

# PSE Technology Corporation

## SPECIFICATION FOR APPROVAL

|                   |  |
|-------------------|--|
| CUSTOMER          | _____                                      |
| NOMINAL FREQUENCY | <b>37.400000 MHz</b>                       |
| PRODUCT TYPE      | <b>TYPE FH 2.5x2.0 SEAM SEALED CRYSTAL</b> |
| PART NUMBER       | <b>FH3740013Z</b>                          |
| CUSTOMER P/N      | _____                                      |
| ISSUE DATE        | <b>August 20, 2014</b>                     |
| VERSION           | <b>B</b>                                   |

| APPROVED                                       | PREPARED        | QA               |
|--|-----------------|------------------|
| <i>Brenda</i>                                  | <i>Nikhi Lu</i> | <i>Becky Lin</i> |
| 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 FH 2.5x2.0 SEAM SEALED CRYSTAL

## ***FH3740013Z***

VER.B 20-AUG-14

### VERSION HISTORY

| Version No. | Version Date  | Customer Receipt Date | Supplier Receipt Date | Description   | Notes |
|-------------|---------------|-----------------------|-----------------------|---|-------|
| A           | Aug. 19, 2014 |                       |                       | Initial Release   |       |
| B           | Aug. 20, 2014 |                       |                       | Updated to Frequency Stability +/-10ppm, Operating Drive Level 100uW , Maximum Drive Level 150uW, ESR 10ohms typ / 30ohms max , C0 3pF & aging +/-1ppm. |       |

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### ELECTRICAL SPECIFICATIONS

| Item  | Symbol | Specifications     | Units | Notes                              |
|---|--------|--------------------|-------|------------------------------------|
| Nominal Frequency   | Fn     | 37.400000          | MHz   |                                    |
| Mode of Oscillation   | MO     | AT Cut-Fundamental |       |                                    |
| Calibration Load Capacitance  | CL     | 8                  | pF    |                                    |
| Calibration Tolerance   | FL     | ± 10               | ppm   | at 25°C±3°C                        |
| Operating Temperature Range   | TR     | -30 to +85         | °C    |                                    |
| Frequency Stability(Frequency Deviation over the Operating Temperature Range) | F/T    | ± 10               | ppm   | Reference to the Frequency at 25°C |
| Operating Drive Level   |        | 100                | μW    |                                    |
| Maximum Drive Level   |        | 150                | μW    |                                    |
| Equivalent Series Resistance  | ESR    | 10 / 30            | Ω     | Typ. / Max.                        |
| Shunt Capacitance   | C0     | 3                  | pF    | Max.                               |
| Aging at 25°C   |        | ± 1                | 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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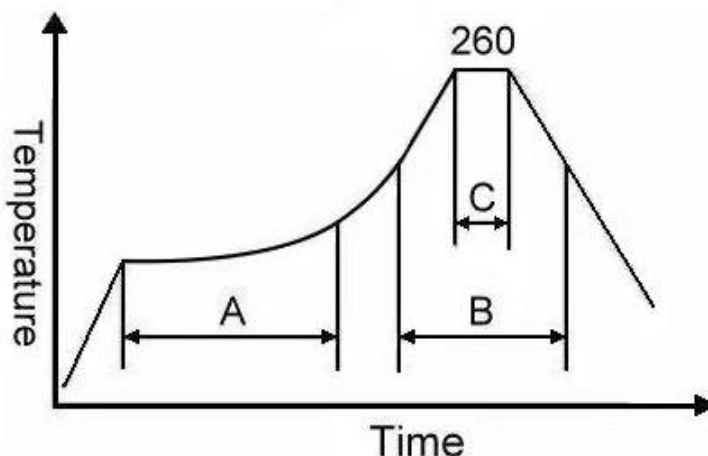
## RELIABILITY SPECIFICATIONS

### 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     |

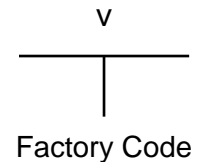
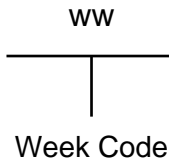
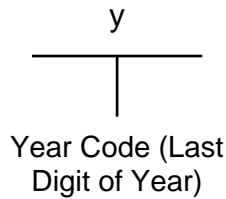
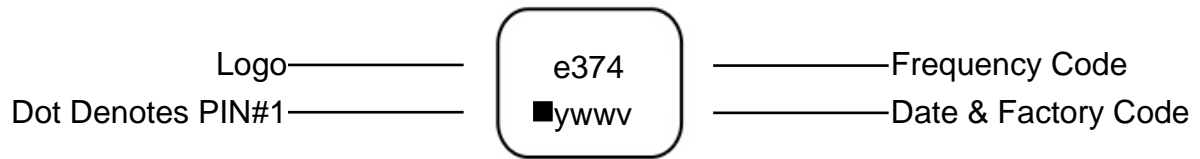
For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

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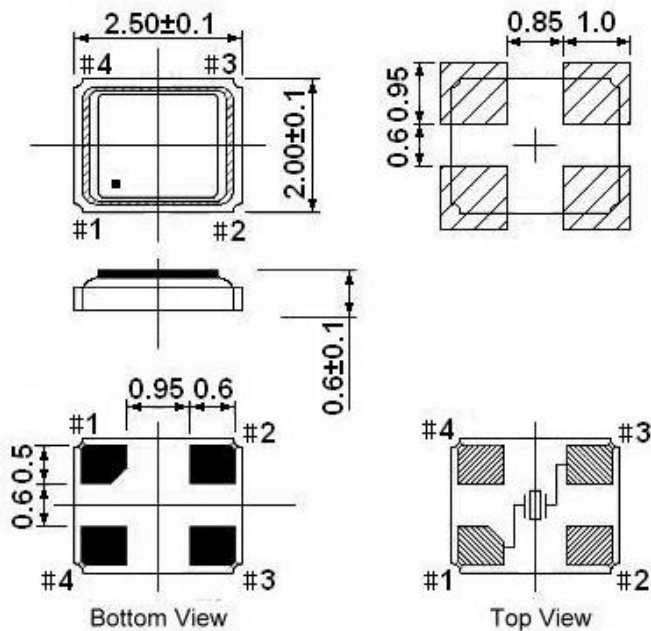
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### MARKING



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

Recommended Land Pattern



\*\* 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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### PACKING

