RoHS Compliant
Pb - Lead Free

Ltr	Revisions	Date	Appr

Electrical Specifications:

Frequency Range		**13.000 to 160.000**		**MHz**
Temperature Stability		**±100**		**PPM Max**
		±50		
		±30		
		±25		
		±20		
Aging per Year		**±3**		
Operating Temperature Range	**Standard**	**-10 to +70**		**ºC**
	Extended	**-40 to +85**		
Storage Temperature Range		**-55 to +125**		
Supply Voltage		**2.5 ± 5%**	**3.3 ± 5%**	**Vdd**
Input Current	**13.000 to 49.999 MHz**	**20**	**20**	**mA Max**
	50.000 to 79.999 MHz	**20**	**25**	
	80.000 to 99.999 MHz	**25**	**30**	
	100.000 to 160.000 MHz	**30**	**40**	
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 Max**
Output Leve		**CMOS**		**-**
Rise and Fall Time	**13.000 to 49.999 MHz**	**5**	**10**	**ns Max**
	50.000 to 79.999 MHz	**4**	**8**	
	80.000 to 99.999 MHz	**3**	**5**	
	100.000 to 160.000 MHz	**3**	**4**	
Enable-Disable Function		**Tri-State**		**-**
Spread Spectrum Modulation	**Center Spread**	**±0.125 to ±2.0**		**%**
	Down Spread	**-0.25 to -4.0**		

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, vilbration, and 1st year aging at +25°C.

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All dimensions are millimeters.

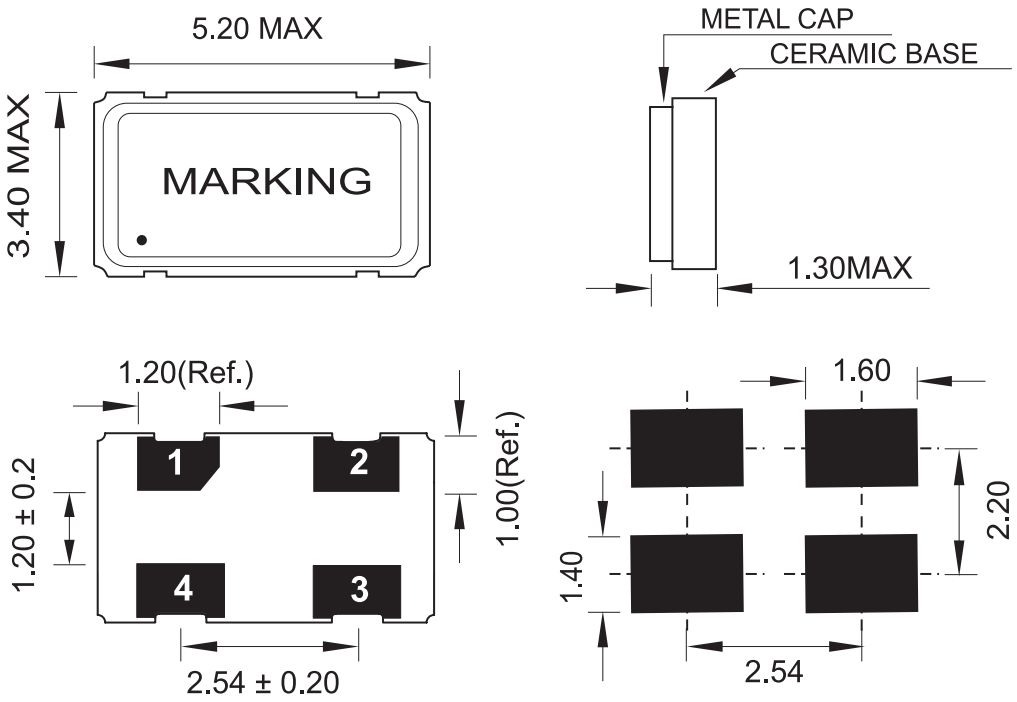
CAD:	TCR		
Review:	EG		
Appr:	SL		
Page:	1/4	Date:	Mar. 10, 2008

Specification Title:

Clock Oscillator
Spread Spectrum - Low EMI
5.0 x 3.2 millimeter Surface Mount
General Product Specification

Part Number: **S5 Low EMI Series**

Mechanical Outline:



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

Bottom

Recommended Land Pattern

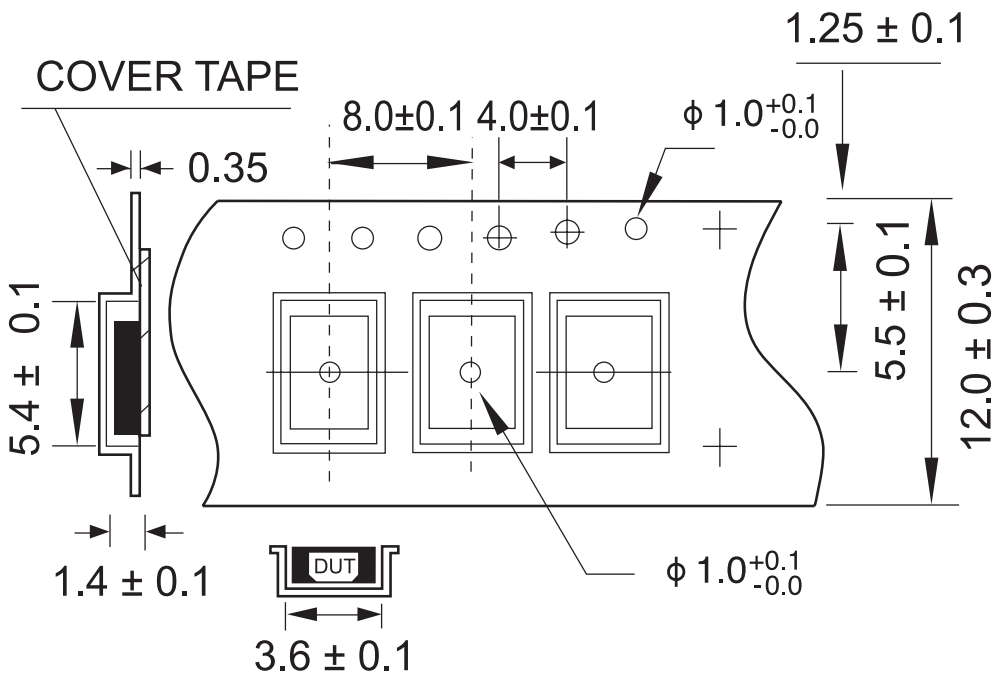
Pin1	Pin 3
INH	Output
High or Open	Operating
Low	High Impedance

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

Spread Spectrum Modulation Specifications:

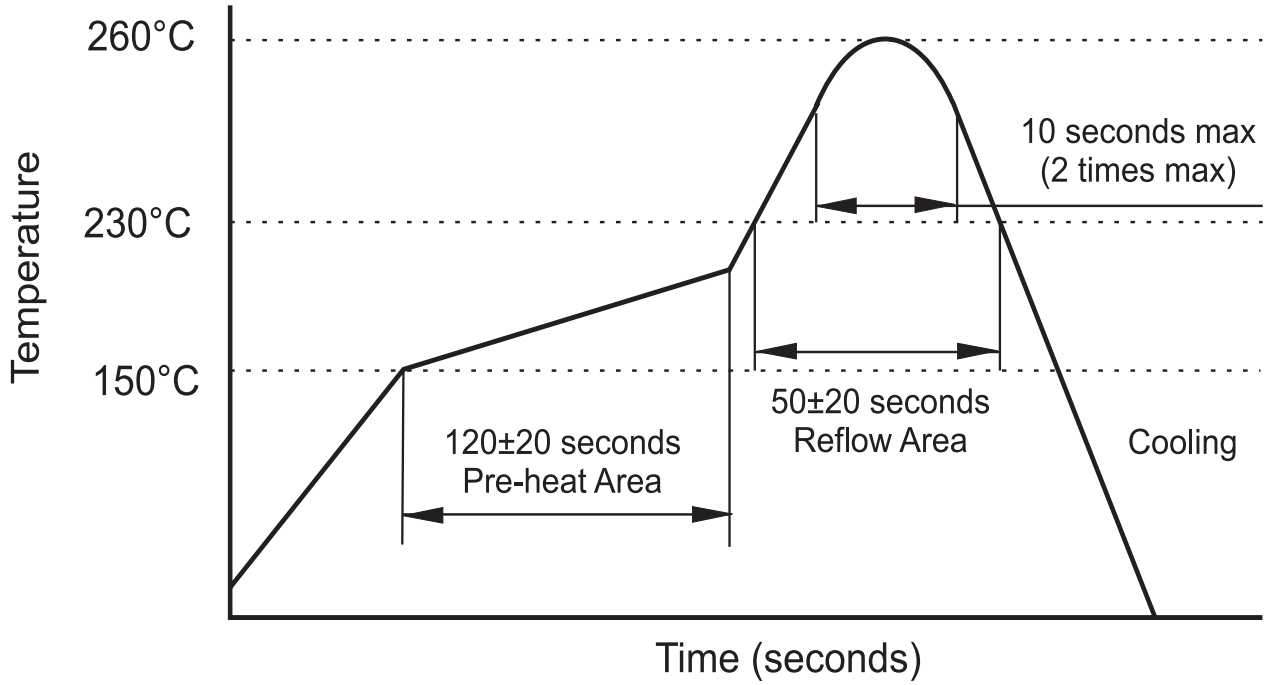
Spread Designation and Percent Modulation			
Down Spread		Center Spread	
LE-0.5	-0.5%	LE0.25	±0.25%
LE-0.75	-0.75%	LE0.375	±0.375%
LE-0.1.25	-1.25%	LE0.625	±0.625%
LE-2.0	-2.0%	LE1.0	±1.0%
LE-2.5	-2.5%	LE1.25	±1.25%
LE-3.0	-3.0%	LE1.5	±1.5%
LE-3.5	-3.5%	LE1.75	±1.75%
LE-3.75	-3.75%	LE1.875	±1.875%

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	**S**	**Parameter**
Package	**5**	**3.2 x 5.0 mm**
Supply Voltage	**33**	**+3.3 Vdd ± 5%**
	25	**+2.5 Vdd ± 5%**
Temperature Stability	**10**	**±100 PPM**
	05	**±50 PPM**
	03	**±30 PPM**
	025	**±25 PPM**
	02	**±20 PPM**
-		
Duty Cylce	**See Notes**	**40 / 60 %**
	T	**45 / 55 %**
-		
Frequency	**13.000 to 160.000**	**MHz**
-		
Temperature Range	**See Notes**	**-10 to +70 ºC**
	X	**-40 to +85 ºC**
-		
Spread Spectrum Modulation	**LE1 (Center Spread)**	**±0.125 to ±2.0%**
	LE2 (Down Spread)	**-0.25 to -4.0%**
-		
Packaging	**R**	**Tape and Reel**

Part Number Example:

S53310-155.520-X-LE1.75-R

S5: 3.2 x 5.0 mm SMD Package
33: +3.3 ± 5% Vdd Supply Voltage
10: ±100 PPM Temperature Stability
155.520 MHz Nominal Frequency
X: -40 to + 85° C Extended Temperature Range
LE1.75: ±1.75% Center Spread (See page 2 for other specifications)
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.