

Features

- Ultra Miniature SMD Package
- Good Frequency Stability
- Good Phase Noise Response

RoHS Compliant
Lead free
Lead-free soldering

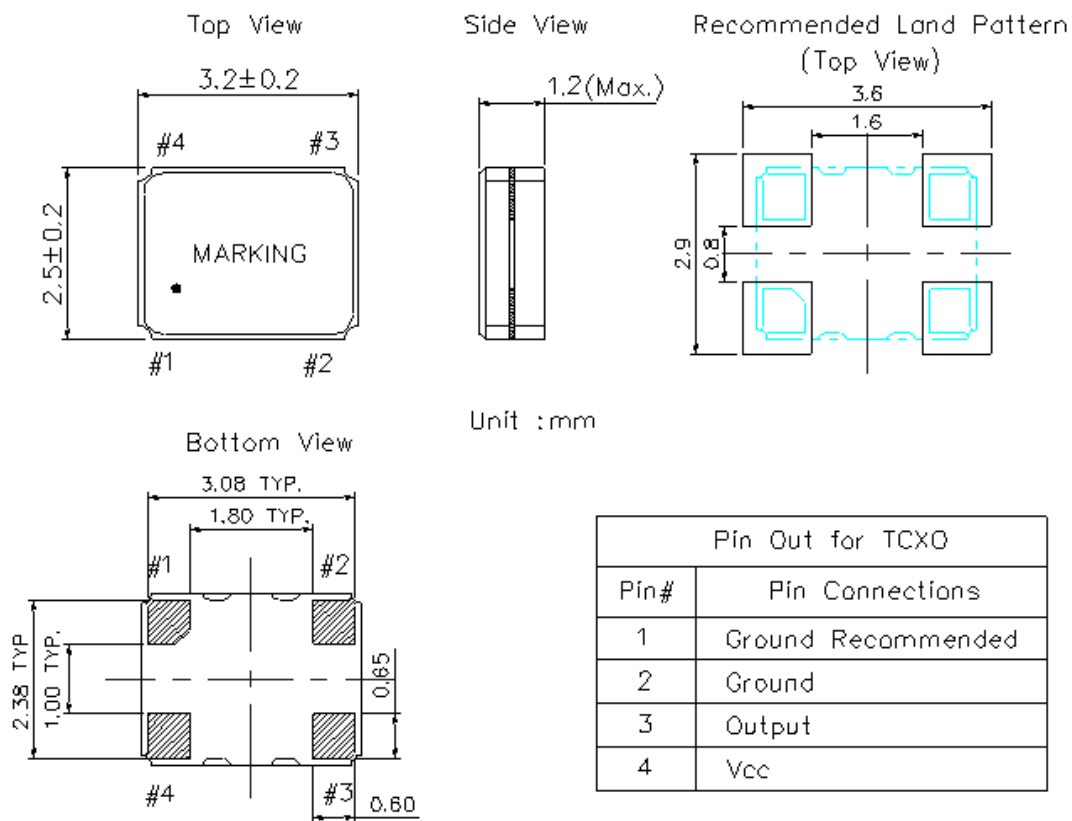
Description and Applications

Surface mount 3.2mmx2.5mm TCXO for use in wireless communications devices

Electrical Specifications

TCXO4001	Specifications
Nominal Frequency, Fo	12.800000 MHz
Storage Temperature Range	-40°C to +85°C
Operating Temperature Range	-40°C to +85°C
Power Supply Voltage, Vcc	3.0 V +/- 10%
Output Voltage with Load 10pF//10KΩ, Vout	0.8 Vp-p min
Output Waveform	Clipped Sinewave
Power Supply Current, Icc	3.0 mA max
Frequency Tolerance after reflow	+/- 2 ppm max @ 25°C +/- 2°C
Frequency Stability a. Vs. Temperature (-30~70°C) b. Vs. Temperature (-40~85°C) c. Vs. Load varied 10pF//10KΩ+/-10% d. Vs. Supply Voltage varied 3.0V+/-5%	+/- 1.0 ppm reference to 25°C +/- 3.0 ppm reference to 25°C +/- 0.2 ppm +/- 0.2 ppm
Start Up Time (90% of final RF level in Vp-p)	2.0 msec max.
Aging	+/-1.0 ppm/year @25°C
Harmonics	-5.0 dBc max
SSB Phase Noise (@10KHz Carrier Offset)	-135 dBc/Hz max

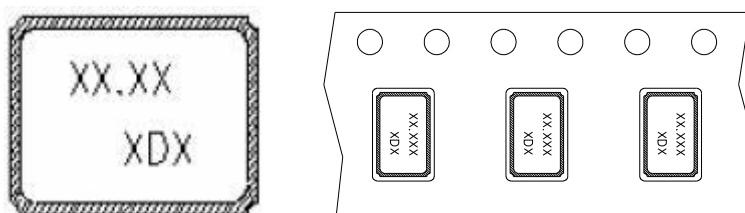
Mechanical Dimensions (mm)



Marking

Line 1: Customer Frequency (12.80)

Line 2: Crystal Product Code + Date Code



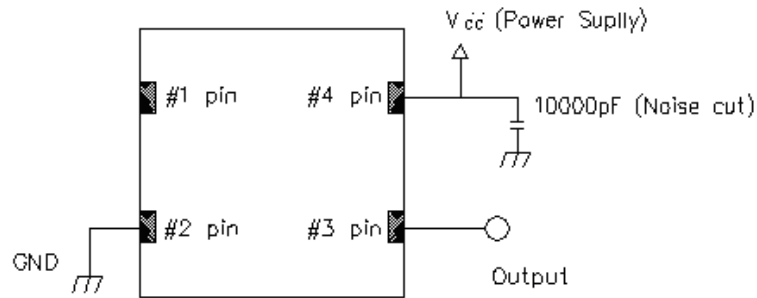
Product Code Table

Year	2005 2009	2006 2010	2007 2011	2008 2012
Product Code	X	x	<u>X</u>	<u>x</u>

Date Code Table

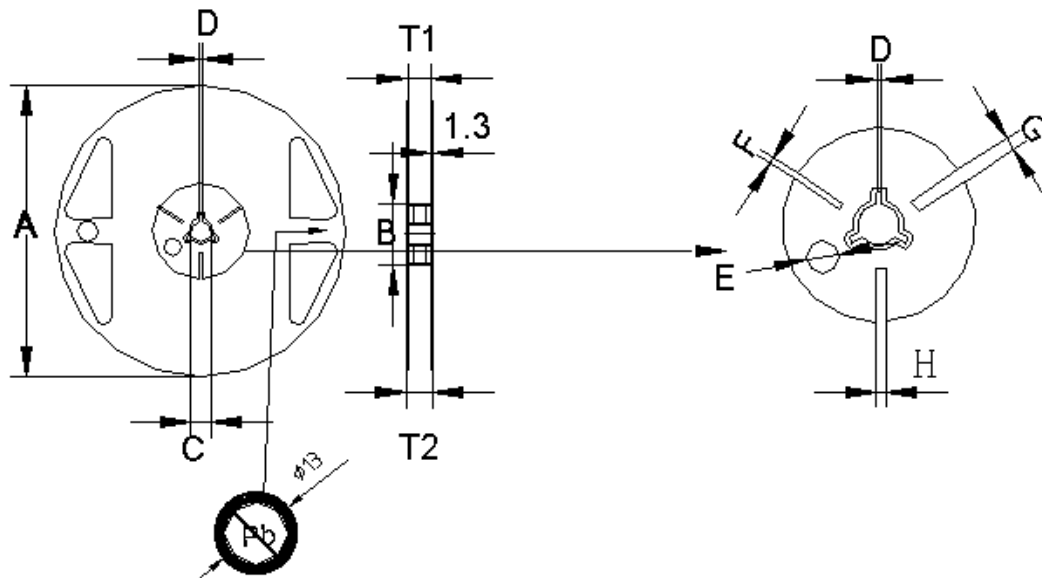
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

Recommended Circuit



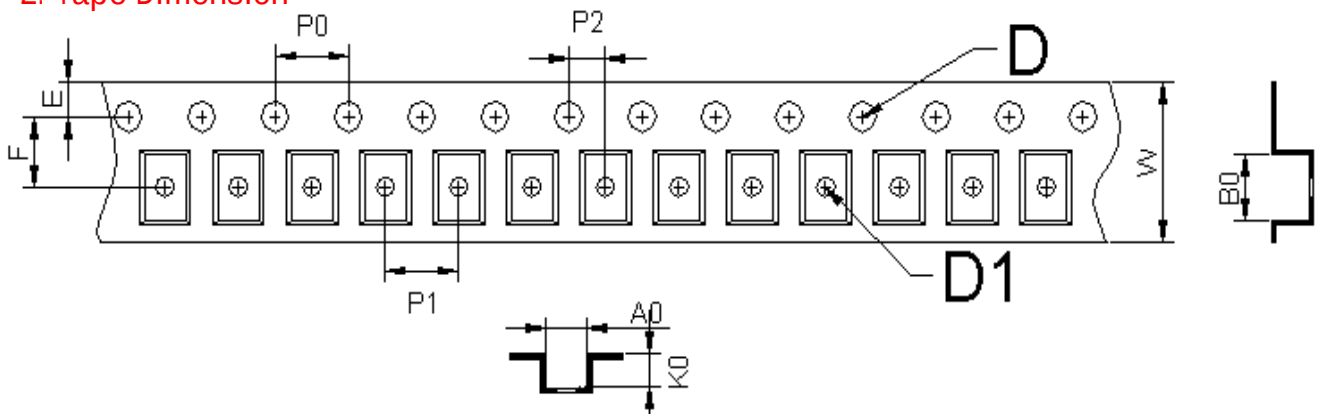
Packing (mm)

1. Reel Dimension



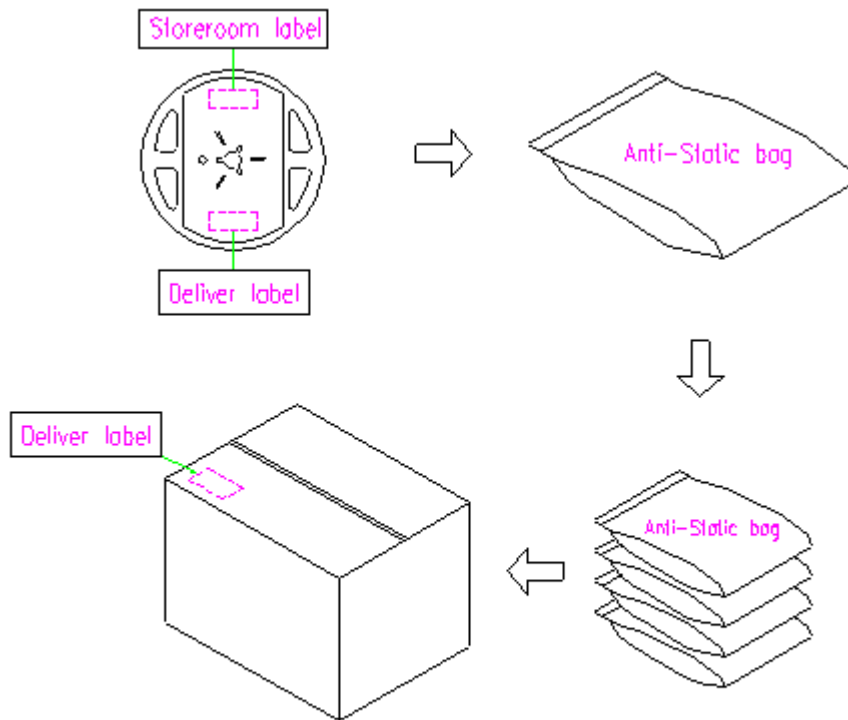
	A	B	C	D	E	F	G	H	T2	T1	T3
Dimensions	180	60	13.0	2.0	9.1	2.9	3.9	4.9	11.4	9.0	1.2
Tolerance	±1.0	±1.0	±0.2	±0.5	±0.5	±0.5	±0.5	±0.5	±1.0	±0.3	±0.1

2. Tape Dimension



Unit: mm	A0	B0	W	F	E	P0	P1	P2	D1	D	K0	t
Dimension	2.80	3.71	8.00	3.5	1.75	4.00	4.00	2	1.50	1.0	1.75	0.25
Tolerance	±0.1	±0.1	+0.3/-0.1	±0.05	±0.1	±0.1	±0.1	±0.05	+0.1/-0.00	+0.25/-0.00	±0.1	±0.02

Packing Quantity/Packing



Reflow Profile

