

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

◆ 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 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)																							
	0805			1206			1210			1808			1812			1825			2220			2225		
	Size	1KV	1KV	2KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV		
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	2KV	1KV	2KV	1KV	2KV	1KV	2KV	3KV	1KV	2KV	3KV	4KV	1KV	2KV	3KV	1KV	2KV	3KV	1KV	2KV	3KV	4KV
100pF (101)																							
120pF (121)																							
150pF (151)																							
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5600pF (562)																							
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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)																							