

# MURATA Ceramic Resonators



## CERAMIC RESONATORS (CERALOCK®) CHIP TYPE THREE-TERMINALS CSTCC/E/R/W SERIES

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:

- Oscillation circuits do not require external load capacitors.
- The resonators are extremely small and have a low profile.
- No adjustment is necessary for oscillation circuits.

### Application:

- Clock oscillators for microprocessors.
- Electronic control circuits for small electronic equipment
- Audio-visual applications (Camcorder, Remote Controller, etc.)
- Office automation equipment (DVD, CD-ROM, HDD, FDD, etc.)

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	Murata Part No.	Fig.	Oscillating Frequency (MHz)	Tolerance ±	Temperature Range (°C)	Temperature Stability %	Price Each			Reel Qty.	Price Per Piece
							1	50	100		
<b>CSTCC-G Series Commercial</b>											
81-CSTCC2.0MG-TC	CSTCC2M00G53-R0	A	2.00	0.5%	-20 to +80	±0.3	.68	.48	.39	2000	.322
81-CSTCC3.58MG-TC	CSTCC3M58G53-R0	A	3.58	0.5%	-20 to +80	±0.3	.55	.39	.316	2000	.26
<b>CSTCR-G Series Commercial</b>											
81-CSTCR4M00G53	CSTCR4M00G53-R0	B	4.00	0.5%	-20 to +80	±0.2	.45	.32	.259	3000	.227
81-CSTCR4M19G53	CSTCR4M19G53-R0	B	4.19	0.5%	-20 to +80	±0.2	.43	.307	.248	3000	.201
81-CSTCR4M91G53	CSTCR4M91G53-R0	B	4.91	0.5%	-20 to +80	±0.2	.46	.327	.262	3000	.215
81-CSTCR5M00G53	CSTCR5M00G53-R0	B	5.00	0.5%	-20 to +80	±0.2	.43	.33	.248	3000	.22
81-CSTCR6M00G53	CSTCR6M00G53-R0	B	6.00	0.5%	-20 to +80	±0.2	.45	.32	.259	3000	.227
<b>CSTCE-G Series Commercial</b>											
81-CSTCE8M00G55-R0	CSTCE8M00G55-R0	C	8.00	0.5%	-20 to +80	±0.2	.41	.35	.286	3000	.251
81-CSTCE10M0G55-R0	CSTCE10M0G55-R0	C	10.00	0.5%	-20 to +80	±0.2	.41	.35	.286	3000	.251
81-CSTCE12M0G55-R0	CSTCE12M0G55-R0	C	12.00	0.5%	-20 to +80	±0.2	.41	.35	.286	3000	.251
81-CSTCE16M0V53-R0	CSTCE16M0V53-R0	C	16.00	0.5%	-20 to +80	±0.2	.48	.41	.335	3000	.276
81-CSTCE20M0V53-R0	CSTCE20M0V53-R0	C	20.00	0.5%	-20 to +80	±0.2	.48	.41	.335	3000	.276
<b>CSTCW-X Series Commercial</b>											
81-CSTCW24M0X53-R0	CSTCW24M0X53-R0	D	24.00	0.5%	-20 to +80	±0.2	.20	.17	.14	3000	.114
81-CSTCW48M0X51-R0	CSTCW48M0X51-R0	D	48.00	0.5%	-20 to +80	±0.2	.20	.17	.14	3000	.114

## LEAD TYPE THREE-TERMINALS CSTLS SERIES

Murata's ceramic resonator, "CERALOCK®" has been widely applied as the most suitable component for clock oscillators in a broad range of microprocessors.

### Features:

- Oscillation circuits do not require external load capacitors.
- The resonators are compact, light weight and exhibit superior shock resistance performance.
- They enable the design of oscillator circuits requiring no adjustment.

### Application:

- DTMF generators
- Clock oscillators for microcomputers
- Remote control units
- Automated office equipment

For quantities of 2000 and up, call for quote.

MOUSER STOCK NO.	Murata Part No.	Fig.	Oscillating Frequency (MHz)	Tolerance ±	Temperature Range (°C)	Temperature Stability %	Price Each				
							1	50	100	500	1000
<b>CSTLS Series Commercial</b>											
81-CSTS0358MG03	CSTLS3M58G53-B0	E	3.58	0.5%	-20 to +80	±0.2	.22	.19	.152	.137	.126
81-CSTS0400MG03	CSTLS4M00G53-B0	E	4.00	0.5%	-20 to +80	±0.2	.21	.18	.146	.132	.121
81-CSTLS4M19G53-B0	CSTLS4M19G53-B0	E	4.19	0.5%	-20 to +80	±0.2	.22	.19	.152	.137	.126
81-CSTLS5M00G53-B0	CSTLS5M00G53-B0	E	5.00	0.5%	-20 to +80	±0.2	.19	.17	.136	.122	.112
81-CSTS0600MG03	CSTLS6M00G53-B0	E	6.00	0.5%	-20 to +80	±0.2	.22	.19	.152	.137	.126
81-CSTS1000MG03	CSTLS10M0G53-B0	E	10.00	0.5%	-20 to +80	±0.2	.23	.20	.16	.144	.133
81-CSTLS16M0X53-B0	CSTLS16M0X53-B0	F	16.00	0.5%	-20 to +80	±0.2	.65	.56	.44	.39	.37
81-CSTLS20M0X53-B0	CSTLS20M0X53-B0	F	20.00	0.5%	-20 to +80	±0.2	.46	.40	.32	.288	.266

## LEAD TYPE TWO-TERMINAL CSBLA SERIES

The CSBLA series ceramic resonator owe their development to Murata's innovative expert technologies and the application of mass production techniques typically utilized in the manufacture of piezoelectric ceramic components. Because of their high mechanical Q and consistent high quality, the CSBLA series are ideally suited to microprocessor and remote control unit applications.

### Features:

- The series comprises fixed, tuned, solid-state devices
- The resonators are miniature, light weight and exhibit excellent shock resistance
- Oscillating circuits requiring no adjustment can be designed by utilizing these resonators in conjunction with transistors or appropriate ICs.

### Application:

- Square-wave and sine-wave oscillator
- Clock generator for microprocessors
- Remote control systems

For quantities of 2000 and up, call for quote.

MOUSER STOCK NO.	Murata Part No.	Fig.	Oscillating Frequency (KHz)	Tolerance ±	Temperature Range (°C)	Temperature Stability %	Price Each				
							1	50	100	500	1000
<b>Washable</b>											
81-CSB400J	CSBLA400KJ5E-B0	G	400	0.5%	-20 to +80	±0.3	1.22	.98	.79	.72	.68
81-CSB480J	CSBLA480KJ58-B0	G	480	0.5%	-20 to +80	±0.3	.81	.70	.54	.48	.46
81-CSB800J	CSBLA800KJ58-B0	G	800	0.5%	-20 to +80	±0.3	.74	.66	.463	.417	.384
81-CSB1000J	CSBLA1M00KJ58-B0	G	1000	0.5%	-20 to +80	±0.3	.74	.602	.482	.421	.388
<b>Non-Washable</b>											
81-CSB400P	CSBLA400KECE-B0	H	400	2KHz	-20 to +80	±0.3	.50	.437	.349	.314	.299
81-CSB455E	CSBLA455KEC8-B0	I	455	2KHz	-20 to +80	±0.3	.39	.348	.246	.225	.21
81-CSB480E	CSBLA480KEC8-B0	I	480	2KHz	-20 to +80	±0.3	.45	.393	.314	.283	.261
81-CSB500E	CSBLA500KEC8-B0	I	500	2KHz	-20 to +80	±0.3	.60	.522	.417	.375	.346
81-CSB540E	CSBLA540KEC8-B0	I	540	2KHz	-20 to +80	±0.3	.56	.485	.388	.339	.32

