

# PSE Technology Corporation

## SPECIFICATION FOR APPROVAL

CUSTOMER

NOMINAL FREQUENCY

**48.000000 MHz**

PRODUCT TYPE

**TYPE FH 2.5x2.0 SEAM SEALED CRYSTAL**

PART NUMBER

**FH4800014**

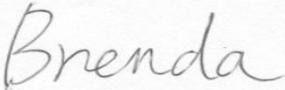
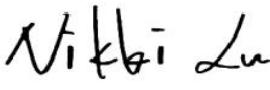
CUSTOMER P/N

ISSUE DATE

**September 3, 2012**

VERSION

**A**

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

PSE Technology Corporation

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<http://www.saronix-ecera.com.tw/>

\*Pb-free

\*RoHS Compliant

\*HF-Halogen Free

\*REACH Compliant

**A Company of PERICOM Semiconductor Corporation**

# TYPE FH 2.5x2.0 SEAM SEALED CRYSTAL

**FH4800014**

VER.A 02-NOV-11

## VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
A	Nov. 2, 2011			Initial Release	



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## ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	48.000000	MHz	
Mode of Oscillation	MO	AT Cut-Fundamental		
Calibration Load Capacitance	CL	10	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		10	µW	
Maximum Drive Level		100	µW	
Equivalent Series Resistance	ESR	60	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).



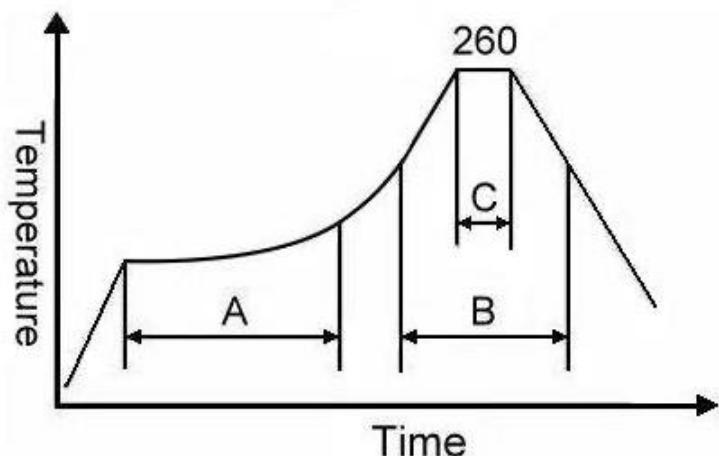
## RELIABILITY SPECIFICATIONS

### 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

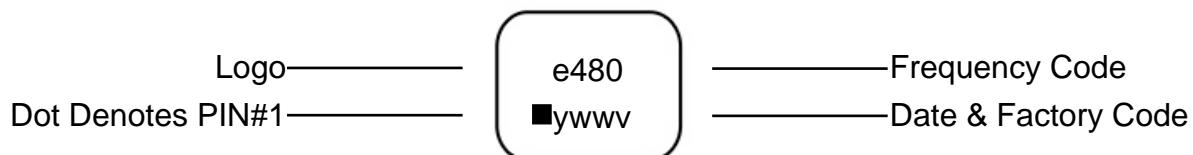
For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

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## MARKING

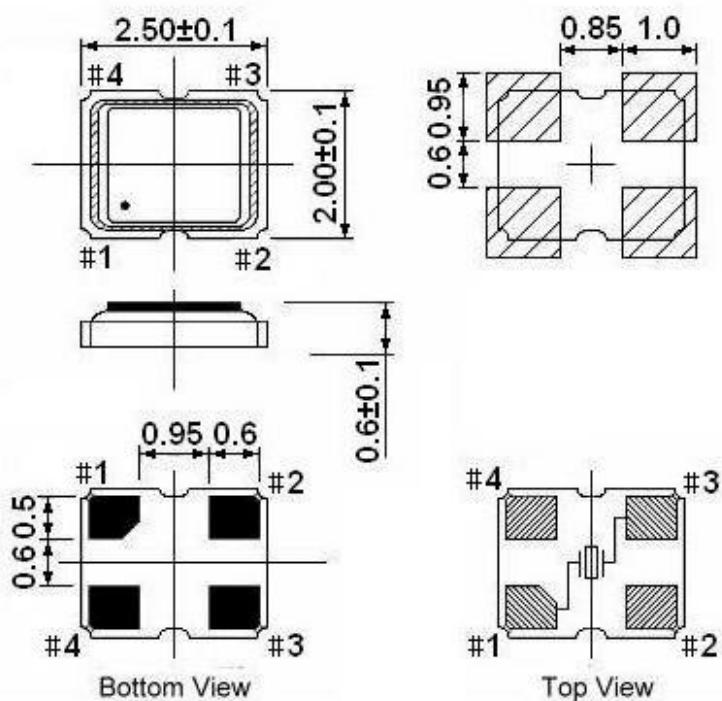


y  
\_\_\_\_\_  
Year Code (Last Digit of Year)

WW  
\_\_\_\_\_  
Week Code

v  
\_\_\_\_\_  
Factory Code

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



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

### Note:

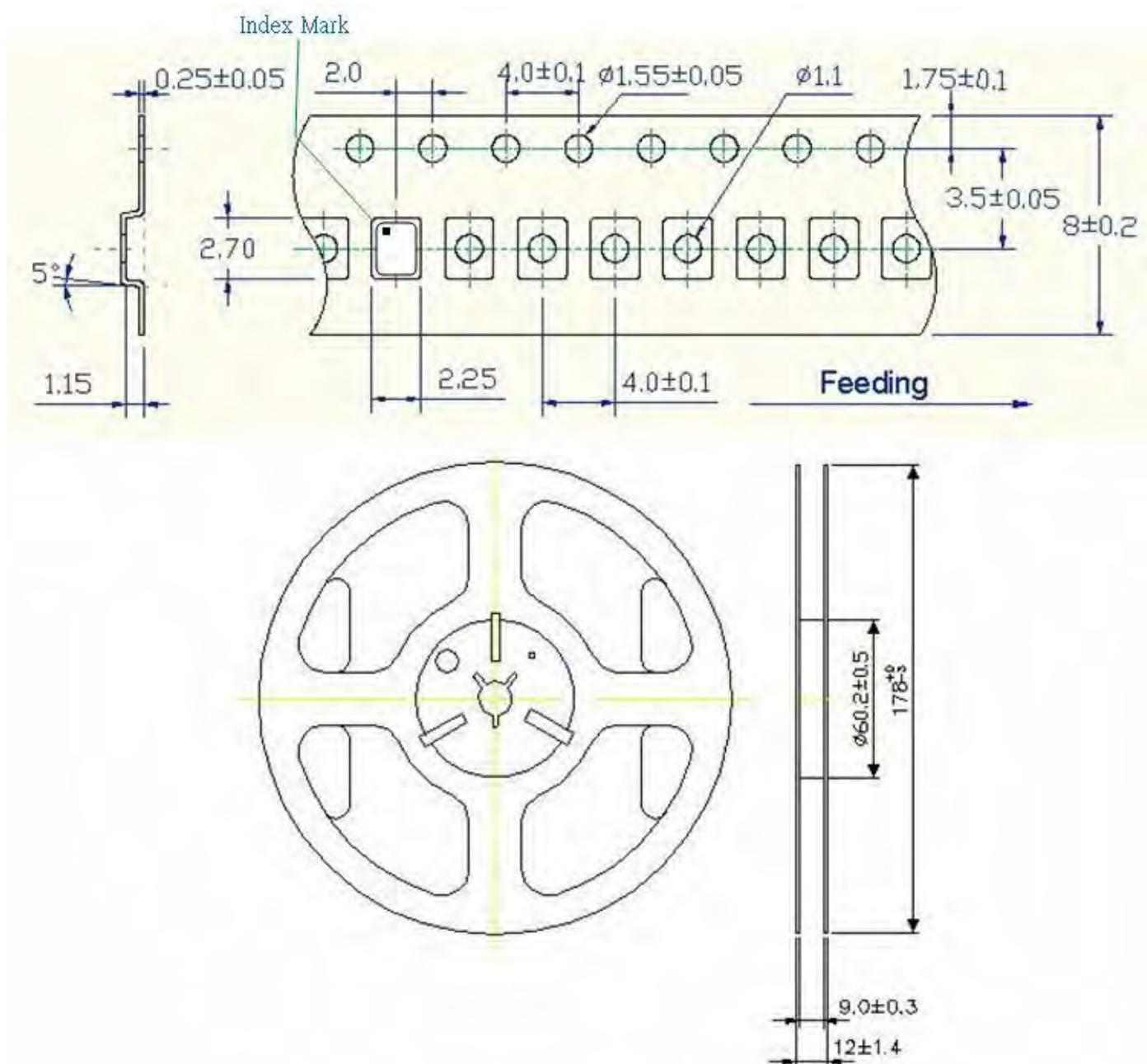
1. The marking dot denotes Pin#1.
2. Pin positions of the drawing is only for reference, and the Pin with chamfer is based on the real product.

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## Tape & Reel



1. 230mm minimum leafer 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

