

**PSE Technology Corporation**

**SPECIFICATION FOR APPROVAL**

CUSTOMER \_\_\_\_\_

NOMINAL FREQUENCY \_\_\_\_\_ 16.000000 MHz \_\_\_\_\_

PRODUCT TYPE \_\_\_\_\_ **TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL** \_\_\_\_\_

SPEC. NO. ( P/N ) \_\_\_\_\_ FL1600043 \_\_\_\_\_

CUSTOMER P/N \_\_\_\_\_

ISSUE DATE \_\_\_\_\_ March 18, 2011 \_\_\_\_\_

VERSION \_\_\_\_\_ C \_\_\_\_\_

| APPROVED                                                                            | PREPARED                                                                            | QA                                                                                    |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| APPROVED BY CUSTOMER :                                                              |                                                                                     | AVL Status                                                                            |
| 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

***FL1600043***

VER. C 18-Mar-11

## VERSION HISTORY

[illegible]

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## FL1600043

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### ELECTRICAL SPECIFICATIONS

| Item                                                                                 | Symbol | Specifications     | Units | Notes                              |
|--------------------------------------------------------------------------------------|--------|--------------------|-------|------------------------------------|
| Nominal Frequency                                                                    | Fn     | 16.000000          | MHz   |                                    |
| Mode of Oscillation                                                                  | MO     | AT Cut-Fundamental |       |                                    |
| Calibration Load Capacitance                                                         | CL     | 9                  | pF    |                                    |
| Calibration Tolerance                                                                | FL     | ±10                | ppm   | at 25°C±3°C                        |
| Operating Temperature Range                                                          | TR     | -20 to +85         | °C    |                                    |
| Frequency Stability<br>(Frequency Deviation over the<br>Operating Temperature Range) | F/T    | ±10                | ppm   | Reference to the Frequency at 25°C |
| Operating Drive Level                                                                |        | 10                 | μW    |                                    |
| Maximum Drive Level                                                                  |        | 100                | μW    |                                    |
| Equivalent Series Resistance                                                         | ESR    | 60                 | Ω     | Max                                |
| Shunt Capacitance                                                                    | C0     | 5                  | pF    | Max                                |
| Aging at 25°C                                                                        |        | ±3                 | ppm   | Max, 1st year                      |
| 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).

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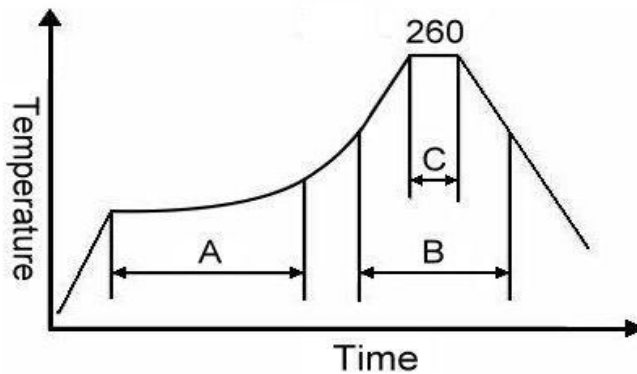
## RELIABILITY SPECIFICATIONS

### 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     |

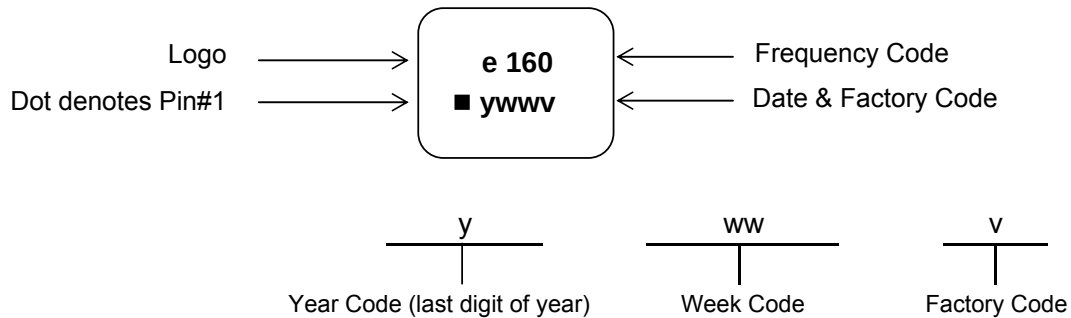
For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

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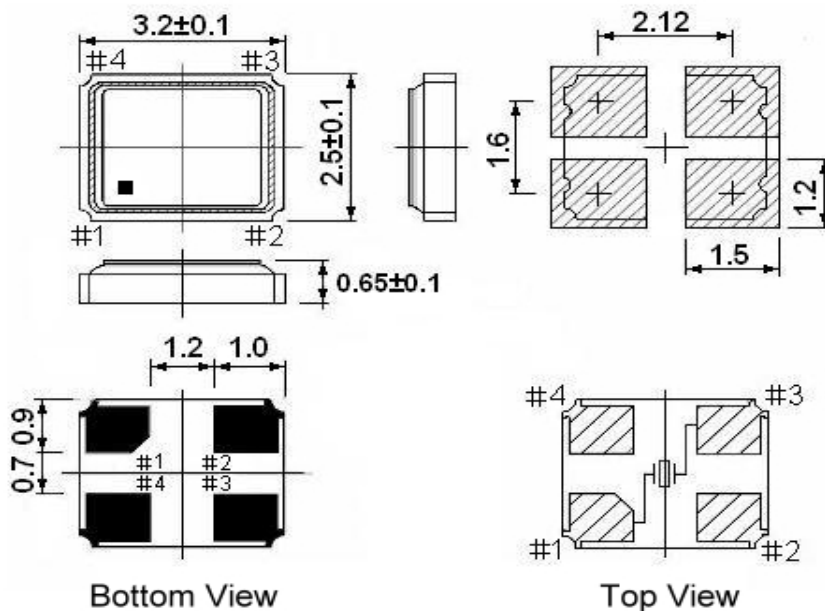
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## MARKING



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



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

### Note:

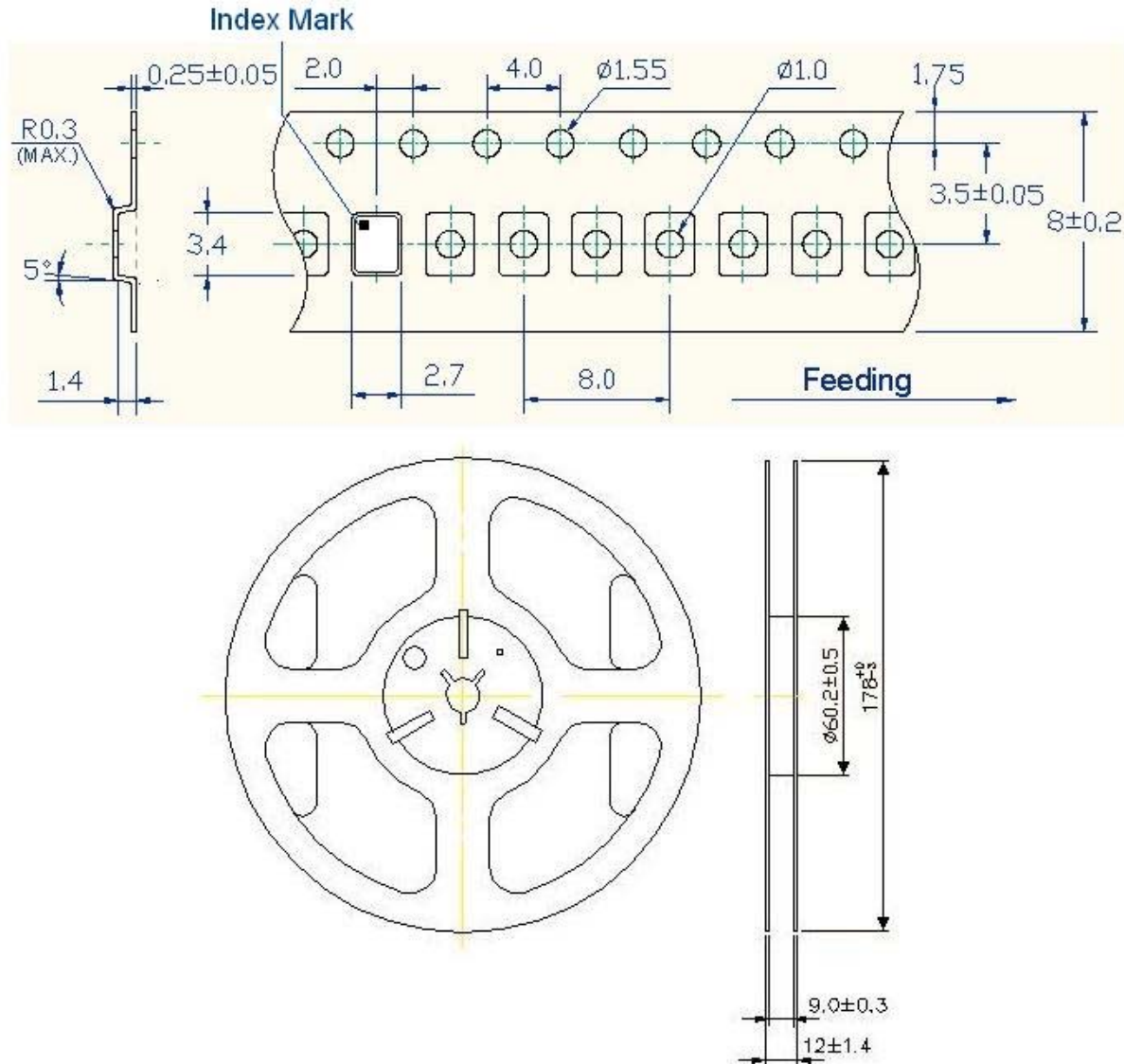
1. The marking dot denotes Pin#1.
2. Pin positions of the drawing is only for reference, and the Pin with chamfer is based on the real product.

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## Tape & Reel



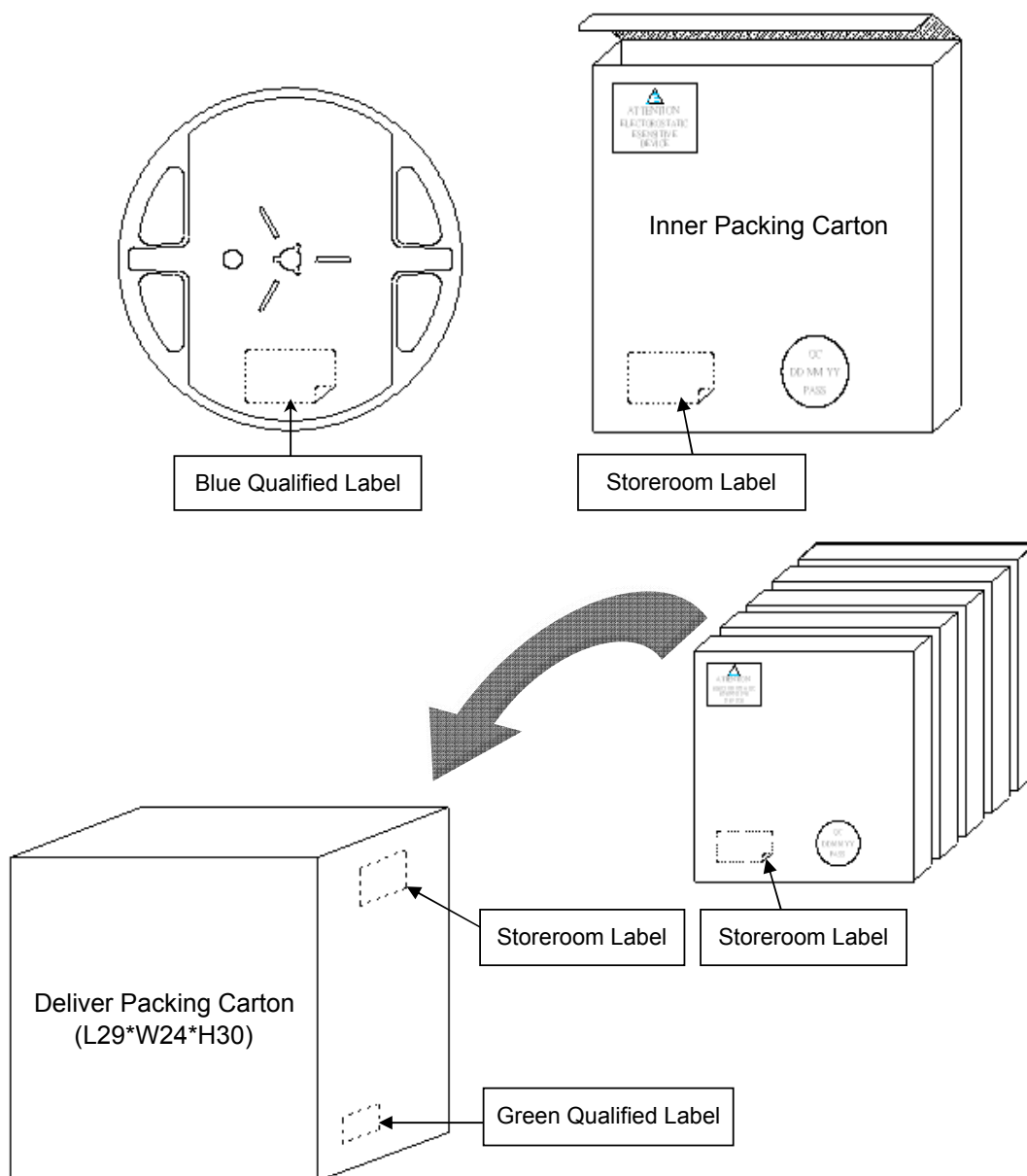
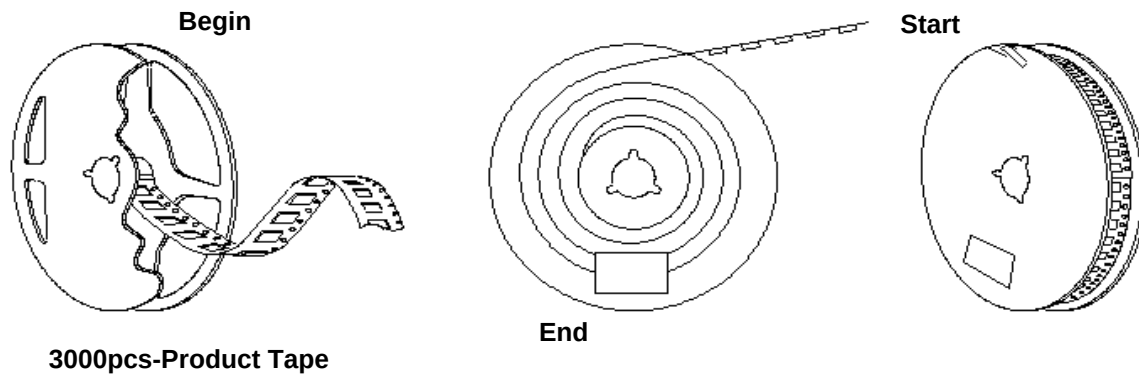
1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

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## PACKING



# Mouser Electronics

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