

**HIGH VOLTAGE TYPE [ XC Series ]**

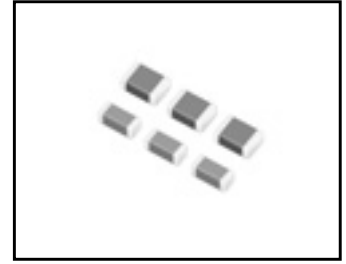
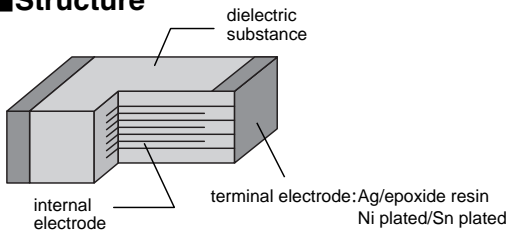
**■ Features**

- High voltage (rated voltage ~5kV).
- Wide range of capacitance in small size.
- RoHS Compliant.

**■ Applications**

- Snubber circuit of power supply, LCD back light.

**■ Structure**



**■ Range of Use**

Temperature characteristics	EIA symbol	Capacitance change Temperature coefficient	Temperature range	Capacitance tolerance
R	X7R	±15%	-55 ~ +125	K (±10%)
CG	C0G	0±30ppm/	-55 ~ +125	C (±0.25pF) Applies to 5pF
				D (±0.5pF) Applies to 5pF
				J (±5%)
				K (±10%)

**■ Capacitance Map (C0G Characteristics)**

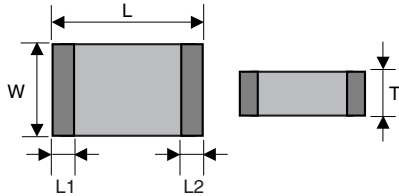
Type rated voltage capacitance	XC35 (3.2 × 1.6)			XC44 (4.5 × 2.0)			XC47 (4.5 × 3.2)				XC63 (5.7 × 2.0)
	1000Vdc (3A)	1600Vdc (3C)	2000Vdc (3D)	1600Vdc (3C)	2000Vdc (3D)	3000Vdc (3F)	1000Vdc (3A)	1600Vdc (3C)	2000Vdc (3D)	3000Vdc (3F)	5000Vdc (3H)
050 5pF						1.25					2.00
100 10pF	1.25		1.70			1.25					2.00
120 12pF	1.25		1.70			1.25					2.00
150 15pF	1.25		1.70			1.25					2.00
180 18pF	1.25		1.70			1.25					2.00
220 22pF	1.25		1.70		1.25	1.25					2.00
330 33pF	1.25				1.25	1.70					
470 47pF	1.70				1.80	1.80					
560 56pF					1.80	1.80					
680 68pF				1.25	1.80						
101 100pF				1.70	1.80					1.70	
151 150pF				1.70						2.20	
221 220pF										2.50	

**■ Capacitance Map (X7R Characteristics)**

Type rated voltage capacitance	XC35 (3.2 × 1.6)			XC44 (4.5 × 2.0)			XC47 (4.5 × 3.2)				XC63 (5.7 × 2.0)
	1000Vdc (3A)	1600Vdc (3C)	2000Vdc (3D)	1600Vdc (3C)	2000Vdc (3D)	3000Vdc (3F)	1000Vdc (3A)	1600Vdc (3C)	2000Vdc (3D)	3000Vdc (3F)	5000Vdc (3H)
101 100pF	1.25										
151 150pF	1.25										
221 220pF	1.25										
331 330pF	1.25										
471 470pF	1.25										
681 680pF	1.25										
102 1000pF	1.25				2.00				2.00		
222 2200pF									2.50		
103 10000pF							1.70	2.80			
223 22000pF							2.80				

# HIGH VOLTAGE TYPE [ XC Series ]

## Dimensions



Unit : mm

Type	L	W	T	L1, L2
XC35	3.2±0.3	1.6±0.2	1.70 max.	0.2~
XC44	4.5±0.4	2.0±0.3	2.00 max.	0.3~
XC47	4.5±0.4	3.2±0.3	2.80 max.	0.4~
XC63	5.7±0.4	2.0±0.3	2.00 max.	0.4~

## List of products in XC Series

### C0G Characteristics

#### Rated Voltage : 5,000Vdc

Part Number	Capacitance(pF)	Product height T (mm)
XC63CG3H050 -TS	5	2.00+0 / -0.40
XC63CG3H100 -TS	10	2.00+0 / -0.40
XC63CG3H120 -TS	12	2.00+0 / -0.40
XC63CG3H150 -TS	15	2.00+0 / -0.40
XC63CG3H180 -TS	18	2.00+0 / -0.40
XC63CG3H220 -TS	22	2.00+0 / -0.40

#### Rated Voltage : 3,000Vdc

Part Number	Capacitance(pF)	Product height T (mm)
XC44CG3F050 -TS	5	1.25+0/-0.30
XC44CG3F100 -TS	10	1.25+0/-0.30
XC44CG3F120 -TS	12	1.25+0/-0.30
XC44CG3F150 -TS	15	1.25+0/-0.30
XC44CG3F180 -TS	18	1.25+0/-0.30
XC44CG3F220 -TS	22	1.25+0/-0.30
XC44CG3F330 -TS	33	1.70+0/-0.40
XC44CG3F470 -TS	47	1.80+0/-0.40
XC44CG3F560 -TS	56	1.80+0/-0.40
XC47CG3F101 -TS	100	1.70+0/-0.40
XC47CG3F151 -TS	150	2.20+0/-0.50
XC47CG3F221 -TS	220	2.50+0/-0.60

#### Rated Voltage : 2,000Vdc

Part Number	Capacitance(pF)	Product height T (mm)
XC35CG3D100 -TS	10	1.70+0/-0.40
XC35CG3D120 -TS	12	1.70+0/-0.40
XC35CG3D150 -TS	15	1.70+0/-0.40
XC35CG3D180 -TS	18	1.70+0/-0.40
XC35CG3D220 -TS	22	1.70+0/-0.40
XC44CG3D220 -TS	22	1.25+0/-0.30
XC44CG3D330 -TS	33	1.25+0/-0.30
XC44CG3D470 -TS	47	1.80+0/-0.40
XC44CG3D560 -TS	56	1.80+0/-0.40
XC44CG3D680 -TS	68	1.80+0/-0.40
XC44CG3D101 -TS	100	1.80+0/-0.40

#### Rated Voltage : 1,600Vdc

Part Number	Capacitance(pF)	Product height T (mm)
XC44CG3C680 -TS	68	1.25+0/-0.30
XC44CG3C101 -TS	100	1.70+0/-0.40
XC44CG3C151 -TS	150	1.70+0/-0.40

#### Rated Voltage : 1,000Vdc

Part Number	Capacitance(pF)	Product height T (mm)
XC35CG3A100 -TS	10	1.25+0/-0.30
XC35CG3A120 -TS	12	1.25+0/-0.30
XC35CG3A150 -TS	15	1.25+0/-0.30
XC35CG3A180 -TS	18	1.25+0/-0.30
XC35CG3A220 -TS	22	1.25+0/-0.30
XC35CG3A330 -TS	33	1.25+0/-0.30
XC35CG3A470 -TS	47	1.70+0/-0.40

### X7R Characteristics

#### Rated Voltage : 2,000Vdc

Part Number	Capacitance(pF)	Product height T (mm)
XC44R3D102K-TS	1,000	2.00+0/-0.40
XC47R3D102K-TS	1,000	2.00+0/-0.40
XC47R3D222K-TS	2,200	2.50+0/-0.60

#### Rated Voltage : 1,600Vdc

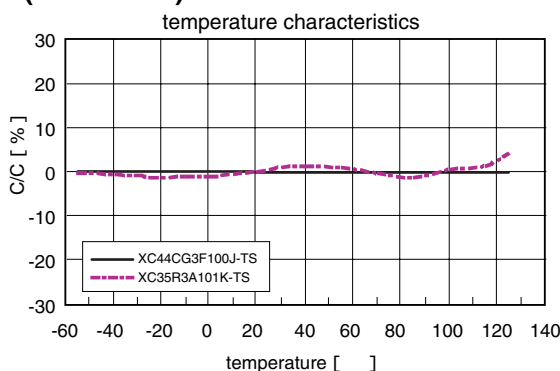
Part Number	Capacitance(pF)	Product height T (mm)
XC47R3C103K-TS	10,000	2.80+0/-0.60

#### Rated Voltage : 1,000Vdc

Part Number	Capacitance(pF)	Product height T (mm)
XC35R3A101K-TS	100	1.25+0/-0.30
XC35R3A151K-TS	150	1.25+0/-0.30
XC35R3A221K-TS	220	1.25+0/-0.30
XC35R3A331K-TS	330	1.25+0/-0.30
XC35R3A471K-TS	470	1.25+0/-0.30
XC35R3A681K-TS	680	1.25+0/-0.30
XC35R3A102K-TS	1,000	1.25+0/-0.30
XC47R3A103K-TS	10,000	1.70+0/-0.40
XC47R3A223K-TS	22,000	2.80+0/-0.60

- \* Specify the capacitance tolerance(J: ±5% K: ±10%)for .  
( C: ±0.25pF D: ±0.5pF for under 10pF )
- \* Highly reliable Ni-barrier terminations show excellent flexion and temperature cycling.
- \* XC44, XC47, XC63 types are available for reflow soldering only.
- \* There is a possibility of discharge from the chip surface. Please coat the surface.
- \* Custom specifications are available. Please contact us for the details.

## Capacitance-Temperature characteristics (Reference)



## DC bias characteristics (Reference)

