

**RoHS Compliant  
Pb - Lead Free**

Ltr	Revisions	Date	Appr

## Electrical Specifications:

Frequency Range		2.000 to 50.000			MHz
Temperature Stability		±100			PPM Max
		±50			
		±25			
Aging per Year		±3			
Operating Temperature Range	Standard	-10 to +70			°C
	Extended	-40 to +85			
Storage Temperature Range		-55 to +125			
Supply Voltage		+1.8 ± 5%	+2.5 ± 5%	+3.3 ± 10%	Vdd
Input Current	2.000 to 10.000 MHz	3	6	7	mA Max
	10.100 to 20.000 MHz	5	8	7	
	20.100 to 32.000 MHz	5	8	12	
	32.100 to 50.000 MHz	10	20	20	
Output Voltage	Logic High (Voh)	90%			Vdd Min
	Logic Low (Vol)	10%			Vdd Max
Output Symmetry (Duty Cycle)	Standard	40 to 60			%
	Tight	45 to 55			
Output Load		15			pF
Output Level		CMOS			-
Phase Jitter (12 KHz to 20 MHz)		1			ps Max RMS
Rise and Fall Time		7			ns Max
Standby Function		Tri-State			-
Start Up Time		10			ms Max

Temperature stability is Inclusive of all conditions:

Calibration Tolerance at +25°C, frequency stability over the operating temperature range, supply voltage, supply voltage change, output load changes, shock, vibration, and 1st year aging at +25°C.



Accurate Kinetic Energy

11-3 Chien-Kuo Rd T.E.P.Z. 4027 Taiwan, ROC

All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

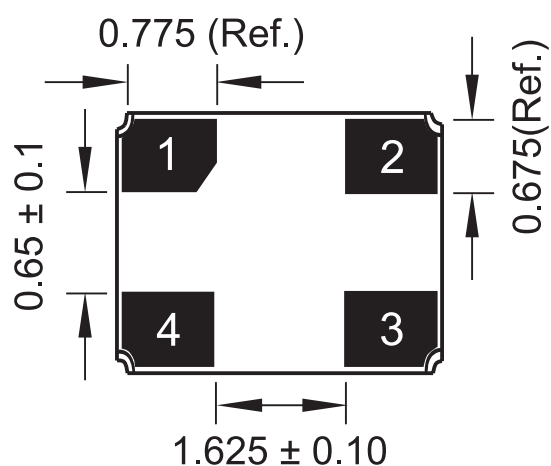
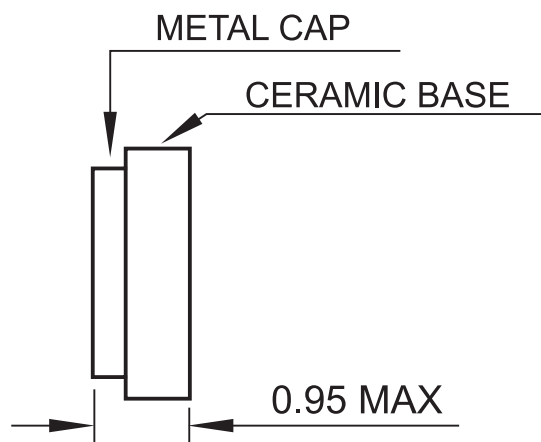
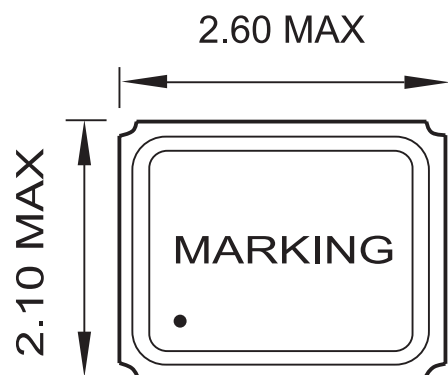
Page: 1/4 Date: Oct. 21, 2013

Specification Title:

**Clock Oscillator  
Ultra Miniature  
2.0 x 2.5 millimeter Surface Mount  
General Product Specification**

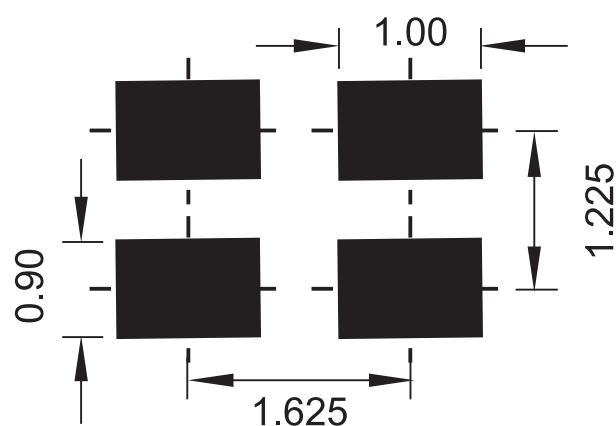
Part Number: **S2 Series**

## Mechanical Outline:



#1 : E/D      #2 : GND  
#4 : VDC      #3 : OUTPUT

Bottom

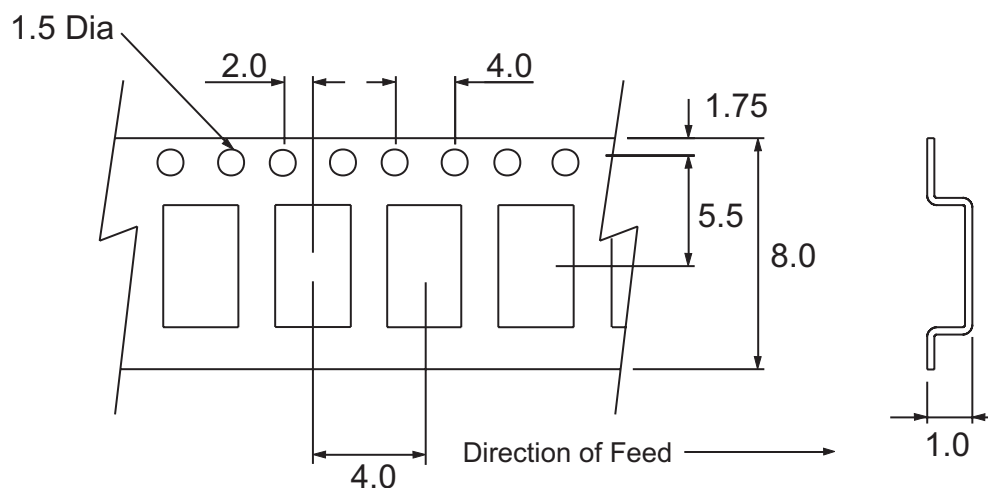


Recommended Land Pattern

Pin1	Pin 3
INH	Output
High or Open	Operating
Low	High Impedance

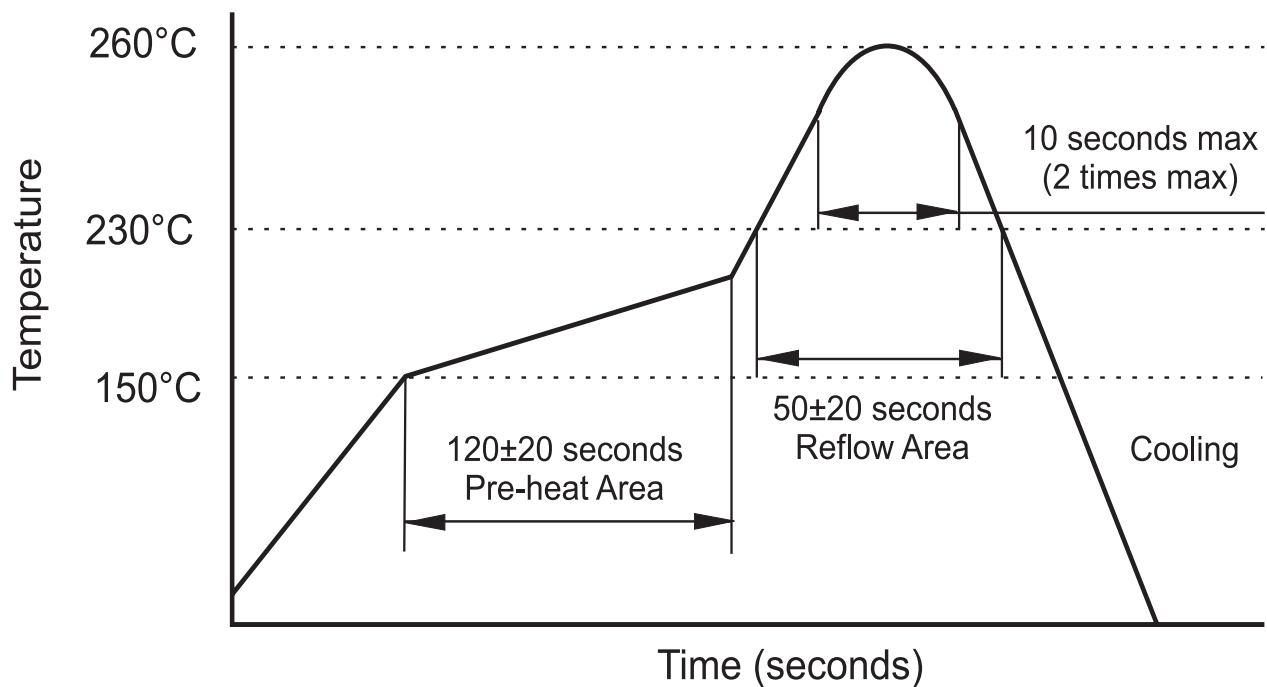
Package is Seam Sealed Ceramic-Metal.  
Dimensions are millimeters.

## Carrier Tape Dimensions:



Dimensions are millimeters.

## Solder Reflow Characteristics:



## How to build a Part Number:

<b>Series</b>	<b>S</b>	<b>Parameter</b>
<b>Package</b>	<b>2</b>	<b>2.0 x 2.5 mm</b>
<b>Supply Voltage</b>	<b>33</b>	<b>+3.3 Vdd ± 10%</b>
	<b>25</b>	<b>+2.5 Vdd ± 5%</b>
	<b>18</b>	<b>+1.8 Vdd ± 5%</b>
<b>Temperature Stability</b>	<b>10</b>	<b>±100 PPM</b>
	<b>05</b>	<b>±50 PPM</b>
	<b>025</b>	<b>±25 PPM</b>
<b>Duty Cycle</b>	<b>See Notes</b>	<b>40 to 60%</b>
	<b>T</b>	<b>45 to 55%</b>
<b>Frequency</b>	<b>2.000 to 50.000</b>	<b>MHz</b>
<b>Temperature Range</b>	<b>See Notes</b>	<b>-10 to +70 °C</b>
	<b>X</b>	<b>-40 to +85 °C</b>
<b>Packaging</b>	<b>R</b>	<b>Tape and Reel</b>

## Part Number Example:

**S22505-48.000-X-R**

**S2: 2.0 x 2.5 mm SMD Package**

**25: +2.5 Vdd Supply Voltage**

**05: ±50 PPM Temperature Stability**

**48.000 MHz Nominal Frequency**

**X: -40 to + 85° C Extended Temperature Range**

**R: Tape and Reel Packaging**

## Notes:

**1- Standard Duty Cycle and Temperature Range do not need to be included in Part Number description.**

**2- Product is shipped in Tape and Reel configuration. Each reel contains 1000 pieces.**

**3- Specification subject to change without notice.**