

Specification Title:

Microprocessor Crystal Unit Automotive Grade 1.6 x 1.2 millimeter Surface Mount - 4 Pad General Product Specification

Series Name: C16 Auto Series

Electrical Specifications:

Frequency Range		24.000 to 60.000	MHz	
Mode of Oscillation	Fundamental	24.000 to 60.000	MHz	
Frequency Tolerance at 25°C	Standard	±30		
	Ontional	±50		
		±20	PPM Max (Note 1)	
	Optional	±15	(Note 1)	
		±10		
	Standard	±50		
		±100		
Frequency Stability over Temperature Range	0-4	±30	PPM Max (Note 1)	
Temperature Kange	Optional	±25	(Note 1)	
		±20		
Operating Temperature Range	Standard	-40 to +85		
	Extended	-40 to +125	${\mathfrak C}$	
Storage Temperature Range		-55 to +150		
Aging		±3	PPM Max/Year	
Load Capacitance		6 to 47 and Series Resonance	pF	
Shunt Capacitance		3.0		
Equivalent Series Resistance(ESR)		Series Resistance(ESR) See ESR Table		
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 Operation
24.000 to 29.999	150	Fundamental
30.000 to 31.999	100	Fundamental
32.000 to 39.999	80	Fundamental
40.000 to 60.000	60	Fundamental

	Ltr	Revisions	Date	Appr
RoHS Compliant				
Pb - Lead Free				
Pb - Lead Free				

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Mechanical Outline: <TOP> <SIDE> $1.6\,\pm\,0.15$ Ceramic Base Metal Lid $1.2\pm0.15\,$ AKER #1 #2 0.4 Max. <BOTTOM> <SUGGESTED LAYOUT> 1.05 #3 0.5 #2:GND #4:NC Package is Seam Sealed Ceramic-Metal. Dimensions are millimeters. P/N: Page: 2/4 Date: August 01, 2022 C16 Auto Series

Carrier Tape Dimensions: Ø1.5 2.0 4.0 ř. ì Ħ H Ø<mark>0.6</mark> 4.0 0.45 1.39 A-A SECTION Dimensions are millimeters. **Solder Reflow Characteristics:** 260°C 255°C 217℃ 180℃ 150℃ 60~150 SEC 60~180 SEC TIME(SEC) Page: Date: August 01, 2022 C16 Auto Series 3/4 P/N:

How to build a Part Number:

Package	Series		С	Parameter		
Coad Capacitance	Package		16	1.6 x 1.2 mm - 4 Pad		
Coad Capacitance			-			
Load Capacitance	F	requency	24.000 to 60.000	MHz		
Load Capacitance			-			
Load Capacitance			~	-		
Load Capacitance						
18						
18	Load Ca	nacitance				
Standard 30	Loud Ga	puonanoo				
S Series						
Standard 30						
Standard Standard			S	Series		
Standard Standard	-					
Companies Comp		Standard	30	±30PPM		
Note 1 Option 15	Fraguency Tolorance		50	±50PPM		
Standard X		Ontion	20	±20PPM		
Standard 50	(11010-1)	Option	15	±15PPM		
Temperature Range			10	±10PPM		
Standard X -40 to +85 °C Option X2 -40 to +105 °C Option X2 -40 to +105 °C Packaging R 1000pcs Reel		Standard	50	±50PPM		
Option 25	Fraguanay Stability		100			
25			30	±30PPM		
AECQ-200 A	(Note 1)		25	±25PPM		
- Standard X -40 to +85 ℃ Option X1 -40 to +125 ℃ Option X2 -40 to +105 ℃ Option -			20	±20PPM		
- Standard X -40 to +85 ℃ Option X1 -40 to +125 ℃ Option X2 -40 to +105 ℃ Option -			-			
Temperature Range		AECQ-200	Α	Automotive		
Temperature Range Option X1 -40 to +125 ℃ Option X2 -40 to +105 ℃ - M 250pcs Reel Packaging R 1000pcs Reel			-			
Option X2 -40 to +105 ℃ - - M 250pcs Reel Packaging R 1000pcs Reel		Standard	X	-40 to +85 ℃		
- M 250pcs Reel Packaging R 1000pcs Reel	Temperature Range	Option	X1	-40 to +125 ℃		
Packaging R 1000pcs Reel		Option	X2	-40 to +105 ℃		
Packaging R 1000pcs Reel	•					
	Packaging		М	250pcs Reel		
R3 3000pcs Reel			R	1000pcs Reel		
			R3	3000pcs Reel		

Part Number Example:

C16-40.000-10-3030-A-X-R

C16- 1.6 x 1.2 mm SMD Seam Seal Crystal Unit - 4 Pad

40.000 MHz Nominal Frequency

10 pF Load Capacitance

3030: ±30 PPM Frequency Tolerance and ±30 PPM Frequency Stability

A: Automotive Grade

-40 to +85℃ Temperature Range

R: Tape and Reel Packaging - 1000pcs

Notes:

- 1- Frequency Tolerance and Stability options are limited due to physical size.
- 2- Product is shipped in Tape and Reel configuration
- 3- Quantities less than 250pcs are shipped in tape only.
- 4- Specification subject to change without notice.

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