

# CC HV series

## Extra High Voltage Capacitor Series ( $\geq 1KV$ )

### ◆ Features

- » Special interior design offers high voltage rating in a given case size
- » High reliability and stability
- » RoHS Compliant

### ◆ Applications

- » DC to DC converter
- » High voltage coupling/DC blocking
- » Back-lighting inverters
- » LAN/WLAN interface
- » Modem
- » Power supplies

### ◆ Part Number

CC	1206	X	102	K	102
Series	Size	Dielectric	Capacitance	Tolerance	Rated voltage
	Inch: 0805 1206 1210 1808 1812 1825 2220 2225	N: NPO (COG) X: X7R	Two significant Digits followed by no. of zeros and P is in place of decimal point Eg.: 0P47 = 0.47pF 0P5 = 0.5pF 1P0 = 1.0pF 100 = $10 \times 10^0$ = 10pF	B= $\pm 0.1pF$ C= $\pm 0.25pF$ D= $\pm 0.5pF$ F= $\pm 1\%$ G= $\pm 2\%$ J= $\pm 5\%$ K= $\pm 10\%$ M= $\pm 20\%$ Z= -20/+80%	Two significant Digits followed by no. of zeros and V is in place of decimal point 102 = 1K VDC 202 = 2K VDC 302 = 3K VDC 402 = 4K VDC

### ◆ General Electrical Data

Dielectric	NPO (COG)	X7R
Size	0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225	0805, 1206, 1210, 1808, 1812, 1825, 2220, 2225
Rate Voltage (WVDC)	1KV, 1.5KV, 2KV, 3KV, 4KV, 5KV, 6KV	1KV, 1.5KV, 2KV, 3KV, 4KV
Capacitance range*	1.5pF ~ 12nF	100pF ~ 150nF
Capacitance tolerance	Cap. $\leq 5pF$ : B ( $\pm 0.1pF$ ), C ( $\pm 0.25pF$ ) 5pF < Cap. < 10pF: D ( $\pm 0.5pF$ ) Cap. $\geq 10pF$ : F ( $\pm 1\%$ ), G ( $\pm 2\%$ ), J ( $\pm 5\%$ ), K ( $\pm 10\%$ )	J ( $\pm 5\%$ ), K ( $\pm 10\%$ ), M ( $\pm 20\%$ )
Tan $\delta^*$	Cap < 30pF: Q $\geq 400+20C$ Cap $\geq 30pF$ : Q $\geq 1000$	$\leq 2.5\%$
Insulation resistance at 500Vdc for 60 seconds	$\geq 100G\Omega$ or R x C $\geq 1000$ whichever is smaller	$\geq 10G\Omega$ or R x C $\geq 500\Omega$ - F whichever is smaller
Operating temperature	-55 to +125°C	
Temperature coefficient	$\pm 30ppm/^\circ C$	$\pm 15\%$
termination	Ag (or Cu)/Ni/Sn (lead-free termination)	

\* Measured at the condition of 30~70% related humidity.

**NPO:** Apply  $1.0 \pm 0.2V_{rms}$ , 1.0MHz $\pm 10\%$  for Cap $\leq 1000pF$  and  $1.0 \pm 0.2V_{rms}$ , 1.0KHz $\pm 10\%$  for Cap $> 1000pF$ , 25°C at ambient temperature.

**X7R:** Apply  $1.0 \pm 0.2V_{rms}$ , 1.0KHz $\pm 10\%$ , at 25°C ambient temperature.

## ◆ Capacitance Range

Dielectric		COG (NPO)																				
Size	0805	1206			1210			1808			1812			1825			2220			2225		
Rated Voltage	1KV	1KV	2KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	
1.5pF (1P5)																						
1.8pF (1P8)																						
2.2pF (2P2)																						
2.7pF (2P7)																						
3.3pF (3P3)																						
3.9pF (3P9)																						
4.7pF (4P7)																						
5.6pF (5P6)																						
6.8pF (6P8)																						
8.2pF (8P2)																						
10pF (100)																						
12pF (120)																						
15pF (150)																						
18pF (180)																						
22pF (220)																						
27pF (270)																						
33pF (330)																						
39pF (390)																						
47pF (470)																						
56pF (560)																						
68pF (680)																						
82pF (820)																						
100pF (101)																						
120pF (121)																						
150pF (151)																						
180pF (181)																						
220pF (221)																						
270pF (271)																						
330pF (331)																						
390pF (391)																						
470pF (471)																						
560pF (561)																						
680pF (681)																						
820pF (821)																						
1000pF (102)																						
1200pF (122)																						
1500pF (152)																						
1800pF (182)																						
2200pF (222)																						
2700pF (272)																						
3300pF (332)																						
3900pF (392)																						
4700pF (472)																						
5600pF (562)																						
6800pF (682)																						
8200pF (822)																						
0.010uF (103)																						
0.012uF (123)																						

## ◆ Capacitance Range

Dielectric	X7R																										
	0805			1206			1210			1808			1812				1825			2220				2225			
	1KV	1KV	2KV	1KV	2KV	1KV	2KV	3KV	1KV	2KV	3KV	4KV	1KV	2KV	3KV	1KV	2KV	3KV	4KV	1KV	2KV	3KV	4KV				
100pF (101)																											
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8200pF (822)																											
0.01uF (103)																											
0.012uF																											
0.015uF																											
0.018uF																											
0.022uF																											
0.027uF																											
0.033uF																											
0.039uF																											
0.047uF																											
0.056uF																											
0.068uF																											
0.082uF																											
0.1uF (104)																											
120nF (124)																											
150nF (154)																											