# RoHS Compliant Pb - Lead Free

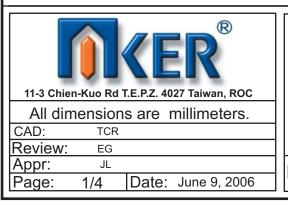
Ltr	Revisions	Date	Appr

## **Electrical Specifications:**

Frequency Range		16.000 to 50.000	MHz	
Mode of Oscillation	Fundamental	16.000 to 50.000	1 IVITZ	
	Standard	±30		
		±25	PPM Max	
Frequency Tolerance at 25°C	Optional	±20		
		±15	(Note 1)	
		±10		
	Standard	±50		
	Optional	±30		
Frequency Stability over		±25	PPM Max (Note 1)	
Temperature Range		±20		
		±15		
		±10		
Operating Temperature Range	Standard	-10 to +70		
	Extended	-40 to +85	° C	
Storage Temperature Range		-55 to +125		
Aging per Year		±3	PPM Max	
Load Capacitance		7 to 32 and Series Resonance		
Shunt Capacitance		5.0	pF	
Equivalent Series Resistance (ESR)		See ESR Table	Ohms	
Drive Level		100	uW Typ	

## 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

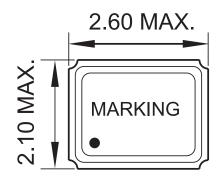


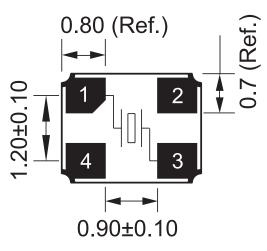
# **Specification Title:**

Microprocessor Crystal Unit Low Profile 2.0 x 2.5 millimeter Surface Mount General Product Specification

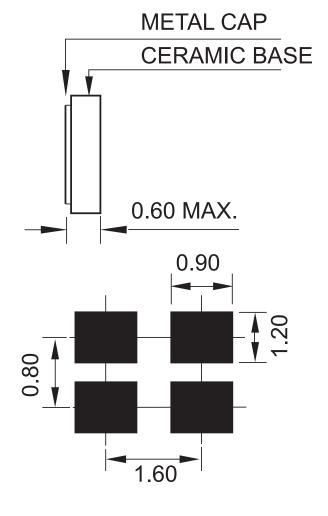
Part Number: **C2E Series** 

### **Mechanical Outline:**





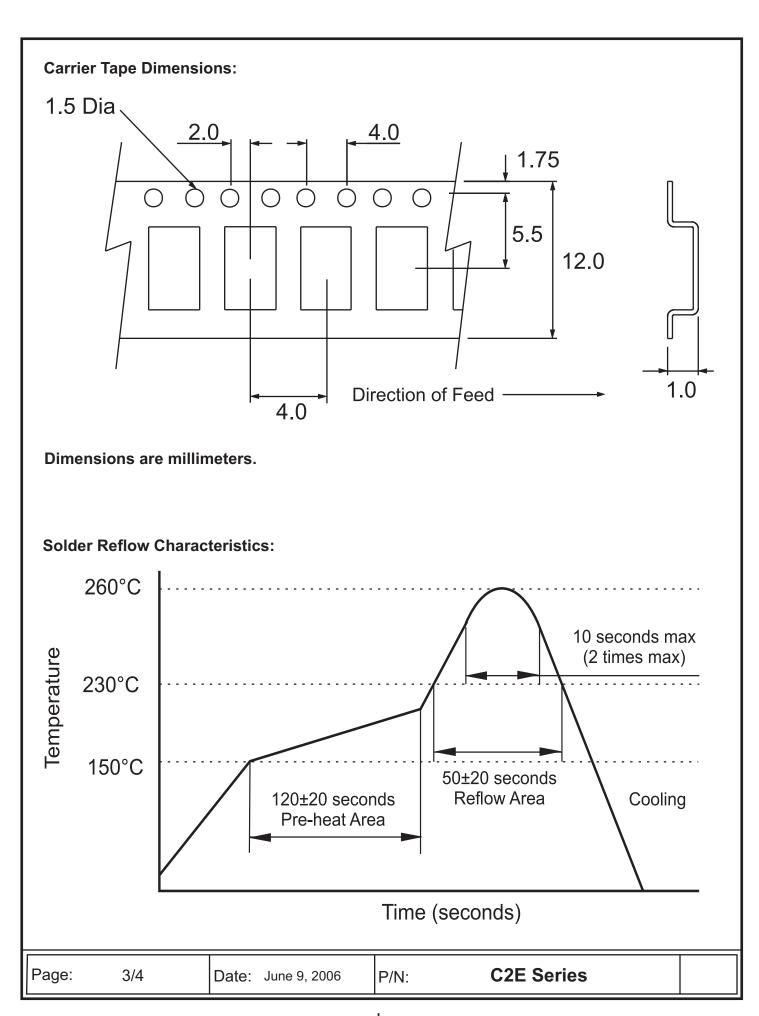
#2 & #4 : GND Bottom



(Recommended Land Pattem)

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

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#### How to build a Part Number:

Series		С	Parameter
Package		2E	2.0 x 2.5 mm
	-	-	
Frequency		16.000 to 50.000	MHz
		-	
		7	7 pF
		10	10 pF
		12	12 pF
Load Ca	nacitanco	16	16 pF
Load Capacitance		18	18 pF
		20	20 pF
		32	32 pF
		S	Series
		-	
	Standard	30	±30 PPM
Frequency Tolerance		25	±25 PPM
(Note 1)	I I	20	±20 PPM
(Note I)		15	± 15 PPM
		10	±10 PPM
	Standard	50	±50 PPM
		30	±30 PPM
Frequency Stability		25	±25 PPM
(Note 1)		20	±20 PPM
		15	±15 PPM
		10	±10 PPM
		-	
Temperature Range	Standard	See Notes	-10 to +70 °C
Temperature Namye	Option	X	-40 to +85 °C
		-	
Packaging		R	Tape and Reel

**Part Number Example:** 

C2E-50.000-18-3050-R

C2E- 2.0 x 2.5 mm SMD Seam Seal Crystal Unit

**50.000 MHz Nominal Frequency** 

18 pF Load Capacitance

3050: ±30 PPM Frequency Tolerance and ±50 PPM Frequency Stability

**Fundamental Mode** 

-10 to +70° C Temperature Range

R: Tape and Reel Packaging

#### Notes:

- 1- Frequency Tolerance and Stability options are limited due to physical size.
- 2- Standard Temperature Range does not need to be included in Part Number description.
- 3- Product is shipped in Tape and Reel configuration. Each reel contains 3000 pieces.
- 4- Quantities less than 3000 are shipped bulk in ESD pouches.
- 5- Specification subject to change without notice.

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