



## APPROVAL SHEET

Issued No. :

DESCRIPTION : SMD 3225 CRYSTAL  
NOMINAL FREQ. : 24.567MHz  
TAITIEN P/N :  
TAITIEN MODEL : 3225-24.567-20-10-10/4B  
REVISION : 1  
DATE : 06/19/2017

| QA | Checked | Prepared |
|----|---------|----------|
|    |         |          |

CUSTOMER :  
CUSTOMER P/N :

|                    |
|--------------------|
| Customer Signature |
| Approved:          |
| Date:              |



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## ELECTRICAL SPECIFICATIONS

|      | Parameter                                            | Min.                | Typ. | Max.     | Units    | Test Condition |
|------|------------------------------------------------------|---------------------|------|----------|----------|----------------|
| 1-1  | Nominal Frequency                                    | 24.567              |      |          | MHz      |                |
| 1-2  | Frequency Tolerance.                                 | -10                 |      | +10      | ppm      | at 25°C +/-3°C |
| 1-3  | Operating Temperature range                          | -40                 |      | +85      | °C       |                |
| 1-4  | Storage Temperature range                            | -40                 |      | +85      | °C       |                |
| 1-5  | Temperature Characteristics                          | -10                 |      | +10      | ppm      | -40°C to +85°C |
| 1-6  | Nominal Load Capacitance                             | 20                  |      |          | pF       |                |
| 1-7  | Series Resistance                                    |                     |      | 40       | Ω        |                |
| 1-8  | Shunt Capacitance                                    |                     |      | 3.0      | pF       |                |
| 1-9  | Motion Capacitance                                   |                     |      |          | fF       |                |
| 1-10 | Motion Inductance                                    |                     |      |          | mH       |                |
| 1-11 | Q factor                                             |                     |      |          | K        |                |
| 1-12 | Spurious Response                                    |                     |      |          | dB       |                |
| 1-13 | Frequency Pull ability                               |                     |      |          | ppm/pF   |                |
| 1-14 | C0/C1 Ratio                                          |                     |      |          |          |                |
| 1-15 | Aging                                                | -3/ year            |      | +3/ year | ppm/year |                |
| 1-16 | Insulation Resistance                                | 500MΩ Min. @ DC100V |      |          |          |                |
| 1-17 | Nominal Drive Level                                  | 10                  |      |          | μ W      | into 10Ω       |
| 1-18 | Dependency Condition                                 |                     |      |          | μ W      |                |
| 1-19 | Drive Level Dependency<br>Resistance Max. Minus Min. |                     |      |          | Ω        |                |
| 1-20 | Drive Level Dependency<br>Frequency Max. Minus Min.  |                     |      |          | ppm      |                |
| 1-21 | Drive Level Dependency<br>Resistance Max.            |                     |      |          | Ω        |                |



利 明

## ■ CUSTOMER SPECIAL REQUIREMENT

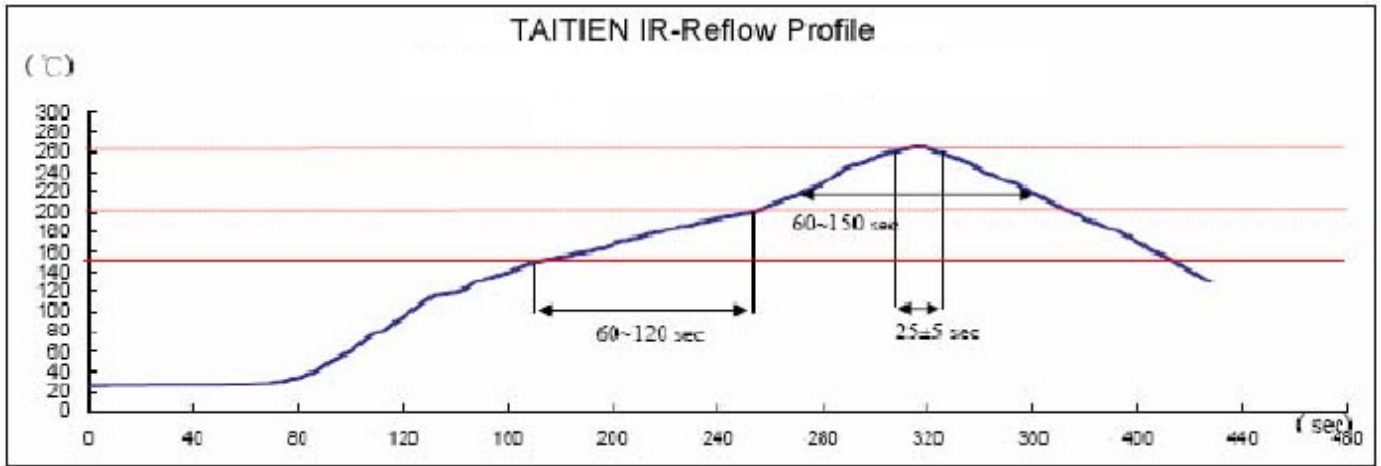
|   |  |
|---|--|
| 2 |  |
|---|--|

## ■ ENVIRONMENTAL

|     | Parameter        | Reference Std.               | Test Condition                                          |
|-----|------------------|------------------------------|---------------------------------------------------------|
| 3-1 | Vibration Test   | MIL-STD-883 2007 Condition A | 10~2000Hz, 1.52mm, 20g, each axis for 4 hrs             |
|     |                  | JESD22-B103 Condition 1      |                                                         |
| 3-2 | Thermal Shock    | MIL-STD-883 1010 Condition B | -55℃, 125℃; soak time is 10 mins, with total 200 cycles |
|     |                  | JESD22-A104 Condition B      |                                                         |
| 3-3 | Mechanical Shock | MIL-STD-883 2002 Condition B | 1500G, half-sine, 0.5ms, each axis for 3 times.         |
|     |                  | JESD22-B104 Condition B      |                                                         |

## ■ RECOMMENDED IR REFLOW PROFILE

### ➤ IR REFLOW PROFILE OF CERAMIC SMD PRODUCTS FOR Pb FREE PROCESS



#### IR-Reflow Test

Reference Standard : JEDEC-STD 020

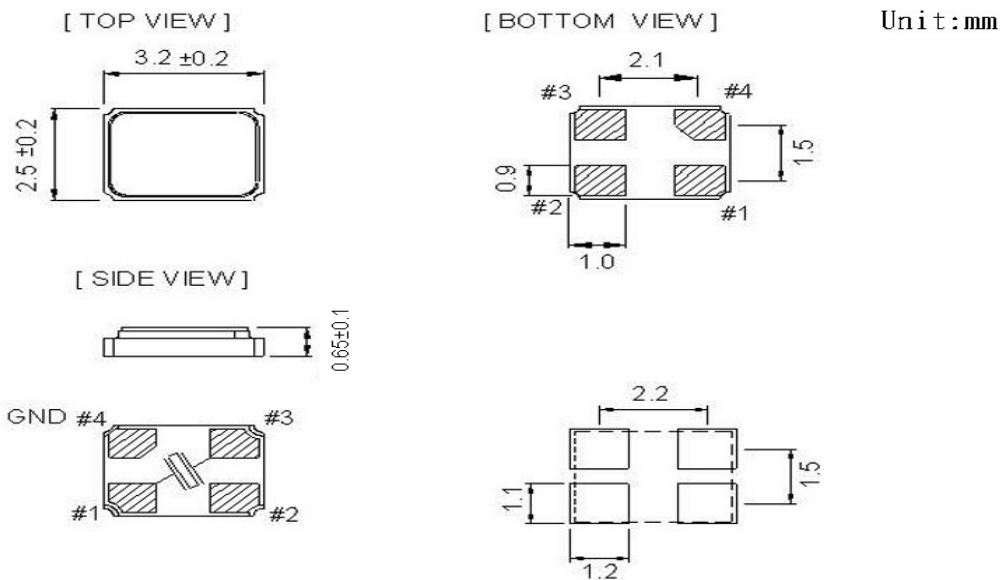
Test Conditions: Pre-heating : 150°C to 200 °C, 60~120 sec

Heating : 217 °C , 60~150 sec

Peak Temperature : 260±5 °C, 25±5 sec

## ■ PRODUCT DIMENSIONS

### ➤ DIMENSIONS

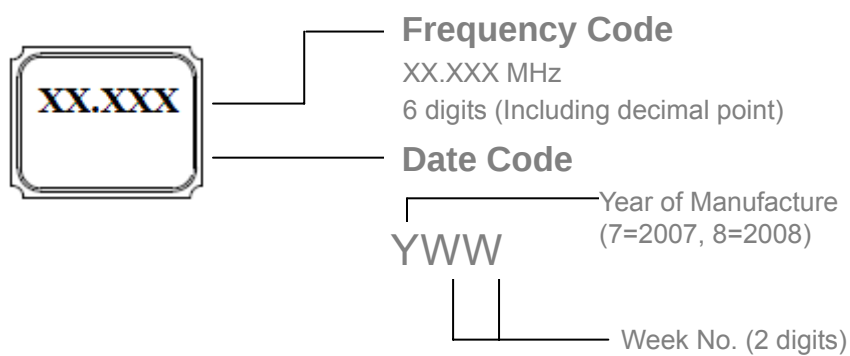


Marking #2 and #4 is connected with metal cap of top

Recommended soldering pattern

## ■ PRODUCT IDENTIFICATION (MARKING)

### ➤ PROCEDURE: LASER

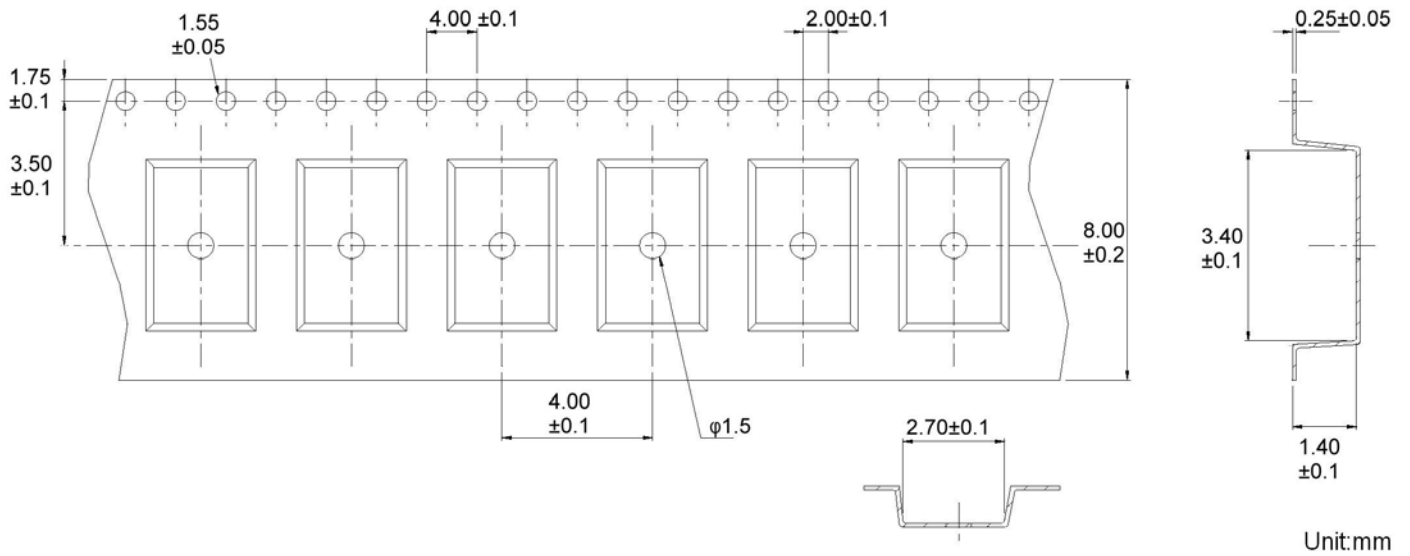


### ➤ FOR EXAMPLE:

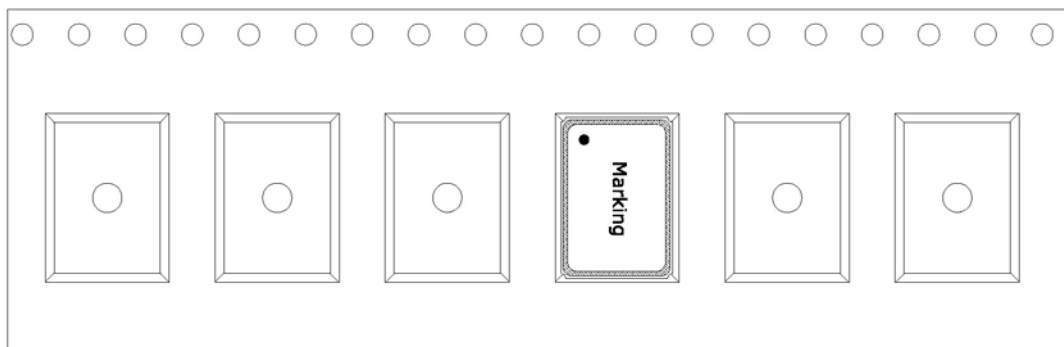


## ■ PACKAGE INFORMATION

### ➤ TAPE (CARRIER) DIMENSIONS



### ➤ THE DIRECTION OF PACKING



### ➤ REEL DIMENSIONS

