

# PSE Technology Corporation

## SPECIFICATION FOR APPROVAL

CUSTOMER \_\_\_\_\_

NOMINAL FREQUENCY 19.200000 MHz

PRODUCT TYPE TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

SPEC. NO. ( P/N ) WT2553I0019.200000

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

ISSUE DATE December 10, 2012

VERSION 01

APPROVED	PREPARED	QA
<i>Brenda</i>	<i>Clair</i>	<i>Becky</i>
<b>APPROVED BY CUSTOMER :</b>		<b>AVL Status</b>
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. WT25192007



# TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

**WT2553I0019.200000**

VER. 01 10-Dec-12

## ELECTRICAL SPECIFICATIONS

**SRe Part Number : WT2553I0019.200000**

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fo	19.200000	MHz	
Operating Temperature Range	TR	-30 to +85	°C	
Storage Temperature Range		-40 to +85	°C	
Supply Voltage	V <sub>DD</sub>	+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	FT	± 0.2	ppm	vs. Load varied 10pF//10kΩ±10%
Frequency Stability		± 0.1	ppm	vs. Supply Voltage varied V <sub>DD</sub> ±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 <sub>DD</sub>	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	Vp-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		-137	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).

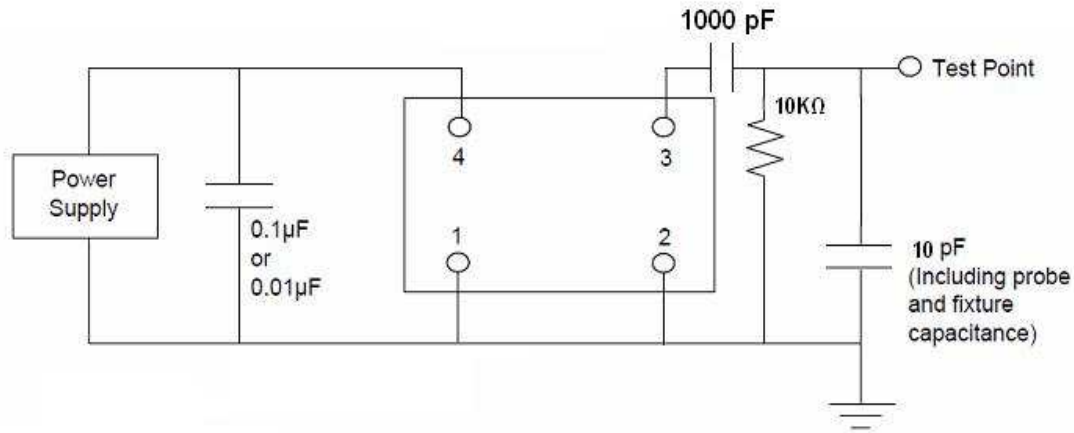


# TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

**WT2553I0019.200000**

VER. 01 10-Dec-12

## TEST CIRCUIT



## RELIABILITY SPECIFICATIONS

### ENVIRONMENTAL:

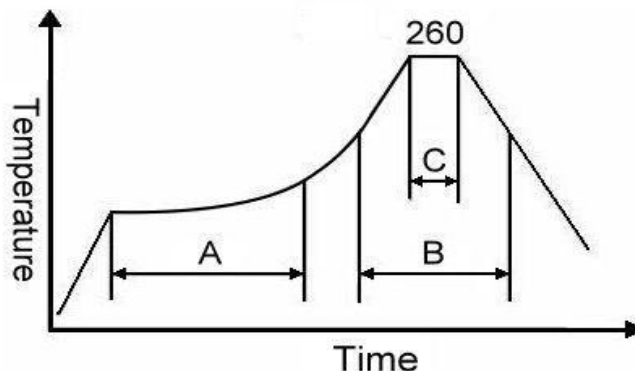
- a) THERMAL SHOCK: MIL-STD-883, Method 1011, Condition A
- b) MOISTURE RESISTANCE: MIL-STD-883, Method 1004
- c) VIBRATION: MIL-STD-883, Method 2007, Condition A
- d) RESISTANCE TO SOLDERING HEAT: J-STD-020D Table 5-2 Pb-free devices (except 2 cycles max)
- e) HAZARDOUS SUBSTANCE: Pb - free and RoHS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

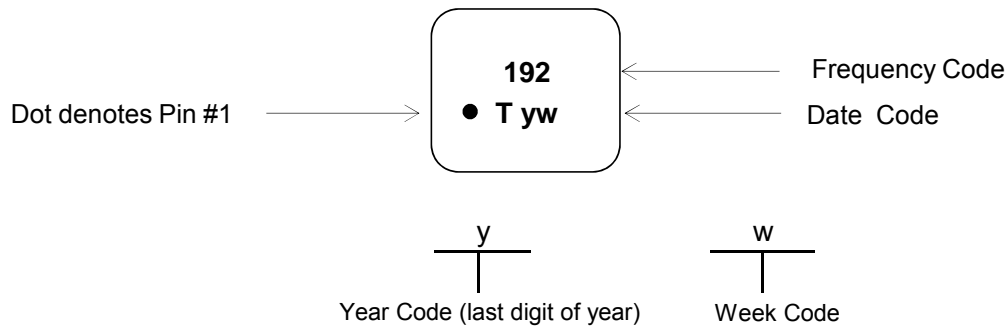
	Stage	Temperature	Time
A	Preheat	150~200°C	60~120 Sec
B	Primary Heat	217°C	60~150 Sec
C	Peak	260°C	10 Sec

# TYPE WT 2.5X2.0 TEMPERATURE COMPENSATED CRYSTAL OSCILLATOR

**WT2553I0019.200000**

VER. 01 10-Dec-12

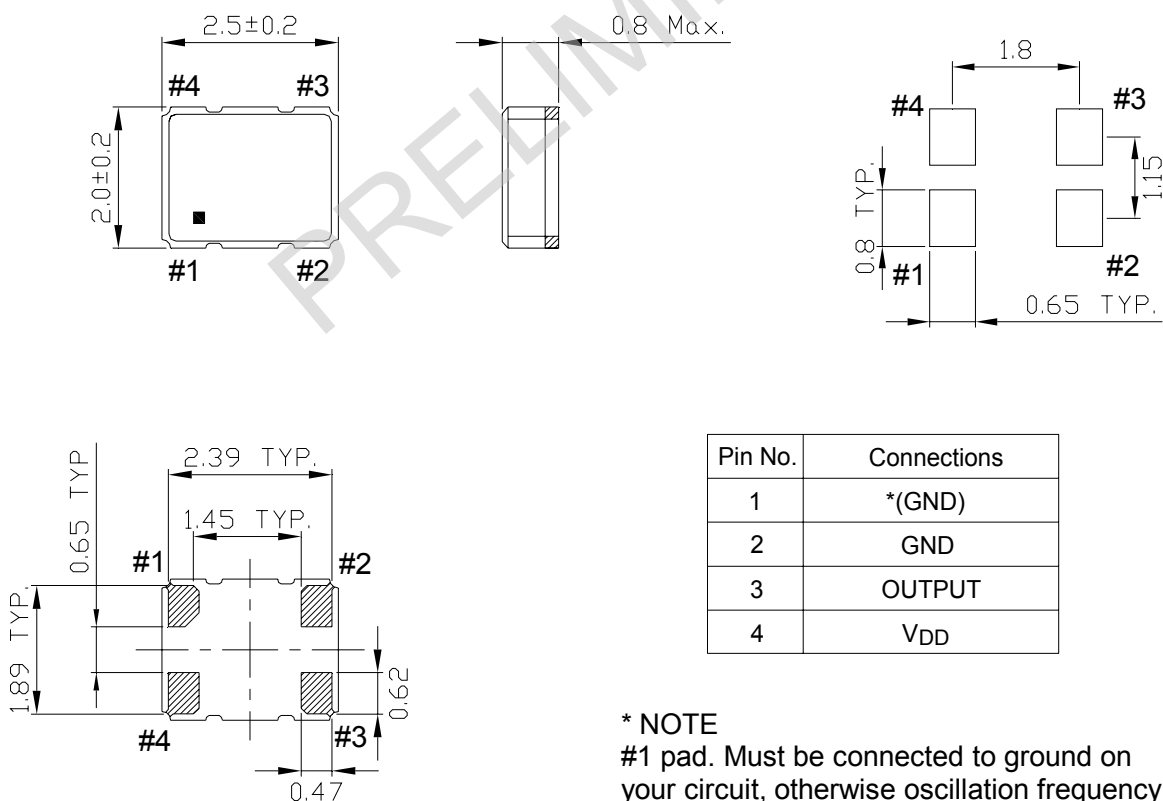
## MARKING



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

### Recommended Land Pattern

(TOP VIEW)



Pin No.	Connections
1	*(GND)
2	GND
3	OUTPUT
4	V <sub>DD</sub>

\* 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

**WT2553I0019.200000**

VER. 01 10-Dec-12

## PACKING

