

RoHS Compliant Pb - Lead Free AEC-Q200 Qualified	Ltr	Revisions	Date	Appr

Electrical Specifications:

Frequency Range		2.000 to 50.000			MHz
Temperature Stability		±100			PPM Max
Aging per Year		±3			
Operating Temperature Range	Automotive Range	-40 to +125			°C
Storage Temperature Range		-55 to +150			
Supply Voltage		1.8 ± 5%	2.5 ± 5%	3.3 ± 10%	Vdd
Input Current	2.000 to 10.000 MHz	5	6	7	mA Max
	10.100 to 20.000 MHz	6	8	7	
	20.100 to 32.000 MHz	6	8	12	
	32.100 to 50.000 MHz	15	20	20	
Output Voltage	Logic High (Voh)	90% (80% at 1.8)			Vdd Min
	Logic Low (Vol)	10% (20% at 1.8)			Vdd Max
Output Symmetry	Standard	40 to 60			%
	Tight	45 to 55			
Output Level		CMOS			-
Output Load		15			pF Max
Rise and Fall Time	2.000 to 10.000 MHz	7	5	5	ns Max
	10.100 to 20.000 MHz	7	5	5	
	20.100 to 32.000 MHz	6	5	5	
	32.100 to 50.000 MHz	6	5	5	
Phase Jitter (12 KHz to 20 MHz)		1			ps Max RMS
Enable-Disable Function		Tri-State			-
Output Disable Time		300	150		ns Max
Output Enable Time		10	5		ms Max
Start Up Time		5 (10 at 1.8 Vdd)			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.



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All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

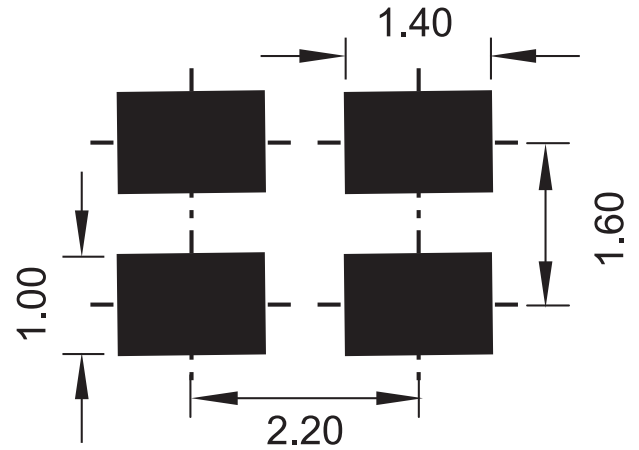
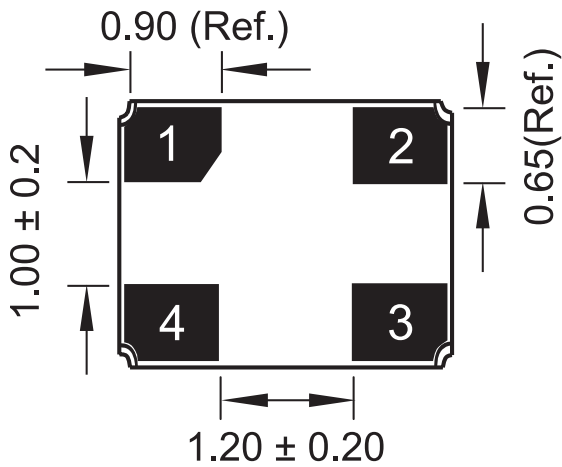
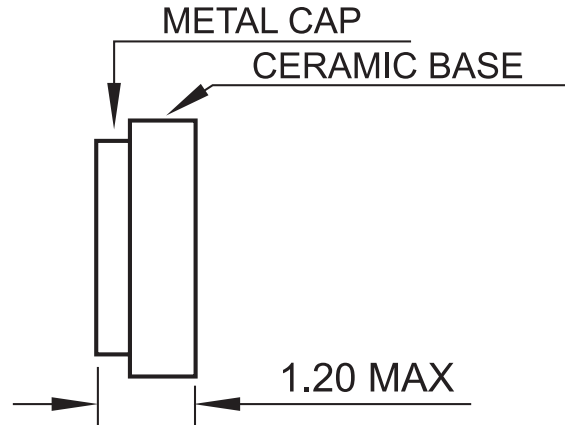
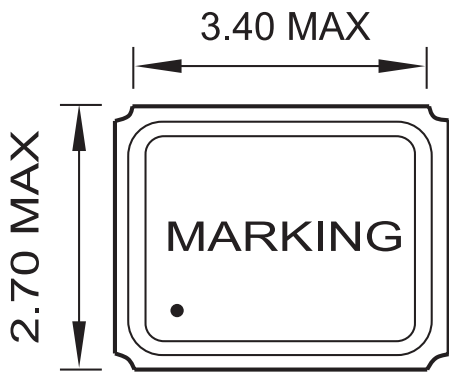
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Specification Title:

Clock Oscillator
Automotive Temperature Range
Miniature - Low Profile
3.2 x 2.5 millimeter Surface Mount
General Product Specification

Part Number: **S3 X1 Series**

Mechanical Outline:



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

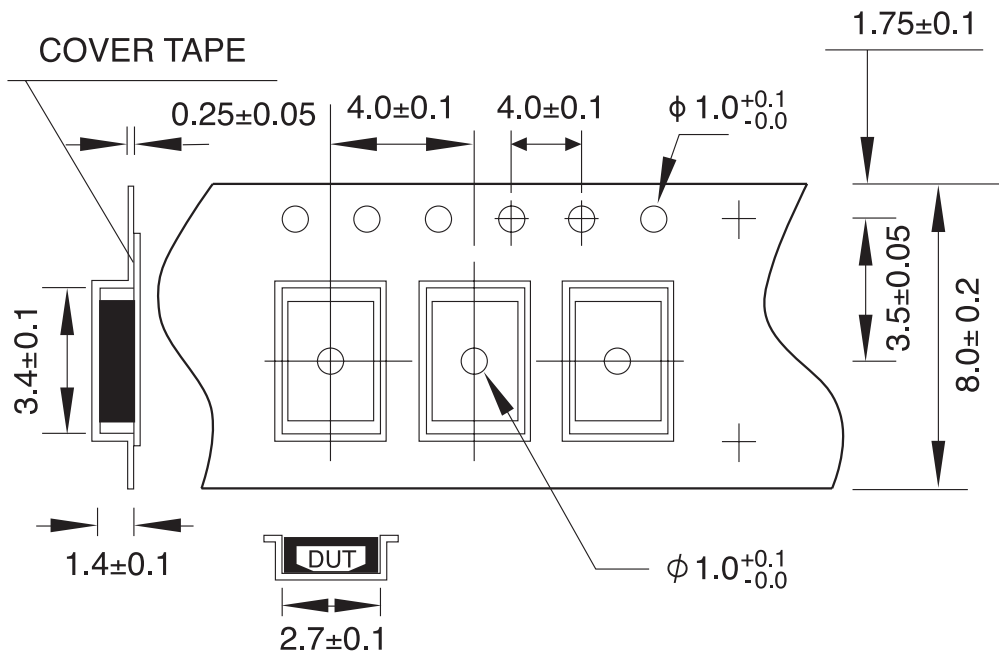
Bottom

Recommended Land Pattern

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

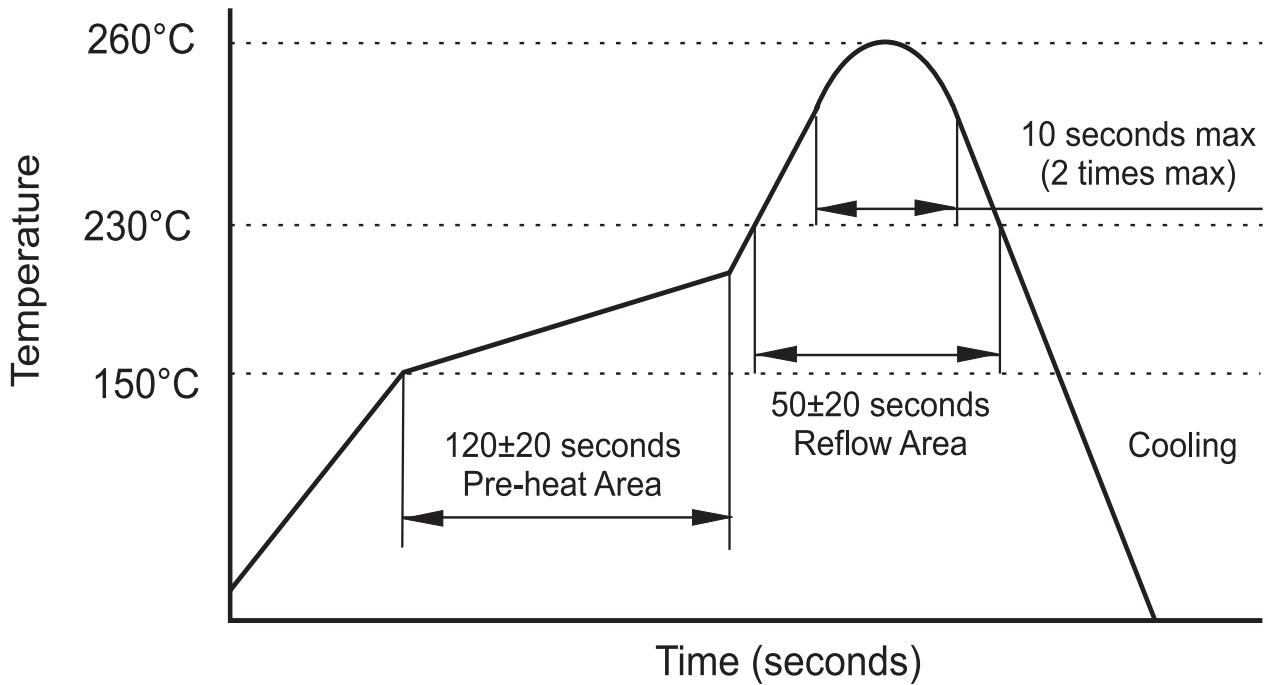
**Package is Seam Sealed Ceramic-Metal.
 Dimensions are millimeters.**

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series	S	Parameter
Package	3	3.2 x 2.5 mm
Supply Voltage	33	+3.3 Vdd ± 10%
	25	+2.5 Vdd ± 5%
	18	+1.8 Vdd ± 5%
Temperature Stability	10	±100 PPM
Duty Cycle	See Notes	40 / 60 %
	T	45 / 55 %
Frequency	2.000 to 50.000	MHz
Temperature Range	X1	-40 to +125 °C
Packaging	R	Tape and Reel

Part Number Example:

S33310-30.000-X1-R

S3: 2.5 x 3.2 mm SMD Package

33: +3.3 ± 10% Vdd Supply Voltage

10: ±100 PPM Temperature Stability

30.000 MHz Nominal Frequency

X1: -40 to + 125° C Automotive Temperature Range

R: Tape and Reel Packaging

Notes:

- 1- Standard Duty Cycle does 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.