

PSE Technology Corporation

SPECIFICATION FOR APPROVAL

CUSTOMER NOMINAL FREQUENCY 12.000000 MHz PRODUCT TYPE **TYPE FH 2.5x2.0 SEAM SEALED CRYSTAL** SPEC. NO. (P/N) FH1200001 **CUSTOMER P/N ISSUE DATE** April 26, 2012 **VERSION** D

APPROVED	PREPARED	QA
Brenda	Nikli Lu	Bedryer
APPROVED BY	AVL Status	
Please return one copy w	vith 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 ***

FH1200001

VER. D 26-Apr-12

VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
А	Jan.4,2009			Initial Release	
В	Nov.2,2010			Revised format & Changed Logo	
С	Mar.25,2011			Updated Suggested IR Reflow Profile & Format	
D	Apr.26,2012			Changed Mechanical Drawings	



FH1200001

VER. D 26-Apr-12

ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	12.000000	MHz	
Mode of Oscillation	MO	AT Cut-Fundamental		
Calibration Load Capacitance	CL	20	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		10	μW	
Maximum Drive Level		100	μW	
Equivalent Series Resistance	ESR	150	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	МΩ	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).



FH1200001

VER. D 26-Apr-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

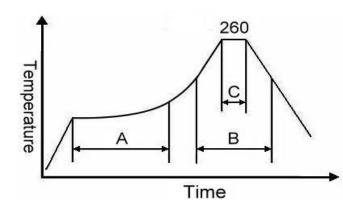
f) VIBRATION: JESD22-B103

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



	Stage	Temperature	Time
Α	Preheat	150~200°C	60~120 Sec
В	Primary Heat	217°C	60~150 Sec
С	Peak	260°C	10 Sec

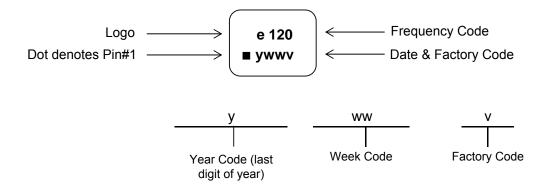
For soldering reflow profile and reliability test ratings go to: http://www.pericom.com/pdf/sre/reflow.pdf



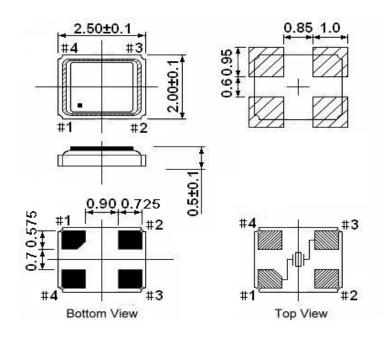
FH1200001

VER. D 26-Apr-12

MARKING



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



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

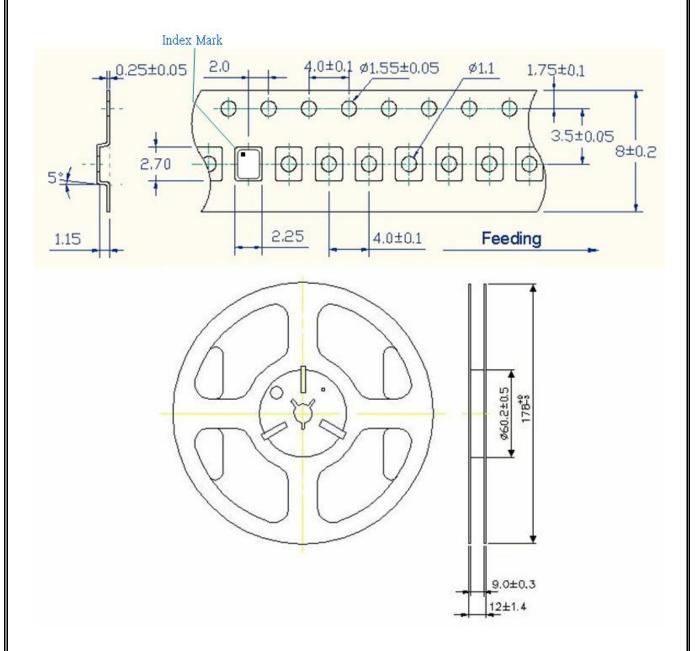
Note:

- 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.
- 3. The package is optional and based on the real product.



VER. D 26-Apr-12

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.



TYPE FH 2.5x2.0 SEAM SEALED CRYSTAL FH1200001 VER. D 26-Apr-12 **PACKING Begin Start End** 3000pcs-Product Tape Inner Packing Carton Storeroom Label Blue Qualified Label Storeroom Label Storeroom Label **Deliver Packing Carton** (L29*W24*H30) Green Qualified Label



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