

<b>Pb-Lead Free RoHS Compliant</b>	Ltr	Revisions	Date	Appr

**Electrical Specifications:**

<b>Nominal Frequency</b>		<b>32.768</b>			<b>KHz</b>
<b>Temperature Stability</b>		<b>±100</b>			<b>PPM Max</b>
		<b>±50</b>			
		<b>±30</b>			
		<b>±25</b>			
		<b>±20</b>			
<b>Aging per Year</b>		<b>±3</b>			
<b>Operating Temperature Range</b>	<b>Standard</b>	<b>0 to +70</b>			<b>°C</b>
	<b>Extended</b>	<b>-40 to +85</b>			
<b>Storage Temperature Range</b>		<b>-55 to +125</b>			
<b>Supply Voltage</b>		<b>1.8 ± 5%</b>	<b>2.5 ± 5%</b>	<b>3.3 ± 10%</b>	<b>Vdd</b>
<b>Input Current</b>		<b>1.5</b>	<b>2.5</b>	<b>3.5</b>	<b>mA Max</b>
<b>Output Symmetry</b>	<b>Standard</b>	<b>40 to 60</b>			<b>%</b>
	<b>Tight</b>	<b>45 to 55</b>			
<b>Output Level</b>		<b>HCMOS</b>			<b>-</b>
<b>Output Load</b>		<b>15</b>			<b>pF Max</b>
<b>Rise and Fall Time</b>		<b>50</b>	<b>50</b>	<b>50</b>	<b>ns Max</b>
<b>Enable-Disable Function</b>		<b>Tri-State</b>			<b>-</b>

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.



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

All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: SL

Page: 1/4 Date: Feb 4, 2008

Specification Title:

**Clock Oscillator**

**Time of Day - 32.678 KHz**

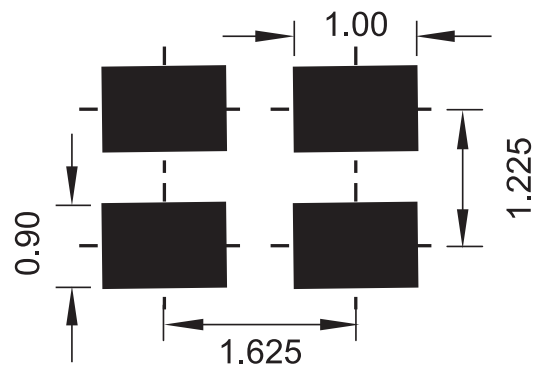
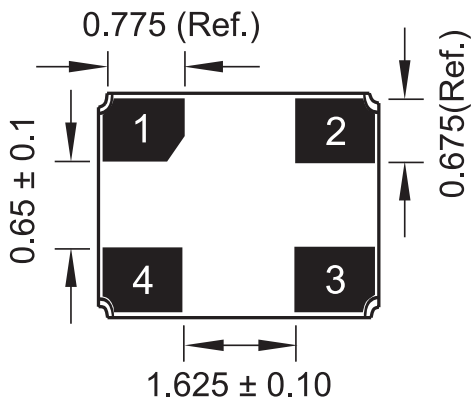
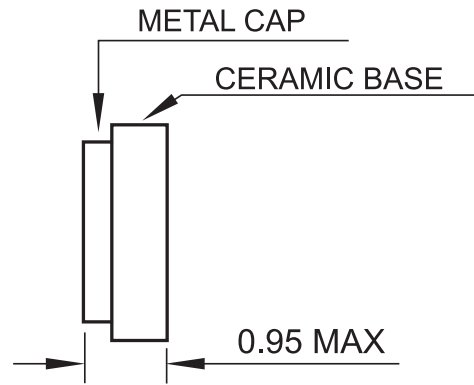
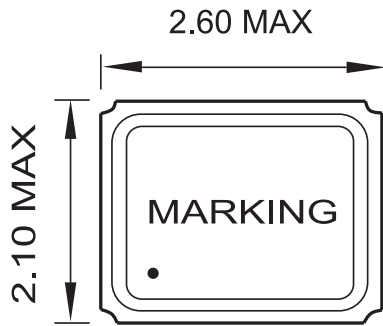
**HCMOS Output**

**2.5 x 2 millimeter Surface Mount**

**General Product Specification**

Part Number: **S2-32.768 KHz Series**

**Mechanical Outline:**



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

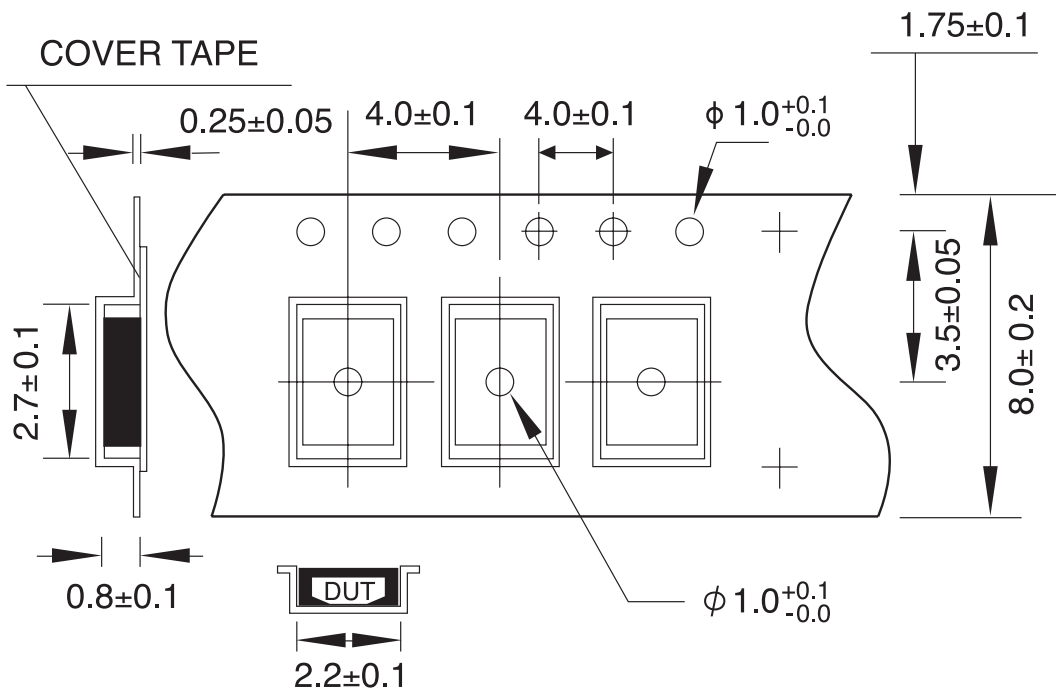
Bottom

Recommended Land Pattern

<b>Pin1</b>	<b>Pin 3</b>
<b>INH</b>	<b>Output</b>
<b>High or Open</b>	<b>Operating</b>
<b>Low</b>	<b>High Impedance</b>

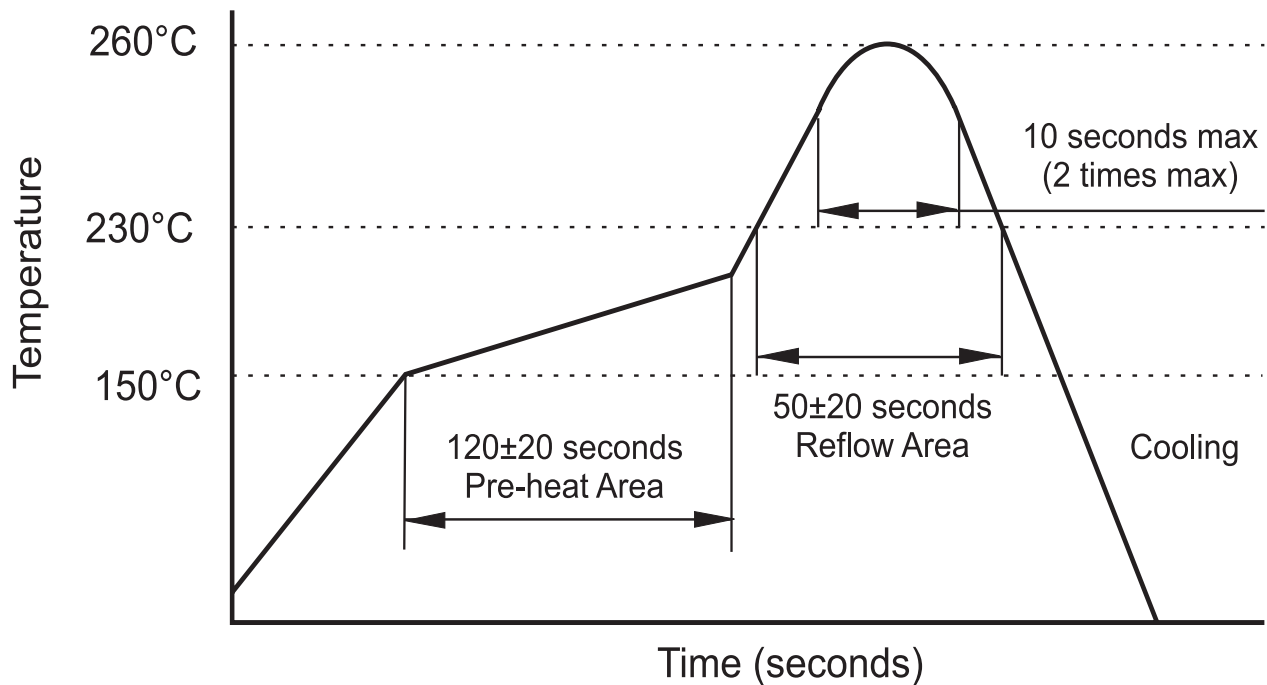
**Package is Seam Sealed Ceramic-Metal.**  
**Terminator Pads are Ni/Au**  
**Dimensions are millimeters.**

### 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>2.5 x 2 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>03</b>	<b>±30 PPM</b>
	<b>025</b>	<b>±25 PPM</b>
	<b>020</b>	<b>±20 PPM</b>
<b>Duty Cycle</b>	<b>See Notes</b>	<b>40 / 60 %</b>
	<b>T</b>	<b>45 / 55 %</b>
	-	
<b>Frequency</b>	<b>32.768K</b>	<b>KHz</b>
	-	
<b>Temperature Range</b>	<b>See Notes</b>	<b>0 to +70 °C</b>
	<b>X</b>	<b>-40 to +85 °C</b>
	-	
<b>Output Load</b>	<b>15</b>	<b>pF Max</b>
	-	
<b>Packaging</b>	<b>R</b>	<b>Tape and Reel</b>

### Part Number Example:

**S23305-32.768K-15-X-R**

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

**33: +3.3 ± 10 % Vdd Supply Voltage**

**05: ±50 PPM Temperature Stability**

**32.768 KHz Nominal Frequency**

**15 pF Load**

**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- Quantities less than 1000 are shipped bulk in ESD pouches.

4- Specification subject to change without notice.