

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



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All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: SL

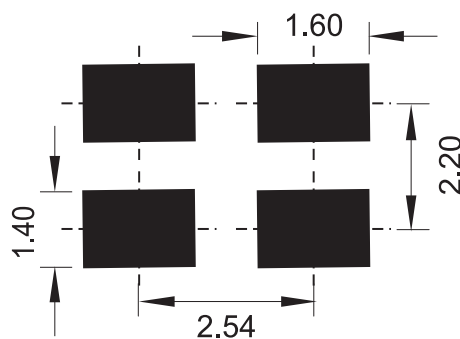
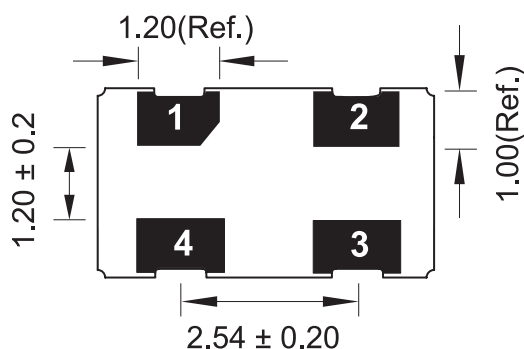
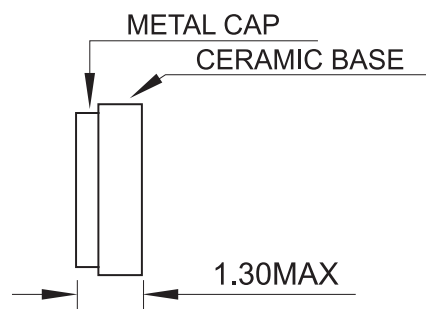
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Specification Title:

**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

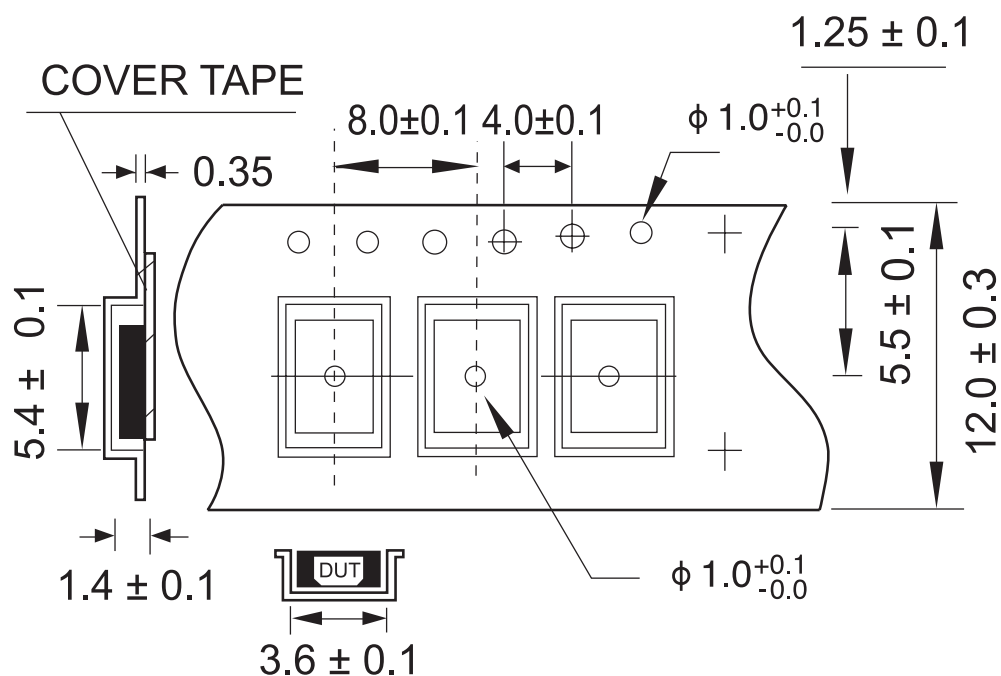
Pin1	Pin 3
INH	Output
High or Open	Operating
Low	High Impedance

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

Spread Spectrum Modulation Specifications:

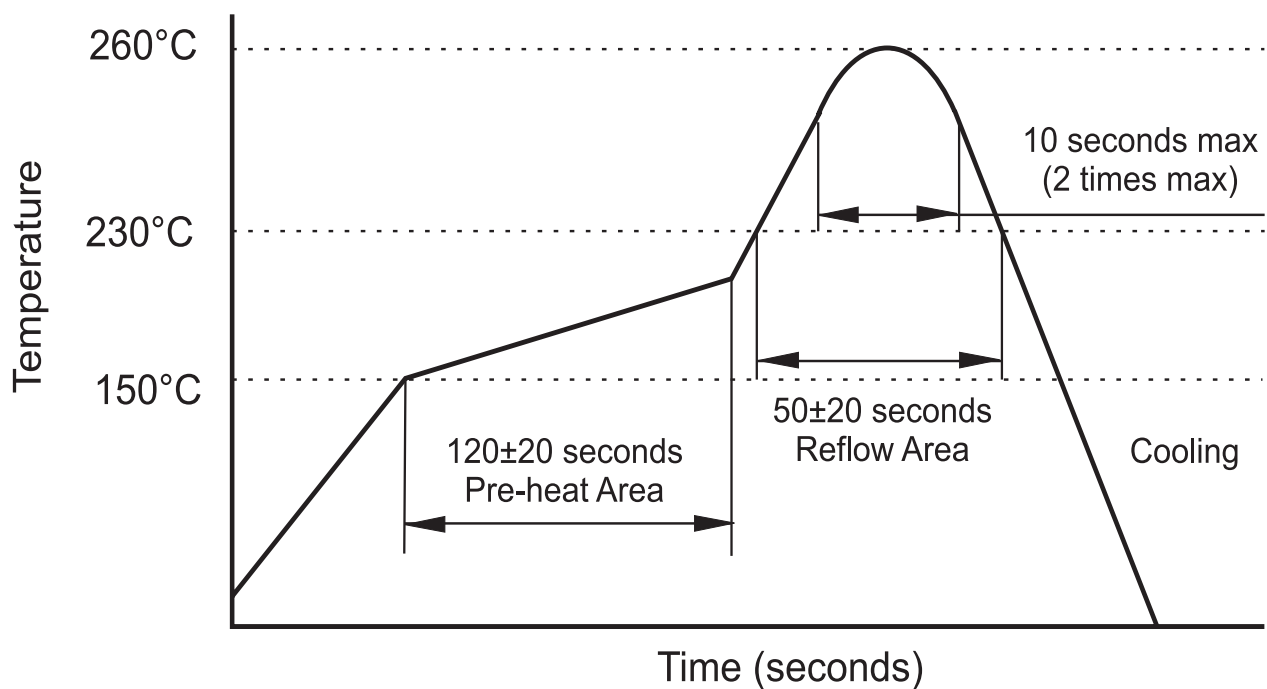
Spread Designation and Percent Modulation			
Down Spread		Center Spread	
LE-0.5	-0.5%	LE0.25	±0.25%
LE-0.75	-0.75%	LE0.375	±0.375%
LE-0.1.25	-1.25%	LE0.625	±0.625%
LE-2.0	-2.0%	LE1.0	±1.0%
LE-2.5	-2.5%	LE1.25	±1.25%
LE-3.0	-3.0%	LE1.5	±1.5%
LE-3.5	-3.5%	LE1.75	±1.75%
LE-3.75	-3.75%	LE1.875	±1.875%

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 Cycle	See Notes	40 / 60 %
	T	45 / 55 %
-		
Frequency	13.000 to 160.000	MHz
-		
Temperature Range	See Notes	-10 to +70 °C
	X	-40 to +85 °C
-		
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.