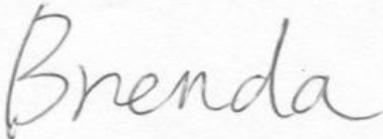


PSE Technology Corporation

SPECIFICATION FOR APPROVAL

CUSTOMER	_____
NOMINAL FREQUENCY	16.000000 MHz
PRODUCT TYPE	TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL
PART NUMBER	FL1600087
CUSTOMER P/N	_____
ISSUE DATE	May 2, 2012
VERSION	F

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

PSE Technology Corporation

No.2, Tzu-Chiang 5th Rd., Chung Li Industrial Park,
 Chung Li City, Taoyuan County, Taiwan (R.O.C.)
 TEL:886-3-451-8888
 FAX:886-3-461-3865
<http://www.saronix-ecera.com.tw/>

- *Pb-free
- *RoHS Compliant
- *HF-Halogen Free
- *REACH Compliant

A Company of PERICOM Semiconductor Corporation

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

FL1600087

VER.F 02-MAY-12

VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
A	Apr. 9, 2012			Initial Release	
B	Apr. 13, 2012			Added individual specs in the note for Frequency Stability	
C	Apr. 18, 2012			Change note of aging spec from 6 years to 10 years	
D	Apr. 24, 2012			Changed Operating Temperature Range from 0~50°C to 0~85°C & updated the note	
E	Apr. 25, 2012			Added note of Calibration tolerance:Including $\pm 0.1\text{pF}$ CL changes	
F	May. 2, 2012			Revised note of Calibration Tolerance: Including $\pm 1\text{pF}$ CL changes	

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

FL1600087

VER.F 02-MAY-12

ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	16.000000	MHz	
Mode of Oscillation	MO	AT Cut-Fundamental		
Calibration Load Capacitance	CL	20	pF	
Calibration Tolerance	FL	± 15	ppm	at 25°C±3°C. Including ±1pF CL changes
Operating Temperature Range	TR	0 to 85	°C	
Frequency Stability(Frequency Deviation over the Operating Temperature Range)	F/T	± 15	ppm	Reference to the Frequency at 25°C
Operating Drive Level		10	μW	
Maximum Drive Level		250	μW	
Equivalent Series Resistance	ESR	28.9	Ω	Max.
Shunt Capacitance	C0	1.5	pF	Max.
Aging at 25°C		± 3	ppm	Max, 1st year
Aging at 25°C		± 10	ppm	Max, 10 years
Storage Temperature		-55 to +125	°C	
Insulation Resistance		500	MΩ	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).

Note: The Overall Frequency Deviation is the sum of Calibration Tolerance, Frequency Stability over the Operating Temperature Range and the Aging.

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

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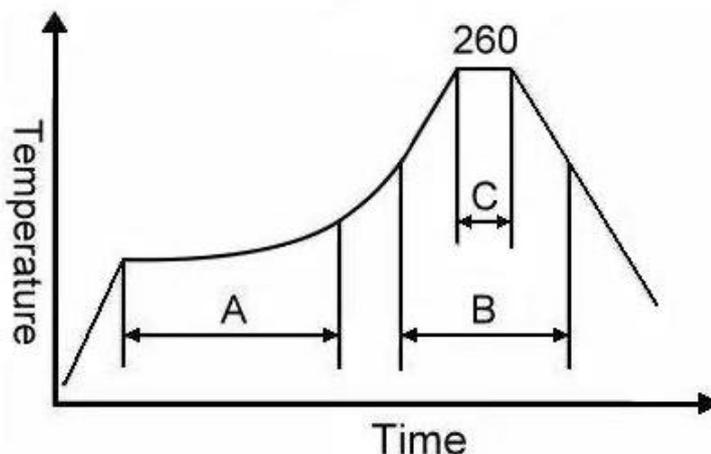
RELIABILITY SPECIFICATIONS

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

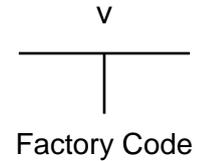
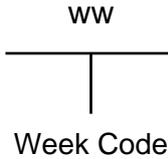
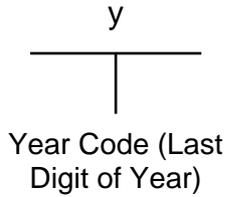
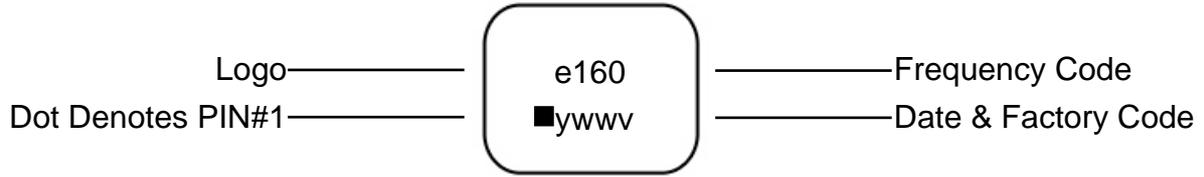
For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

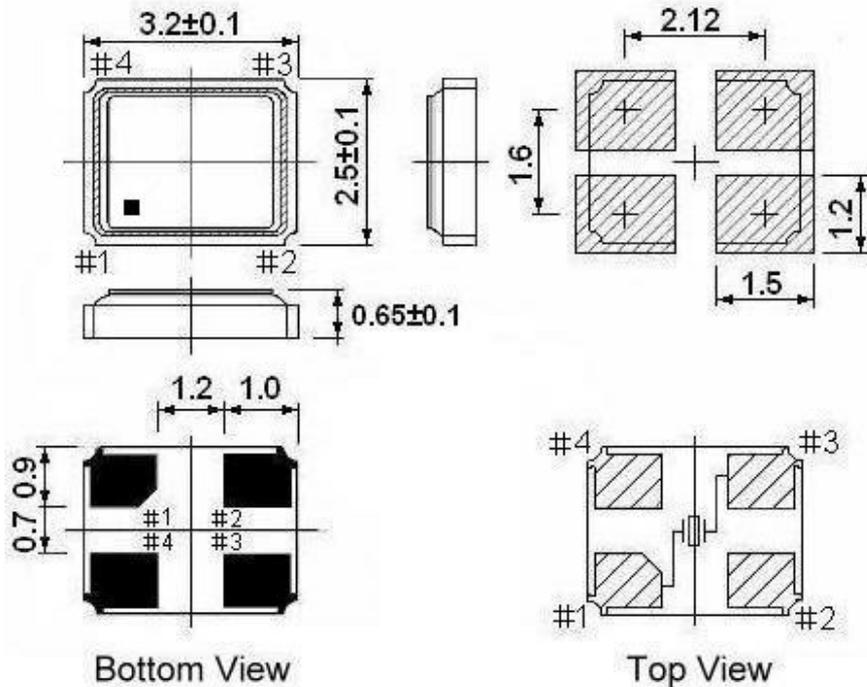
FL1600087

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MARKING



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



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

Note:

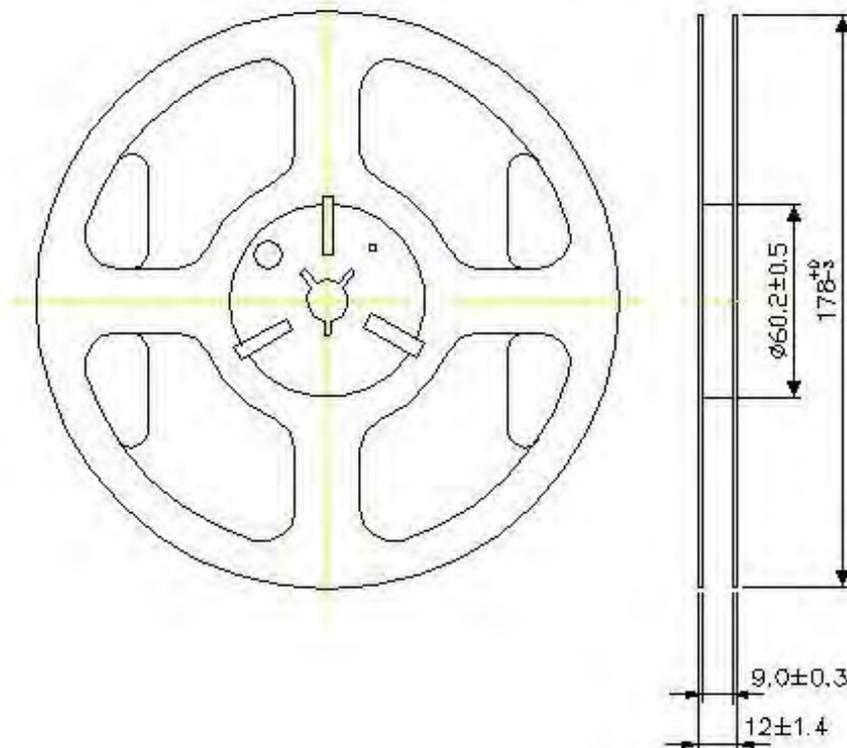
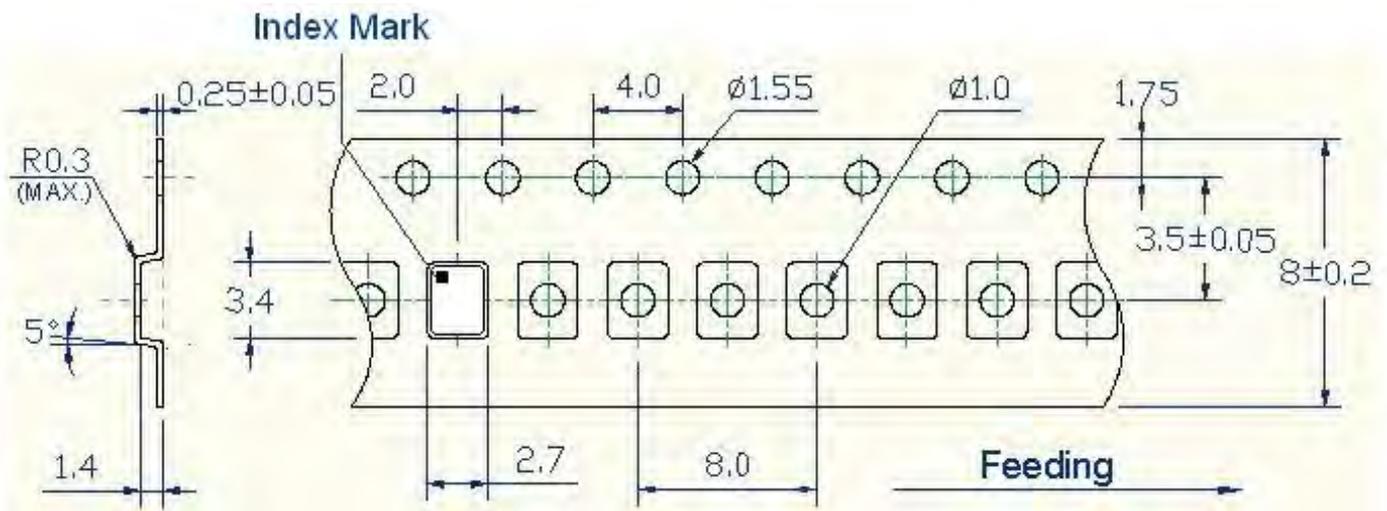
1. The marking dot denotes Pin#1.
2. Pin positions of the drawing is only for reference, and the Pin with chamfer is based on the real product.

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

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Tape & Reel



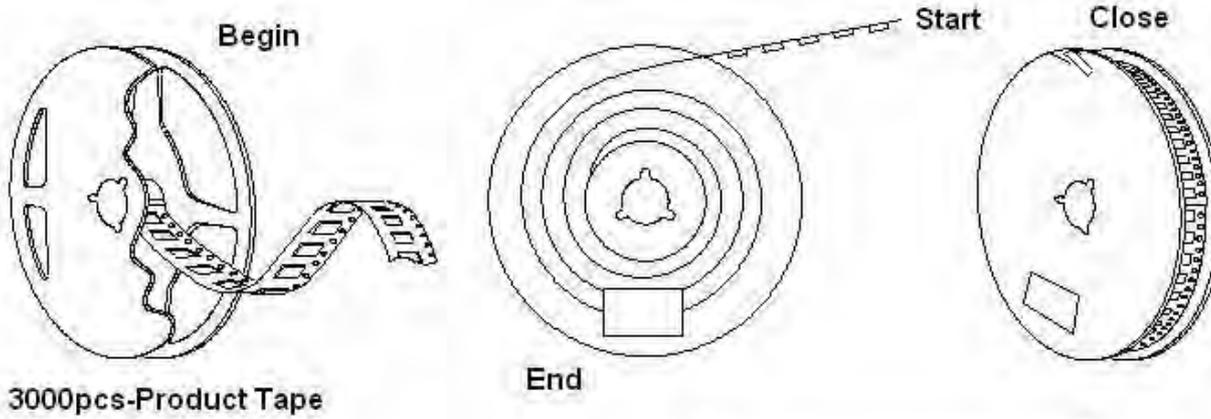
1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

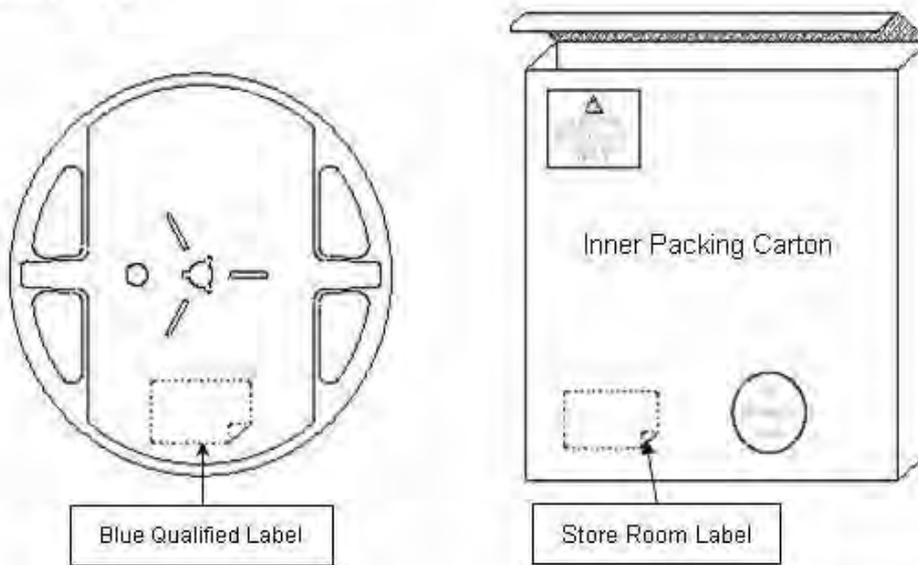
FL1600087

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PACKING

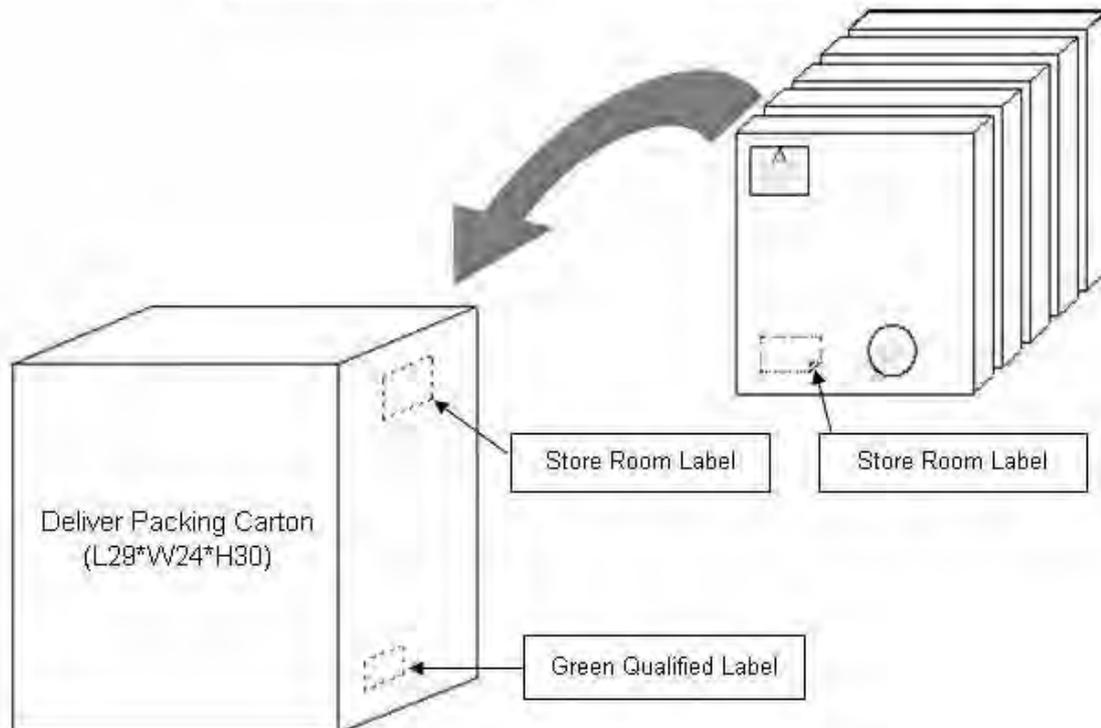


3000pcs-Product Tape



Blue Qualified Label

Store Room Label



Store Room Label

Store Room Label

Green Qualified Label