

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

All	dimensions a	re millimeters.
CAD:	TCF	{
Review:	EG	
Appr:	JL	
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Specification Title:

Microprocessor Crystal Unit Low Profile 2.0 x 1.6 millimeter Surface Mount - 4 Pad General Product Specification

Series Name: C1E Series

Electrical Specifications:

Frequency Range		16.000 to 96.000	MHz
Mode of Oscillation	Fundamental	16.000 to 96.000	MHz
Frequency Tolerance at 25°C	Standard	±30	
	Optional	±50	
		±20	PPM Max (Note 1)
		±15	
		±10	
	Standard	±50	
	Optional	±100	
Frequency Stability over		±30	PPM Max
Temperature Range		±25	(Note 1)
		±20	
		±15	
	Standard	-20 to +70	
Operating Temperature Range	Extended	-40 to +85	°0
		-40 to +125	്
Storage Temperature Range		-55 to +125	
Aging		±3	PPM Max/Year
Load Capacitance		6 to 47 and Series Resonance	۳E
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
16.000 to 19.199	200	Fundamental
19.200 to 21.999	100	Fundamental
22.000 to 35.999	80	Fundamental
36.000 to 96.000	60	Fundamental

	Ltr	Revisions	Date	Appr
RoHS Compliant				
Pb - Lead Free				



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Package 1E 2.0 x 1.6 mm - Frequency 16.000 to 96.000 MHz - - 16.000 to 96.000 MHz 10 10 pF 12 12 pF 16 16 pF 18 18 pF 20 20 pF 32 32 pF S Series - - Frequency Tolerance (Note 1) Option 30 ±30PPM 20 ±25PPM 20 ±25PPM 20 ±20PPM 10 ±10PPM 10 ±10PPM 10 ±50PPM	4 Pad	
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15 ±15PPM 10 ±10PPM		
Standard 50 ±50PPM		
Frequency Stability 30 ±30PPM		
(Note 1) Option 25 ±25PPM		
20 ±20PPM		
15 ±15PPM		
Standard See Notes -20 to +70	<u>م</u>	
Standard See Notes -20 to +70 Option X -40 to +85	-	
emperature Range Option X1 -40 to +85	-	
Option X1 -40 to +125 Option X2 -40 to +105		
-		
M 250pcs Re	el	
Packaging R 1000pcs Re	el	
R3 3000pcs Re		

-20 to +70°℃ Temperature Range

R3: Tape and Reel Packaging - 3000pcs

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.
- 4- Quantities less than 250pcs are shipped in tape only.

5- Specification subject to change without notice.

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