

PSE Technology Corporation

SPECIFICATION FOR APPROVAL

CUSTOMER	
NOMINAL FREQUENCY	25.000000 MHz
PRODUCT TYPE	TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL
PART NUMBER	FL2500213Z
CUSTOMER P/N	
ISSUE DATE	April 1, 2015
VERSION	F

APPROVED	PREPARED	QA
		
APPROVED BY CUSTOMER		
Please return one copy with approval to PSE-TW		

PSE Technology Corporation

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*Pb-free

*RoHS Compliant

*HF-Halogen Free

*REACH Compliant

A Company of PERICOM Semiconductor Corporation

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

FL2500213Z

VER.F 01-APR-15

VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
A	Apr. 26, 2013			Initial Release	
B	Oct. 8, 2013			Updated 3rd Harmonic Motional Resistance from 30ohms Min to 40ohms Min	
C	Jul. 4, 2014			Updated Operating Temperature Range to -40~85°C	
D	Feb. 11, 2015			Updated Operating Temperature Range to -40~90°C & 3rd Harmonic Motional Resistance to 30ohms Min.	
E	Feb. 12, 2015			Updated Operating Temperature Range to -40~100°C	
F	Apr. 1, 2015			Updated Operating Temperature Range to -40~85°C	

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ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	25.000000	MHz	
Mode of Oscillation	MO	AT Cut-Fundamental		
Calibration Load Capacitance	CL	20	pF	
Calibration Tolerance	FL	± 20	ppm	at 25°C $\pm 3^{\circ}\text{C}$
Operating Temperature Range	TR	-40 to +85	°C	
Frequency Stability(Frequency Deviation over the Operating Temperature Range)	F/T	± 20	ppm	Reference to the Frequency at 25°C
Operating Drive Level		300	μW	
Maximum Drive Level		300	μW	
Equivalent Series Resistance	ESR	30	Ω	Max.
Shunt Capacitance	C0	7	pF	Max.
Trim Sensitivity	TS	10	ppm/pF	Max.
Q-Factor	Q	30000		Min.
3rd Harmonic Motional Resistance		30	Ω	Min.
Aging at 25°C		± 20	ppm	Max, 10 years
Storage Temperature		-55 to +125	°C	
Insulation Resistance		500	M Ω	Min.

** This product doesn't include harmful substance that stipulated by SONY SS-00259 Level 1 and S-AT2-001 Level 1 standard. RoHS Compliant (Pb - Free).

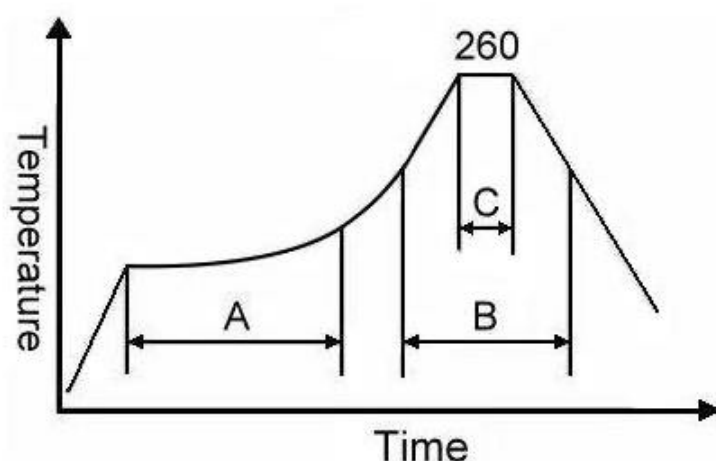
RELIABILITY SPECIFICATIONS

MECHANICAL AND ENVIRONMENTAL RATINGS:

- a) FINE LEAK TEST: JESD22-A109 (Condition 1A)
- b) GROSS LEAK TEST: JESD22-A109 (Condition C)
- c) MOISTURE RESISTANCE: JESD22-A113
- d) SHOCK: JESD22-B104 (Condition B)
- e) SOLDERABILITY : (RoHS version): J-STD-002
- f) VIBRATION: JESD22-B103
- g) SOLVENT RESISTANCE: JESD22-B107
- h) RESISTANCE TO SOLDERING HEAT (RoHS version): J-STD-020D Table 5.2 Pb free devices (3 cycles max)

SUGGESTED IR REFLOW PROFILE

*As per IPC-JEDEC J-STD-020D



Note:

	Stage	Temperature	Time
A	Preheat	150~200°C	60~120 Sec
B	Primary Heat	217°C	60~150 Sec
C	Peak	260°C	10 Sec

For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

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MARKING

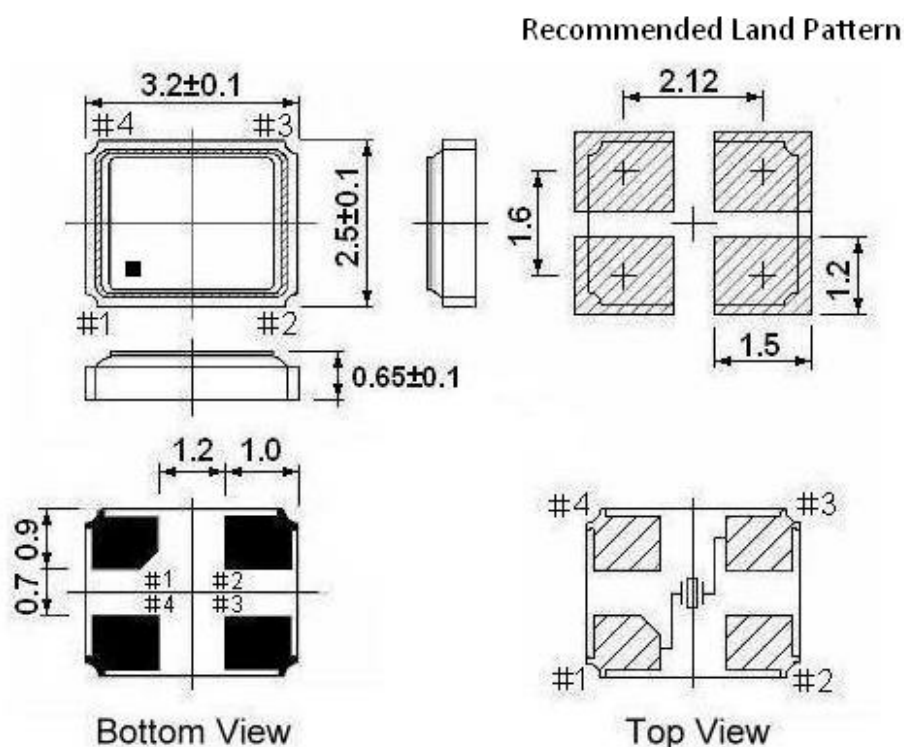


y
 —————
 |
 Year Code (Last
 Digit of Year)

ww
 —————
 |
 Week Code

v
 —————
 |
 Factory Code

MECHANICAL DRAWINGS (Scale: None. Dimensions are in mm.)



**** Recommended - Pin 1 & 3 : CRYSTAL
 Pin 2 & 4 : GND**

Notes:

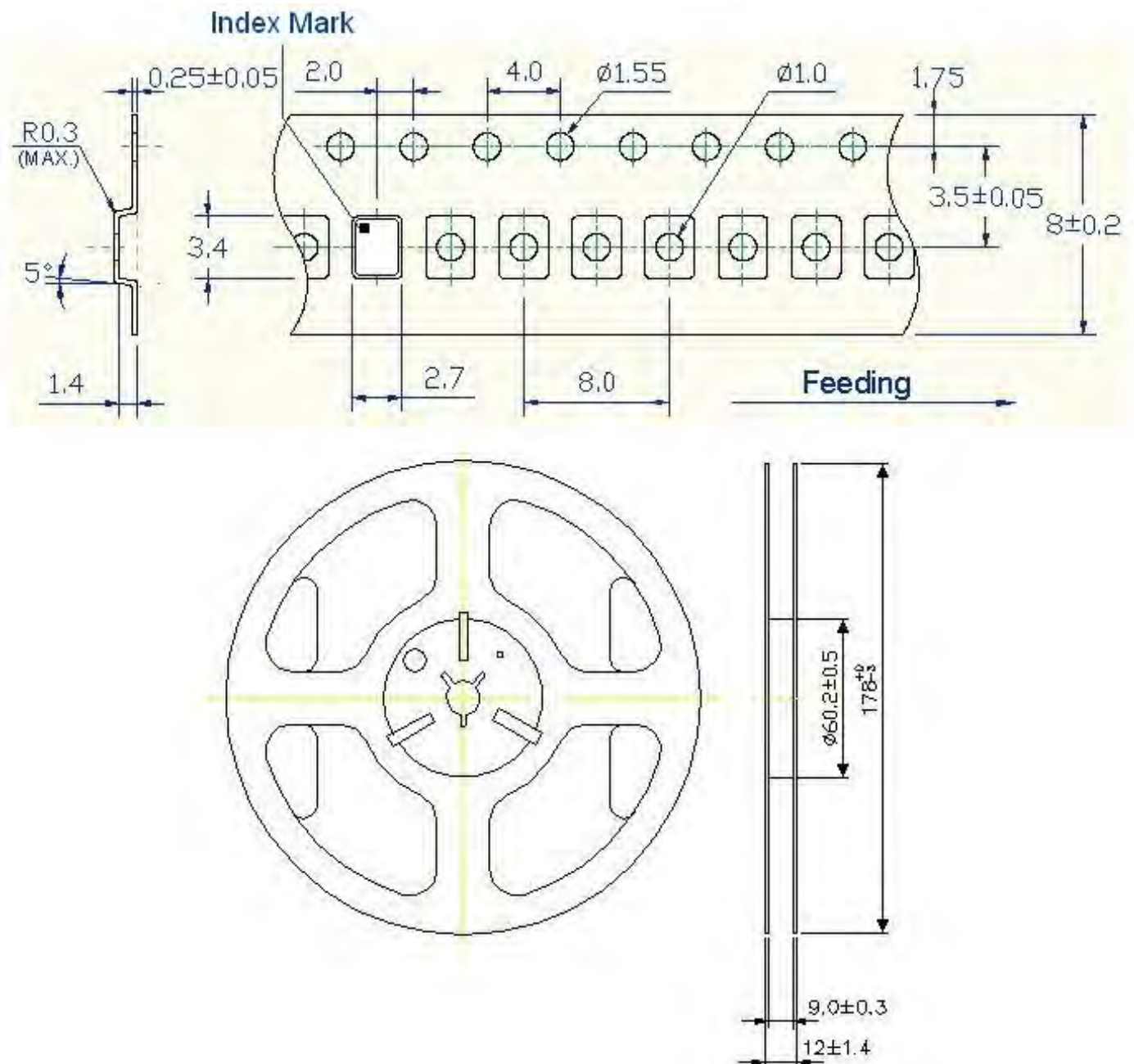
1. Package drawings are for reference only, and the appearances of objects may vary.
 Actual packages are based on the real product.
2. The marking dot denotes Pin#1.
3. The position and shape of the chamfer pin may vary and are based on the real product.

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Tape & Reel



1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

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PACKING

