

CERAMIC RESONATOR



Chip Ceramic Resonator CSTC/CSTCC/CSTCV Series

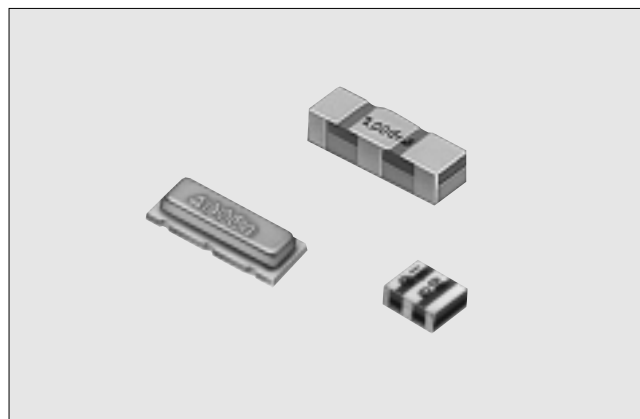
Chip CERALOCK[®] with built-in load capacitance in an extremely small package.

MURATA's package technology expertise has enabled the development of the Chip CERALOCK[®] with built-in load capacitance.

High-density mounting can be realized because of the small package and the elimination of the need for an external load capacitor.

■FEATURES

1. Oscillation circuits do not require external load capacitors.
2. The series is available in a wide frequency range.
3. The resonators are extremely small and have a low profile.
4. No adjustment is necessary for oscillation circuits.



■APPLICATIONS

1. Clock oscillators for microprocessors.
2. Electronic control circuits for small electronic equipment such as hand held movie.
3. Audio-visual applications (Camcorder, Remote Controller, etc.)
4. Office automation equipments (DVD, CD-ROM, HDD, FDD, etc.)
5. Automotive electronics.(CSTC/CSTCC series)
6. Dual Tone Multi Frequency (DTMF) generator for cordless telephones.

■SPECIFICATIONS

Type Item	CSTC Series	CSTCC Series	CSTCV Series	
	CSTC□MG	CSTCC□MG	CSTCV□MTJ*6	CSTCV□MXJ040*6
Frequency Range	2.00—3.49MHz	3.50—10.00MHz*1	10.01—13.00MHz	13.50—60.00MHz
Oscillation Frequency Initial Tolerance	±0.5%	±0.5%	±0.5%	±0.5%
Oscillation Frequency Temperature Stability*2	±0.3%	±0.3%	±0.4%	±0.3%
Aging*3	±0.3%	±0.3%	±0.3%	±0.3%
Oscillation Frequency Measuring Circuit	IC :1/6CD4069UBEX2*4 V_{DD} :5V (MTJ series:12V) X :Chip CERALOCK[®]			

*1 Available in several standard frequencies. (ex. 3.58, 3.64, 3.68, 3.84, 4.00, 4.19, 4.91, 5.00, 6.00, 8.00, 10.00MHz)

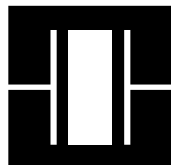
*2 At -20 to +80°C

*3 For 10 years at room temperature

*4 TC74HCU04 is used as the standard circuit for the MXJ040 series.

*5 If connected with incorrect orientation, the above specification may not be guaranteed.

*6 CSTCS series shall be recommended in automotive application.



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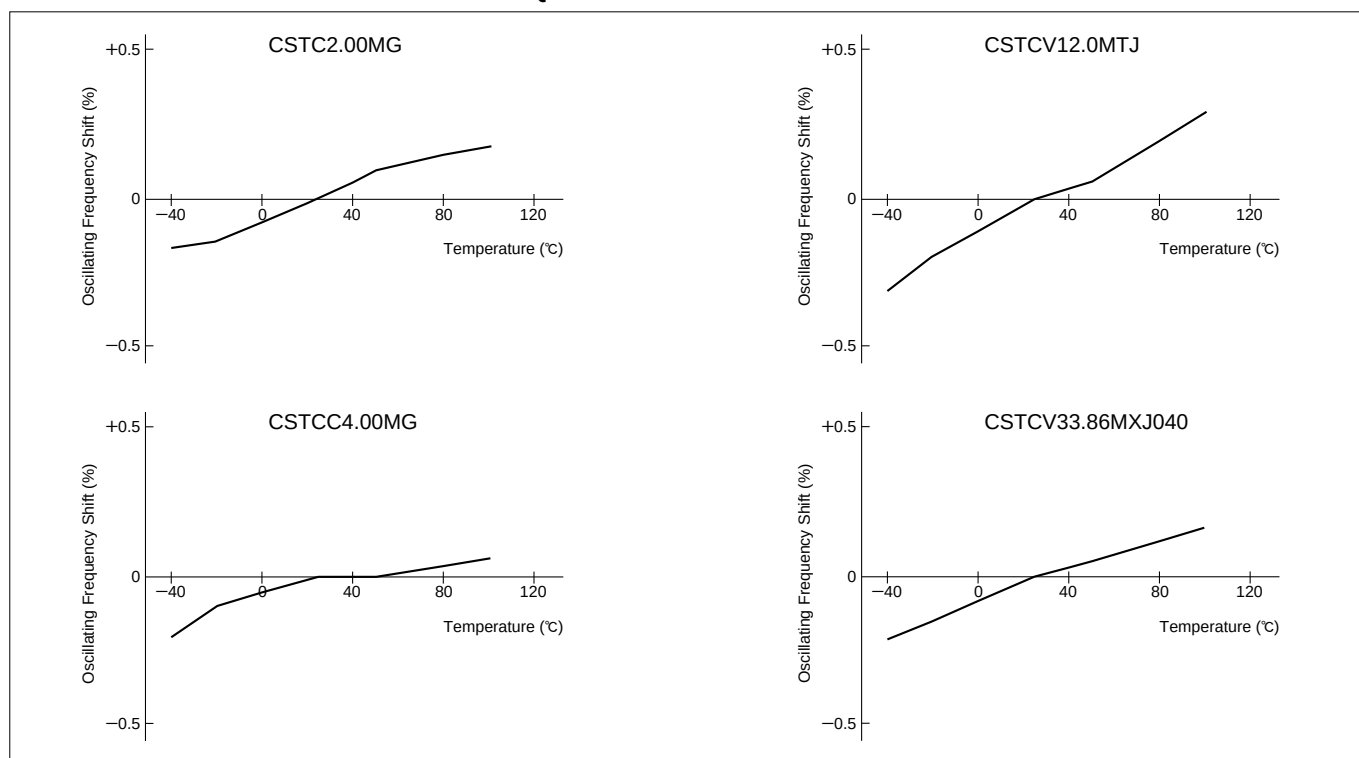


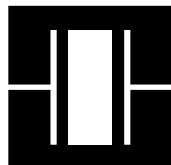
Chip Ceramic Resonator **CSTC/CSTCC/CSTCV** Series

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

Frequency	2.00—3.49MHz	3.50—10.00MHz	10.01—13.00MHz	13.50—60MHz
Type	CSTC□MG	CSTCC□MG	CSTCV□MTJ	CSTCV□MXJ040
Dimensions	8.0±0.2 2.00 C_M* 2.5±0.2 2.0max (2.0) (2.0) (2.0) 1.5±0.5 1.5±0.5 1.5±0.5 4.75±0.5 4.70±0.5 2.2±0.5 1.4±0.3 2.2±0.5 (3) (2) (1)	7.2±0.2 0.45±0.3 400 C_M* 0.3±0.3 0.5±0.05 6.6max 1.55±0.05 (0.45) (0.45) (0.45) (3) (2) (1) 1.2±0.2 1.4±0.2 1.2±0.2 2.5±0.1 2.5±0.1 1.1±0.1	3.7±0.2 16.00 C_M* 1.2±0.2 3.1±0.2 (0.7) (0.9) (0.7) (3) (2) (1) 0.6±0.3 0.7±0.3 0.6±0.3 *Thickness varies with frequencies.	0.7±0.3 0.9±0.3 0.7±0.3 1.5±0.2 1.5±0.2 1.85±0.3
Standard Land Pattern	1.6 1.4 1.6 1.4 1.6 3.5-4.5 2.6 2.6	1.2 1.2 1.4 1.2 1.2 3.8-4.4 Land Pattern electrode	0.7 0.7 0.9 0.7 0.7 1.0 0.5 1.0 0.5 1.5 1.5 3.1±0.2	

■ THE STABILITY OF OSCILLATION FREQUENCY WITH TEMPERATURE VARIATION

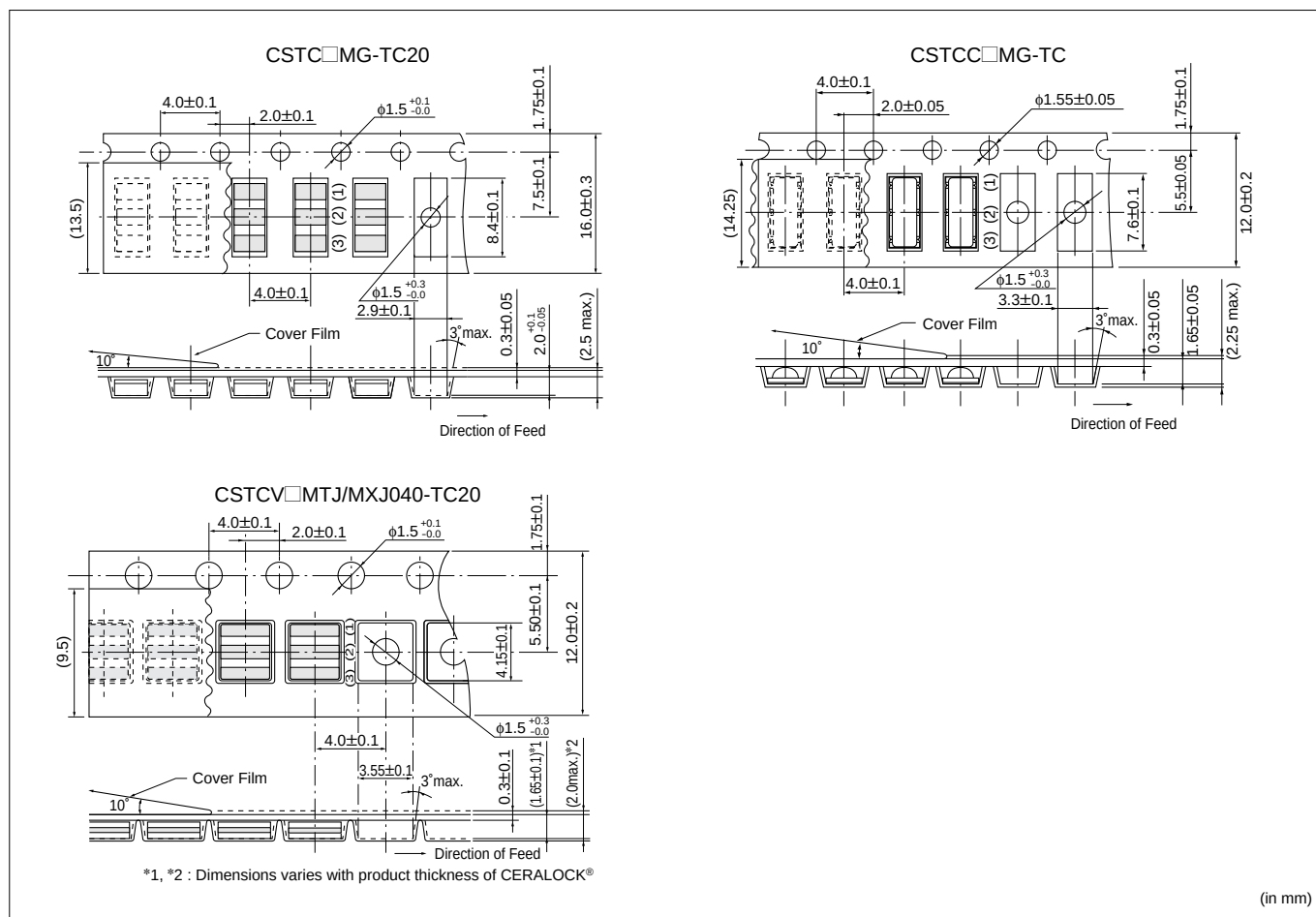




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■ DIMENSIONS OF PLASTIC TAPE

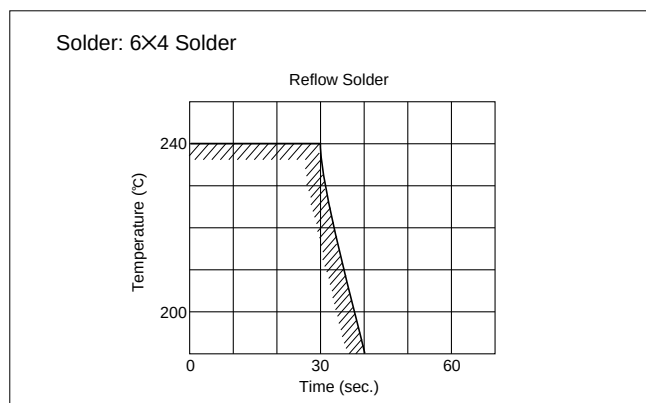


■ APPLICATIONS

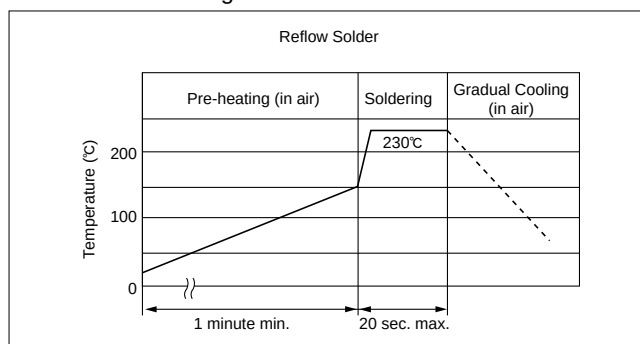
1. Soldering Conditions

● Soldering Temperature and Time

Solder within the temperature and time combinations illustrated by the slanted lines in the following graph. If soldering is repeated, please note that the allowed time is the accumulated time.



● Standard Soldering Conditions



● Soldering Method

Soldering conditions : Soldering iron temperature 270°C
Soldering time less than 3 seconds

2. Cleaning Conditions

Please contact us concerning cleaning method before use. For protection of ozone layer, we also investigate the non-ODC cleaning process for our devices. For more details, please contact us before use.