

No.11-3 Jianguo Rd., T.E.P.Z. 42760 Taiwan, ROC

All dimensions are millimeters.

CAD:	TCR			
Review:	EG			
Appr:		JL		
Page:	1/4	Date: August 01, 2022		

Electrical Specifications:

Specification Title:

Microprocessor Crystal Unit Low Profile 3.2 x 2.5 millimeter Surface Mount - 4 Pad General Product Specification

Series Name: C3E Series

Frequency Range		8.000 to 150.000	MHz	
Mode of Oscillation	Fundamental	8.000 to 64.000	MHz	
Mode of Oscillation	Third Overtone	60.000 to 150.00		
	Standard	±30		
		±50		
requency Tolerance at 25°C requency Stability over emperature Range	Ontional	±20	PPM Max (Note 1)	
	Optional	±15	(Note 1)	
		±10		
	Standard	±50		
		±100		
		±30	PPM Max (Note 1)	
	Optional	±25		
Temperature Range		±20		
		±15		
		±10*		
	Standard	-20 to +70		
Operating Temperature Range	Extended	-40 to +85	°0	
		-40 to +125	C	
Storage Temperature Range		-55 to +125		
Aging		±3	PPM Max/Year	
Load Capacitance		6 to 47 and Series Resonance		
Shunt Capacitance		3.0	pF	
Equivalent Series Resistance(ESR)		See ESR Table	Ohm	
Drive Level		100	uW Max	
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	Frequency Range in MHz	ESR Ohm Max	Mode of Opera	ation
8.000 to 9.999	500	Fundamental	60.000 to 99.999	150	Third Overte	one
10.000 to 11.999	150	Fundamental	100.000 to 124.999	100	Third Overto	one
12.000 to 15.999	80	Fundamental	125.000 to 150.000	80	Third Overto	one
16.000 to 19.999	60	Fundamental				
20.000 to 24.999	50	Fundamental				
25.000 to 49.999	40	Fundamental				
50.000 to 64.000	30	Fundamental				
	Ltr		Revisions		Date	Appr
RoHS Complian	RoHS Compliant					
Pb - Lead Free	Pb - Lead Free					

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Mechanical Outline:				
510 # 52 52 57		<side> eramic Base Metal Lid</side>		
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#1	1.2 #2 10 #3		1.2	
Package is Seam Seale Dimensions are millime	ed Ceramic-Metal. eters.			
Page: 2/4	Date: August 01, 2022	P/N: C3E Se	eries	

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Series C Parameter Package 3E 3.2 x 2.5 mm - 4 Pad Frequency 8.000 to 150.000 MHz Total 7 7 pF 10 10 pF 12 12 12 pF 32 32 pF S Series Standard 30 20 200 PPM 15 150PPM 10 100 10 100 10 100 10 100 20 200PPM 10 100 10 100 10 100 110 100 120 200PPM 13 116 15 150PM 100 100PPM* 100 100 *100PPM 100 100 *100PPM 100 <th>How to build a Par</th> <th>t Number:</th> <th></th> <th></th> <th></th> <th></th>	How to build a Par	t Number:				
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Option X2 -40 to +105 °C - - Packaging M 250pcs Reel Packaging R 1000pcs Reel R3 3000pcs Reel - Part Number Example: C3E-24.000-18-3050-X-R - C3E-3.2 x 2.5 mm SMD Seam Seal Crystal Unit - 4 Pad - - 24.000 MHz Nominal Frequency 18 pF Load Capacitance - 3050: ±30 PPM Frequency Tolerance and ±50 PPM Frequency Stability - - Fundamental Mode - - - X: -40 to +85° C Temperature Range - - - R: Tape and Reel Packaging - 1000pcs Reel Notes: - - 1- Frequency Tolerance and Stability options are limited due to physical size. * ±10 PPM Temperature Range does not need to be included in Part Number description. 2- Standard Temperature Range does not need to be included in Part Number description. - 3- Fundamental mode does not need to be included in part number description. - 3- Fundamental mode does not need to be included in part number description. - 3- Specification subject to change without notice. - </td <td>Temperature Range</td> <td></td> <td></td> <td></td> <td>•</td> <td></td>	Temperature Range				•	
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Part Number Example: C3E-24.000-18-3050-X-R C3E- 3.2 x 2.5 mm SMD Seam Seal Crystal Unit - 4 Pad 24.000 MHz Nominal Frequency 18 pF Load Capacitance 3050: ±30 PPM Frequency Tolerance and ±50 PPM Frequency Stability Fundamental Mode X: -40 to +85° C Temperature Range R: Tape and Reel Packaging - 1000pcs Reel Notes: 1- Frequency Tolerance and Stability options are limited due to physical size. * ±10 PPM Temperature Stability is only available from -30 to +85° C. 2- Standard Temperature Range does not need to be included in Part Number description. 3- Fundamental mode does not need to be included in part number description 4- Quantities less than 250pcs are shipped in tape only. 5- Specification subject to change without notice.	F	Packaging			-	
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