TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
Taoyuan, 324, Taiwan, R.O.C.
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E-mail: tstsales1@mail.taisaw.com Web: www.taisaw.com

Approval Sheet For Product Specification

Issued Date: 1/13/2005 (REV. NO: 2)

Product Name: SMD 5.0x3.2 13.21MHz Crystal Unit

TST Parts No.: TZ0505A

Customer Parts No. :_____

Company:_____

Division:_____

Approved by:_____

Date:_____

Checked by: Ryan Huang

Approval by: TF Yang

Date: 1/13/2005

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SMD 5.0x3.2 13.21MHz Crystal Unit

MODEL NO.: TZ0505A REV. NO.: 2

Features:

RoHS Compliant
Lead free
Lead-free soldering

- Surface Mount Seam Weld Package
- Excellent Reliability Performance
- Good Frequency Perturbation and Stability over temperature

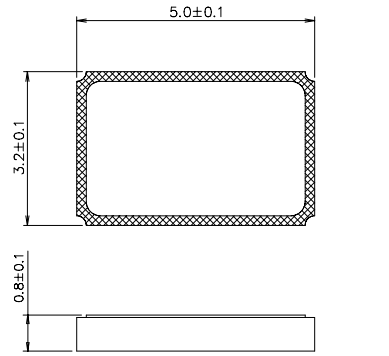
Description and Applications:

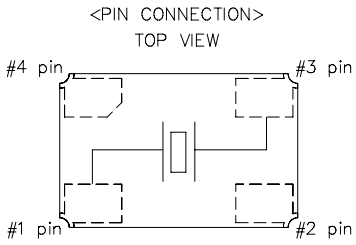
Surface mount 5.0mmx3.2mm crystal unit for use in wireless telecommunications devices, especially for a need of ultra miniature package for mobility.

Electrical Specifications:

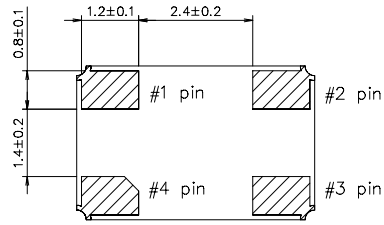
TZ0505A	**Specification**
Nominal Frequency	13.210000 MHz
Mode of Oscillation	Fundamental
Storage Temperature Range	-40°C to +85°C
Operating Temperature Range	-20°C to +70°C
Frequency Stability over Operating Temperature Range	+/-10 ppm (referred to the value at 25°C)
Frequency Make Tolerance (FL)	+/-10 ppm @ 25°C +/- 3°C
Equivalent Series Resistance (ESR)	50 Ω max.
Nominal Drive Level	10 uW
Shunt Capacitance (Co)	3 pF max
Load Capacitance (CL)	20 pF
Marking	Laser Marking

Mechanical Dimensions (mm):



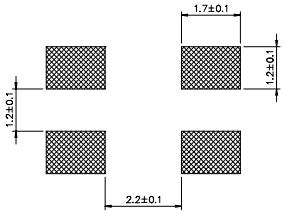


Marking #2, #4 is connected with metal cap of top.



	Pin Connection
#1 pin	IN/OUT
#2 pin	GND
#3 pin	IN/OUT
#4 pin	GND

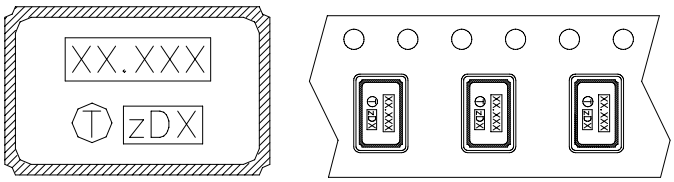
Recommended Land Pattern: (unit: mm)



Marking:

Line 1: Frequency (13.210)

Line 2: TST Logo + Crystal Product Code + Date Code



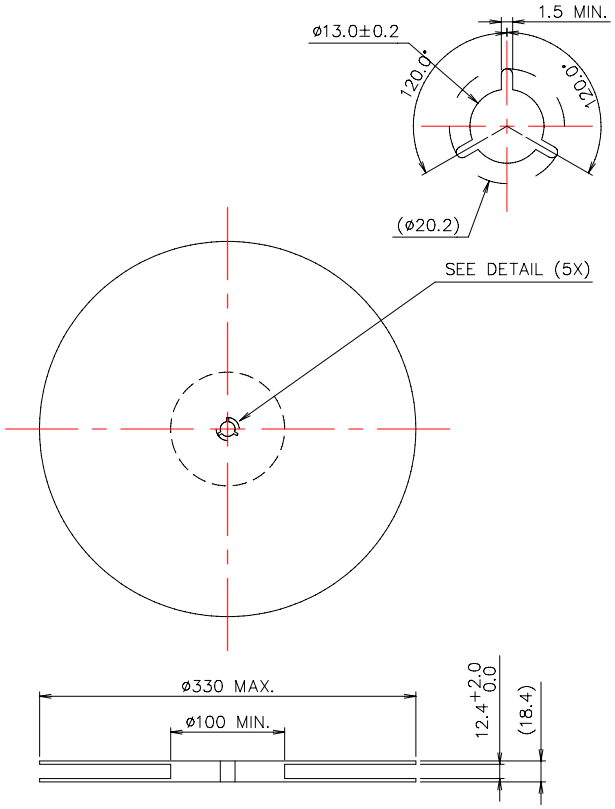
Product Code Table

Year	2001 2005	2002 2006	2003 2007	2004 2008
Product Code	Z	z	Z	z

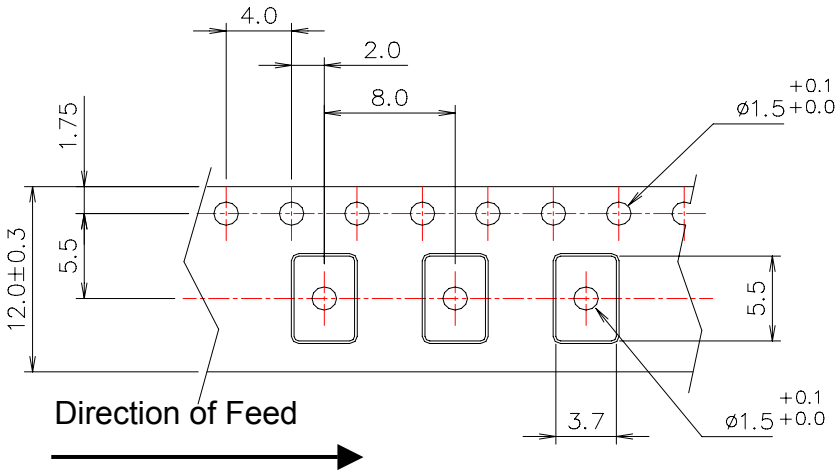
Date Code Table

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

Reel Dimensions (mm):

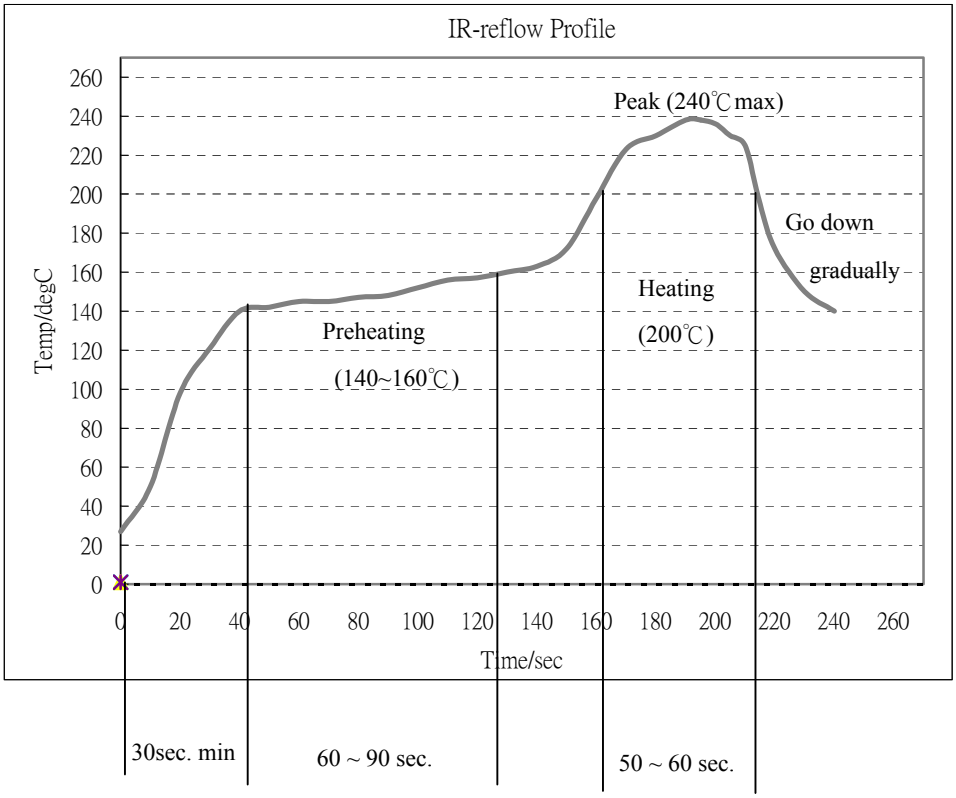


Tape Dimensions (mm):



[NOTE]:

1. Unless otherwise specified tolerance on dimension +/-0.1 mm.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance +/-0.2 mm.

Reflow Profile:

1. Preheating shall be fixed at 140 ~ 160 ℃ for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150 ℃ shall be 30 seconds min.
3. Heating shall be fixed at 200 ℃ for 50 ~ 60 seconds and at 230±10 ℃ peak.