THE DATASHEET OF

UX54F62001

PSE Technology Corporation

SPECIFICATION FOR APPROVAL

CUSTOMER	
NOMINAL FREQUENCY	156.250000 MHz
PRODUCT TYPE	TYPE UX 5.0x3.2 SEAM SEALED CRYSTAL CLOCK OSCILLATOR
SPEC. NO. (P/N)	UX54F62001
CUSTOMER P/N	
ISSUE DATE	August 12, 2015
VERSION	A

APPROVED	PREPARED	QA
Brenda	Claire	Jenny Jang
APPROVED BY CUSTOMER :		**AVL Status**
Please return one copy with approval to PSE-TW		

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*Pb-free
*RoHS Compliant
*HF-Halogen Free
*REACH Compliant

*** *A company of* PERICOM *Semiconductor Corporation* ***

VERSION HISTORY

Version No.	Version Date	Customer Receipt Date	Supplier Receipt Date	Description	Notes
01	Aug.23,2013			Initial Release	
02	Oct.31,2013			1. Updated phase jitter from 0.14ps max to 0.2ps max 2. Added Phase noise: -160dBc/Hz Typ at 20MHz offset	
03	Nov.6,2013			Updated phase jitter from 0.2ps max to 0.18ps max	
04	Nov.13,2013			Updated phase jitter from 0.18ps max to 0.16ps max	
05	Jul.4,2014			Changed Output Voltage "1" Level to 0.85V max	
06	Sep.12,2014			Added Edge Rate & Absolute Crossing Point Voltages	
A	Aug.12,2015			Convert to formal version	

TYPE UX 5.0x3.2 SEAM SEALED CRYSTAL CLOCK OSCILLATOR

UX54F62001

VER. A 12-Aug-15

ELECTRICAL SPECIFICATIONS

SRe Part Number : UX54F62001

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fo	156.250000	MHz	
Frequency Stability	FT	± 50	ppm	**See note
Operating Temperature Range	TR	-40 to +85	°C	
Supply Voltage	V_{CC}	+3.3 ± 10.0%	V	
Logic Type	LT	HCSL		
Supply Current, Output Enabled	I_{CC}/OE	60	mA	Max.
Supply Current, Output Disabled	I_{CC}/OD	10	uA	Max.
Duty Cycle (Symmetry)	DC/SY	45 / 55	%	Measured 50% of Waveform
Rise / Fall Time	T_R/T_F	0.85	ns	Max. measured from Vol=0.175V to Voh=0.525V
Output Voltage "0" Level	V_{OL}	-0.150	V	Min. 0.0V Typ.
Output Voltage "1" Level	V_{OH}	0.850	V	Max. 0.660V Min. 0.700V Typ.
Output Load		Rs=33Ω, Rp=50Ω,CL=2pF		Typ. In HCSL termination
Output Phase Jitter-PCIe Gen2		2.5	ps RMS	Max.
Jitter, Phase	RMS	0.11 / 0.16	ps	Typ. / Max. 12KHz ~ 20MHz Frequency Band
Jitter, Accumulated	RMS(1-σ)	4	ps	Max. 20,000 Consecutive Periods
Jitter, Peak to Peak	Pk-Pk	20 / 30	ps	Typ. / Max. 100,000 Random Periods
Phase Noise		-139	dBc/Hz	Typ. at 10kHz offset
Phase Noise		-140	dBc/Hz	Typ. at 100kHz offset
Phase Noise		-153	dBc/Hz	Typ. at 1MHz offset
Phase Noise		-160	dBc/Hz	Typ. at 10MHz offset
Phase Noise		-160	dBc/Hz	Typ. at 20MHz offset
Phase Noise		-160	dBc/Hz	Typ. at 100MHz offset
Edge Rate	Edge_rate	1.0 / 4.0	V/ns	Min. / Max., measured from -150mV to +150mV on the differential waveform
Absolute Crossing Point Voltages	Vcross absolute	250 / 550	mV	Min. / Max., measured at crossing point of output and output N on the single ended waveform
Start Up Time		10	ms	Max.
Storage Temperature Range		-55 to +125	°C	

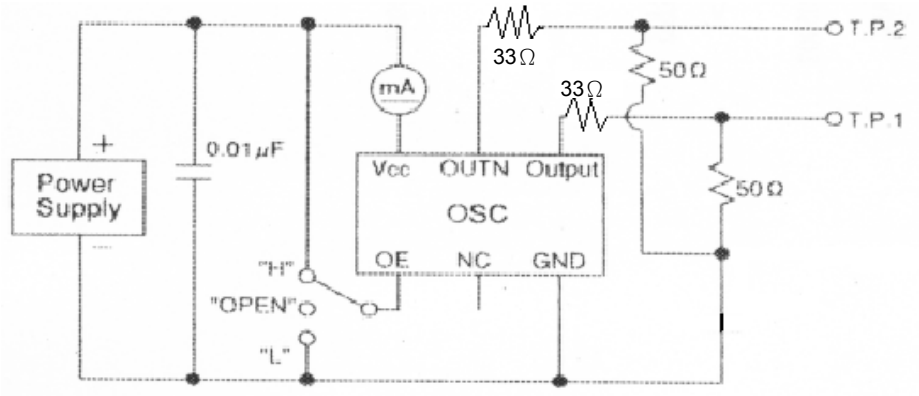
※ This product doesn't include harmful substance that stipulated by SONY SS-00259 Level 1 and S-AT2-001 Level 1 standard. RoHS Compliant (Pb - Free).

****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.**

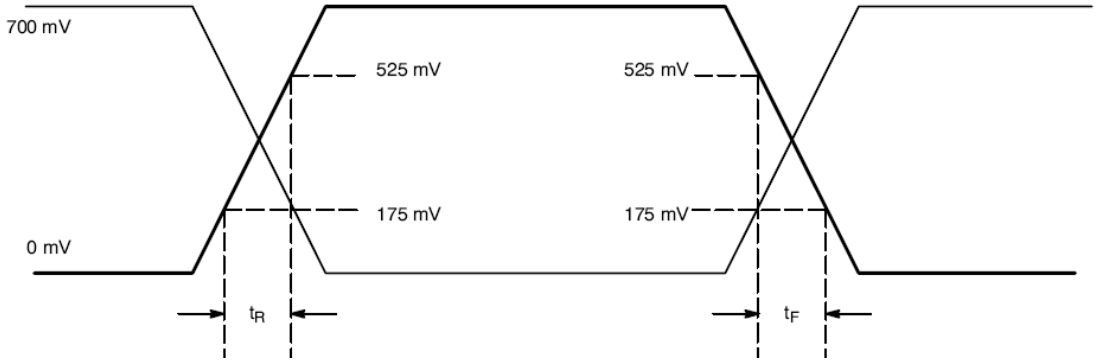
Output Enable / Disable Function

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (Pin1), Output Enable	$0.7V_{CC}$			V	Or Open
Input Voltage (Pin1), Output Disable (low power standby)			$0.3V_{CC}$	V	Output is Hi-Z
Output Disable Delay			200	ns	
Output Enable Delay			2	ms	

TEST CIRCUIT



OUTPUT WAVEFORM



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/Green 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

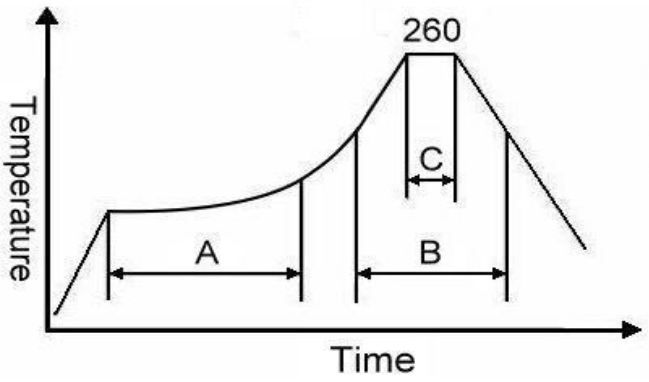
d) GROSS LEAK: MIL-STD-883, Method 1014, Condition C

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

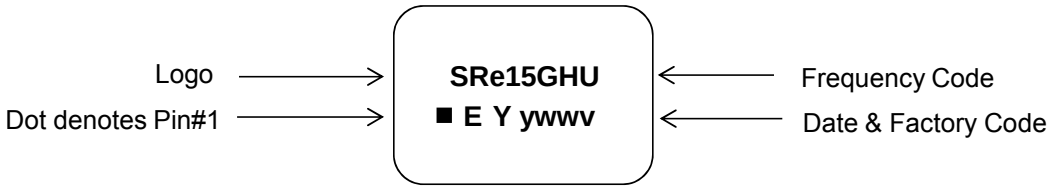


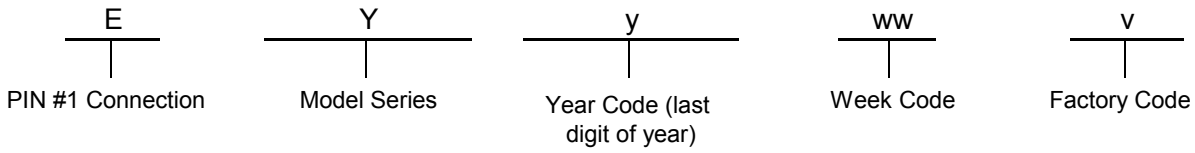
Note:

	Stage	Temperature	Time
A	Preheat	150~200°C	60~120 Sec
B	Primary Heat	217°C	60~150 Sec
C	Peak	260°C	10 Sec

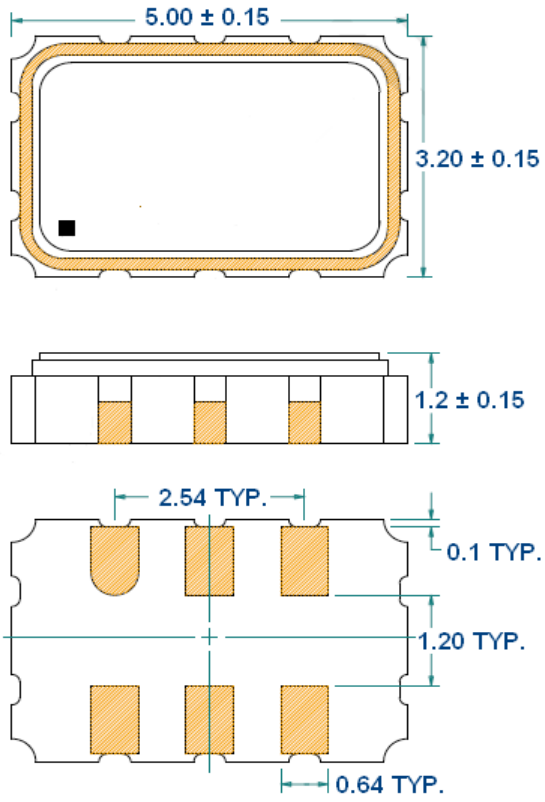
For soldering reflow profile and reliability test ratings go to: http://www.pericom.com/pdf/sre/reflow.pdf

MARKING

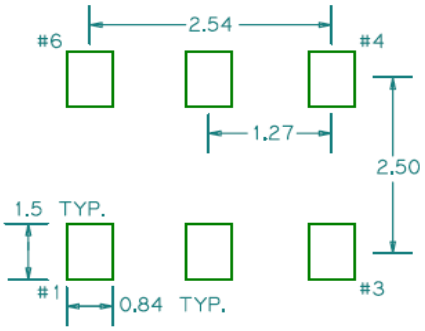




MECHANICAL DRAWINGS (Scale:None. Dimensions are in mm.)

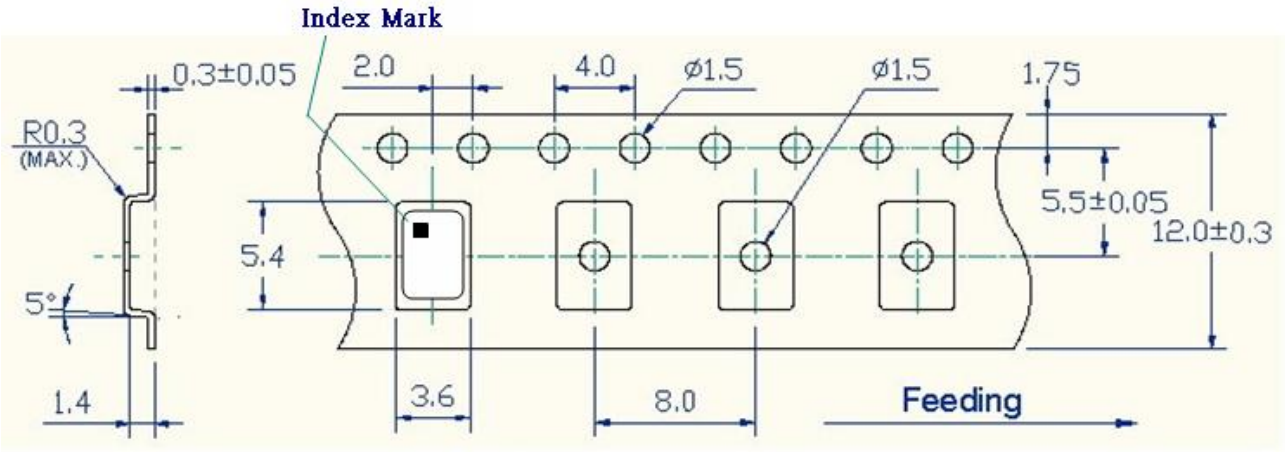


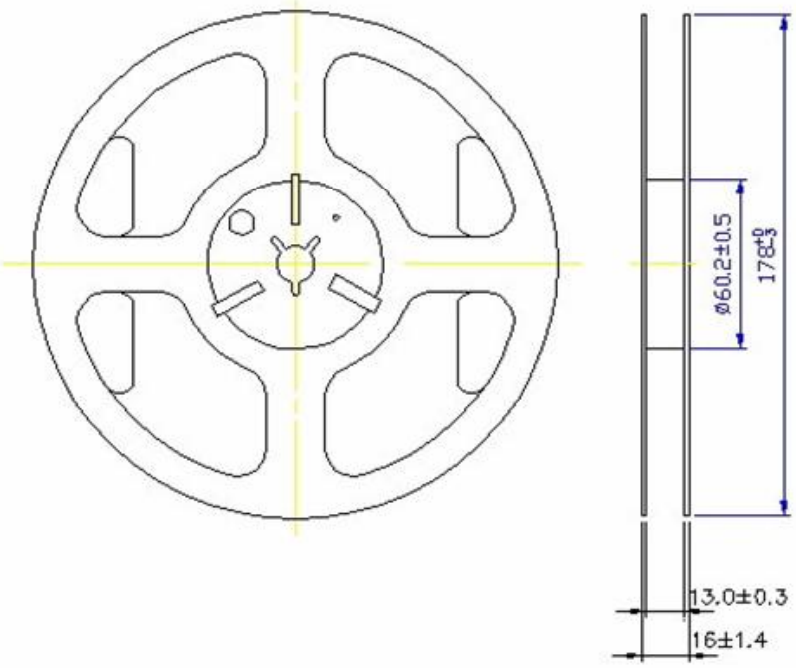
Recommended Land Pattern*



Pin	Function
1	OE
2	NC
3	V_{EE}
4	OUTPUT
5	OUTPUT N
6	V_{CC}

TAPE&REEL

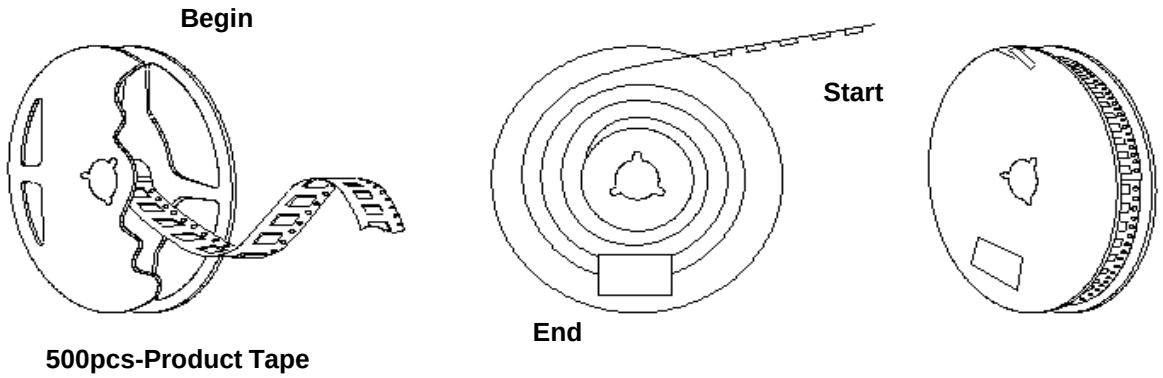


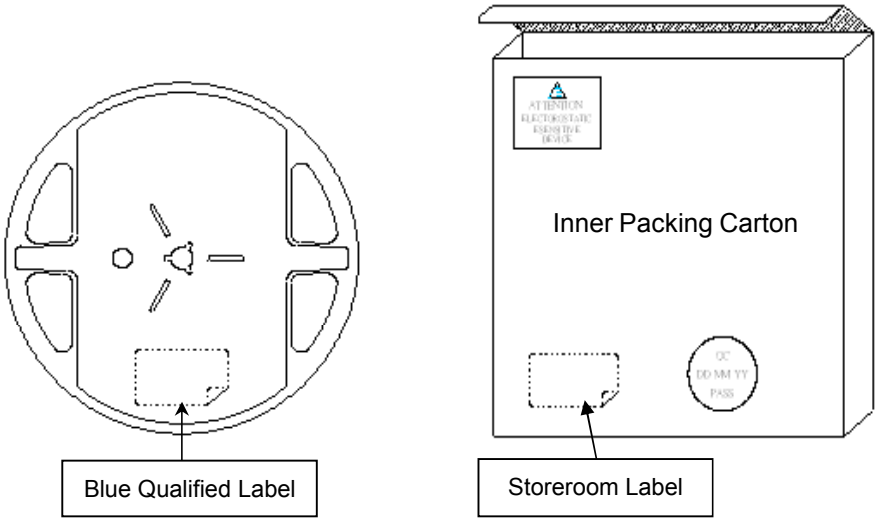


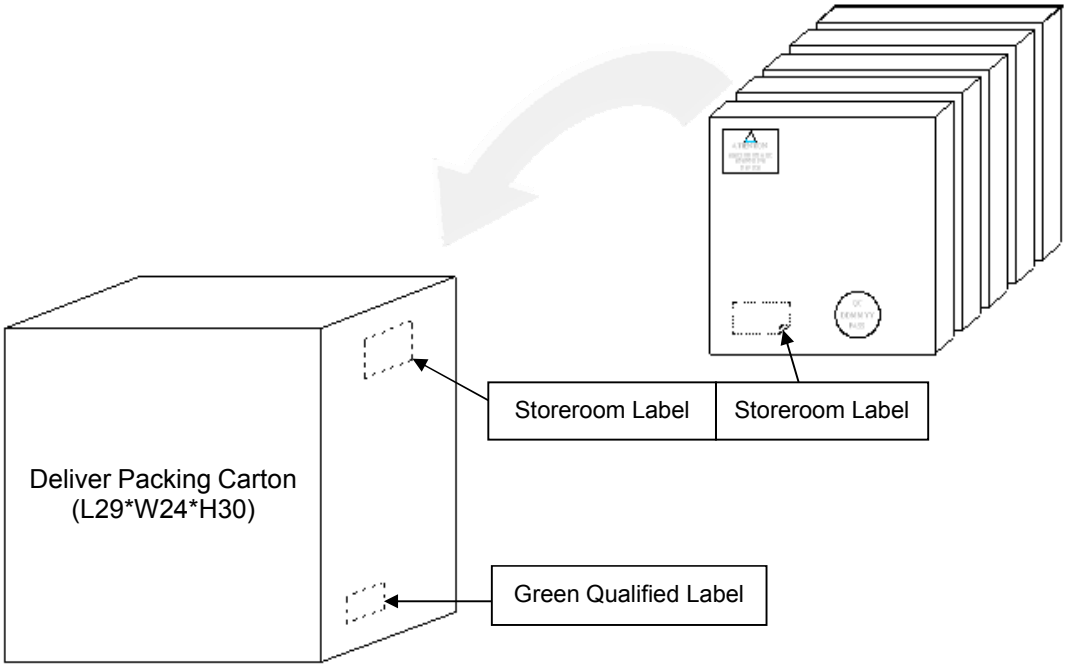
1. 230mm minimum leafer which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.

2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

PACKING


Begin
Start
End
500pcs-Product Tape


Inner Packing Carton
Blue Qualified Label
Storeroom Label


Deliver Packing Carton
(L29*W24*H30)
Storeroom Label
Storeroom Label
Green Qualified Label

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- Alternative Solution
- Excess Inventory Management