

## ● Part Numbering

### CERALOCK® (MHz)

(Global Part Number) 

CS	T	CV	16M0	X53	***	-R0
①	②	③	④	⑤	⑥	⑦

#### ① Product ID

Product ID	
CS	Ceramic Resonators

#### ② Frequency/Capacitance

Code	Frequency/Capacitance
A	MHz No capacitance built-in
T	MHz Built-in Capacitance

#### ③ Structure/Size

Code	Structure/Size
LA	Lead Type
LS	Round Lead Type
CC	Cap Chip Type
CR/CE/CG	Small-cap Chip Type
CV	Monolithic Chip Type
CW	Small Monolithic Chip Type

#### ④ Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (MHz).  
Decimal point is expressed by capital letter "M".

#### ⑤ Design

Code	Design
G□□	Thickness Shear mode
TV□□	Thickness Expander mode
X□□	Thickness Expander mode (3rd overtone)

□□ indicates initial frequency tolerance and load capacity.

### CERALOCK® (kHz)

(Global Part Number) 

CS	B	FB	1M00	J58	***	-R1
①	②	③	④	⑤	⑥	⑦

#### ① Product ID

Product ID	
CS	Ceramic Resonators

#### ② Frequency/Capacitance

Code	Frequency/Capacitance
B	kHz No capacitance built-in

#### ③ Structure/Size

Code	Structure/Size
LA	Two-Terminal Lead Type
FB	SMD Type

#### ④ Nominal Center Frequency

Expressed by four-digit alphanumerics. The unit is in hertz (Hz).  
Capital letter "K" following three figures expresses the unit of "kHz".

#### ⑥ Individual Specification

Code	Individual Specification
***	Three-digit alphanumerics express "Individual Specification".

With standard products, "⑥ Individual Specification" is omitted, and "⑦ Package Specification Code" is carried up.

#### ⑦ Packaging

Code	Packaging
-B0	Bulk
-A0	Radial Taping H <sub>0</sub> =18mm
-A1	Radial Taping H <sub>0</sub> =16mm
-R0	Plastic Taping ø=180mm
-R1	Plastic Taping ø=330mm

Radial taping is applied to lead type and plastic taping to chip type.

#### ⑤ Design

Code	Design
E□□	Area Expansion mode
J□□	Area Expansion mode (Closed Type)

□□ indicates initial frequency tolerance and load capacitance.

#### ⑥ Individual Specification

Code	Individual Specification
***	Three-digit alphanumerics express "Individual Specification".

With standard products, "⑥ Individual Specification" is omitted, and "⑦ Package Specification Code" is carried up.

#### ⑦ Packaging

Code	Packaging
-B0	Bulk
-R1	Plastic Taping ø=330mm

# Ceramic Resonators (CERALOCK<sup>®</sup>)



## Chip Type Three-Terminals CSTCC/E/G/R/V/W 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 capacitors.  
High-density mounting can be realized because of the small package and the elimination of the need for an external load capacitor.

### ■ Features

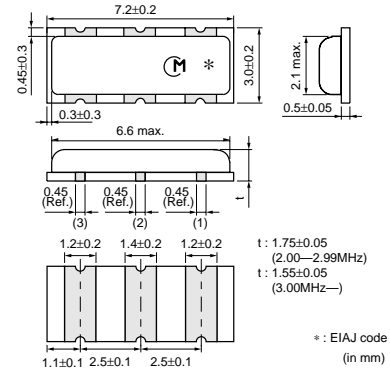
1. Oscillation circuits do not require external load capacitors.
2. The series is available in a wide frequency range.
3. The resonators are extremely small and have a low profile.
4. No adjustment is necessary for oscillation circuits.

### ■ Applications

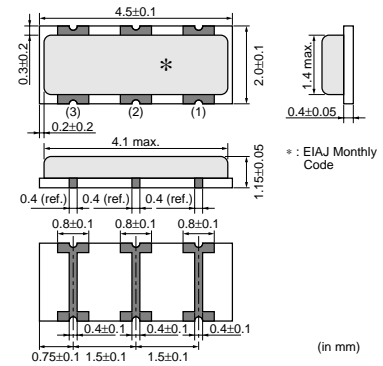
- Clock oscillators for microprocessors.
- Electronic control circuits for small electronic equipment such as hand held movie.
- Audio-visual applications (Camcorder, Remote Controller, etc.)
- Office automation equipments (DVD, CD-ROM, HDD, FDD, etc.)
- Automotive electronics. (CSTCC\_G\_A series, CSTCR\_G\_A series, CSTCE\_G\_A series, CSTCV\_X\_Q series)
- Dual Tone Multi Frequency (DTMF) generator for cordless telephones.



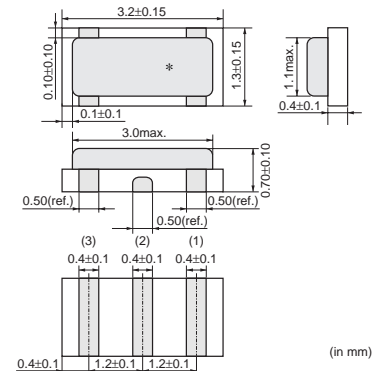
CSTCC\_G(A)  
2.00-3.99MHz



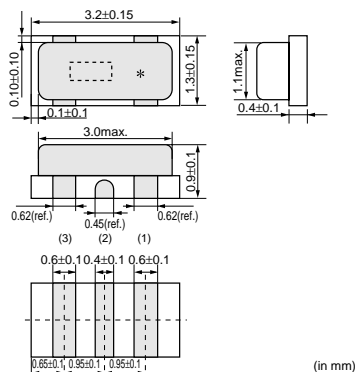
CSTCR\_G(A)  
4.00-7.99MHz



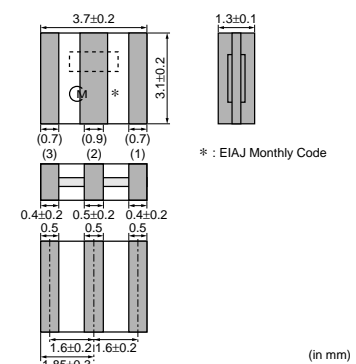
CSTCE\_G(A)  
8.00-12.50MHz



CSTCE\_V  
12.51-19.99MHz



CSTCV\_X\_Q  
14.70-70.00MHz



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