

PSE Technology Corporation

SPECIFICATION FOR APPROVAL

CUSTOMER	_____
NOMINAL FREQUENCY	16.369000 MHz
PRODUCT TYPE	TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR
SPEC. NO. (P/N)	WT2553I0016.369000
CUSTOMER P/N	_____
ISSUE DATE	November 9, 2012
VERSION	02

APPROVED	PREPARED	QA
<i>Brenda</i>	<i>Clare</i>	<i>Bedley</i>
APPROVED BY CUSTOMER :		AVL Status
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 ***

Pericom Internal Reference NO. WT25163010

TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

WT2553I0016.369000

VER. 02 9-Nov-12

ELECTRICAL SPECIFICATIONS

SRe Part Number : WT2553I0016.369000

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	F ₀	16.369000	MHz	
Operating Temperature Range	TR	-30 to +85	°C	
Storage Temperature Range		-40 to +85	°C	
Supply Voltage	V _{DD}	+1.8 ± 5.0%	V	
Frequency Stability	FT	± 2.0	ppm	vs. Temperature (Refer to the mid-point between minimum and maximum frequency values over the specified temperature range)
Frequency Stability		± 0.2	ppm	vs. Load varied 10pF//10kΩ±10%
Frequency Stability		± 0.1	ppm	vs. Supply Voltage varied V _{DD} ±5% at 25°C
Frequency Tolerance		± 2.0	ppm	Max. After 2 times reflow (Refer to nominal frequency)
Frequency Slope		± 0.1	ppm/°C	Max. (measurement every 2°C from -30°C to +85°C)
Static Temperature Hysteresis		± 0.6	ppm	Max.
Aging		±1	ppm	per year at 25°C
Logic Type	LT	Clipped Sinewave		
Supply Current	I _{DD}	1.5	mA	Max.
Start Up Time v.s Output Level		2.5	msec	Max, 90% of specified output level
Output Voltage		0.8 to 1.4	V _{p-p}	
Output Load Resistance		10	KΩ	9KΩ Min / 11KΩ Max
Output Load Capacitance		10	pF	9pF Min / 11pF Max
Harmonics		-7	dBc	Max.
Phase Noise		-134	dBc/Hz	Max, at 1kHz offset

※ 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).

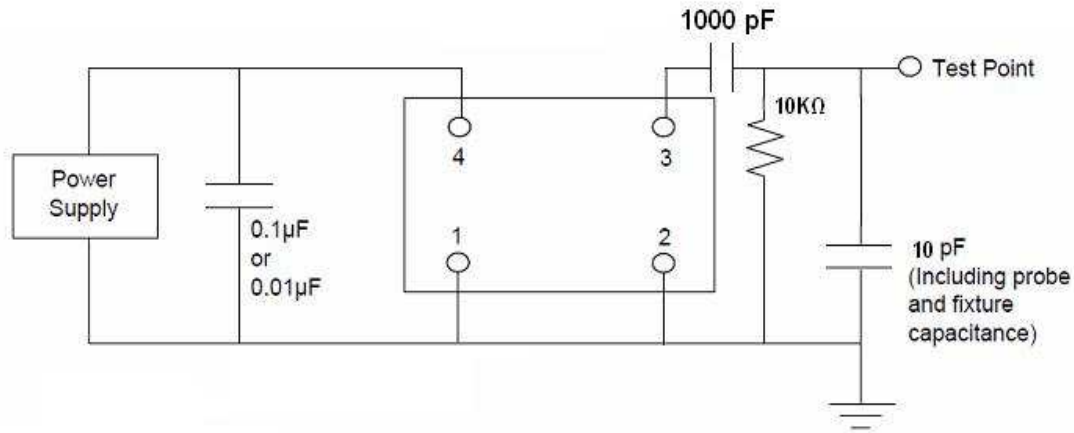


TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

WT2553I0016.369000

VER. 02 9-Nov-12

TEST CIRCUIT



RELIABILITY SPECIFICATIONS

ENVIRONMENTAL:

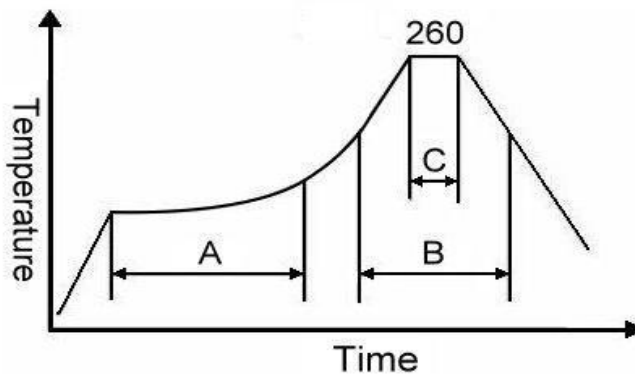
- a) THERMAL SHOCK: MIL-STD-883, Method 1011, Condition A
- b) MOISTURE RESISTANCE: MIL-STD-883, Method 1004
- c) VIBRATION: MIL-STD-883, Method 2007, Condition A
- d) RESISTANCE TO SOLDERING HEAT: J-STD-020D Table 5-2 Pb-free devices (except 2 cycles max)
- e) HAZARDOUS SUBSTANCE: Pb - free and RoHS 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, $R1=2 \times 10^{-8}$ 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

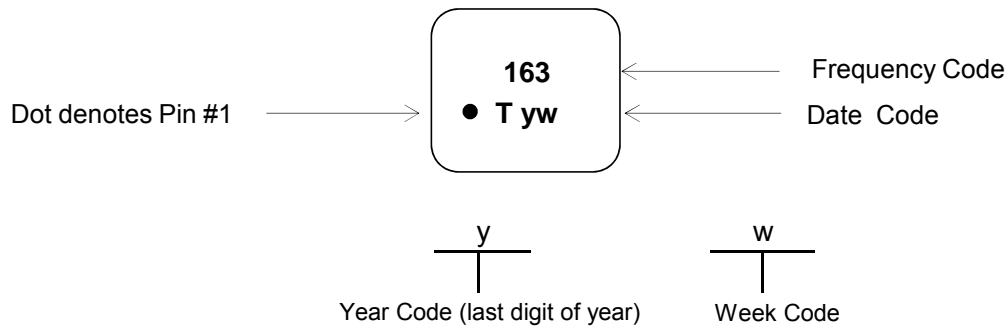
TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

WT2553I0016.369000

VER. 02

9-Nov-12

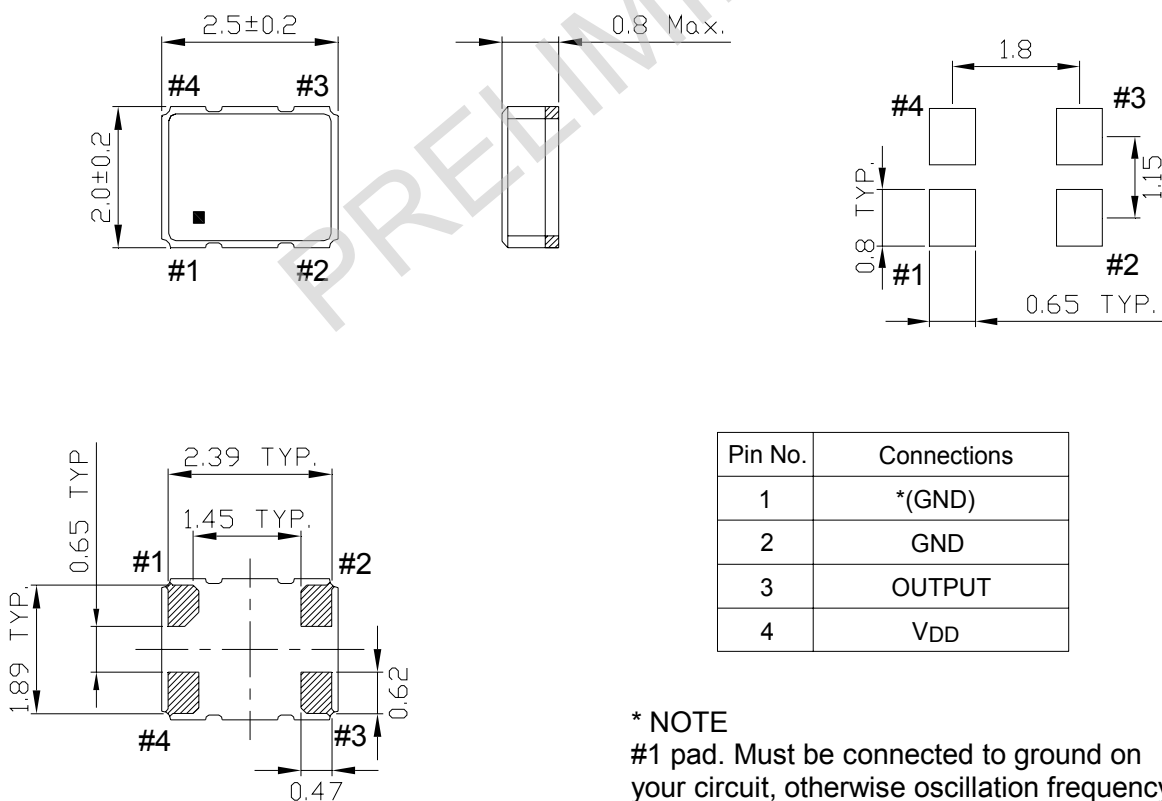
MARKING



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

Recommended Land Pattern

(TOP VIEW)



Pin No.	Connections
1	*(GND)
2	GND
3	OUTPUT
4	VDD

* NOTE

#1 pad. Must be connected to ground on your circuit, otherwise oscillation frequency will shift from the output frequency specified.

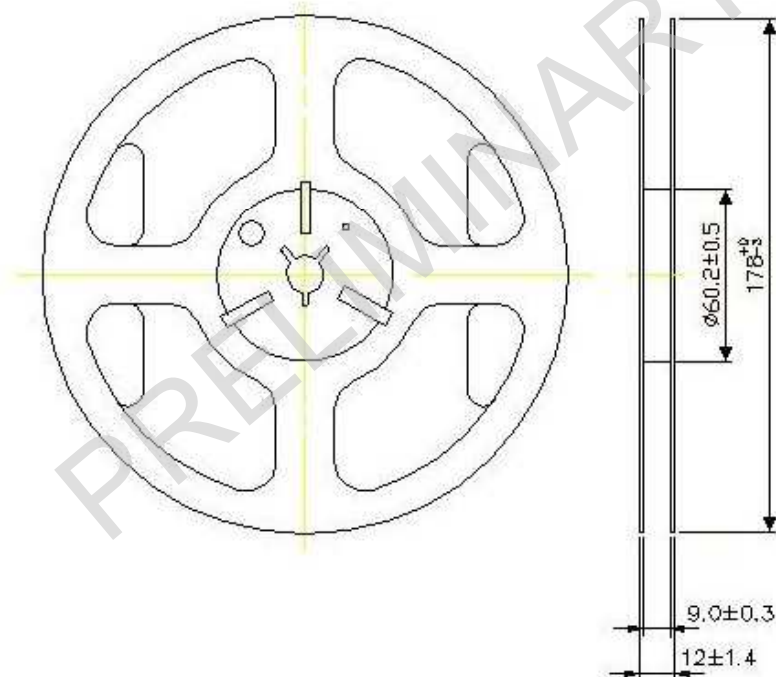
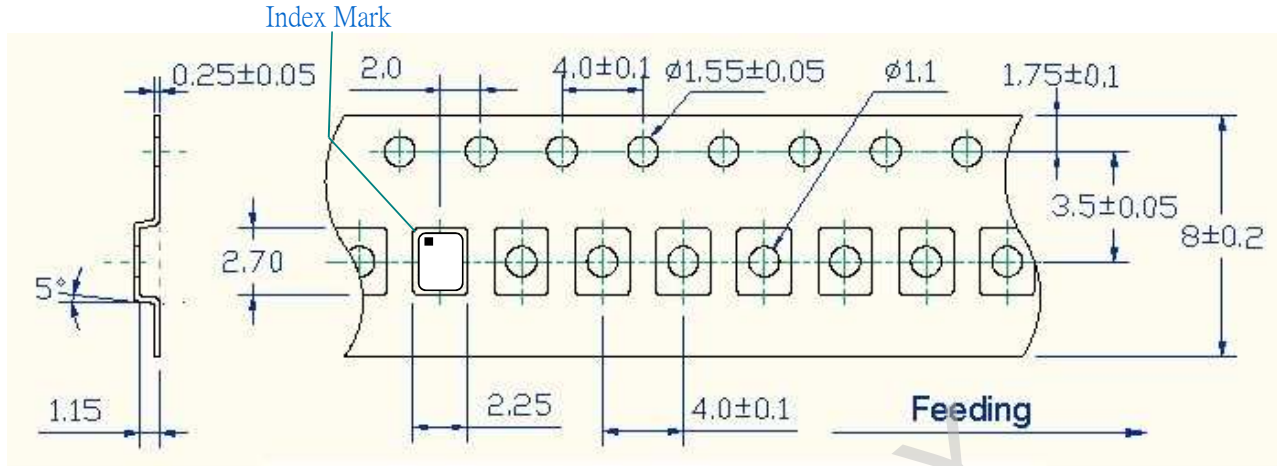
TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

WT2553I0016.369000

VER. 02

9-Nov-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 WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

WT2553I0016.369000

VER. 02

9-Nov-12

PACKING

