	Ltr	Revisions	Date	Appr
RoHS Compliant				
Pb - Lead Free AEC-Q200 Qualified				

Electrical Specifications:

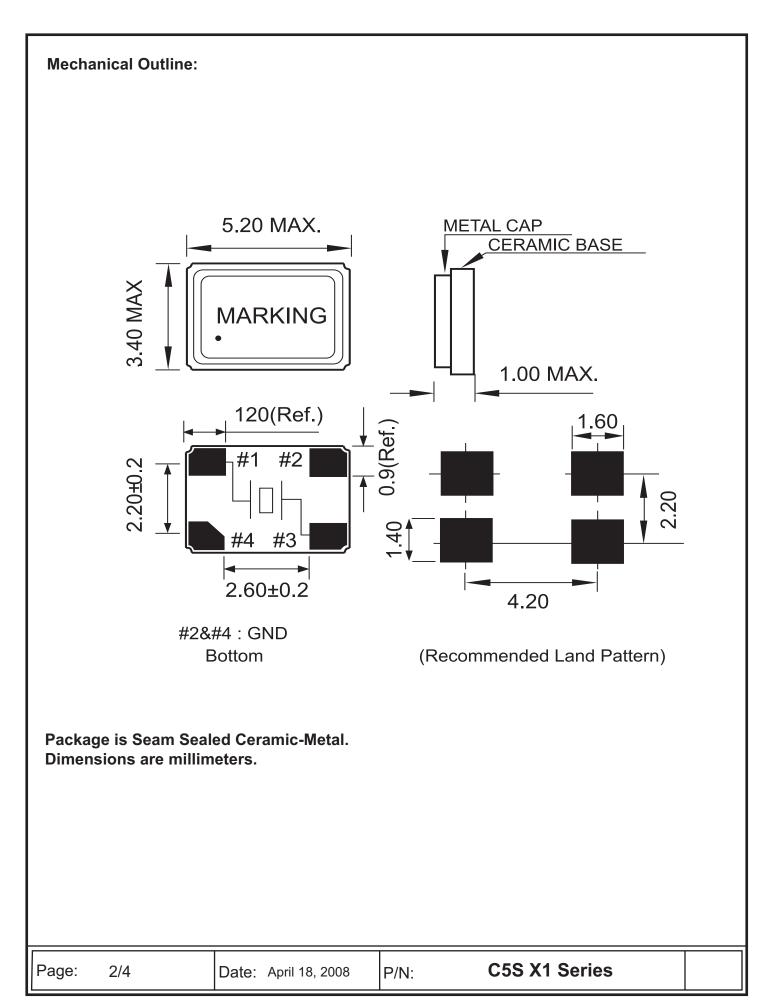
Frequency Range		8.000 to 150.000	MHz	
Mode of Oscillation	Fundamental	8.000 to 52.000		
Mode of Oscillation	Third Overtone	40.000 to 150.000		
Frequency Tolerance at 25°C		±50	DDM Moy	
Frequency Stability over Temperature Range		±100	PPM Max	
Operating Temperature Range		-40 to +125	°C	
Storage Temperature Range		-55 to +150		
Aging per Year		±3	PPM Max	
Load Capacitance		10 to 32 and Series Resonance	۳E	
Shunt Capacitance		7.0	pF	
Equivalent Series Resistance (ESR)		See ESR Table	Ohm	
Drive Level		100	uW Typ	
Insulation Resistance		500 at at 100 Vdc ± 15 Vdc	M Ohm	

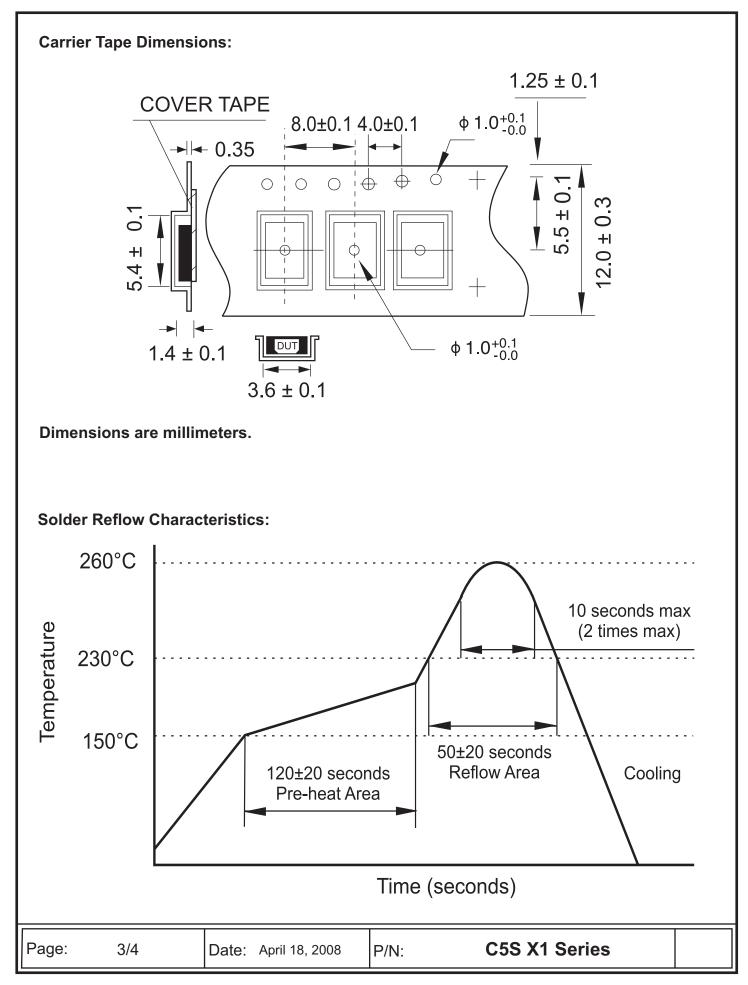
Frequency Range and ESR Values:

Frequency Range in MHz	ESR Ohm Max	Mode of Operation	
8.000 to 10.000	150	Fundamental	
10.100 to 12000	90	Fundamental	
12.100 to 15.000	70	Fundamental	
15.100 to 30.000	50	Fundamental	
30.100 to 52.000	30	Fundamental	
40.000 to 52.000	100	Third Overtone	
52.100 to 80.000	100	Third Overtone	
80.100 to 150.000	80	Third Overtone	

	Specification Title:		
11-3 Chien-Kuo Rd T.E.P.Z. 4027 Taiwan, ROC	Microprocessor Crystal Unit Automotive Temperature Range 5.0 x 3.2 millimeter Surface Mount General Product Specification		
All dimensions are millimeters.			
CAD: TCR			
Review: EG			
Appr: JL	Part Number: C5S X1 Series		
Page: 1/4 Date: April 18, 2008			

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Series	С	Parameter
Package	55	5.0 x 3.2 mm
Frequency	- 8.000 to 150.000	MHz
	-	
	10	10 pF
	12	12 pF
	16	16 pF
Load Capacitane	ce 18	18 pF
	20	20 pF
	32	32 pF
	S	20 pF 32 pF Series
	-	
Frequency Tolerand	ce 50	±50 PPM
Frequency Stabili	ty 100	±100 PPM
	-	
Mode of Oscillation	See Notes	
	3	±50 PPM ±100 PPM Fundamental Third Overtone
	•	
Temperature Rang	ge X1	-40 to +125 °C
Daakaair		Tano and Pool
Packagir		Tape and Ree

Part Number Example: C5S-40.000-18-50100-X1-R

C5S: 5.0 x 3.2 mm SMD Seam Sealed Package

40.000 MHz Nominal Frequency

18 pF Load Capacitance

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

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

R: Tape and Reel Packaging

Notes:

- 1- Fundamental mode does not need to be included in Part Number description.
- 2- Othe Load Capacitances are availble than those listed in Part Number table above.
- 3- Product is shipped in Tape and Reel configuration. Each reel contains 1000 pieces.
- 4- Quantities less than 1000 are shipped bulk in ESD pouches.
- 5- Specification subject to change without notice

Page:	4/4	Date: A	opril 18, 2008	P/N:	C5S X1 Series	