




# PSE Technology Corporation

## SPECIFICATION FOR APPROVAL

|                   |  |
|-------------------|--|
| CUSTOMER          |  |
| NOMINAL FREQUENCY | <b>25.000000 MHz</b>                       |
| PRODUCT TYPE      | <b>TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL</b> |
| PART NUMBER       | <b>FL2500133</b>                           |
| CUSTOMER P/N      |  |
| ISSUE DATE        | <b>February 23, 2012</b>                   |
| VERSION           | <b>A</b>                                   |

| 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

## *FL2500133*

VER.A 23-FEB-12

### VERSION HISTORY

| Version No. | Version Date  | Customer Receipt Date | Supplier Receipt Date | Description     | Notes |
|-------------|---------------|-----------------------|-----------------------|-----------------|-------|
| A           | Feb. 23, 2012 |                       |                       | Initial Release |       |

# TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

## FL2500133

VER.A 23-FEB-12

### ELECTRICAL SPECIFICATIONS

| Item  | Symbol | Specifications     | Units | Notes                              |
|---|--------|--------------------|-------|------------------------------------|
| Nominal Frequency   | Fn     | 25.000000          | MHz   |                                    |
| Mode of Oscillation   | MO     | AT Cut-Fundamental |       |                                    |
| Calibration Load Capacitance  | CL     | 18                 | pF    |                                    |
| Calibration Tolerance   | FL     | ± 20               | ppm   | at 25°C±3°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   |        | 10                 | μW    |                                    |
| Maximum Drive Level   |        | 100                | μW    |                                    |
| Equivalent Series Resistance  | ESR    | 40                 | Ω     | Max.                               |
| Shunt Capacitance   | C0     | 5                  | pF    | Max.                               |
| Aging at 25°C   |        | ± 5                | 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).

# TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

**FL2500133**

VER.A 23-FEB-12

## 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     |

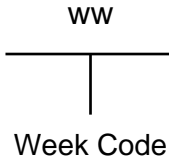
For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

# TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

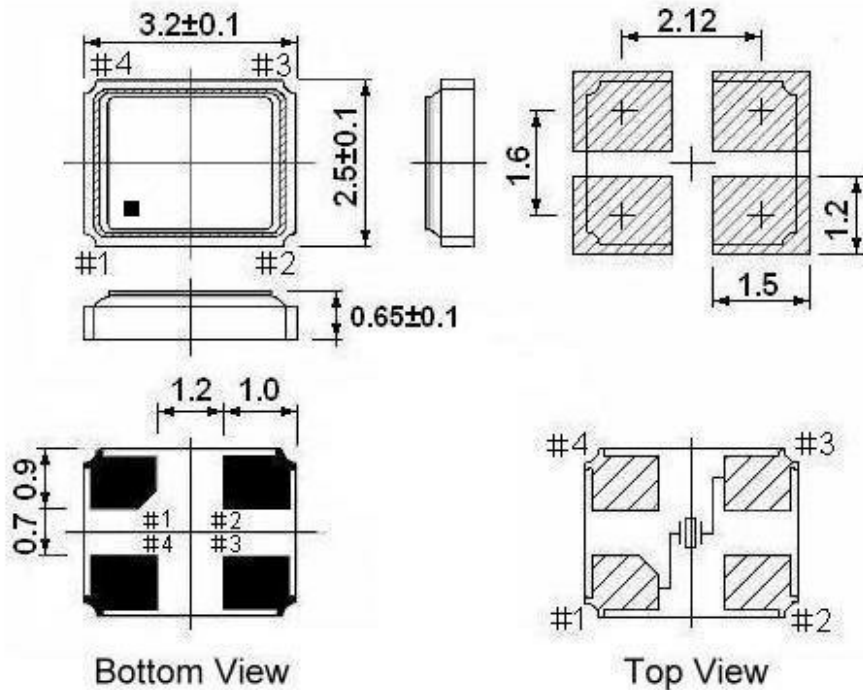
## FL2500133

VER.A 23-FEB-12

### 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

## FL2500133

VER.A 23-FEB-12

### 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

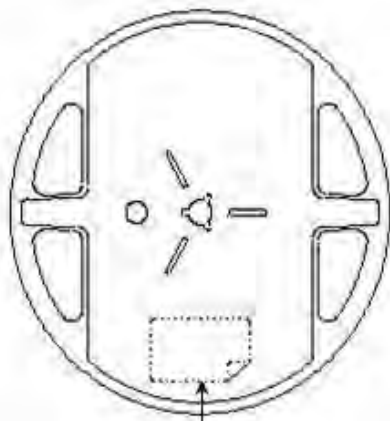
## FL2500133

VER.A 23-FEB-12

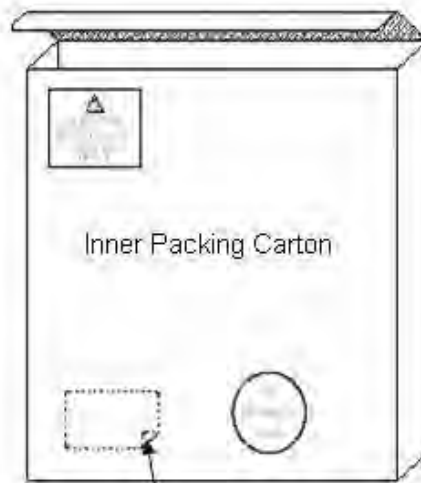
### PACKING



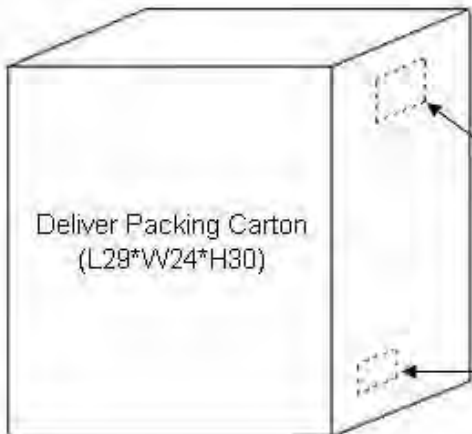
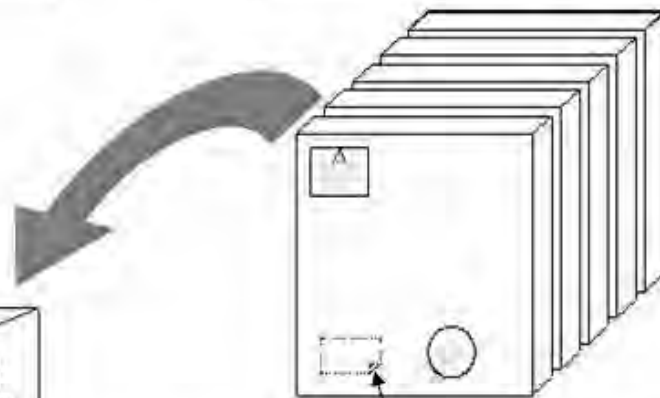
3000pcs-Product Tape



Blue Qualified Label



Store Room Label



Store Room Label

Store Room Label

Green Qualified Label