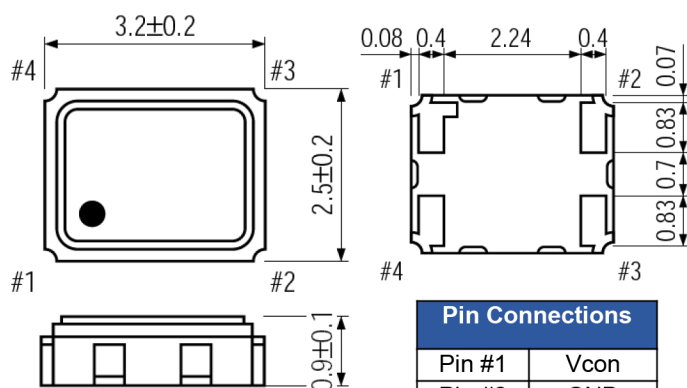


Figure 1) Top, Side and Bottom views

Pin Connections	
Pin #1	Vcon
Pin #2	GND
Pin #3	Output
Pin #4	+VDC

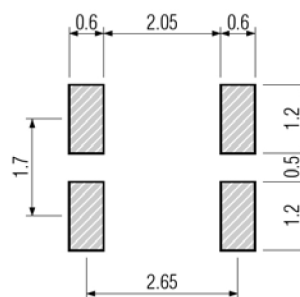


Figure 2) Suggested Land Pattern

### PART NUMBERING GUIDE: Example VC-TXO-23SM-192-B

ECS - Series - Frequency Abbreviation - Stability

VC-TXO-23SM

192 = 19.200 MHz  
See Frequency Abbreviations (Pg 2)

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

## Frequency Abbreviations

FREQUENCY MHz	CODE
10.000000	100
19.200000	192
19.680000	196.8
19.800000	198
20.000000	200
26.000000	260

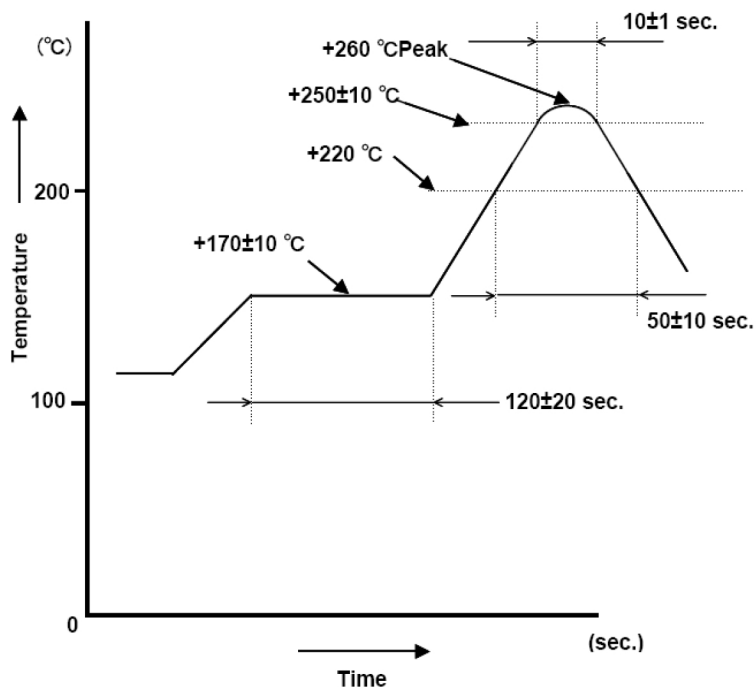
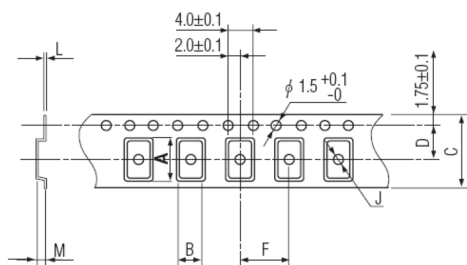


Figure 1) Suggested Reflow Profile

### TAPE DIMENSIONS (mm)



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

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

Figure 2) Pocket Tape Dimensions