

Общество с ограниченной ответственностью  
«Научно-производственное предприятие «Техно-ПАРК»  
(ООО «НПП «Техно-ПАРК»)

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## Технические характеристики кварцевого резонатора

### TZ1720A

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Производитель: TAI-SAW TECHNOLOGY CO., LTD

Поставщик: ООО «НПП «Техно-ПАРК» - авторизованный дистрибьютор компании  
TAI-SAW TECHNOLOGY CO., LTD

Научно-производственное предприятие ООО «НПП «Техно-ПАРК» разрабатывает и поставляет полосно-пропускающие радиочастотные фильтры на поверхностных акустических волнах (ПАВ) и устройства на их основе. «НПП «Техно-ПАРК» имеет собственную научную и производственную базу, а также является авторизованным дистрибьютором мирового лидера по производству фильтров на ПАВ компании TAI-SAW TECHNOLOGY CO., LTD

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# TAI-SAW TECHNOLOGY CO., LTD.

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## Product Specifications Approval Sheet

Product Description: Crystal Unit SMD 2.0x1.6 31.875MHz

TST Part No.: TZ1720A

Customer Part No.: \_\_\_\_\_

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: \_\_\_\_\_ Kelly Huang *Kelly Huang*

Approved by: \_\_\_\_\_ Robert Chang *Robert Chang*

Date: \_\_\_\_\_ 7/20/2009

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.



# TAI-SAW TECHNOLOGY CO., LTD.

Crystal Unit SMD 2.0x1.6 31.875MHz

MODEL NO.: TZ1720A

REV. NO.: 1

## Revise:

Rev.	Rev. Page	Rev. Account	Date	Ref. No.	Revised by
1	N/A	Initial release	7/20/09'	N/A	Kelly Huang



# TAI-SAW TECHNOLOGY CO., LTD.

## Crystal Unit SMD 2.0x1.6 31.875MHz

MODEL NO.: TZ1720A

REV. NO.: 1

### Features:

- Surface Mount Hermetic Package
- Excellent Reliability Performance
- Good Frequency Perturbation and Stability over temperature
- Ultra Miniature Package

RoHS Compliant  
Lead free  
Lead-free soldering

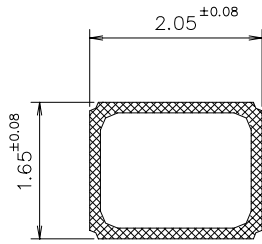
### Description and Applications:

Surface mount 2.0mmx1.6mm crystal unit for use in wireless communications devices, especially for a need of ultra miniature package for mobility.

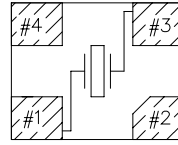
### Electrical Specifications:

TZ1720A	Specification
Nominal Frequency	31.875000 MHz
Mode of Oscillation	Fundamental
Storage Temperature Range	-40°C to +85°C
Operating Temperature Range	0°C to +70°C
Frequency Stability over Operating Temperature Range	+/-50 ppm (referred to the value at 25°C)
Frequency Make Tolerance (FL)	+/-30 ppm @ 25°C +/- 3°C
Equivalent Series Resistance (ESR)	100 Ω max
Nominal Drive Level	10 uW , 100uW max.
Shunt Capacitance (Co)	5.0 pF max
Load Capacitance (CL)	10 pF
Insulation Resistance	500 MΩ min./DC 100V
Marking	Laser Marking
Unit Weight	5.7mg+/-0.5mg

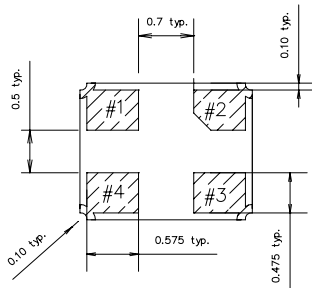
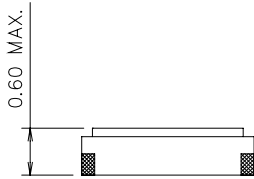
# Mechanical Dimensions (mm):



Internal Connections  
(Top View)

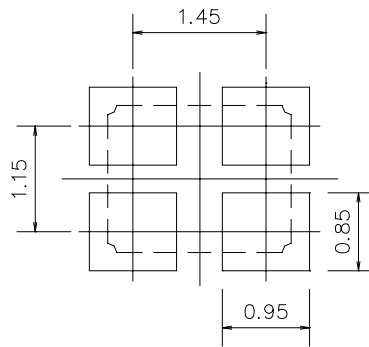


[NOTE] #2=NC, #4 is connected with a metal cover



	Pin connection
#1 Pin	IN/OUT
#2 Pin	NC
#3 Pin	IN/OUT
#4 Pin	GND

# Recommended Land Pattern: (unit: mm)

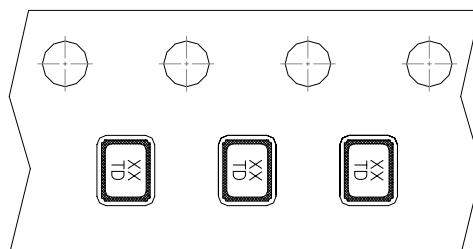


Recommended Land Pattern

# Marking:

Line 1: XX; Frequency (31)

Line 2: T; Traceable Code + D; date Code of Year/Month



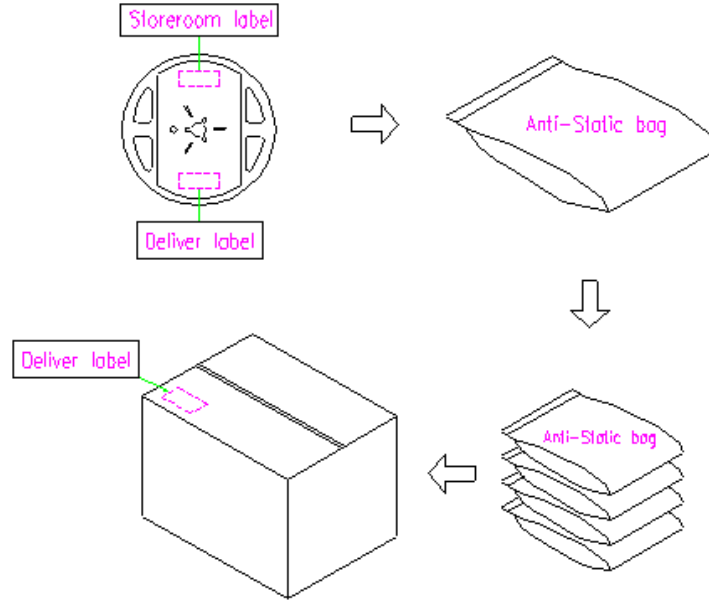


[NOTE]:

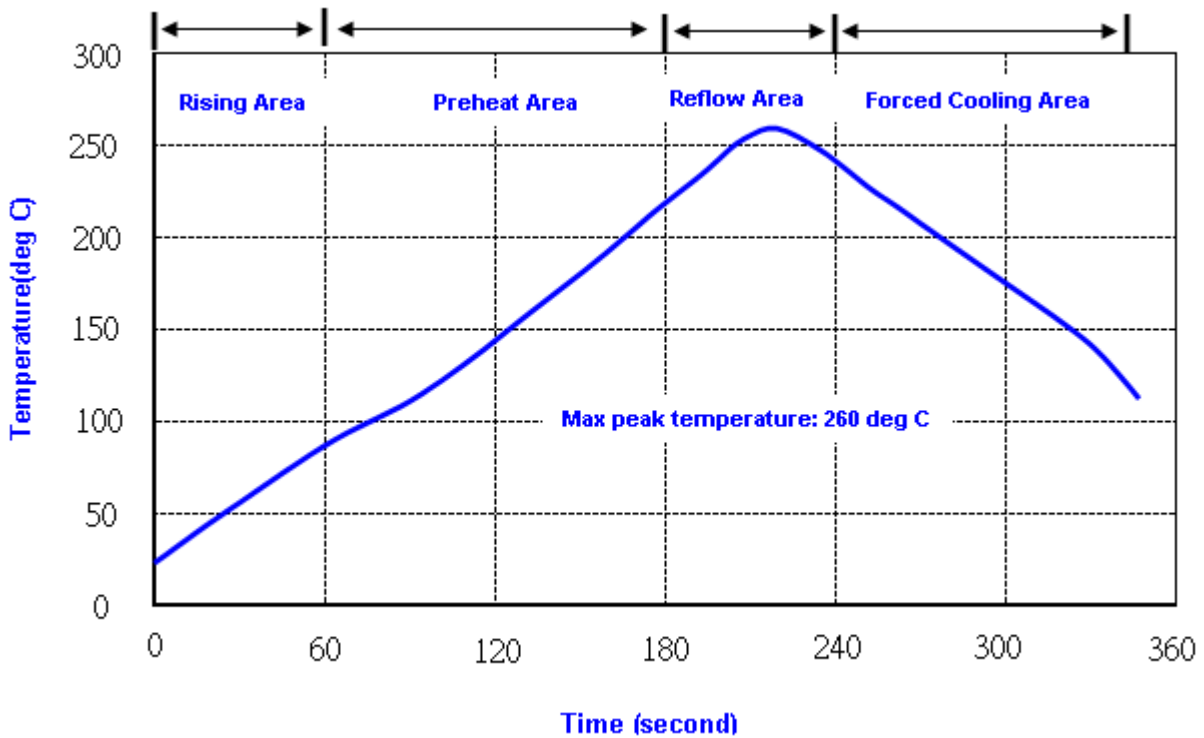
1. Unless otherwise specified tolerance on dimension +/-0.1 mm.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance +/-0.2 mm.

## Packing Quantity/Packing:

**3K pcs maximum per reel**



## Reflow Profile:



- Note:**
1. Max peak temperature: 260 +/- 5 deg C; Time: 10 +/- 2 sec
  2. Temperature: 217 +/- 5 deg C; Time: 90 ~ 100 sec

## Reliability Specifications

Test name	Test process / method	Reference standard
<b>Mechanical characteristics</b>		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 260°C /10sec ×2 times Total time : 4min.(IR-reflow)	EIAJED-4701 -300(301)M(II)
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 55 Hz Sweep period : 1.0 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	MIL-STD 202F method 201A
Mechanical Shock	directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine	MIL-STD 202F method 213C
Solderability	Solder Temperature:265±5°C Duration time: 5±0.5 seconds.	MIL-STD 883G method 2003
<b>Environmental characteristics</b>		
Thermal Shock	Heat cycle conditions -55 °C (30min) ↔ 125 °C (30min) * cycle time : 10 times	MIL-STD 883G method 1010.7
Humidity test	Temperature : 70 ± 2 °C Relative humidity : 90~95% Duration : 96 hours	MIL-STD 202F method 103B
Dry heat ( Aging test )	Temperature : 125 ± 2 °C Duration : 168 hours	MIL-STD 883G method 1008.2 condition C
PCT test	Pressure: 2.06kg/cm <sup>2</sup> (2.03*10 <sup>5</sup> pa) Temperature : 121 ± 2 °C Relative humidity : 100% Duration : 24 hours	EIAJED-4701-3 B-123A