

● Part Numbering

CERALOCK® (MHz)

(Global Part Number) 

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

① Product ID

Product ID	
<b>CS</b>	Ceramic Resonators

② Frequency/Capacitance

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

③ Structure/Size

Code	Structure/Size
<b>LA</b>	Lead Type
<b>LS</b>	Round Lead Type
<b>CC</b>	Cap Chip Type
<b>CR/CE/CG</b>	Small-cap Chip Type
<b>CV</b>	Monolithic Chip Type
<b>CW</b>	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
<b>G□□</b>	Thickness Shear mode
<b>T/□□</b>	Thickness Expander mode
<b>X□□</b>	Thickness Expander mode (3rd overtone)

□□ indicates initial frequency tolerance and load capacity.

CERALOCK® (kHz)

(Global Part Number) 

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

① Product ID

Product ID	
<b>CS</b>	Ceramic Resonators

② Frequency/Capacitance

Code	Frequency/Capacitance
<b>B</b>	kHz No capacitance built-in

③ Structure/Size

Code	Structure/Size
<b>LA</b>	Two-Terminal Lead Type
<b>FB</b>	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
<b>***</b>	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
<b>-B0</b>	Bulk
<b>-A0</b>	Radial Taping H <sub>0</sub> =18mm
<b>-A1</b>	Radial Taping H <sub>0</sub> =16mm
<b>-R0</b>	Plastic Taping ø=180mm
<b>-R1</b>	Plastic Taping ø=330mm

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

⑤ Design

Code	Design
<b>E□□</b>	Area Expansion mode
<b>J□□</b>	Area Expansion mode (Closed Type)

□□ indicates initial frequency tolerance and load capacitance.

⑥ Individual Specification

Code	Individual Specification
<b>***</b>	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
<b>-B0</b>	Bulk
<b>-R1</b>	Plastic Taping ø=330mm

# Ceramic Resonators (CERALOCK®)



## 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

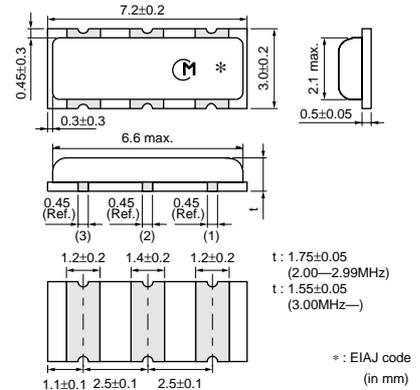
1. Oscillation circuits do not require external load capacitors.
2. The series is available in a wide frequency range.
3. The resonators are extremely small and have a low profile.
4. No adjustment is necessary for oscillation circuits.

### ■ Applications

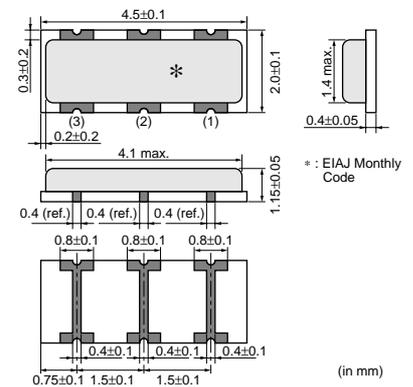
- Clock oscillators for microprocessors.
- Electronic control circuits for small electronic equipment such as hand held movie.
- Audio-visual applications (Camcorder, Remote Controller, etc.)
- Office automation equipments (DVD, CD-ROM, HDD, FDD, etc.)
- Automotive electronics. (CSTCC\_G\_A series, CSTCR\_G\_A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



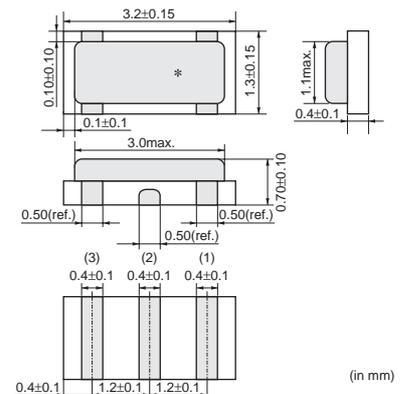
CSTCC\_G(A)  
2.00-3.99MHz



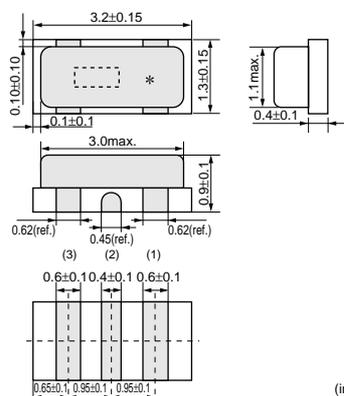
CSTCR\_G(A)  
4.00-7.99MHz



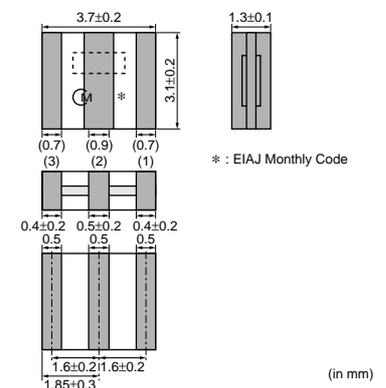
CSTCE\_G(A)  
8.00-12.50MHz



CSTCE\_V  
12.51-19.99MHz



CSTCV\_X\_Q  
14.70-70.00MHz



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