



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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- ▶ 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)

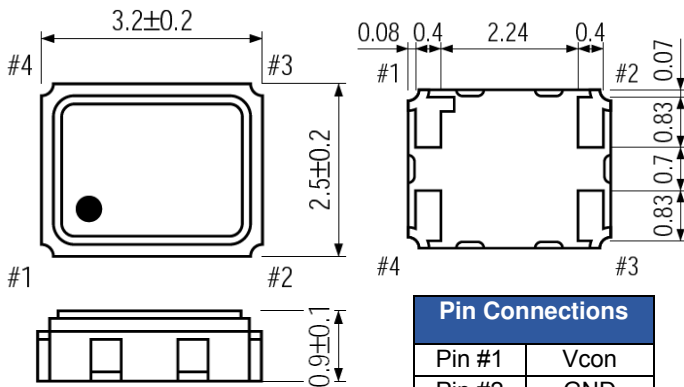


Figure 1) Top, Side and Bottom views

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

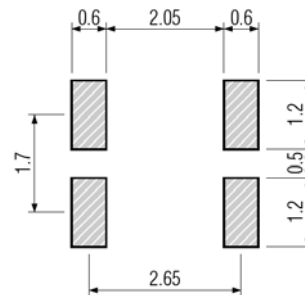


Figure 2) Suggested Land Pattern

#### 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

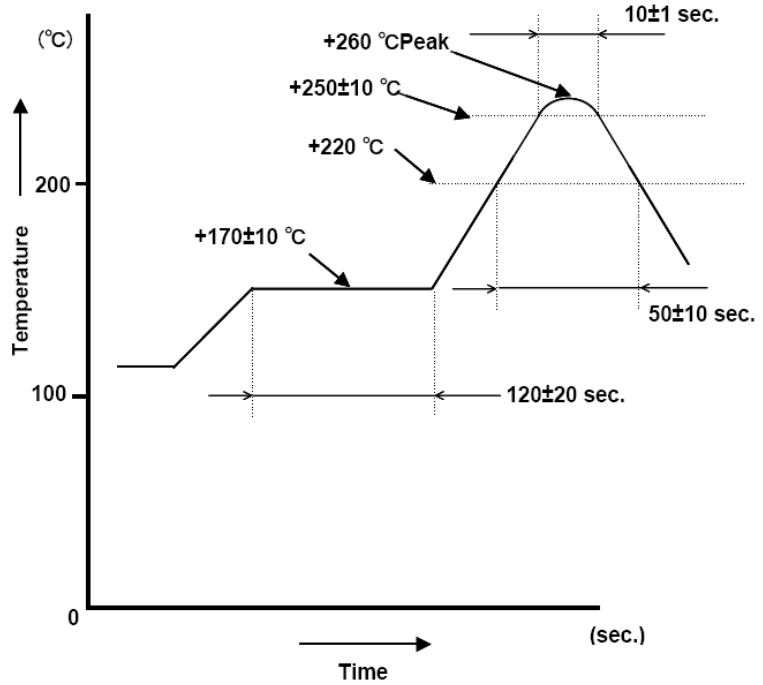
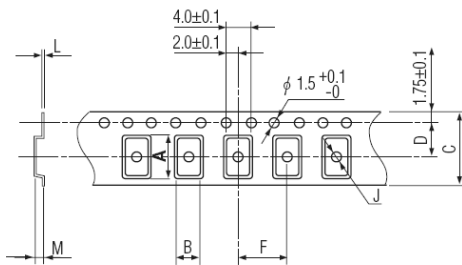


Figure 1) Suggested Reflow Profile

### 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