



TAI-SAW TECHNOLOGY CO., LTD.

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Approval Sheet For Product Specification

Issued Date: 1/5/2007 (REV. NO: 1)

Product Name: SMD 2.5x2.0 32.0MHz Crystal Unit

TST Parts No.: TZ1045A

Customer Parts No. : _____

| |
|--------------------|
| Company: _____ |
| Division: _____ |
| Approved by: _____ |
| Date: _____ |

Checked by: _____ Kelly Huang

Approval by: _____ Robert Chang

Date: _____ 1/5/2007



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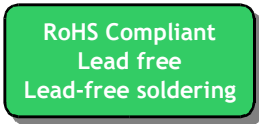
SMD 2.5x2.0 32.0MHz Crystal Unit

MODEL NO.: TZ1045A

REV. NO.: 1

Features:

- Surface Mount Seam Weld Package
- Excellent Reliability Performance
- Ultra Miniature Package



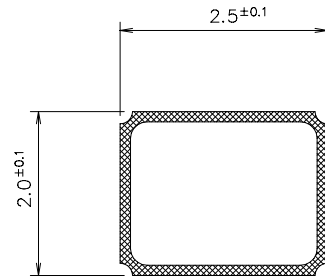
Description and Applications:

Surface mount 2.5mmx2.0mm crystal unit for use in communications devices, especially for a need of ultra miniature package for mobility.

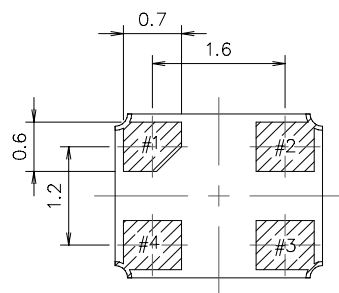
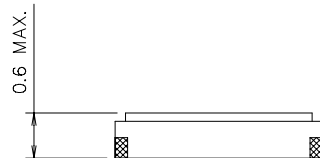
Electrical Specifications:

| TZ1045A | Specification |
|--|---|
| Nominal Frequency | 32.000000 MHz |
| Mode of Oscillation | Fundamental |
| Storage Temperature Range | -40°C to +85°C |
| Operating Temperature Range | -40°C to +85°C |
| Frequency Stability over Operating Temperature Range | +/-20 ppm (referred to the value at 25°C) |
| Frequency Make Tolerance (FL) | +/-10 ppm @ 25°C +/- 3°C |
| Equivalent Series Resistance (ESR) | 60 Ω max |
| Nominal Drive Level | 10 uW |
| Shunt Capacitance (Co) | 3 pF max |
| Load Capacitance (CL) | 16 pF |
| Marking | Laser Marking |

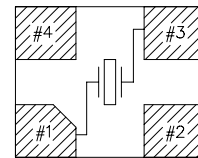
Mechanical Dimensions (mm):



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

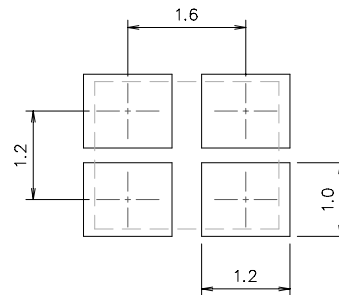


Internal Connections
(Top View)



[NOTE] #2, #4 is connected with a cover
(Please connect with a GND ora power supply)

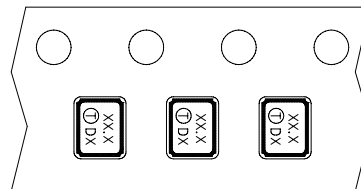
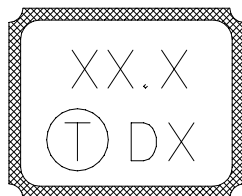
Recommended Land Pattern: (unit: mm)



Marking:

Line 1: Frequency (32.0)

Line 2: TST Logo + Date Code + Product Code



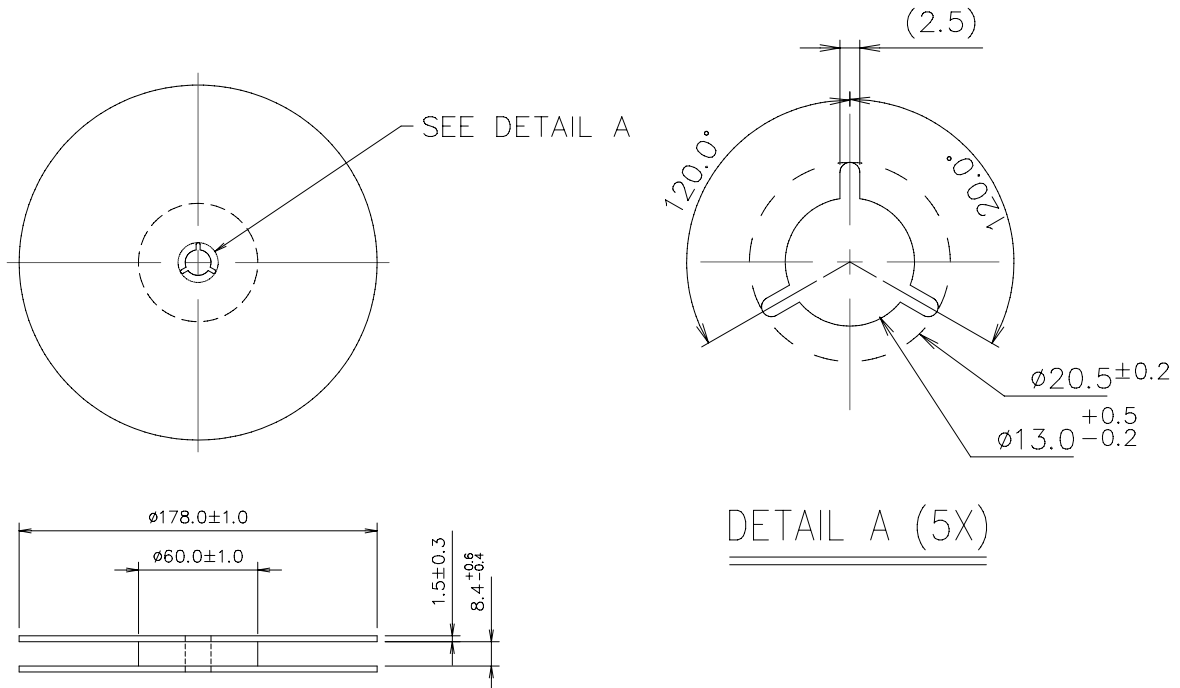
Date Code Table

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 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 |

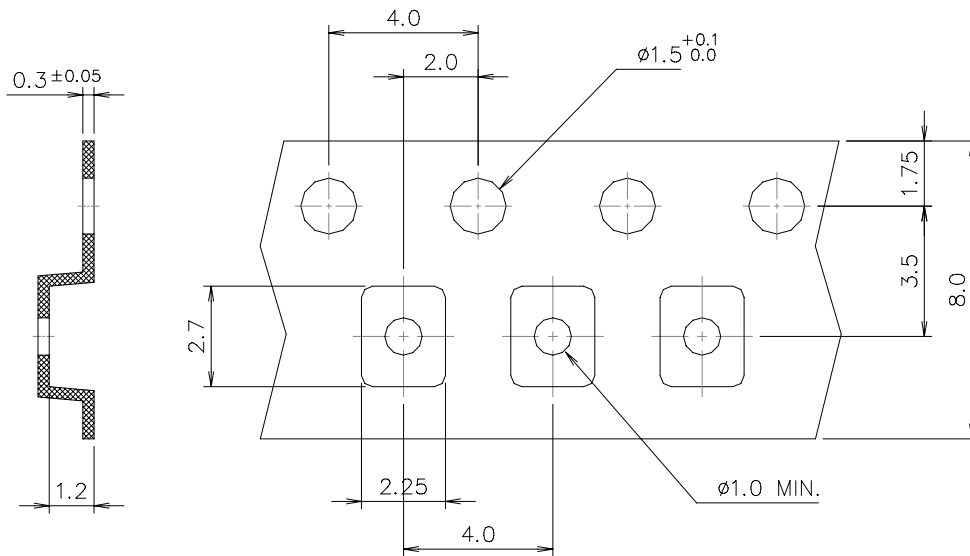
Product Code Table

| Year | 2001 2005 | 2002 2006 | 2003 2007 | 2004 2008 |
|--------------|--------------|--------------|--------------|--------------|
| Product Code | X | x | <u>X</u> | <u>x</u> |

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:

