

RoHS Compliant
Pb - Lead Free
AEC-Q200 Qualified

Ltr	Revisions	Date	Appr

Electrical Specifications:

Frequency Range	16.000 to 50.000	MHz
Mode of Oscillation	Fundamental	
Frequency Tolerance at 25°C	±50	PPM Max
Frequency Stability over Temperature Range	±100	
Operating Temperature Range	-40 to +125	° C
Storage Temperature Range	-55 to +150	
Aging per Year	±3	PPM Max
Load Capacitance	7 to 32 and Series Resonance	pF
Shunt Capacitance	5.0	
Equivalent Series Resistance (ESR)	See ESR Table	Ohm
Drive Level	100	uW Typ
Insulation Resistance	500 at 100 Vdc ± 15 Vdc	M Ohm

Frequency Range and ESR Values:

Frequency Range in MHz	ESR Ohm Max	Mode of Operation
16.000 to 29.999	100	Fundamental
30.000 to 50.000	70	Fundamental



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All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: JL

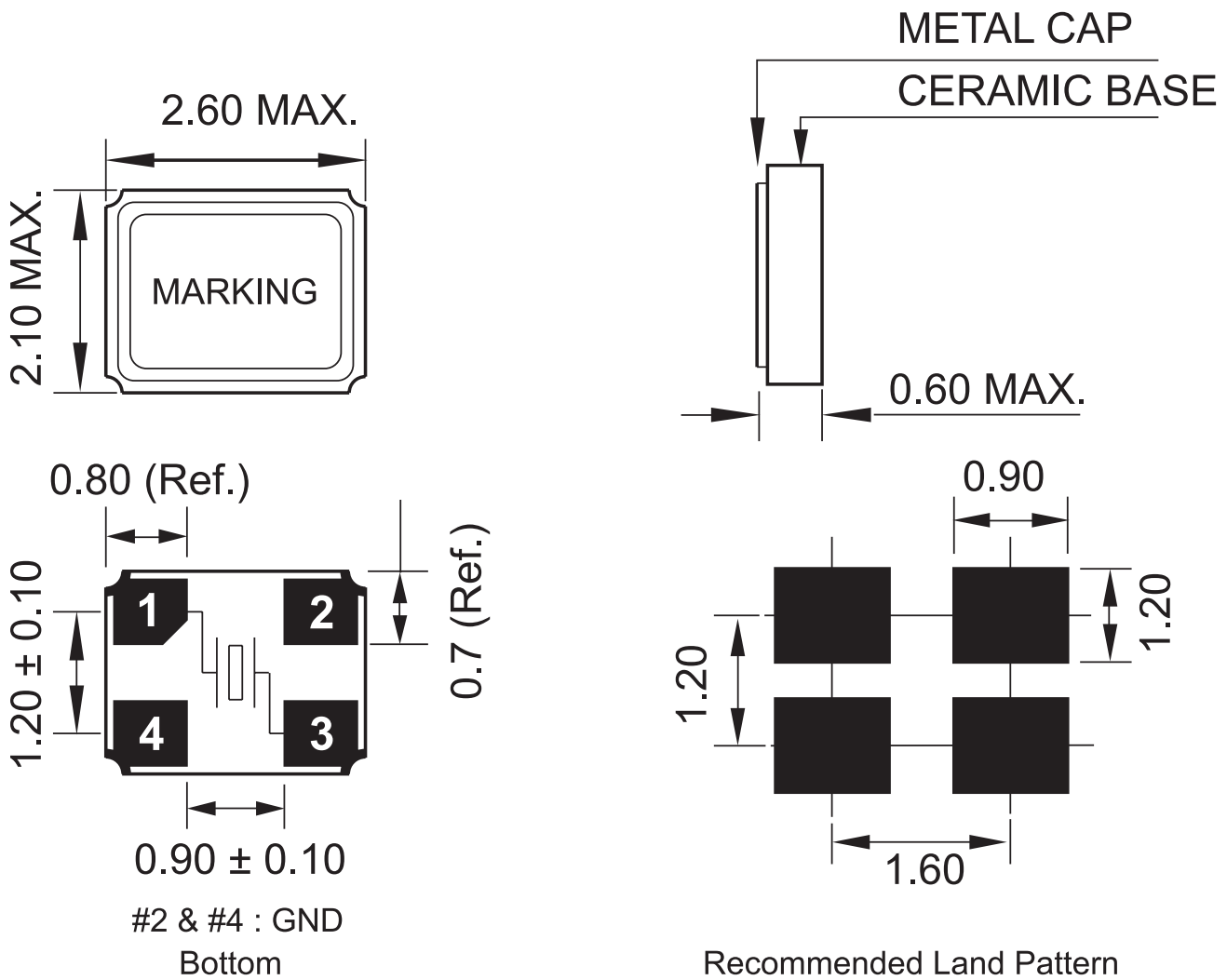
Page: 1/4 Date: April 15, 2008

Specification Title:

**Microprocessor Crystal Unit
Automotive Temperature Range
2.0 x 2.5 millimeter Surface Mount
General Product Specification**

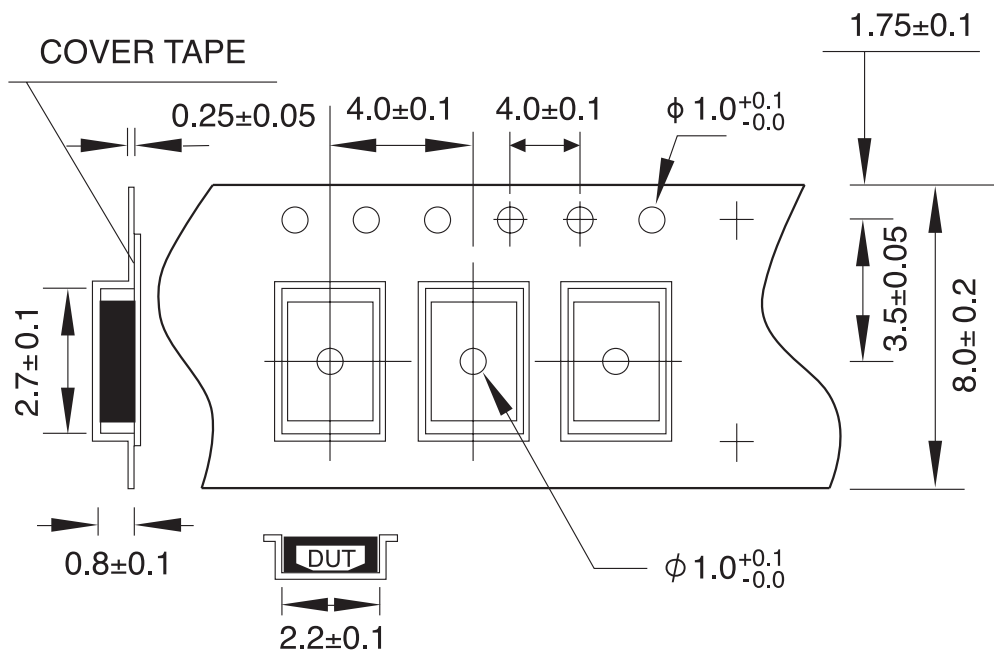
Part Number: **C2E X1 Series**

Mechanical Outline:



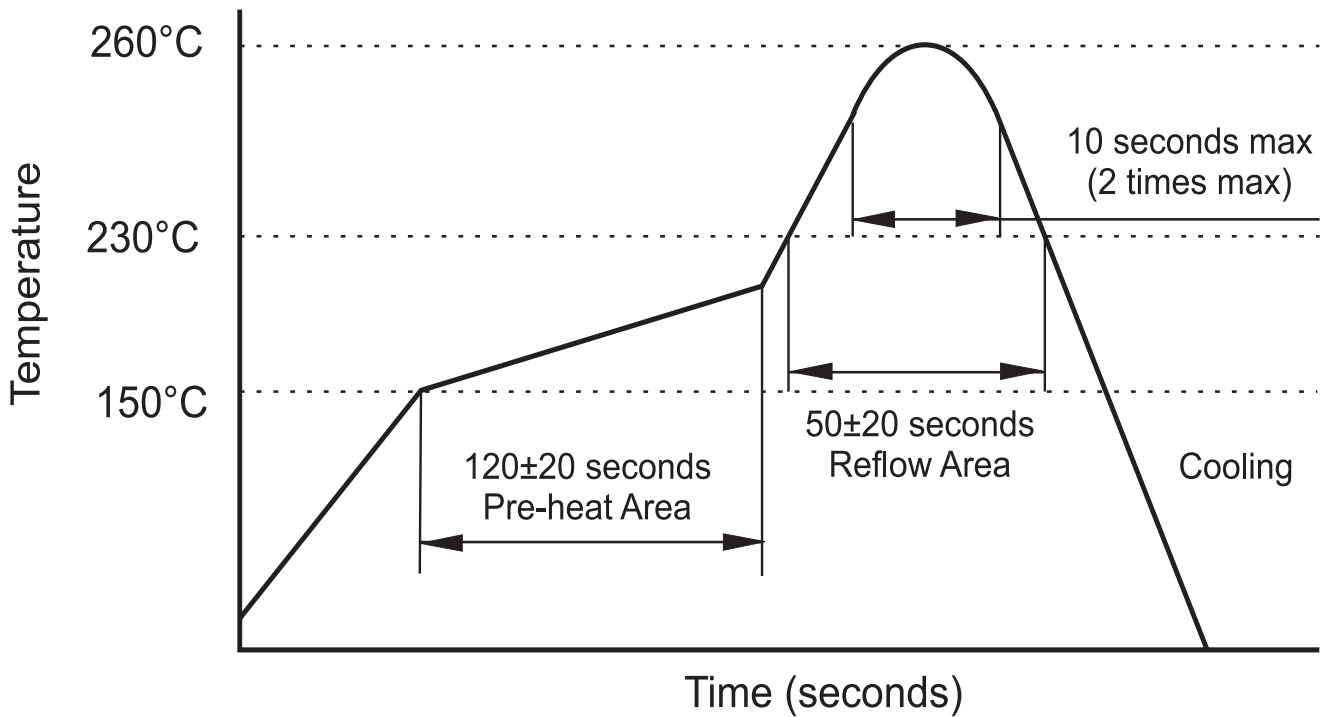
**Package is Seam Sealed Ceramic-Metal.
Dimensions are millimeters.**

Carrier Tape Dimensions:



Dimensions are millimeters.

Solder Reflow Characteristics:



How to build a Part Number:

Series		C	Parameter
Package		2E	2.0 x 2.5 mm
		-	
Frequency		16.000 to 50.000	MHz
		-	
Load Capacitance		7	7 pF
		10	10 pF
		12	12 pF
		16	16 pF
		18	18 pF
		20	20 pF
		32	32 pF
		S	Series
		-	
Frequency Tolerance		50	±50 PPM
Frequency Stability		100	±100 PPM
		-	
Temperature Range		X1	-40 to +125 °C
		-	
Packaging		R	Tape and Reel

Part Number Example:

C2E-50.000-18-50100-X1-R

C2E- 2.0 x 2.5 mm SMD Seam Seal Crystal Unit

50.000 MHz Nominal Frequency

18 pF Load Capacitance

50100: ±50 PPM Frequency Tolerance and ±100 PPM Frequency Stability

Fundamental Mode

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

R: Tape and Reel Packaging

Notes:

- 1- Product is shipped in Tape and Reel configuration. Each reel contains 3000 pieces.**
- 2- Quantities less than 3000 are shipped bulk in ESD pouches.**
- 3- Specification subject to change without notice.**