

# Multilayer Ceramic Chip Capacitors

## Mid voltage

### C series

**Type:** C1608[EIA CC0603]  
C2012[EIA CC0805]  
C3216[EIA CC1206]  
C3225[EIA CC1210]  
C4532[EIA CC1812]  
C5750[EIA CC2220]

**Issue date:** April 2007

- All specifications are subject to change without notice.
  - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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# REMINDERS

Please read this before using the product.

## SAFETY REMINDERS

### REMINDERS

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# Mid Voltage Multilayer Ceramic Chip Capacitors

## C Series C1608 (EIA CC0603) Type

Conformity to RoHS Directive

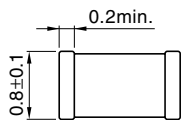
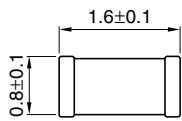
### FEATURES

- The unique design structure for mid voltage enables a compact size with high voltage withstanding.
- Rated voltage Edc: 100 and 250V.

### APPLICATIONS

Snubber circuits for switching power supply, ringer circuits for telephone and modem, or other general high voltage circuits.

### SHAPES AND DIMENSIONS



Dimensions in mm



### PRODUCT IDENTIFICATION

C	1608	CH	2E	101	K	□
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series name

(2) Dimensions

1608	1.6×0.8mm
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(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
CH	0±60ppm/°C	-25 to +85°C
C0G	0±30ppm/°C	-55 to +125°C

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
JB	±10%	-25 to +85°C
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C

(4) Rated voltage Edc

2A	100V
2E	250V

(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.

101	100pF
102	1,000pF
333	33,000pF

(6) Capacitance tolerance

K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

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**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C), C0G(0±30ppm/°C)**

 RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
100	±5%	0.80±0.10	C1608CH2E101J	C1608C0G2E101J
	±10%	0.80±0.10	C1608CH2E101K	C1608C0G2E101K
120	±5%	0.80±0.10	C1608CH2E121J	C1608C0G2E121J
	±10%	0.80±0.10	C1608CH2E121K	C1608C0G2E121K
150	±5%	0.80±0.10	C1608CH2E151J	C1608C0G2E151J
	±10%	0.80±0.10	C1608CH2E151K	C1608C0G2E151K
180	±5%	0.80±0.10	C1608CH2E181J	C1608C0G2E181J
	±10%	0.80±0.10	C1608CH2E181K	C1608C0G2E181K
220	±5%	0.80±0.10	C1608CH2E221J	C1608C0G2E221J
	±10%	0.80±0.10	C1608CH2E221K	C1608C0G2E221K
270	±5%	0.80±0.10	C1608CH2E271J	C1608C0G2E271J
	±10%	0.80±0.10	C1608CH2E271K	C1608C0G2E271K
330	±5%	0.80±0.10	C1608CH2E331J	C1608C0G2E331J
	±10%	0.80±0.10	C1608CH2E331K	C1608C0G2E331K
390	±5%	0.80±0.10	C1608CH2E391J	C1608C0G2E391J
	±10%	0.80±0.10	C1608CH2E391K	C1608C0G2E391K
470	±5%	0.80±0.10	C1608CH2E471J	C1608C0G2E471J
	±10%	0.80±0.10	C1608CH2E471K	C1608C0G2E471K
560	±5%	0.80±0.10	C1608CH2E561J	C1608C0G2E561J
	±10%	0.80±0.10	C1608CH2E561K	C1608C0G2E561K
680	±5%	0.80±0.10	C1608CH2E681J	C1608C0G2E681J
	±10%	0.80±0.10	C1608CH2E681K	C1608C0G2E681K

 RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
100	±5%	0.80±0.10	C1608CH2A101J	C1608C0G2A101J
	±10%	0.80±0.10	C1608CH2A101K	C1608C0G2A101K
120	±5%	0.80±0.10	C1608CH2A121J	C1608C0G2A121J
	±10%	0.80±0.10	C1608CH2A121K	C1608C0G2A121K
150	±5%	0.80±0.10	C1608CH2A151J	C1608C0G2A151J
	±10%	0.80±0.10	C1608CH2A151K	C1608C0G2A151K
180	±5%	0.80±0.10	C1608CH2A181J	C1608C0G2A181J
	±10%	0.80±0.10	C1608CH2A181K	C1608C0G2A181K
220	±5%	0.80±0.10	C1608CH2A221J	C1608C0G2A221J
	±10%	0.80±0.10	C1608CH2A221K	C1608C0G2A221K
270	±5%	0.80±0.10	C1608CH2A271J	C1608C0G2A271J
	±10%	0.80±0.10	C1608CH2A271K	C1608C0G2A271K
330	±5%	0.80±0.10	C1608CH2A331J	C1608C0G2A331J
	±10%	0.80±0.10	C1608CH2A331K	C1608C0G2A331K
390	±5%	0.80±0.10	C1608CH2A391J	C1608C0G2A391J
	±10%	0.80±0.10	C1608CH2A391K	C1608C0G2A391K
470	±5%	0.80±0.10	C1608CH2A471J	C1608C0G2A471J
	±10%	0.80±0.10	C1608CH2A471K	C1608C0G2A471K
560	±5%	0.80±0.10	C1608CH2A561J	C1608C0G2A561J
	±10%	0.80±0.10	C1608CH2A561K	C1608C0G2A561K
680	±5%	0.80±0.10	C1608CH2A681J	C1608C0G2A681J
	±10%	0.80±0.10	C1608CH2A681K	C1608C0G2A681K
820	±5%	0.80±0.10	C1608CH2A821J	C1608C0G2A821J
	±10%	0.80±0.10	C1608CH2A821K	C1608C0G2A821K
1000	±5%	0.80±0.10	C1608CH2A102J	C1608C0G2A102J
	±10%	0.80±0.10	C1608CH2A102K	C1608C0G2A102K

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: JB( $\pm 10\%$ ), X5R/X7R( $\pm 15\%$ )**RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
1,000	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A102K	C1608X5R2A102K	C1608X7R2A102K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A102M	C1608X5R2A102M	C1608X7R2A102M
1,500	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A152K	C1608X5R2A152K	C1608X7R2A152K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A152M	C1608X5R2A152M	C1608X7R2A152M
2,200	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A222K	C1608X5R2A222K	C1608X7R2A222K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A222M	C1608X5R2A222M	C1608X7R2A222M
3,300	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A332K	C1608X5R2A332K	C1608X7R2A332K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A332M	C1608X5R2A332M	C1608X7R2A332M
4,700	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A472K	C1608X5R2A472K	C1608X7R2A472K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A472M	C1608X5R2A472M	C1608X7R2A472M
6,800	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A682K	C1608X5R2A682K	C1608X7R2A682K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A682M	C1608X5R2A682M	C1608X7R2A682M
10,000	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A103K	C1608X5R2A103K	C1608X7R2A103K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A103M	C1608X5R2A103M	C1608X7R2A103M
15,000	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A153K	C1608X5R2A153K	C1608X7R2A153K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A153M	C1608X5R2A153M	C1608X7R2A153M
22,000	$\pm 10\%$	0.80 $\pm$ 0.10	C1608JB2A223K	C1608X5R2A223K	C1608X7R2A223K
	$\pm 20\%$	0.80 $\pm$ 0.10	C1608JB2A223M	C1608X5R2A223M	C1608X7R2A223M

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

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# C Series C2012 (EIA CC0805) Type

Conformity to RoHS Directive

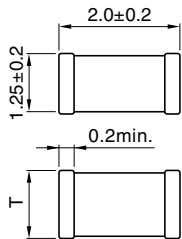
## FEATURES

- The unique design structure for mid voltage enables a compact size with high voltage withstanding.
- Rated voltage Edc: 100 and 250V.

## APPLICATIONS

Snubber circuits for switching power supply, ringer circuits for telephone and modem, or other general high voltage circuits.

## SHAPES AND DIMENSIONS



Dimensions in mm



## PRODUCT IDENTIFICATION

C 2012 CH 2E 102 J □  
(1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimensions

2012	2.0×1.25mm
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(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
CH	0±60ppm/°C	-25 to +85°C
C0G	0±30ppm/°C	-55 to +125°C

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
JB	±10%	-25 to +85°C
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C

(4) Rated voltage Edc

2A	100V
2E	250V

(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.

101	100pF
102	1,000pF
333	33,000pF
474	470,000pF

(6) Capacitance tolerance

J	±5%
K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C), C0G(0±30ppm/°C)**

 RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
820	±5%	0.60±0.10	C2012CH2E821J	C2012C0G2E821J
	±10%	0.60±0.10	C2012CH2E821K	C2012C0G2E821K
1,000	±5%	0.85±0.10	C2012CH2E102J	C2012C0G2E102J
	±10%	0.85±0.10	C2012CH2E102K	C2012C0G2E102K
1,500	±5%	0.85±0.10	C2012CH2E152J	C2012C0G2E152J
	±10%	0.85±0.10	C2012CH2E152K	C2012C0G2E152K
2,200	±5%	1.25±0.10	C2012CH2E222J	C2012C0G2E222J
	±10%	1.25±0.10	C2012CH2E222K	C2012C0G2E222K

 RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
1,000	±5%	0.60±0.10	C2012CH2A102J	C2012C0G2A102J
	±10%	0.60±0.10	C2012CH2A102K	C2012C0G2A102K
1,500	±5%	0.60±0.10	C2012CH2A152J	C2012C0G2A152J
	±10%	0.60±0.10	C2012CH2A152K	C2012C0G2A152K
2,200	±5%	0.85±0.10	C2012CH2A222J	C2012C0G2A222J
	±10%	0.85±0.10	C2012CH2A222K	C2012C0G2A222K
3,300	±5%	1.25±0.10	C2012CH2A332J	C2012C0G2A332J
	±10%	1.25±0.10	C2012CH2A332K	C2012C0G2A332K
4,700	±5%	1.25±0.10	C2012CH2A472J	C2012C0G2A472J
	±10%	1.25±0.10	C2012CH2A472K	C2012C0G2A472K

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: JB(±10%), X5R/X7R(±15%)**

 RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
1,000	±10%	0.85±0.10	C2012JB2E102K	C2012X5R2E102K	C2012X7R2E102K
	±20%	0.85±0.10	C2012JB2E102M	C2012X5R2E102M	C2012X7R2E102M
1,500	±10%	0.85±0.10	C2012JB2E152K	C2012X5R2E152K	C2012X7R2E152K
	±20%	0.85±0.10	C2012JB2E152M	C2012X5R2E152M	C2012X7R2E152M
2,200	±10%	0.85±0.10	C2012JB2E222K	C2012X5R2E222K	C2012X7R2E222K
	±20%	0.85±0.10	C2012JB2E222M	C2012X5R2E222M	C2012X7R2E222M
3,300	±10%	0.85±0.10	C2012JB2E332K	C2012X5R2E332K	C2012X7R2E332K
	±20%	0.85±0.10	C2012JB2E332M	C2012X5R2E332M	C2012X7R2E332M
4,700	±10%	0.85±0.10	C2012JB2E472K	C2012X5R2E472K	C2012X7R2E472K
	±20%	0.85±0.10	C2012JB2E472M	C2012X5R2E472M	C2012X7R2E472M
6,800	±10%	1.25±0.10	C2012JB2E682K	C2012X5R2E682K	C2012X7R2E682K
	±20%	1.25±0.10	C2012JB2E682M	C2012X5R2E682M	C2012X7R2E682M
10,000	±10%	1.25±0.10	C2012JB2E103K	C2012X5R2E103K	C2012X7R2E103K
	±20%	1.25±0.10	C2012JB2E103M	C2012X5R2E103M	C2012X7R2E103M
15,000	±10%	1.25±0.10	C2012JB2E153K	C2012X5R2E153K	C2012X7R2E153K
	±20%	1.25±0.10	C2012JB2E153M	C2012X5R2E153M	C2012X7R2E153M
22,000	±10%	1.25±0.10	C2012JB2E223K	C2012X5R2E223K	C2012X7R2E223K
	±20%	1.25±0.10	C2012JB2E223M	C2012X5R2E223M	C2012X7R2E223M

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## RATED VOLTAGE Edc: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
1,000	±10%	0.85±0.10	C2012JB2A102K	C2012X5R2A102K	C2012X7R2A102K
	±20%	0.85±0.10	C2012JB2A102M	C2012X5R2A102M	C2012X7R2A102M
1,500	±10%	0.85±0.10	C2012JB2A152K	C2012X5R2A152K	C2012X7R2A152K
	±20%	0.85±0.10	C2012JB2A152M	C2012X5R2A152M	C2012X7R2A152M
2,200	±10%	0.85±0.10	C2012JB2A222K	C2012X5R2A222K	C2012X7R2A222K
	±20%	0.85±0.10	C2012JB2A222M	C2012X5R2A222M	C2012X7R2A222M
3,300	±10%	0.85±0.10	C2012JB2A332K	C2012X5R2A332K	C2012X7R2A332K
	±20%	0.85±0.10	C2012JB2A332M	C2012X5R2A332M	C2012X7R2A332M
4,700	±10%	0.85±0.10	C2012JB2A472K	C2012X5R2A472K	C2012X7R2A472K
	±20%	0.85±0.10	C2012JB2A472M	C2012X5R2A472M	C2012X7R2A472M
6,800	±10%	0.85±0.10	C2012JB2A682K	C2012X5R2A682K	C2012X7R2A682K
	±20%	0.85±0.10	C2012JB2A682M	C2012X5R2A682M	C2012X7R2A682M
10,000	±10%	0.85±0.10	C2012JB2A103K	C2012X5R2A103K	C2012X7R2A103K
	±20%	0.85±0.10	C2012JB2A103M	C2012X5R2A103M	C2012X7R2A103M
15,000	±10%	1.25±0.10	C2012JB2A153K	C2012X5R2A153K	C2012X7R2A153K
	±20%	1.25±0.10	C2012JB2A153M	C2012X5R2A153M	C2012X7R2A153M
22,000	±10%	1.25±0.10	C2012JB2A223K	C2012X5R2A223K	C2012X7R2A223K
	±20%	1.25±0.10	C2012JB2A223M	C2012X5R2A223M	C2012X7R2A223M
33,000	±10%	1.25±0.20	C2012JB2A333K	C2012X5R2A333K	C2012X7R2A333K
	±20%	1.25±0.20	C2012JB2A333M	C2012X5R2A333M	C2012X7R2A333M
47,000	±10%	1.25±0.20	C2012JB2A473K	C2012X5R2A473K	C2012X7R2A473K
	±20%	1.25±0.20	C2012JB2A473M	C2012X5R2A473M	C2012X7R2A473M
68,000	±10%	0.85±0.20	C2012JB2A683K	C2012X5R2A683K	C2012X7R2A683K
	±20%	0.85±0.20	C2012JB2A683M	C2012X5R2A683M	C2012X7R2A683M
100,000	±10%	1.25±0.20	C2012JB2A104K	C2012X5R2A104K	C2012X7R2A104K
	±20%	1.25±0.20	C2012JB2A104M	C2012X5R2A104M	C2012X7R2A104M

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

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# C Series C3216 (EIA CC1206) Type

Conformity to RoHS Directive

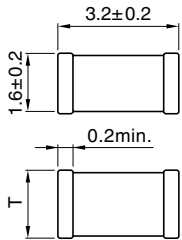
## FEATURES

- The unique design structure for mid voltage enables a compact size with high voltage withstanding.
- Rated voltage Edc: 100, 250 and 630V.

## APPLICATIONS

Snubber circuits for switching power supply, ringer circuits for telephone and modem, or other general high voltage circuits.

## SHAPES AND DIMENSIONS



Dimensions in mm

## PRODUCT IDENTIFICATION

C 3216 CH 2J 101 J □  
 (1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimensions

3216	3.2×1.6mm
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(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
CH	0±60ppm/°C	-25 to +85°C
C0G	0±30ppm/°C	-55 to +125°C

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
JB	±10%	-25 to +85°C
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C

(4) Rated voltage Edc

2A	100V
2E	250V
2J	630V

(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.

101	100pF
102	1,000pF
333	33,000pF
474	470,000pF

(6) Capacitance tolerance

J	±5%
K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
 Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C), C0G(0±30ppm/°C)**
**RATED VOLTAGE E<sub>dc</sub>: 630V**

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
100	±5%	0.60±0.10	C3216CH2J101J	C3216C0G2J101J
	±10%	0.60±0.10	C3216CH2J101K	C3216C0G2J101K
120	±5%	0.60±0.10	C3216CH2J121J	C3216C0G2J121J
	±10%	0.60±0.10	C3216CH2J121K	C3216C0G2J121K
150	±5%	0.60±0.10	C3216CH2J151J	C3216C0G2J151J
	±10%	0.60±0.10	C3216CH2J151K	C3216C0G2J151K
180	±5%	0.60±0.10	C3216CH2J181J	C3216C0G2J181J
	±10%	0.60±0.10	C3216CH2J181K	C3216C0G2J181K
220	±5%	0.60±0.10	C3216CH2J221J	C3216C0G2J221J
	±10%	0.60±0.10	C3216CH2J221K	C3216C0G2J221K
270	±5%	0.60±0.10	C3216CH2J271J	C3216C0G2J271J
	±10%	0.60±0.10	C3216CH2J271K	C3216C0G2J271K
330	±5%	0.60±0.10	C3216CH2J331J	C3216C0G2J331J
	±10%	0.60±0.10	C3216CH2J331K	C3216C0G2J331K
390	±5%	0.60±0.10	C3216CH2J391J	C3216C0G2J391J
	±10%	0.60±0.10	C3216CH2J391K	C3216C0G2J391K
470	±5%	0.85±0.10	C3216CH2J471J	C3216C0G2J471J
	±10%	0.85±0.10	C3216CH2J471K	C3216C0G2J471K
560	±5%	0.85±0.10	C3216CH2J561J	C3216C0G2J561J
	±10%	0.85±0.10	C3216CH2J561K	C3216C0G2J561K
680	±5%	0.85±0.10	C3216CH2J681J	C3216C0G2J681J
	±10%	0.85±0.10	C3216CH2J681K	C3216C0G2J681K
820	±5%	0.85±0.10	C3216CH2J821J	C3216C0G2J821J
	±10%	0.85±0.10	C3216CH2J821K	C3216C0G2J821K
1,000	±5%	0.85±0.10	C3216CH2J102J	C3216C0G2J102J
	±10%	0.85±0.10	C3216CH2J102K	C3216C0G2J102K
1,500	±5%	1.15±0.10	C3216CH2J152J	C3216C0G2J152J
	±10%	1.15±0.10	C3216CH2J152K	C3216C0G2J152K
2,200	±5%	1.15±0.10	C3216CH2J222J	C3216C0G2J222J
	±10%	1.15±0.10	C3216CH2J222K	C3216C0G2J222K
3,300	±5%	1.60±0.15	C3216CH2J332J	C3216C0G2J332J
	±10%	1.60±0.15	C3216CH2J332K	C3216C0G2J332K

**RATED VOLTAGE E<sub>dc</sub>: 250V**

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
3,300	±5%	0.85±0.10	C3216CH2E332J	C3216C0G2E332J
	±10%	0.85±0.10	C3216CH2E332K	C3216C0G2E332K
4,700	±5%	1.15±0.10	C3216CH2E472J	C3216C0G2E472J
	±10%	1.15±0.10	C3216CH2E472K	C3216C0G2E472K
6,800	±5%	1.60±0.15	C3216CH2E682J	C3216C0G2E682J
	±10%	1.60±0.15	C3216CH2E682K	C3216C0G2E682K

**RATED VOLTAGE E<sub>dc</sub>: 100V**

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
4,700	±5%	0.85±0.10	C3216CH2A472J	C3216C0G2A472J
	±10%	0.85±0.10	C3216CH2A472K	C3216C0G2A472K
6,800	±5%	1.15±0.10	C3216CH2A682J	C3216C0G2A682J
	±10%	1.15±0.10	C3216CH2A682K	C3216C0G2A682K
10,000	±5%	1.15±0.10	C3216CH2A103J	C3216C0G2A103J
	±10%	1.15±0.10	C3216CH2A103K	C3216C0G2A103K

**CAPACITANCE RANGES: CLASS 2**

**TEMPERATURE CHARACTERISTICS: JB(±10%), X5R/X7R(±15%)**

RATED VOLTAGE E<sub>dc</sub>: 630V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
1,000	±10%	1.15±0.10	C3216JB2J102K	C3216X5R2J102K	C3216X7R2J102K
	±20%	1.15±0.10	C3216JB2J102M	C3216X5R2J102M	C3216X7R2J102M
1,500	±10%	1.15±0.10	C3216JB2J152K	C3216X5R2J152K	C3216X7R2J152K
	±20%	1.15±0.10	C3216JB2J152M	C3216X5R2J152M	C3216X7R2J152M
2,200	±10%	1.15±0.10	C3216JB2J222K	C3216X5R2J222K	C3216X7R2J222K
	±20%	1.15±0.10	C3216JB2J222M	C3216X5R2J222M	C3216X7R2J222M
3,300	±10%	1.15±0.10	C3216JB2J332K	C3216X5R2J332K	C3216X7R2J332K
	±20%	1.15±0.10	C3216JB2J332M	C3216X5R2J332M	C3216X7R2J332M
4,700	±10%	1.15±0.10	C3216JB2J472K	C3216X5R2J472K	C3216X7R2J472K
	±20%	1.15±0.10	C3216JB2J472M	C3216X5R2J472M	C3216X7R2J472M
6,800	±10%	1.15±0.10	C3216JB2J682K	C3216X5R2J682K	C3216X7R2J682K
	±20%	1.15±0.10	C3216JB2J682M	C3216X5R2J682M	C3216X7R2J682M
10,000	±10%	1.15±0.10	C3216JB2J103K	C3216X5R2J103K	C3216X7R2J103K
	±20%	1.15±0.10	C3216JB2J103M	C3216X5R2J103M	C3216X7R2J103M
15,000	±10%	1.30±0.10	C3216JB2J153K	C3216X5R2J153K	C3216X7R2J153K
	±20%	1.30±0.10	C3216JB2J153M	C3216X5R2J153M	C3216X7R2J153M
22,000	±10%	1.30±0.10	C3216JB2J223K	C3216X5R2J223K	C3216X7R2J223K
	±20%	1.30±0.10	C3216JB2J223M	C3216X5R2J223M	C3216X7R2J223M
33,000	±10%	1.60±0.15	C3216JB2J333K	C3216X5R2J333K	C3216X7R2J333K
	±20%	1.60±0.15	C3216JB2J333M	C3216X5R2J333M	C3216X7R2J333M

RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
15,000	±10%	1.15±0.10	C3216JB2E153K	C3216X5R2E153K	C3216X7R2E153K
	±20%	1.15±0.10	C3216JB2E153M	C3216X5R2E153M	C3216X7R2E153M
22,000	±10%	1.15±0.10	C3216JB2E223K	C3216X5R2E223K	C3216X7R2E223K
	±20%	1.15±0.10	C3216JB2E223M	C3216X5R2E223M	C3216X7R2E223M
33,000	±10%	1.60±0.15	C3216JB2E333K	C3216X5R2E333K	C3216X7R2E333K
	±20%	1.60±0.15	C3216JB2E333M	C3216X5R2E333M	C3216X7R2E333M
47,000	±10%	1.60±0.15	C3216JB2E473K	C3216X5R2E473K	C3216X7R2E473K
	±20%	1.60±0.15	C3216JB2E473M	C3216X5R2E473M	C3216X7R2E473M
68,000	±10%	1.60±0.15	C3216JB2E683K	C3216X5R2E683K	C3216X7R2E683K
	±20%	1.60±0.15	C3216JB2E683M	C3216X5R2E683M	C3216X7R2E683M
100,000	±10%	1.60±0.15	C3216JB2E104K	C3216X5R2E104K	C3216X7R2E104K
	±20%	1.60±0.15	C3216JB2E104M	C3216X5R2E104M	C3216X7R2E104M

RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
33,000	±10%	1.15±0.10	C3216JB2A333K	C3216X5R2A333K	C3216X7R2A333K
	±20%	1.15±0.10	C3216JB2A333M	C3216X5R2A333M	C3216X7R2A333M
47,000	±10%	1.15±0.10	C3216JB2A473K	C3216X5R2A473K	C3216X7R2A473K
	±20%	1.15±0.10	C3216JB2A473M	C3216X5R2A473M	C3216X7R2A473M
68,000	±10%	1.60±0.15	C3216JB2A683K	C3216X5R2A683K	C3216X7R2A683K
	±20%	1.60±0.15	C3216JB2A683M	C3216X5R2A683M	C3216X7R2A683M
100,000	±10%	1.60±0.15	C3216JB2A104K	C3216X5R2A104K	C3216X7R2A104K
	±20%	1.60±0.15	C3216JB2A104M	C3216X5R2A104M	C3216X7R2A104M
150,000	±10%	1.60±0.15	C3216JB2A154K	C3216X5R2A154K	C3216X7R2A154K
	±20%	1.60±0.15	C3216JB2A154M	C3216X5R2A154M	C3216X7R2A154M
220,000	±10%	1.15±0.10	C3216JB2A224K	C3216X5R2A224K	C3216X7R2A224K
	±20%	1.15±0.10	C3216JB2A224M	C3216X5R2A224M	C3216X7R2A224M
330,000	±10%	1.30±0.15	C3216JB2A334K	C3216X5R2A334K	C3216X7R2A334K
	±20%	1.30±0.15	C3216JB2A334M	C3216X5R2A334M	C3216X7R2A334M
470,000	±10%	1.60±0.20	C3216JB2A474K	C3216X5R2A474K	C3216X7R2A474K
	±20%	1.60±0.20	C3216JB2A474M	C3216X5R2A474M	C3216X7R2A474M
680,000	±10%	1.60±0.20	C3216JB2A684K	C3216X5R2A684K	C3216X7R2A684K
	±20%	1.60±0.20	C3216JB2A684M	C3216X5R2A684M	C3216X7R2A684M
1,000,000	±10%	1.60±0.20	C3216JB2A105K	C3216X5R2A105K	C3216X7R2A105K
	±20%	1.60±0.20	C3216JB2A105M	C3216X5R2A105M	C3216X7R2A105M

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

• All specifications are subject to change without notice.

Please read the precautions before using this catalog.

# C Series C3225 (EIA CC1210) Type

Conformity to RoHS Directive

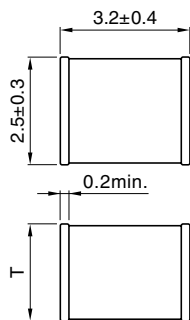
## FEATURES

- The unique design structure for mid voltage enables a compact size with high voltage withstanding.
- Rated voltage Edc: 100, 250 and 630V.
- C3225 type is specific to reflow soldering.

## APPLICATIONS

Snubber circuits for switching power supply, ringer circuits for telephone and modem, or other general high voltage circuits.

## SHAPES AND DIMENSIONS



Dimensions in mm



## PRODUCT IDENTIFICATION

C 3225 CH 2E 103 J □  
 (1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimensions

3225	3.2×2.5mm
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(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
CH	0±60ppm/°C	-25 to +85°C
C0G	0±30ppm/°C	-55 to +125°C

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
JB	±10%	-25 to +85°C
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C

(4) Rated voltage Edc

2A	100V
2E	250V
2J	630V

(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.

472	4,700pF
333	33,000pF
474	470,000pF
105	1,000,000pF

(6) Capacitance tolerance

J	±5%
K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
 Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)****TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C), C0G(0±30ppm/°C)**RATED VOLTAGE E<sub>dc</sub>: 630V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
4,700	±5%	1.60±0.20	C3225CH2J472J	C3225C0G2J472J
	±10%	1.60±0.20	C3225CH2J472K	C3225C0G2J472K
6,800	±5%	2.00±0.20	C3225CH2J682J	C3225C0G2J682J
	±10%	2.00±0.20	C3225CH2J682K	C3225C0G2J682K

RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
10,000	±5%	1.60±0.20	C3225CH2E103J	C3225C0G2E103J
	±10%	1.60±0.20	C3225CH2E103K	C3225C0G2E103K
15,000	±5%	2.00±0.20	C3225CH2E153J	C3225C0G2E153J
	±10%	2.00±0.20	C3225CH2E153K	C3225C0G2E153K

RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
15,000	±5%	1.25±0.10	C3225CH2A153J	C3225C0G2A153J
	±10%	1.25±0.10	C3225CH2A153K	C3225C0G2A153K
22,000	±5%	1.60±0.20	C3225CH2A223J	C3225C0G2A223J
	±10%	1.60±0.20	C3225CH2A223K	C3225C0G2A223K
33,000	±5%	2.00±0.20	C3225CH2A333J	C3225C0G2A333J
	±10%	2.00±0.20	C3225CH2A333K	C3225C0G2A333K
47,000	±5%	2.30±0.20	C3225CH2A473J	C3225C0G2A473J
	±10%	2.30±0.20	C3225CH2A473K	C3225C0G2A473K

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: JB(±10%), X5R/X7R(±15%)**RATED VOLTAGE E<sub>dc</sub>: 630V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
47,000	±10%	2.00±0.20	C3225JB2J473K	C3225X5R2J473K	C3225X7R2J473K
	±20%	2.00±0.20	C3225JB2J473M	C3225X5R2J473M	C3225X7R2J473M
68,000	±10%	2.00±0.20	C3225JB2J683K	C3225X5R2J683K	C3225X7R2J683K
	±20%	2.00±0.20	C3225JB2J683M	C3225X5R2J683M	C3225X7R2J683M

RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
100,000	±10%	2.00±0.20	C3225JB2E104K	C3225X5R2E104K	C3225X7R2E104K
	±20%	2.00±0.20	C3225JB2E104M	C3225X5R2E104M	C3225X7R2E104M
150,000	±10%	2.00±0.20	C3225JB2E154K	C3225X5R2E154K	C3225X7R2E154K
	±20%	2.00±0.20	C3225JB2E154M	C3225X5R2E154M	C3225X7R2E154M
220,000	±10%	2.00±0.20	C3225JB2E224K	C3225X5R2E224K	C3225X7R2E224K
	±20%	2.00±0.20	C3225JB2E224M	C3225X5R2E224M	C3225X7R2E224M

RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
330,000	±10%	2.00±0.20	C3225JB2A334K	C3225X5R2A334K	C3225X7R2A334K
	±20%	2.00±0.20	C3225JB2A334M	C3225X5R2A334M	C3225X7R2A334M
470,000	±10%	2.00±0.20	C3225JB2A474K	C3225X5R2A474K	C3225X7R2A474K
	±20%	2.00±0.20	C3225JB2A474M	C3225X5R2A474M	C3225X7R2A474M
680,000	±10%	1.60±0.20	C3225JB2A684K	C3225X5R2A684K	C3225X7R2A684K
	±20%	1.60±0.20	C3225JB2A684M	C3225X5R2A684M	C3225X7R2A684M
1,000,000	±10%	2.00±0.20	C3225JB2A105K	C3225X5R2A105K	C3225X7R2A105K
	±20%	2.00±0.20	C3225JB2A105M	C3225X5R2A105M	C3225X7R2A105M
1,500,000	±10%	2.00±0.20	C3225JB2A155K	C3225X5R2A155K	C3225X7R2A155K
	±20%	2.00±0.20	C3225JB2A155M	C3225X5R2A155M	C3225X7R2A155M
2,200,000	±10%	2.30±0.30	C3225JB2A225K	C3225X5R2A225K	C3225X7R2A225K
	±20%	2.30±0.30	C3225JB2A225M	C3225X5R2A225M	C3225X7R2A225M

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

- All specifications are subject to change without notice.

Please read the precautions before using this catalog.

# C Series C4532 (EIA CC1812) Type

Conformity to RoHS Directive

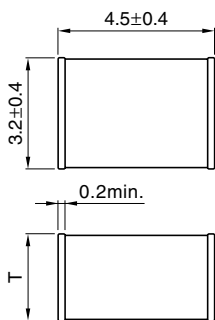
## FEATURES

- The unique design structure for mid voltage enables a compact size with high voltage withstanding.
- Rated voltage Edc: 100, 250 and 630V.
- C4532 type is specific to reflow soldering.

## APPLICATIONS

Snubber circuits for switching power supply, ringer circuits for telephone and modem, or other general high voltage circuits.

## SHAPES AND DIMENSIONS



Dimensions in mm



## PRODUCT IDENTIFICATION

C 4532 CH 2J 103 J □  
(1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimensions

4532	4.5×3.2mm
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(3) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
CH	0±60ppm/°C	-25 to +85°C
C0G	0±30ppm/°C	-55 to +125°C

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
JB	±10%	-25 to +85°C
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C

(4) Rated voltage Edc

2A	100V
2E	250V
2J	630V

(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.

103	10,000pF
474	470,000pF
225	2,200,000pF

(6) Capacitance tolerance

J	±5%
K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)****TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C), C0G(0±30ppm/°C)**RATED VOLTAGE E<sub>dc</sub>: 630V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
10,000	±5%	1.60±0.20	C4532CH2J103J	C4532C0G2J103J
	±10%	1.60±0.20	C4532CH2J103K	C4532C0G2J103K
15,000	±5%	2.50±0.30	C4532CH2J153J	C4532C0G2J153J
	±10%	2.50±0.30	C4532CH2J153K	C4532C0G2J153K
22,000	±5%	3.20±0.30	C4532CH2J223J	C4532C0G2J223J
	±10%	3.20±0.30	C4532CH2J223K	C4532C0G2J223K

RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
22,000	±5%	1.60±0.20	C4532CH2E223J	C4532C0G2E223J
	±10%	1.60±0.20	C4532CH2E223K	C4532C0G2E223K
33,000	±5%	2.00±0.20	C4532CH2E333J	C4532C0G2E333J
	±10%	2.00±0.20	C4532CH2E333K	C4532C0G2E333K
47,000	±5%	3.20±0.30	C4532CH2E473J	C4532C0G2E473J
	±10%	3.20±0.30	C4532CH2E473K	C4532C0G2E473K

RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.	
			Temperature characteristics: CH	Temperature characteristics: C0G
47,000	±5%	2.0±0.20	C4532CH2A473J	C4532C0G2A473J
	±10%	2.0±0.20	C4532CH2A473K	C4532C0G2A473K
68,000	±5%	2.5±0.30	C4532CH2A683J	C4532C0G2A683J
	±10%	2.5±0.30	C4532CH2A683K	C4532C0G2A683K
100,000	±5%	3.2±0.30	C4532CH2A104J	C4532C0G2A104J
	±10%	3.2±0.30	C4532CH2A104K	C4532C0G2A104K

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: JB(±10%), X5R/X7R(±15%)**RATED VOLTAGE E<sub>dc</sub>: 630V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
68,000	±10%	1.60±0.20	C4532JB2J683K	C4532X5R2J683K	C4532X7R2J683K
	±20%	1.60±0.20	C4532JB2J683M	C4532X5R2J683M	C4532X7R2J683M
100,000	±10%	2.30±0.20	C4532JB2J104K	C4532X5R2J104K	C4532X7R2J104K
	±20%	2.30±0.20	C4532JB2J104M	C4532X5R2J104M	C4532X7R2J104M

RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
150,000	±10%	1.60±0.20	C4532JB2E154K	C4532X5R2E154K	C4532X7R2E154K
	±20%	1.60±0.20	C4532JB2E154M	C4532X5R2E154M	C4532X7R2E154M
220,000	±10%	2.30±0.20	C4532JB2E224K	C4532X5R2E224K	C4532X7R2E224K
	±20%	2.30±0.20	C4532JB2E224M	C4532X5R2E224M	C4532X7R2E224M
330,000	±10%	2.30±0.20	C4532JB2E334K	C4532X5R2E334K	C4532X7R2E334K
	±20%	2.30±0.20	C4532JB2E334M	C4532X5R2E334M	C4532X7R2E334M
470,000	±10%	2.30±0.20	C4532JB2E474K	C4532X5R2E474K	C4532X7R2E474K
	±20%	2.30±0.20	C4532JB2E474M	C4532X5R2E474M	C4532X7R2E474M

RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
680,000	±10%	2.30±0.20	C4532JB2A684K	C4532X5R2A684K	C4532X7R2A684K
	±20%	2.30±0.20	C4532JB2A684M	C4532X5R2A684M	C4532X7R2A684M
1,000,000	±10%	2.30±0.20	C4532JB2A105K	C4532X5R2A105K	C4532X7R2A105K
	±20%	2.30±0.20	C4532JB2A105M	C4532X5R2A105M	C4532X7R2A105M
1,500,000	±10%	2.30±0.20	C4532JB2A155K	C4532X5R2A155K	C4532X7R2A155K
	±20%	2.30±0.20	C4532JB2A155M	C4532X5R2A155M	C4532X7R2A155M
2,200,000	±10%	2.30±0.20	C4532JB2A225K	C4532X5R2A225K	C4532X7R2A225K
	±20%	2.30±0.20	C4532JB2A225M	C4532X5R2A225M	C4532X7R2A225M

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

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# C Series C5750 (EIA CC2220) Type

Conformity to RoHS Directive

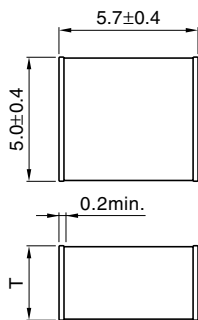
## FEATURES

- The unique design structure for mid voltage enables a compact size with high voltage withstanding.
- Rated voltage Edc: 100, 250 and 630V.
- C5750 type is specific to reflow soldering.

## APPLICATIONS

Snubber circuits for switching power supply, ringer circuits for telephone and modem, or other general high voltage circuits.

## SHAPES AND DIMENSIONS



Dimensions in mm



## PRODUCT IDENTIFICATION

C 5750 JB 2E 105 K □  
 (1) (2) (3) (4) (5) (6) (7)

(1) Series name

(2) Dimensions

5750	5.7×5.0mm
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(3) Capacitance temperature characteristics

Class 2 (Temperature stable and general purpose)

Temperature characteristics	Capacitance change	Temperature range
JB	±10%	-25 to +85°C
X7R	±15%	-55 to +125°C
X5R	±15%	-55 to +85°C

(4) Rated voltage Edc

2A	100V
2E	250V
2J	630V

(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.

154	150,000pF
105	1,000,000pF

(6) Capacitance tolerance

K	±10%
M	±20%

(7) Packaging style

T	Taping (reel)
B	Bulk

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: JB(±10%), X5R/X7R(±15%)**RATED VOLTAGE E<sub>dc</sub>: 630V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
150,000	±10%	1.60±0.20	C5750JB2J154K	C5750X5R2J154K	C5750X7R2J154K
	±20%	1.60±0.20	C5750JB2J154M	C5750X5R2J154M	C5750X7R2J154M
220,000	±10%	2.30±0.20	C5750JB2J224K	C5750X5R2J224K	C5750X7R2J224K
	±20%	2.30±0.20	C5750JB2J224M	C5750X5R2J224M	C5750X7R2J224M

RATED VOLTAGE E<sub>dc</sub>: 250V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
330,000	±10%	1.60±0.20	C5750JB2E334K	C5750X5R2E334K	C5750X7R2E334K
	±20%	1.60±0.20	C5750JB2E334M	C5750X5R2E334M	C5750X7R2E334M
470,000	±10%	2.30±0.20	C5750JB2E474K	C5750X5R2E474K	C5750X7R2E474K
	±20%	2.30±0.20	C5750JB2E474M	C5750X5R2E474M	C5750X7R2E474M
680,000	±10%	2.30±0.20	C5750JB2E684K	C5750X5R2E684K	C5750X7R2E684K
	±20%	2.30±0.20	C5750JB2E684M	C5750X5R2E684M	C5750X7R2E684M
1,000,000	±10%	2.30±0.20	C5750JB2E105K	C5750X5R2E105K	C5750X7R2E105K
	±20%	2.30±0.20	C5750JB2E105M	C5750X5R2E105M	C5750X7R2E105M

RATED VOLTAGE E<sub>dc</sub>: 100V

Capacitance (pF)	Tolerance	Thickness T (mm)	Part No.		
			Temperature characteristics: JB	Temperature characteristics: X5R	Temperature characteristics: X7R
680,000	±10%	1.60±0.20	C5750JB2A684K	C5750X5R2A684K	C5750X7R2A684K
	±20%	1.60±0.20	C5750JB2A684M	C5750X5R2A684M	C5750X7R2A684M
1,000,000	±10%	2.30±0.20	C5750JB2A105K	C5750X5R2A105K	C5750X7R2A105K
	±20%	2.30±0.20	C5750JB2A105M	C5750X5R2A105M	C5750X7R2A105M
1,500,000	±10%	2.30±0.20	C5750JB2A155K	C5750X5R2A155K	C5750X7R2A155K
	±20%	2.30±0.20	C5750JB2A155M	C5750X5R2A155M	C5750X7R2A155M
2,200,000	±10%	2.30±0.20	C5750JB2A225K	C5750X5R2A225K	C5750X7R2A225K
	±20%	2.30±0.20	C5750JB2A225M	C5750X5R2A225M	C5750X7R2A225M
3,300,000	±10%	2.30±0.20	C5750JB2A335K	C5750X5R2A335K	C5750X7R2A335K
	±20%	2.30±0.20	C5750JB2A335M	C5750X5R2A335M	C5750X7R2A335M
4,700,000	±10%	2.30±0.20	C5750JB2A475K	C5750X5R2A475K	C5750X7R2A475K
	±20%	2.30±0.20	C5750JB2A475M	C5750X5R2A475M	C5750X7R2A475M

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[CGA2B2C0G1H2R2C](#) [CGA2B2C0G1H3R3C](#) [CGA2B2C0G1H680J](#) [CGA2B2C0G1H6R8D](#) [CGA2B2X8R1H221K](#) [CGA2B2X8R1H472K](#)  
[CGA3E1X7R1C474K](#)