



APPROVAL SHEET

Issued No. :

DESCRIPTION : SMD 3225 CRYSTAL
NOMINAL FREQ. : 13.56MHz
P/N :
MODEL : 3225-13.56-20-10-10/4B
REVISION : 1
DATE : 06/19/2017

QA	Checked	Prepared

CUSTOMER :

CUSTOMER P/N :

Customer Signature
Approved:
Date:



REVISION HISTORY

Rev.	Revised Page	Revision Content	Date	Ref. No.	Reviser
01	N/A	InitialReleased	12/14/2015	N/A	MA YU PING

Please note that placing order with Taitien constitutes acknowledgement that you have read and agree to Taitien's Terms and Conditions. Please refer to our website for more details. Thank you for choosing Taitien!

Remedies and Limitation of Liability: BUYER'S SOLE AND EXCLUSIVE REMEDY AND TAITIEN'S SOLE LIABILITY, WITH RESPECT TO ANY BREACH OF WARRANTY, SHALL BE AT TAITIEN'S OPTION: (A) REPAIR OR REPLACEMENT OF THE DEFECTIVE OR NONCONFORMING CRYSTALS OR (B) REFUND OF BUYER'S PURCHASE PRICE FOR THE DEFECTIVE OR NONCONFORMING CRYSTALS.

IN NO EVENT SHALL TAITIEN'S TOTAL LIABILITY FOR ANY AND ALL LOSSES AND DAMAGES ARISING OUT OF ANY CAUSE (INCLUDING, BUT NOT LIMITED TO, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE) EXCEED THE PURCHASE COST OF THE CRYSTALS. IN NO EVENT SHALL TAITIEN BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES.



CONTENT

SPECIFICATIONS	PAGE
ELECTRICAL SPECIFICATIONS	4~5
RECOMMENDED IR REFLOW PROFILE	6
PRODUCT DIMENSIONS	7
PRODUCT IDENTIFICATION (MARKING)	7
PACKAGE INFORMATION	8

ELECTRICAL SPECIFICATIONS

	Parameter	Min.	Typ.	Max.	Units	Test Condition
1-1	Nominal Frequency	13.56			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 Resistance Max. Minus Min.				Ω	
1-20	Drive Level Dependency Frequency Max. Minus Min.				ppm	
1-21	Drive Level Dependency Resistance Max.				Ω	



利 明

■ CUSTOMER SPECIAL REQUIREMENT

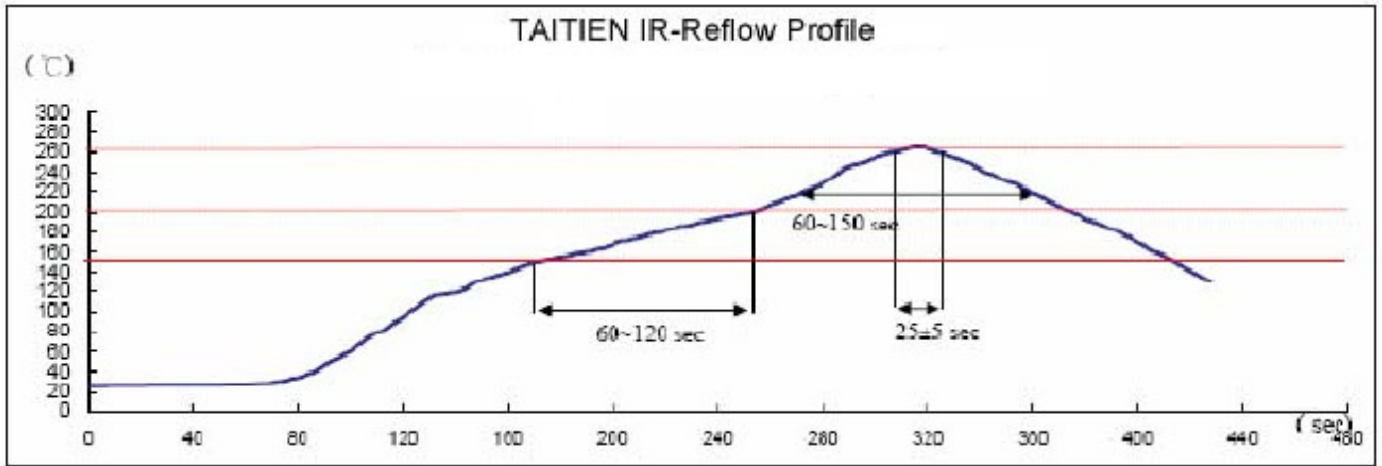
2	
---	--

■ 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

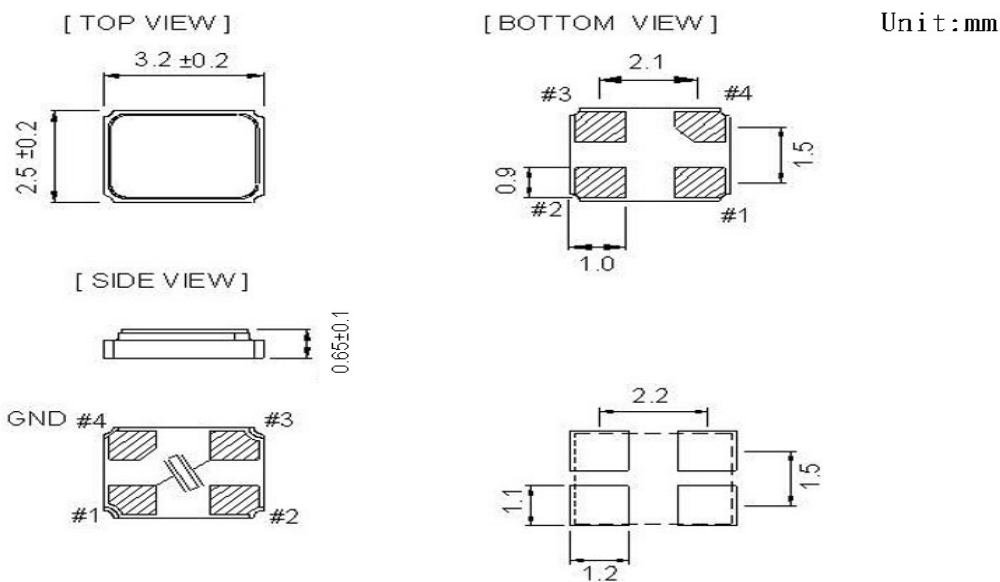
Test Conditions: Pre-heating : 150°C to 200 °C, 60~120 sec

Heating : 217 °C , 60~150 sec

Peak Temperature : 260±5 °C, 25±5 sec

■ PRODUCT DIMENSIONS

➤ DIMENSIONS

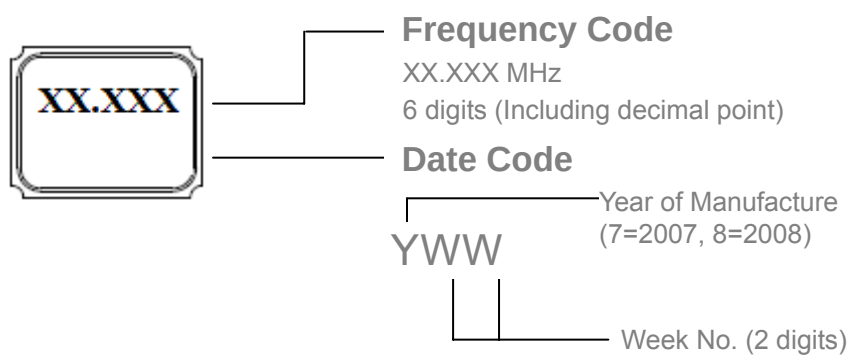


Marking #2 and #4 is connected with metal cap of top

Recommended soldering pattern

■ PRODUCT IDENTIFICATION (MARKING)

➤ PROCEDURE: LASER

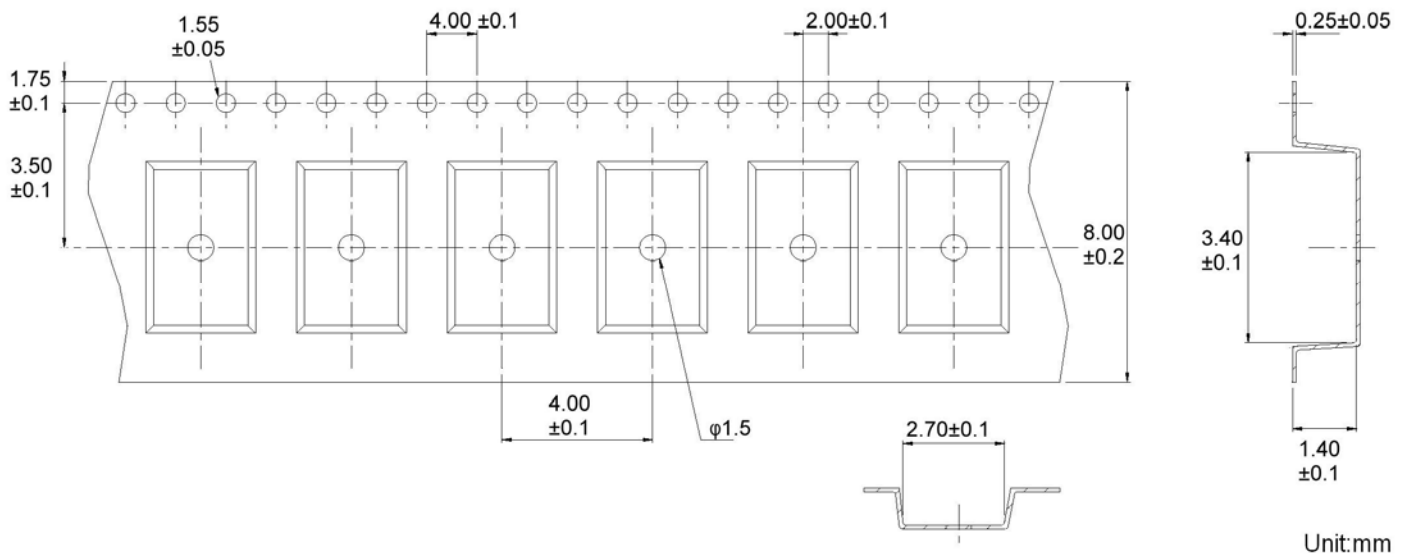


➤ FOR EXAMPLE:

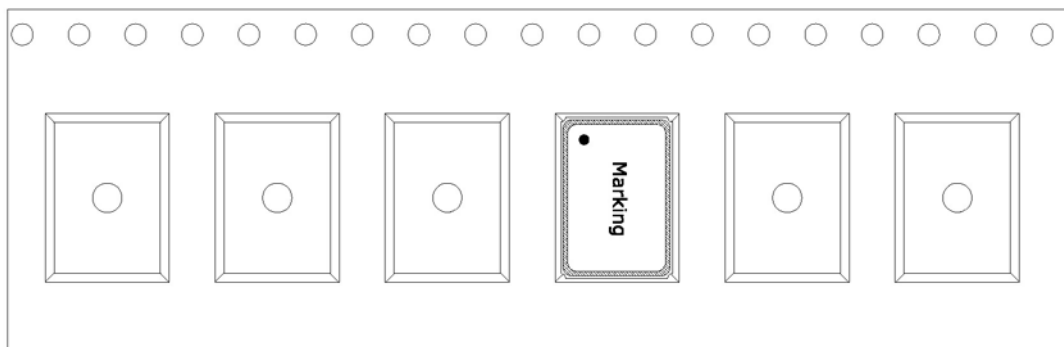


■ PACKAGE INFORMATION

➤ TAPE (CARRIER) DIMENSIONS



➤ THE DIRECTION OF PACKING



➤ REEL DIMENSIONS

