



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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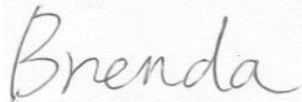
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# PSE Technology Corporation

## SPECIFICATION FOR APPROVAL

|                   |                                     |
|-------------------|-------------------------------------|
| CUSTOMER          |                                     |
| NOMINAL FREQUENCY | 24.000000 MHz                       |
| PRODUCT TYPE      | TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL |
| PART NUMBER       | FL2400081                           |
| CUSTOMER P/N      |                                     |
| ISSUE DATE        | July 29, 2011                       |
| VERSION           | A                                   |

| APPROVED                                                                            | PREPARED                                                                            | QA                                                                                    |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| APPROVED BY CUSTOMER                                                                |                                                                                     |                                                                                       |
| <div>Please return one copy with approval to PSE-TW</div>                           |                                                                                     |                                                                                       |

### 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

***FL2400081***

VER.A 29-JUL-11

## VERSION HISTORY

| Version No. | Version Date  | Customer Receipt Date | Supplier Receipt Date | Description     | Notes |
|-------------|---------------|-----------------------|-----------------------|-----------------|-------|
| A           | Jul. 29, 2011 |                       |                       | Initial Release |       |

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**FL2400081**

VER.A 29-JUL-11

## ELECTRICAL SPECIFICATIONS

| Item                                                                          | Symbol | Specifications     | Units         | Notes                              |
|-------------------------------------------------------------------------------|--------|--------------------|---------------|------------------------------------|
| Nominal Frequency                                                             | Fn     | 24.000000          | MHz           |                                    |
| Mode of Oscillation                                                           | MO     | AT Cut-Fundamental |               |                                    |
| Calibration Load Capacitance                                                  | CL     | 18                 | pF            |                                    |
| Calibration Tolerance                                                         | FL     | $\pm 30$           | ppm           | at 25°C $\pm 3^{\circ}\text{C}$    |
| Operating Temperature Range                                                   | TR     | -20 to +70         | °C            |                                    |
| Frequency Stability(Frequency Deviation over the Operating Temperature Range) | F/T    | $\pm 30$           | ppm           | Reference to the Frequency at 25°C |
| Operating Drive Level                                                         |        | 10                 | $\mu\text{W}$ |                                    |
| Maximum Drive Level                                                           |        | 100                | $\mu\text{W}$ |                                    |
| Equivalent Series Resistance                                                  | ESR    | 60                 | $\Omega$      | Max.                               |
| Shunt Capacitance                                                             | C0     | 5                  | pF            | Max.                               |
| Aging at 25°C                                                                 |        | $\pm 5$            | ppm           | Max, 1st year                      |
| Storage Temperature                                                           |        | -55 to +125        | °C            |                                    |
| Insulation Resistance                                                         |        | 500                | M $\Omega$    | 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).

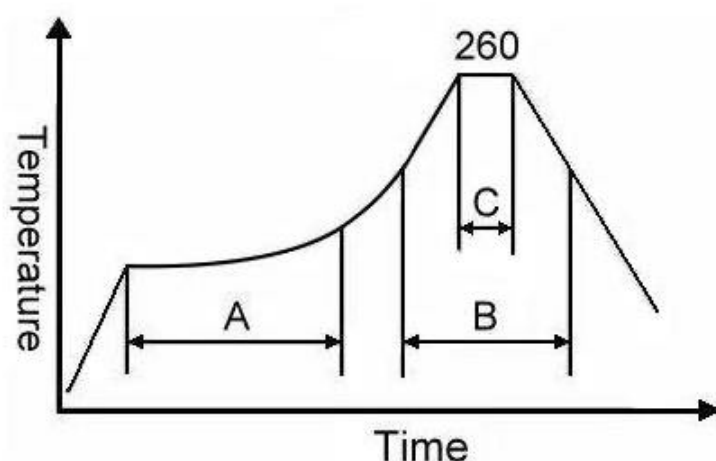
### RELIABILITY SPECIFICATIONS

#### 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>

# TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

**FL2400081**

VER.A 29-JUL-11

## MARKING

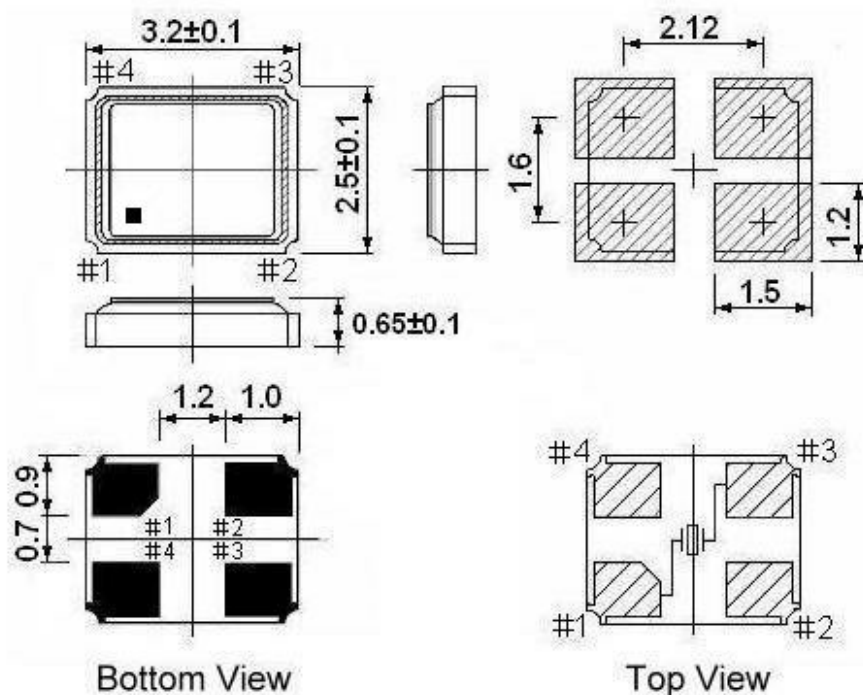


y  
|  
Year Code (Last  
Digit of Year)

ww  
|  
Week Code

v  
|  
Factory Code

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



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

### Note:

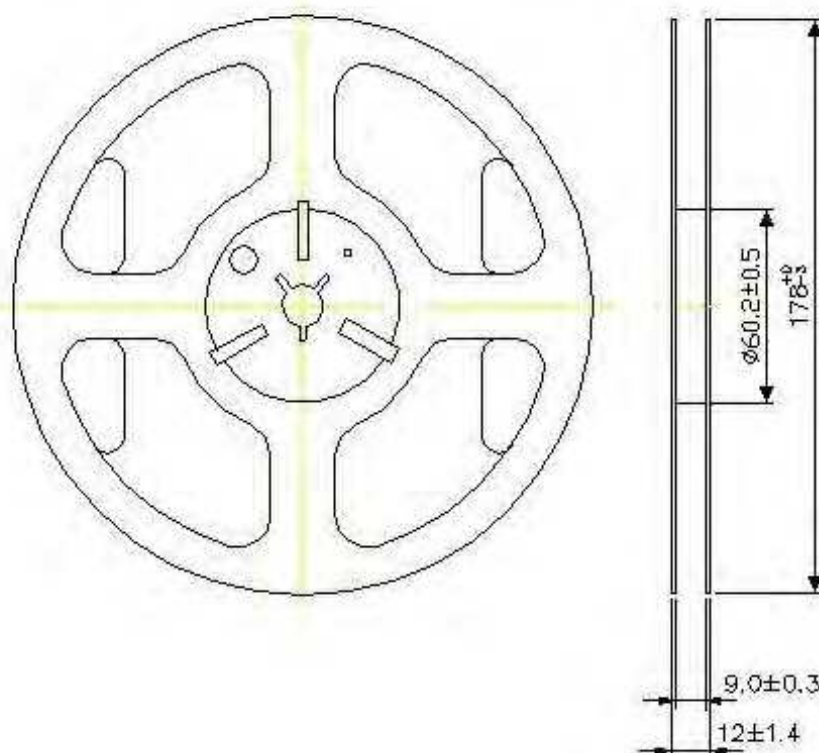
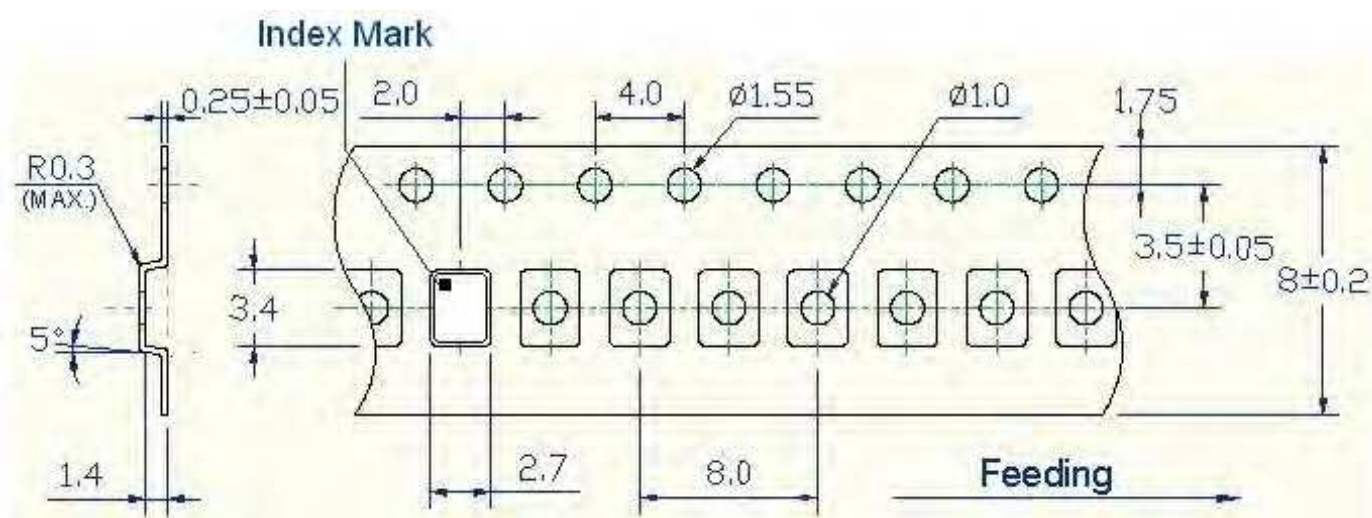
1. The marking dot denotes Pin#1.
2. Pin positions of the drawing is only for reference, and the Pin with chamfer is based on the real product.

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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

