

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

◆ General Electrical Data

Dielectric	NPO (COG)	X7R
Size	1206, 1210, 1808, 1812, 1825, 2220, 2225	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: C ($\pm 0.25pF$), 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 δ^*	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 $R \times C \geq 1000$ whichever is smaller	$\geq 10G\Omega$ or $R \times C \geq 500\Omega - F$ 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 $Cap > 1000pF$, $25^\circ C$ at ambient temperature.

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

◆ Capacitance Range

Dielectric		COG (NPO)																				
		1206		1210			1808			1812			1825			2220			2225			
Size		1KV	2KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	
Rated Voltage		1KV	2KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	
Capacitance	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																		
Size		1206		1210		1808			1812			1825			2220			2225		
Rated Voltage		1KV	2KV	1KV	2KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV
100pF (101)																				
120pF (121)																				
150pF (151)																				
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220pF (221)																				
270pF (271)																				
330pF (331)																				
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6800pF (682)																				
8200pF (822)																				
0.01uF (103)																				
0.012uF (123)																				
0.015uF (153)																				
0.018uF (183)																				
0.022uF (223)																				
0.027uF (273)																				
0.033uF (333)																				
0.039uF (393)																				
0.047uF (473)																				
0.056uF (563)																				
0.068uF (683)																				
0.082uF (823)																				
0.1uF (104)																				
120nF (124)																				
150nF (154)																				