

# Ceramic Capacitors

## Low ESL Flip SMD

## C Series

### FEATURES

- Positioning the electrodes along the length of the chip device, reduces ESR and ESL components over conventional products.
- Provides high frequency noise suppression effect because the resonating frequency is high.
- Target application : IC decoupling.

### APPLICATIONS

Personal computers, word processors, portable telephones, cordless telephones, camcorders, etc.

### PRODUCT IDENTIFICATION

C	1220	JB	1E	104	K	□
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series name

(2) Dimensions L×W

1220	1.25×2.0mm
1632	1.6×3.2mm

(3) Capacitance temperature characteristics  
Class 2

Temperature characteristics	Capacitance change	Temperature range
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C

(4) Rated voltage Edc

1H	50V
1E	25V
1C	16V
1A	10V
0J	6.3V

(5) Nominal capacitance

The capacitance is expressed in three digit codes and in units of pico farads (pF).

The first and second digits identify the first and second significant figures of the capacitance.

The third digit identifies the multiplier.

R designates a decimal point.

104	10000pF
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(6) Capacitance tolerance

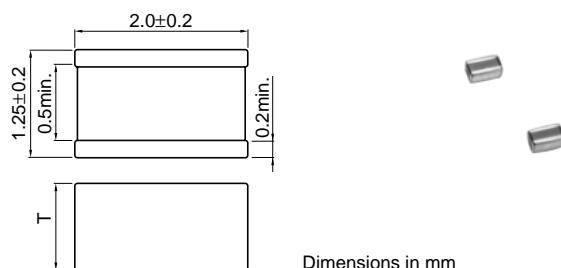
K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

### C1220 (EIA:CC0508) TYPE

### SHAPES AND DIMENSIONS



Dimensions in mm

### CAPACITANCE RANGES:

#### CLASS 2

#### TEMPERATURE CHARACTERISTICS: X7R(±15%)

##### RATED VOLTAGE Edc:50V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
10000	±10%	0.85±0.15	C1220X7R1H103K
	±20%	0.85±0.15	C1220X7R1H103M
22000	±10%	0.85±0.15	C1220X7R1H223K
	±20%	0.85±0.15	C1220X7R1H223M
47000	±10%	0.85±0.15	C1220X7R1H473K
	±20%	0.85±0.15	C1220X7R1H473M

##### RATED VOLTAGE Edc:25V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
100000	±10%	0.85±0.15	C1220X7R1E104K
	±20%	0.85±0.15	C1220X7R1E104M

##### RATED VOLTAGE Edc:16V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
220000	±10%	0.85±0.15	C1220X7R1C224K
	±20%	0.85±0.15	C1220X7R1C224M

#### TEMPERATURE CHARACTERISTICS: X5R(±15%)

##### RATED VOLTAGE Edc:10V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
470000	±10%	0.85±0.15	C1220X5R1A474K
	±20%	0.85±0.15	C1220X5R1A474M

##### RATED VOLTAGE Edc:6.3V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
1000000	±10%	0.85±0.15	C1220X5R0J105K
[1μF]	±20%	0.85±0.15	C1220X5R0J105M

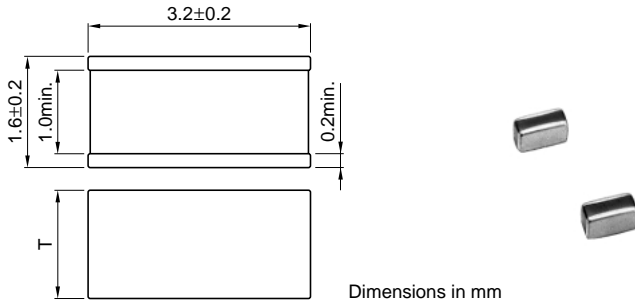
- For more information about products with other capacitance or other data, please contact us.

# Ceramic Capacitors

Low ESL Flip  
SMD

## C Series

### C1632 (EIA:CC0612) TYPE SHAPES AND DIMENSIONS



### CAPACITANCE RANGES:

#### CLASS 2

### TEMPERATURE CHARACTERISTICS: X7R( $\pm 15\%$ )

RATED VOLTAGE Edc: 50V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
10000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X7R1H103K
	$\pm 20\%$	$0.7 \pm 0.1$	C1632X7R1H103M
22000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X7R1H223K
	$\pm 20\%$	$0.7 \pm 0.1$	C1632X7R1H223M
47000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X7R1H473K
	$\pm 20\%$	$0.7 \pm 0.1$	C1632X7R1H473M
100000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X7R1H104K
	$\pm 20\%$	$0.7 \pm 0.1$	C1632X7R1H104M
220000	$\pm 10\%$	$1.15 \pm 0.1$	C1632X7R1H224K
	$\pm 20\%$	$1.15 \pm 0.1$	C1632X7R1H224M

RATED VOLTAGE Edc: 25V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
220000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X7R1E224K
	$\pm 20\%$	$0.7 \pm 0.1$	C1632X7R1E224M
470000	$\pm 10\%$	$1.15 \pm 0.1$	C1632X7R1E474K
	$\pm 20\%$	$1.15 \pm 0.1$	C1632X7R1E474M

RATED VOLTAGE Edc: 16V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
470000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X7R1C474K
	$\pm 20\%$	$0.7 \pm 0.1$	C1632X7R1C474M
1000000	$\pm 10\%$	$1.15 \pm 0.1$	C1632X7R1C105K
	$\pm 20\%$	$1.15 \pm 0.1$	C1632X7R1C105M

### TEMPERATURE CHARACTERISTICS: X5R( $\pm 15\%$ )

RATED VOLTAGE Edc: 10V

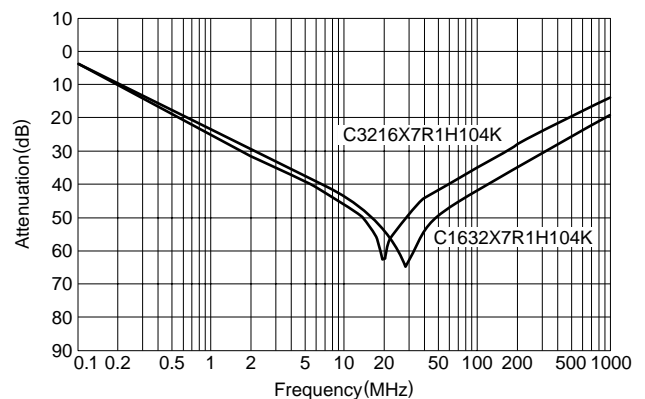
Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
1000000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X5R1A105K
[1 $\mu$ F]	$\pm 20\%$	$0.7 \pm 0.1$	C1632X5R1A105M
2200000	$\pm 10\%$	$1.15 \pm 0.15$	C1632X5R1A225K
[2.2 $\mu$ F]	$\pm 20\%$	$1.15 \pm 0.15$	C1632X5R1A225M

RATED VOLTAGE Edc: 6.3V

Capacitance (pF)	Tolerance	Thickness (mm)	Part No.
2200000	$\pm 10\%$	$0.7 \pm 0.1$	C1632X5R0J225K
[2.2 $\mu$ F]	$\pm 20\%$	$0.7 \pm 0.1$	C1632X5R0J225M
4700000	$\pm 10\%$	$1.3 \pm 0.15$	C1632X5R0J475K
[4.7 $\mu$ F]	$\pm 20\%$	$1.3 \pm 0.15$	C1632X5R0J475M

### TYPICAL ELECTRICAL CHARACTERISTICS

#### ATTENUATION vs. FREQUENCY CHARACTERISTICS



• For more information about products with other capacitance or other data, please contact us.

• All specifications are subject to change without notice.