

# PSE Technology Corporation

## SPECIFICATION FOR APPROVAL

CUSTOMER \_\_\_\_\_

NOMINAL FREQUENCY **30.000000 MHz**




PRODUCT TYPE **TYPE FW 2.0x1.6 SEAM SEALED CRYSTAL**

PART NUMBER **FW3000010**

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

ISSUE DATE **October 23, 2012**

VERSION **C**

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 FW 2.0x1.6 SEAM SEALED CRYSTAL

**FW3000010**

VER.C 23-OCT-12

## VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
A	Oct. 11, 2012			Initial Release	
B	Oct. 12, 2012			Changed operating drive level from 100uW to 200uW & maximum drive level from 150uW to 200uw.	
C	Oct. 23, 2012			Changed Maximum Drive Level from 200uW to 300uW	

# TYPE FW 2.0x1.6 SEAM SEALED CRYSTAL

## FW3000010

VER.C 23-OCT-12

### ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	30.000000	MHz	
Mode of Oscillation	MO	AT Cut-Fundamental		
Calibration Load Capacitance	CL	10	pF	
Calibration Tolerance	FL	± 30	ppm	at 25°C±3°C
Operating Temperature Range	TR	-20 to +70	°C	
Frequency Stability(Frequency Deviation over the Operating Temperature Range)	F/T	± 30	ppm	Reference to the Frequency at 25°C
Operating Drive Level		200	μW	
Maximum Drive Level		300	μW	
Equivalent Series Resistance	ESR	45	Ω	Max.
Shunt Capacitance	C0	7	pF	Max.
Spurious Modes Suppression in dB (12.5Ω fixture)	SPDB	6	dB	Min, down from the main mode
Q-Factor	Q	20K to 200K		
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).

# TYPE FW 2.0x1.6 SEAM SEALED CRYSTAL

**FW3000010**

VER.C 23-OCT-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

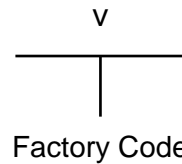
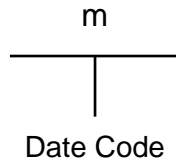
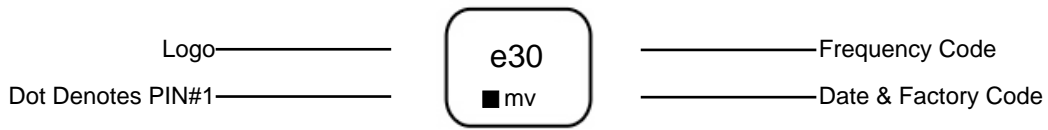
For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

# TYPE FW 2.0x1.6 SEAM SEALED CRYSTAL

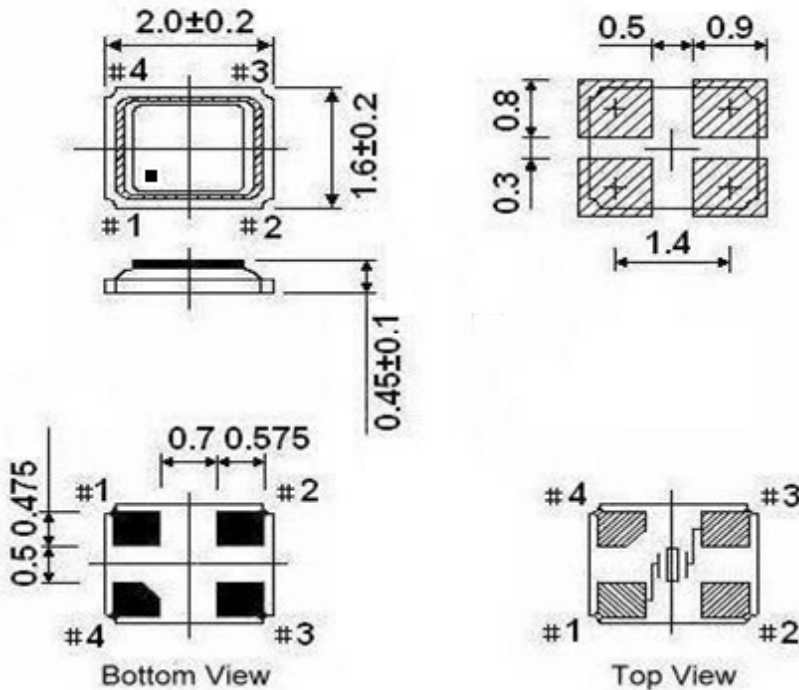
**FW3000010**

VER.C 23-OCT-12

## MARKING



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



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

**Note:**

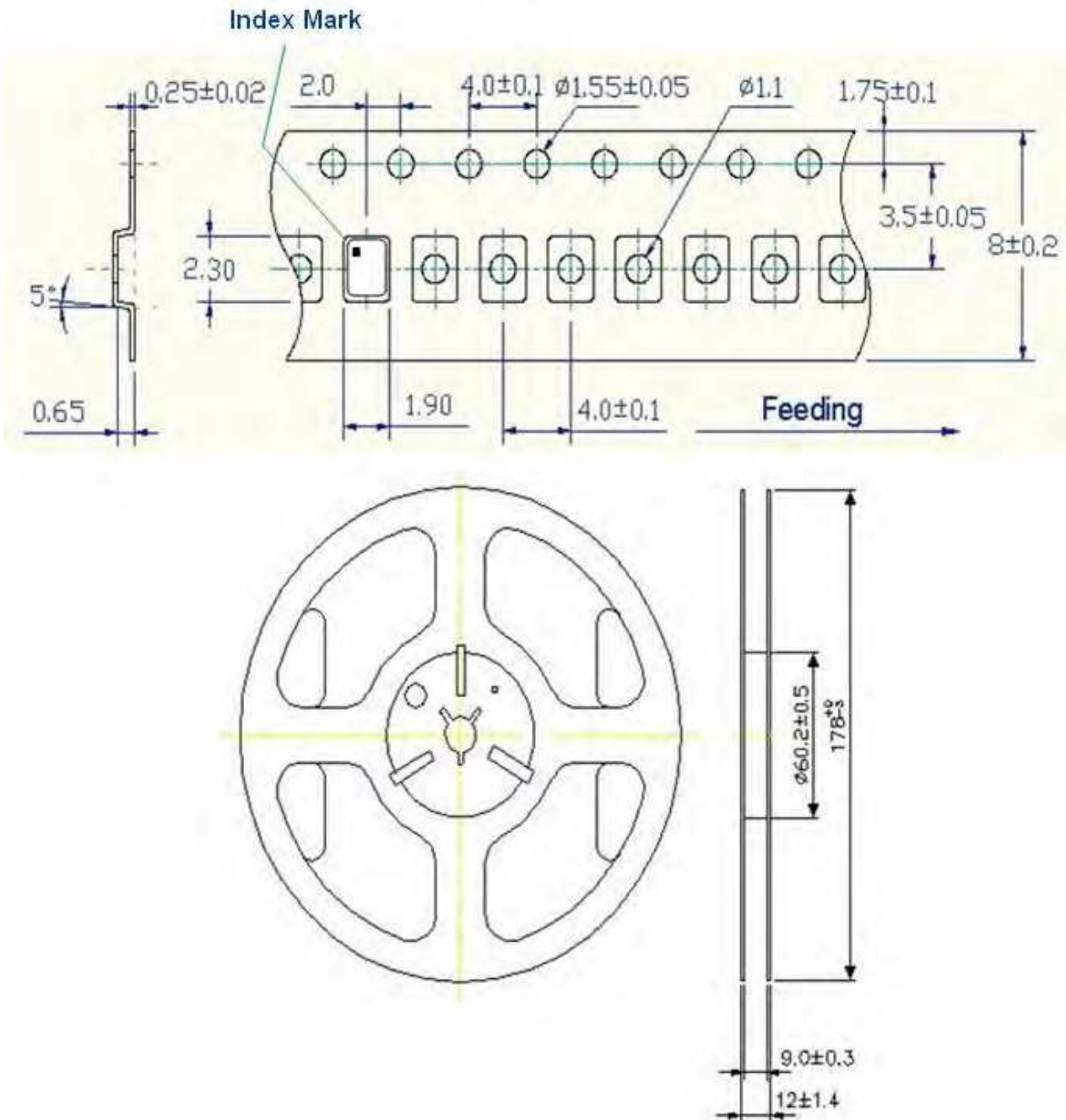
1. The marking dot denotes Pin#1.
2. Pin positions of the drawing is only for reference, and the Pin with chamfer is based on the real product.

# TYPE FW 2.0x1.6 SEAM SEALED CRYSTAL

FW3000010

VER.C 23-OCT-12

## Tape & Reel



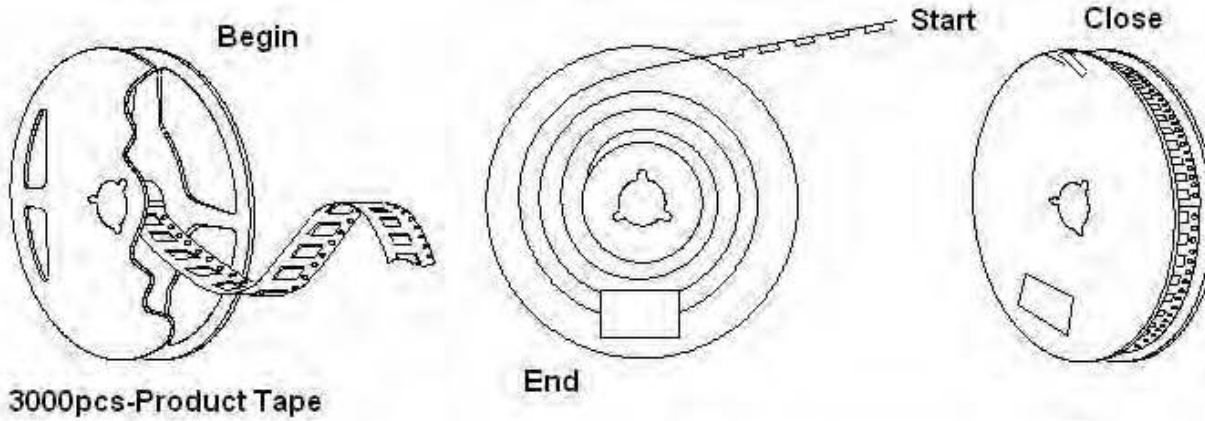
1. 230mm minimum leader which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.
2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

# TYPE FW 2.0x1.6 SEAM SEALED CRYSTAL

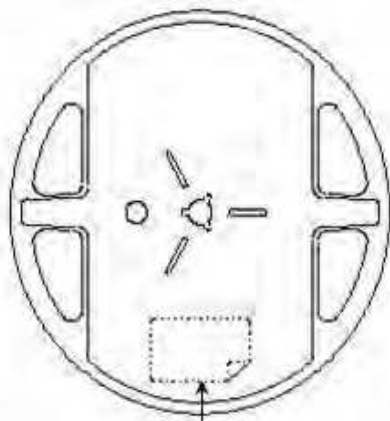
FW3000010

VER.C 23-OCT-12

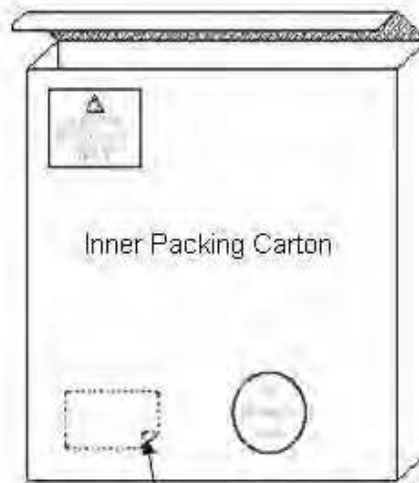
## PACKING



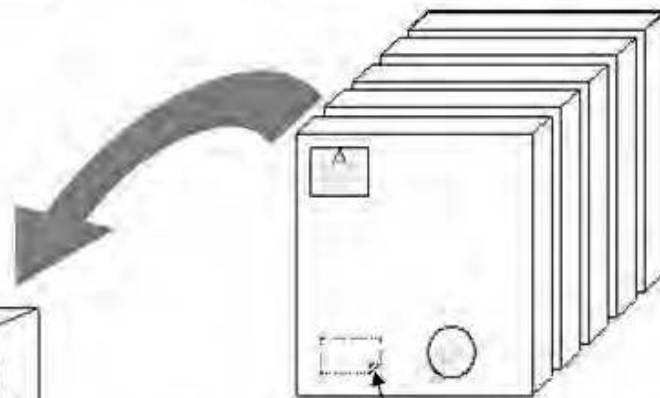
3000pcs-Product Tape



Blue Qualified Label



Store Room Label



Store Room Label

Store Room Label



Deliver Packing Carton  
(L29\*W24\*H30)

Green Qualified Label