

CERAMIC RESONATOR (CERALOCK®)



Chip Ceramic Resonator **CSAC/CSACS** Series (CERALOCK®)

Wide range of chip CERALOCK® is now available.

This diverse series owes its development to MURATA's package technology expertise and original mass production techniques. It enables high-density mounting and further miniaturization of electronic equipment.

FEATURES

1. The series is available in a wide frequency range.
2. The resonators are extremely small and have a low profile (CSACS series).
3. No adjustment is necessary for oscillation circuits.

APPLICATIONS

1. Clock oscillators for microprocessors.
2. Electronic control circuits for small electronic equipment.
3. Automotive electronics
4. DTMF generators for cordless telephones.



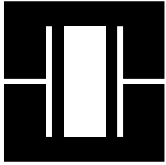
SPECIFICATIONS

Item \ Type	CSAC Series		CSACS Series	
	CSAC□MGC/MGCM	CSACS□MT	CSACS□MX040	
Frequency Range	1.80–6.00MHz	6.01–13.0MHz	14.00–60.00MHz	
Oscillation Frequency Initial Tolerance	±0.5%	±0.5%	±0.5%	
Oscillation Frequency Temperature Stability※1	±0.3%	±0.5%	±0.3%	
Aging※2	±0.3%	±0.5%	±0.3%	
Oscillation Frequency Measuring Circuit				IC :1/6CD4069UBE×2※3 V _{DD} :5V (MT Series:12V) X :Chip CERALOCK®

※1 At -20 to +80°C

※2 For 10 years at room temperature

※3 TC74HCU04 is used as the standard circuit for the MX040 series.



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■ DIMENSIONS/STANDARD LAND PATTERN (in mm tol.:±0.3mm)

Frequency	1.80—6.00MHz	6.01—13.0MHz	14.00—60.00MHz
Type	CSAC□MGC/MGCM	CSACS□MT	CSACS□MX040
Dimensions	<p>(MGCM)</p> <p>(MGC)</p>	<p>※Thickness varies with frequency.</p>	
Standard Land Pattern			

■ THE STABILITY OF OSCILLATION FREQUENCY WITH TEMPERATURE VARIATION

