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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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PSE Technology Corporation

SPECIFICATION FOR APPROVAL

CUSTOMER	
NOMINAL FREQUENCY	25.000000 MHz
PRODUCT TYPE	TYPE FD 5.0x3.2 SEAM SEALED CRYSTAL CLOCK OSCILLATOR
SPEC. NO. (P/N)	FD2500050
CUSTOMER P/N	
ISSUE DATE	April 16, 2011
VERSION	E

APPROVED	PREPARED	QA	
Brenda	Clane	Canten	
APPROVED BY	APPROVED BY CUSTOMER:		
Please return one copy v	vith approval to PSE-TW		

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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 FD 5.0x3.2 SEAM SEALED CRYSTAL CLOCK OSCILLATOR FD2500050 Ver. E 16-Apr-1

VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
Α	Apr.14,2009			Initial Release	
В	Jun.4,2009			Revised OE/OD function	
С	Dec.17,2009			Change Output Disable Delay from 50us to 50ns	
D	Nov.2,2010			1. Added phase jitter, accumulated jitter and peak to peak jitter specs. 2. Changed internal pullup resistance from $50K\Omega$ Min. to $30K\Omega$ Min.	
E	Apr.16,2011			Added Start up time spec: 10ms max & Updated Suggested IR Reflow Profile	

FD2500050

VER. E 16-Apr-11

ELECTRICAL SPECIFICATIONS

SRe Part Number: FD2500050

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fo	25.000000	MHz	
Frequency Stability	FT	± 50	ppm	**See note
Operating Temperature Range	TR	-20 to +70	°C	
Supply Voltage	V_{DD}	+2.5 ± 5.0%	V	
Logic Type	LT	LVCMOS		
Supply Current, Output Enabled	I _{DD} /OE	15	mA	Max.
Supply Current, Output Disabled	I _{DD} /OD	10	μΑ	Max.
Duty Cycle (Symmetry)	DC/SY	45 / 55	%	Measured 50% of Waveform
Rise / Fall Time	T _R /T _F	10	ns	Max. measured 20/80% of Waveform
Output Voltage "0" Level	V _{OL}	10% V _{DD}	V	Max.
Output Voltage "1" Level	V _{OH}	90% V _{DD}	V	Min.
Output Load	CL	15	pF	Max
Jitter, Phase	RMS(1-σ)	1	ps	Max. 12KHz ~ 5MHz Frequency Band
Jitter, Accumulated	RMS(1-σ)	5	ps	Max. 20,000 Consecutive Periods
Jitter, Peak to Peak	Pk-Pk	50	ps	Max. 100,000 Random Periods
Start Up Time		10	ms	Max.
Storage Temperature Range		-55°C to +125°C	°C	

^{**}Out bills in the dear the continue of Out or time. To reconstruct the debag one work of four the Veltage of Out or time.

💥 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).

Output Enable / Disable Function

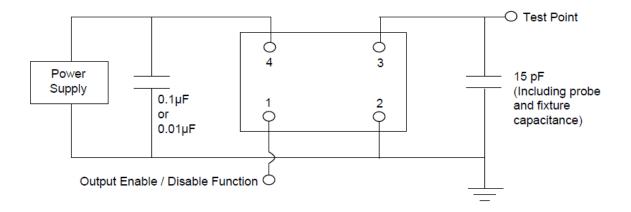
Parameter	Min.	Тур.	Max.	Units	Notes
Input Voltage (Pin1), Output Enable	0.7V _{DD}			V	Or Open
Input Voltage (Pin1), Output Disable (low power standby)			$0.3V_{DD}$	V	Output is Hi-Z
Internal Pullup Resistance	30			ΚΩ	
Output Disable Delay			50	ns	

^{**}Stability includes all combinations of Operating Temperature, Load changes, rated Input (Supply) Voltage changes, Initial Calibration Tolerance (25°C), Aging (1 year at 25°C Average Effective Ambient Temperature), Shock and Vibration.

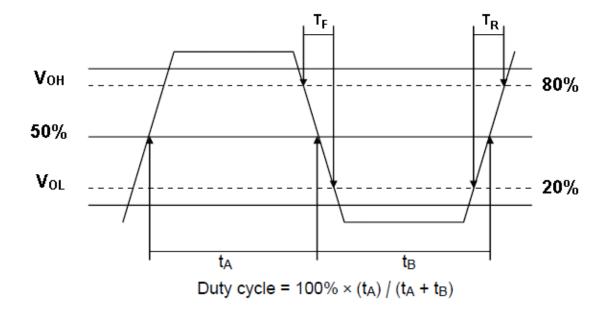
FD2500050

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TEST CIRCUIT



OUTPUT WAVEFORM



FD2500050

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RELIABILITY SPECIFICATIONS

ENVIRONMENTAL:

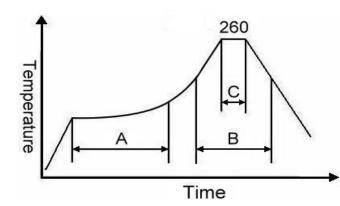
- a) THERMAL SHOCK: MIL-STD-883, Method 1011, Condition A
- b) MOISTURE RESISTANCE: MIL-STD-883, Method 1004
- c) VIBRATION: MIL-STD-883, Method 2007, Condition A
- d) RESISTANCE TO SOLDERING HEAT: J-STD-020D Table 5-2 Pb-free devices (except 2 cycles max)
- e) HAZARDOUS SUBSTANCE: Pb free and RoHS Compliant.

MECHANICAL:

- a) SHOCK: MIL-STD-883, Method 2002, Condition B
- b) SOLDERABILITY: JESD22-B102-D Method 2 (Preconditioning E)
- c) TERMINAL STRENGTH: MIL-STD-883, Method 2004, Test Condition D
- d) GROSS LEAK: MIL-STD-883, Method 1014, Condition C
- e) FINE LEAK: MIL-STD-883, Method 1014, Condition A2, R1=2x10⁻⁸ atm cc/s
- f) SOLVENT RESISTANCE: MIL-STD-202, Method 215

SUGGESTED IR REFLOW PROFILE

*As per IPC-JEDEC J-STD-020D



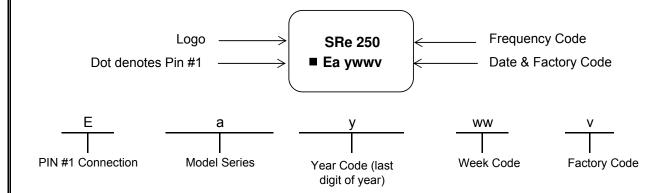
Note	•		
	Stage	Temperature	Time
Α	Preheat	150~200°C	60~120 Sec
В	Primary Heat	217°C	60~150 Sec
С	Peak	260°C	10 Sec

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

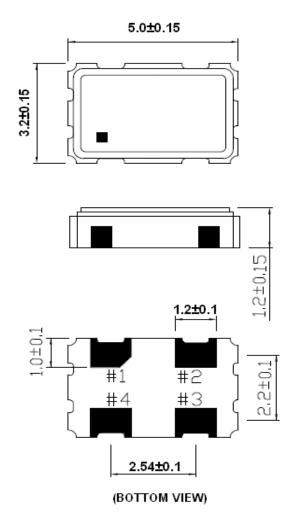
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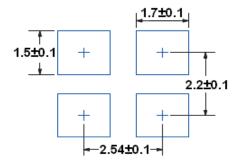
MARKING



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



Recommended Land Pattern*



*External high-frequency power decoupling is recommended.(see test circuit for minimum recommendation). To ensure optimal performance, do not route traces beneath the package.

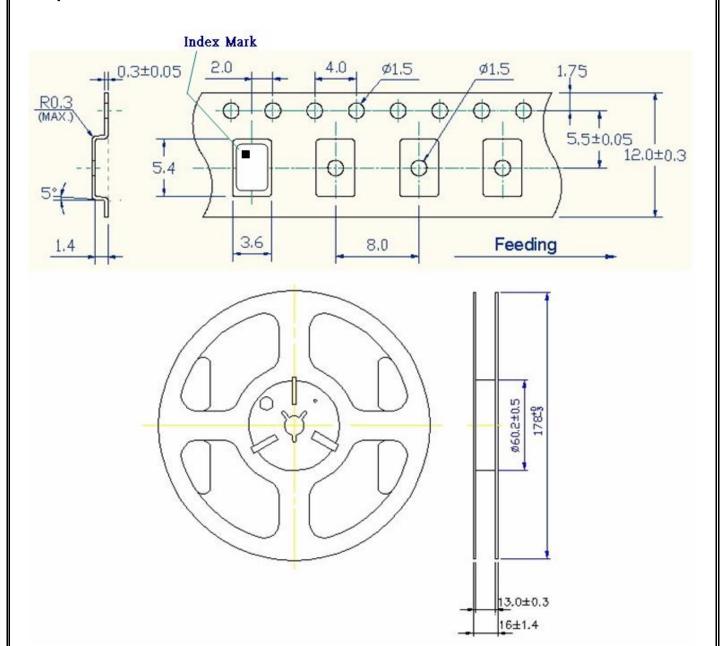
Pin	Function
1	OE
2	Ground
3	Clock Output
4	V_{DD}

E0-R-4-014 Rev. E

FD2500050

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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.



TYPE FD 5.0x3.2 SEAM SEALED CRYSTAL CLOCK OSCILLATOR FD2500050 VER. E 16-Apr-11 **PACKING** Begin Start End 1000pcs-Product Tape Inner Packing Carton Blue Qualified Label Storeroom Label Storeroom Label Storeroom Label **Deliver Packing Carton** (L29*W24*H30) Green Qualified Label