

Medium – High Voltage Capacitors

Feature

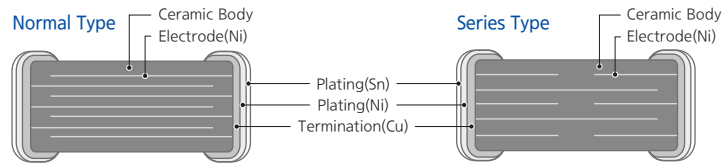
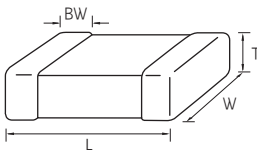


- Highly reliable performance
- Operating at high voltage level
- Wide voltage level : from 100V to 3kV
- High withstanding voltage
- Tape & reel surface mount assembly

Application

- Switching Power Circuit (SMPS)
- Lighting Ballast, LCD Back Lighting Inverter
- DC - DC converter input filter, Snubber Circuit
- Network (IEEE802.3)

Structure and Dimensions



Size Code	EIA Code	Dimension(mm)				
		L	W	T	Thickness Code	BW
05	0402	1.00±0.05	0.50±0.05	0.50±0.05	5	0.25±0.10
10	0603	1.60±0.10	0.80±0.10	0.80±0.10	8	0.30±0.20
21	0805	2.00±0.10	1.25±0.10	0.65±0.10	A	0.50+0.20/-0.30
		2.00±0.10	1.25±0.10	0.85±0.10	C	
		2.00±0.10	1.25±0.10	1.15±0.10	M	
		2.00±0.10	1.25±0.10	1.25±0.10	F	
31	1206	3.20±0.15	1.60±0.15	0.85±0.15	C	0.50±0.30
		3.20±0.15	1.60±0.15	1.25±0.15	F	
		3.20±0.20	1.60±0.20	1.60±0.20	H	
32	1210	3.20±0.30	2.50±0.20	1.25±0.20	F	0.60±0.30
		3.20±0.30	2.50±0.20	1.60±0.20	H	
		3.20±0.30	2.50±0.20	2.00±0.20	I	
		3.20±0.30	2.50±0.20	2.50±0.20	J	
42	1802	4.50±0.40	2.00±0.20	1.25±0.20	F	0.80±0.30
		4.50±0.40	2.00±0.20	1.60±0.20	H	
		4.50±0.40	2.00±0.20	2.00±0.20	I	
43	1812	4.50±0.40	3.20±0.30	1.25±0.20	F	0.80±0.30
		4.50±0.40	3.20±0.30	1.60±0.20	H	
		4.50±0.40	3.20±0.30	2.00±0.20	I	
		4.50±0.40	3.20±0.30	2.50±0.20	J	
55	2220	5.70±0.40	5.00±0.40	2.50±0.20	J	1.00±0.30

Medium - High Voltage Capacitance Table (COG)

Size inch (mm)	Rated Voltage (Vdc)	Capacitance																																
		pF													nF																			
		47	100	120	150	180	220	270	330	390	470	560	680	820	1.0	1.2	1.5	1.8	2.2	2.7	3.3	3.9	4.7	5.6	6.8	8.2	10	12	15	18	22	27	33	47
0402(1005)	100	[Bar chart showing capacitance values for 100V, 0402 size]																																
	200	[Bar chart showing capacitance values for 200V, 0402 size]																																
0603 (1608)	100	[Bar chart showing capacitance values for 100V, 0603 size]																																
	200	[Bar chart showing capacitance values for 200V, 0603 size]																																
	250	[Bar chart showing capacitance values for 250V, 0603 size]																																
0805 (2012)	100	[Bar chart showing capacitance values for 100V, 0805 size]																																
	200	[Bar chart showing capacitance values for 200V, 0805 size]																																
	250	[Bar chart showing capacitance values for 250V, 0805 size]																																
	500	[Bar chart showing capacitance values for 500V, 0805 size]																																
	630	[Bar chart showing capacitance values for 630V, 0805 size]																																
1206 (3216)	100	[Bar chart showing capacitance values for 100V, 1206 size]																																
	200	[Bar chart showing capacitance values for 200V, 1206 size]																																
	250	[Bar chart showing capacitance values for 250V, 1206 size]																																
	500	[Bar chart showing capacitance values for 500V, 1206 size]																																
	630	[Bar chart showing capacitance values for 630V, 1206 size]																																
	1k	[Bar chart showing capacitance values for 1kV, 1206 size]																																
	2k	[Bar chart showing capacitance values for 2kV, 1206 size]																																
1210 (3225)	100	[Bar chart showing capacitance values for 100V, 1210 size]																																
	200	[Bar chart showing capacitance values for 200V, 1210 size]																																
	250	[Bar chart showing capacitance values for 250V, 1210 size]																																
	500	[Bar chart showing capacitance values for 500V, 1210 size]																																
	630	[Bar chart showing capacitance values for 630V, 1210 size]																																
	1k	[Bar chart showing capacitance values for 1kV, 1210 size]																																
	2k	[Bar chart showing capacitance values for 2kV, 1210 size]																																
1808 (4520)	2k	[Bar chart showing capacitance values for 2kV, 1808 size]																																
	3k	[Bar chart showing capacitance values for 3kV, 1808 size]																																
1812 (4532)	100	[Bar chart showing capacitance values for 100V, 1812 size]																																
	200	[Bar chart showing capacitance values for 200V, 1812 size]																																
	250	[Bar chart showing capacitance values for 250V, 1812 size]																																
	500	[Bar chart showing capacitance values for 500V, 1812 size]																																
	630	[Bar chart showing capacitance values for 630V, 1812 size]																																
	1k	[Bar chart showing capacitance values for 1kV, 1812 size]																																
	2k	[Bar chart showing capacitance values for 2kV, 1812 size]																																
	3k	[Bar chart showing capacitance values for 3kV, 1812 size]																																
2220 (5750)	100	[Bar chart showing capacitance values for 100V, 2220 size]																																
	200	[Bar chart showing capacitance values for 200V, 2220 size]																																
	250	[Bar chart showing capacitance values for 250V, 2220 size]																																
	500	[Bar chart showing capacitance values for 500V, 2220 size]																																
	630	[Bar chart showing capacitance values for 630V, 2220 size]																																
	1k	[Bar chart showing capacitance values for 1kV, 2220 size]													3.6																			
	2k	[Bar chart showing capacitance values for 2kV, 2220 size]																																
	3k	[Bar chart showing capacitance values for 3kV, 2220 size]																																

Medium – High Voltage Capacitors

Medium – High Voltage Capacitance Table (X7R)

Size inch (mm)	Rated Voltage (Vdc)	Capacitance																											
		nF																uF											
		1.0	1.5	2.2	3.3	4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680	1.0	1.5	2.2	3.3	4.7					
0603(1608)	100					4.7	6.8	10	15	22	33	47	68	100															
	200					4.7	6.8	10	15	22	33	47	68	100	150	220													
0805 (2012)	100					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	200					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	250					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
1206 (3216)	100					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	200					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	250					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	350					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	500					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	630					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	1k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	2k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
1210 (3225)	100					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	200					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	250					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	500					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	630					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	1k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	2k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	3k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
1808 (4520)	2k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	3k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
1812 (4532)	100					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	200					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	250					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	500					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	630					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	1k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	2k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
2220 (5750)	100					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	200					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	250					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	500					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	630					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	1k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										
	2k					4.7	6.8	10	15	22	33	47	68	100	150	220	330	470	680										

Product Line Up (COG)

■ Size : 1.00 X 0.50mm (inch : 0402)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number
0.55mm	100Vdc	1.8pF	±0.25pF	CL05C1R8CC5NNN □
		2.2pF	±0.25pF	CL05C2R2CC5NNN □
		3.0pF	±0.25pF	CL05C030CC5NNN □
		3.3pF	±0.25pF	CL05C3R3CC5NNN □
		4.0pF	±0.25pF	CL05C040CC5NNN □
		15pF	±5%	CL05C150JC5NNN □
		33pF	±5%	CL05C330JC5NNN □
		39pF	±5%	CL05C390JC5NNN □
		47pF	±5%	CL05C470JC5NNN □
		82pF	±5%	CL05C820JC5NNN □
		100pF	±5%	CL05C101JC5NNN □

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number
0.90mm	100Vdc	270pF	±5%	CL10C271JC8NNN □
		330pF	±5%	CL10C331JC8NNN □
		390pF	±5%	CL10C391JC8NNN □
		470pF	±5%	CL10C471JC8NNN □
		1.0nF	±5%	CL10C102JC8NNN □
		200Vdc	220pF	±10%
	250Vdc	470pF	±5%	CL10C471JE8NNN □

■ Size : 2.00 X 1.25mm (inch : 0805)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number
0.75mm	100Vdc	2.7pF	±0.25pF	CL21C2R7CCANNN □
		4.7pF	±0.1pF	CL21C4R7BCANNN □
		10pF	±0.25pF	CL21C100CCANNN □
		10pF	±5%	CL21C100JCANNN □
		11pF	±2%	CL21C110GCANNN □
		11pF	±5%	CL21C110JCANNN □
		12pF	±2%	CL21C120GCANNN □
		13pF	±2%	CL21C130GCANNN □
		13pF	±5%	CL21C130JCANNN □
		14pF	±5%	CL21C140JCANNN □
		15pF	±5%	CL21C150JCANNN □
		16pF	±2%	CL21C160GCANNN □
		16pF	±5%	CL21C160JCANNN □
		17pF	±5%	CL21C170JCANNN □
		18pF	±2%	CL21C180GCANNN □
		18pF	±5%	CL21C180JCANNN □
		20pF	±5%	CL21C200JCANNN □
		22pF	±5%	CL21C220JCANNN □
		24pF	±2%	CL21C240GCANNN □
		24pF	±5%	CL21C240JCANNN □
		25pF	±5%	CL21C250JCANNN □
		27pF	±5%	CL21C270JCANNN □
		30pF	±5%	CL21C300JCANNN □
		32pF	±2%	CL21C320GCANNN □
		33pF	±1%	CL21C330FC8NNN □
		33pF	±5%	CL21C330JC8NNN □
		39pF	±1%	CL21C390FC8NNN □
		39pF	±5%	CL21C390JC8NNN □
		47pF	±5%	CL21C470JC8NNN □
		50pF	±5%	CL21C500JC8NNN □
		52pF	±5%	CL21C520JC8NNN □
		56pF	±5%	CL21C560JC8NNN □
		62pF	±5%	CL21C620JC8NNN □
		62pF	±10%	CL21C620KC8NNN □
		68pF	±2%	CL21C680GC8NNN □
		68pF	±5%	CL21C680JC8NNN □
		82pF	±5%	CL21C820JC8NNN □
		91pF	±5%	CL21C910JC8NNN □
		95pF	±5%	CL21C950JC8NNN □
		100pF	±5%	CL21C101JC8NNN □
		110pF	±5%	CL21C111JC8NNN □
		120pF	±5%	CL21C121JC8NNN □
150pF	±5%	CL21C151JC8NNN □		
180pF	±5%	CL21C181JC8NNN □		
180pF	±10%	CL21C181KC8NNN □		
190pF	±5%	CL21C191JC8NNN □		
200pF	±5%	CL21C201JC8NNN □		
220pF	±5%	CL21C221JC8NNN □		
220pF	±10%	CL21C221KC8NNN □		

■ Size : 1.60 X 0.80mm (inch : 0603)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number
0.90mm	100Vdc	10pF	±0.25pF	CL10C100CC8NNN □
		10pF	±0.5pF	CL10C100DC8NNN □
		10pF	±5%	CL10C100JC8NNN □
		12pF	±5%	CL10C120JC8NNN □
		13pF	±5%	CL10C130JC8NNN □
		15pF	±5%	CL10C150JC8NNN □
		18pF	±5%	CL10C180JC8NNN □
		20pF	±5%	CL10C200JC8NNN □
		22pF	±5%	CL10C220JC8NNN □
		24pF	±5%	CL10C240JC8NNN □
		27pF	±5%	CL10C270JC8NNN □
		30pF	±5%	CL10C300JC8NNN □
		32pF	±2%	CL10C320GC8NNN □
		33pF	±1%	CL10C330FC8NNN □
		33pF	±5%	CL10C330JC8NNN □
		39pF	±1%	CL10C390FC8NNN □
		39pF	±5%	CL10C390JC8NNN □
		47pF	±5%	CL10C470JC8NNN □
		50pF	±5%	CL10C500JC8NNN □
		52pF	±5%	CL10C520JC8NNN □
		56pF	±5%	CL10C560JC8NNN □
		62pF	±5%	CL10C620JC8NNN □
		62pF	±10%	CL10C620KC8NNN □
		68pF	±2%	CL10C680GC8NNN □
		68pF	±5%	CL10C680JC8NNN □
		82pF	±5%	CL10C820JC8NNN □
		91pF	±5%	CL10C910JC8NNN □
		95pF	±5%	CL10C950JC8NNN □
		100pF	±5%	CL10C101JC8NNN □
		110pF	±5%	CL10C111JC8NNN □
		120pF	±5%	CL10C121JC8NNN □
		150pF	±5%	CL10C151JC8NNN □
		180pF	±5%	CL10C181JC8NNN □
180pF	±10%	CL10C181KC8NNN □		
190pF	±5%	CL10C191JC8NNN □		
200pF	±5%	CL10C201JC8NNN □		
220pF	±5%	CL10C221JC8NNN □		
220pF	±10%	CL10C221KC8NNN □		

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p.148

Medium – High Voltage Capacitors

Product Line Up (COG)

■ Size : 2.00 X 1.25mm (inch : 0805)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	
0.75mm	100Vdc	91pF	±5%	CL21C910JCANNN □	
		100pF	±5%	CL21C101JCANNN □	
		110pF	±5%	CL21C111JCANNN □	
		120pF	±5%	CL21C121JCANNN □	
		130pF	±5%	CL21C131JCANNN □	
		150pF	±1%	CL21C151FCANNN □	
		150pF	±5%	CL21C151JCANNN □	
		160pF	±5%	CL21C161JCANNN □	
		180pF	±2%	CL21C181GCANNN □	
		180pF	±5%	CL21C181JCANNN □	
		200pF	±5%	CL21C201JCANNN □	
		220pF	±5%	CL21C221JCANNN □	
		240pF	±5%	CL21C241JCANNN □	
		270pF	±5%	CL21C271JCANNN □	
		270pF	±10%	CL21C271KCANNN □	
		300pF	±5%	CL21C301JCANNN □	
		330pF	±5%	CL21C331JCANNN □	
		360pF	±5%	CL21C361JCANNN □	
	390pF	±5%	CL21C391JCANNN □		
	200Vdc	100pF	±5%	CL21C101JDCANNN □	
0.95mm	100Vdc	15pF	±5%	CL21C150JCCNND □	
		470pF	±2%	CL21C471GCCNND □	
		470pF	±5%	CL21C471JCCNND □	
		510pF	±5%	CL21C511JCCNND □	
		560pF	±1%	CL21C561FCCNND □	
		620pF	±5%	CL21C621JCCNND □	
		680pF	±5%	CL21C681JCCNND □	
		200Vdc	10pF	±0.5pF	CL21C100DDCNND □
			15pF	±5%	CL21C150JDCNND □
			18pF	±2%	CL21C180GDCNND □
	18pF		±5%	CL21C180JDCNND □	
	20pF		±2%	CL21C200GDCNND □	
	36pF		±2%	CL21C360GDCNND □	
	39pF		±2%	CL21C390GDCNND □	
	43pF		±2%	CL21C430GDCNND □	
	47pF		±5%	CL21C470JDCNND □	
	51pF		±5%	CL21C510JDCNND □	
	56pF	±2%	CL21C560GDCNND □		
	56pF	±5%	CL21C560JDCNND □		
	62pF	±2%	CL21C620GDCNND □		
100pF	±2%	CL21C101GDCNND □			
100pF	±5%	CL21C101JDCNND □			
120pF	±5%	CL21C121JDCNND □			
150pF	±5%	CL21C151JDCNND □			
200pF	±5%	CL21C201JDCNND □			
220pF	±5%	CL21C221JDCNND □			
250Vdc	100pF	±10%	CL21C101KECNND □		
1.35mm	100Vdc	100pF	±5%	CL21C101JCFNND □	
		1.0nF	±2%	CL21C102JCFNND □	
		1.0nF	±5%	CL21C102JCFNND □	
		1.2nF	±5%	CL21C122JCFNND □	
		2.2nF	±5%	CL21C222JCFNND □	
		470pF	±5%	CL21C471JDFNND □	
	200Vdc	1.0nF	±5%	CL21C102JDFNND □	

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number
1.35mm	250Vdc	1.0nF	±5%	CL21C102JEFNND □
		27pF	±5%	CL21C270JHFNND □
	630Vdc	33pF	±5%	CL21C330JHFNND □
		68pF	±5%	CL21C680JHFNND □
		150pF	±5%	CL21C151JHFNND □
		560pF	±5%	CL21C561JHFNND □

■ Size : 3.20 X 1.60mm (inch : 1206)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number
1.00mm	100Vdc	10pF	±0.25pF	CL31C100CCNND □
		10pF	±0.5pF	CL31C100DCNND □
		10pF	±5%	CL31C100JCCNND □
		11pF	±5%	CL31C110JCCNND □
		12pF	±2%	CL31C120GCCNND □
		12pF	±5%	CL31C120JCCNND □
		15pF	±2%	CL31C150GCCNND □
		15pF	±5%	CL31C150JCCNND □
		18pF	±2%	CL31C180GCCNND □
		18pF	±5%	CL31C180JCCNND □
		20pF	±5%	CL31C200JCCNND □
		22pF	±5%	CL31C220JCCNND □
		24pF	±5%	CL31C240JCCNND □
		27pF	±1%	CL31C270FCCNND □
		27pF	±2%	CL31C270GCCNND □
		27pF	±5%	CL31C270JCCNND □
		30pF	±2%	CL31C300GCCNND □
		30pF	±5%	CL31C300JCCNND □
		30pF	±10%	CL31C300KCCNND □
		33pF	±5%	CL31C330JCCNND □
		36pF	±5%	CL31C360JCCNND □
		39pF	±5%	CL31C390JCCNND □
		43pF	±5%	CL31C430JCCNND □
		51pF	±5%	CL31C510JCCNND □
		56pF	±5%	CL31C560JCCNND □
		62pF	±5%	CL31C620JCCNND □
		68pF	±5%	CL31C680JCCNND □
		75pF	±5%	CL31C750JCCNND □
		82pF	±5%	CL31C820JCCNND □
		91pF	±1%	CL31C910FCCNND □
		91pF	±2%	CL31C910GCCNND □
		91pF	±5%	CL31C910JCCNND □
		100pF	±5%	CL31C101JCCNND □
		110pF	±5%	CL31C111JCCNND □
		120pF	±5%	CL31C121JCCNND □
		130pF	±5%	CL31C131JCCNND □
		180pF	±1%	CL31C181FCCNND □
		180pF	±5%	CL31C181JCCNND □
		200pF	±5%	CL31C201JCCNND □
		220pF	±5%	CL31C221JCCNND □
240pF	±5%	CL31C241JCCNND □		
270pF	±5%	CL31C271JCCNND □		
300pF	±5%	CL31C301JCCNND □		

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p.148

Product Line Up (COG)

■ Size : 3.20 X 1.60mm (inch : 1206)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark	Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark	
1.00mm	100Vdc	330pF	±1%	CL31C331FCCNNN□		1.40mm	500Vdc	470pF	±10%	CL31C471KGFNNN□		
		330pF	±5%	CL31C331JCCNNN□				560pF	±2%	CL31C561JGFNNN□		
		360pF	±5%	CL31C361JCCNNN□				560pF	±5%	CL31C561JGFNNN□		
		390pF	±5%	CL31C391JCCNNN□				630Vdc	10pF	±5%	CL31C100JHFNNN□	
		390pF	±10%	CL31C391KCCNNN□					12pF	±5%	CL31C120JHFNNN□	
		470pF	±1%	CL31C471FCCNNN□					15pF	±5%	CL31C150JHFNNN□	
		470pF	±2%	CL31C471GCCNNN□					18pF	±5%	CL31C180JHFNNN□	
		470pF	±5%	CL31C471JCCNNN□					22pF	±5%	CL31C220JHFNNN□	
		470pF	±10%	CL31C471KCCNNN□					22pF	±5%	CL31C220JHFNNC□	dv/dt
		510pF	±5%	CL31C511JCCNNN□					27pF	±5%	CL31C270JHFNNN□	
		560pF	±5%	CL31C561JCCNNN□			33pF		±5%	CL31C330JHFNNN□		
		680pF	±5%	CL31C681JCCNNN□			39pF		±5%	CL31C390JHFNNN□		
		750pF	±5%	CL31C751JCCNNN□			47pF		±2%	CL31C470GHFNNN□		
		820pF	±1%	CL31C821FCCNNN□			47pF	±5%	CL31C470JHFNNN□			
		910pF	±5%	CL31C911JCCNNN□			47pF	±5%	CL31C470JHFNNC□	dv/dt		
		1.0nF	±5%	CL31C102JCCNNN□			47pF	±10%	CL31C470KHFNNN□			
		1.2nF	±5%	CL31C122JCCNNN□			56pF	±5%	CL31C560JHFNNN□			
		1.5nF	±5%	CL31C152JCCNNN□			68pF	±5%	CL31C680JHFNNN□			
		1.8nF	±5%	CL31C182JCCNNN□			82pF	±5%	CL31C820JHFNNN□			
		2.2nF	±5%	CL31C222JCCNNN□			100pF	±5%	CL31C101JHFNNN□			
	200Vdc	10pF	±0.5pF	CL31C100DDCNNN□			120pF	±5%	CL31C121JHFNNN□			
		15pF	±5%	CL31C150JDCNNN□			150pF	±5%	CL31C151JHFNNN□			
		36pF	±5%	CL31C360JDCNNN□			180pF	±5%	CL31C181JHFNNN□			
		51pF	±5%	CL31C510JDCNNN□			220pF	±5%	CL31C221JHFNNN□			
		100pF	±5%	CL31C101JDCNNN□			220pF	±10%	CL31C221KHFNNN□			
		200pF	±5%	CL31C201JDCNNN□			330pF	±5%	CL31C331JHFNNN□			
		220pF	±5%	CL31C221JDCNNN□			390pF	±5%	CL31C391JHFNNN□			
		470pF	±5%	CL31C470JHFNNN□			470pF	±5%	CL31C471JHFNNN□			
1.30mm	630Vdc	1.0nF	±5%	CL31C102JHMLNN□		1kVdc	10pF	±5%	CL31C100JIFNNN□			
1.40mm	200Vdc	1.0nF	±5%	CL31C102JDFNNN□			12pF	±5%	CL31C120JIFNNN□			
		1.5nF	±5%	CL31C152JDFNNN□			15pF	±5%	CL31C150JIFNNN□			
	500Vdc	10pF	±5%	CL31C100JGFNNN□			18pF	±5%	CL31C180JIFNNN□			
		15pF	±2%	CL31C150GGFNNN□			22pF	±5%	CL31C220JIFNNN□			
		15pF	±5%	CL31C150JGFNNN□			33pF	±5%	CL31C330JIFNNN□			
		20pF	±5%	CL31C200JGFNNN□			39pF	±5%	CL31C390JIFNNN□			
		22pF	±5%	CL31C220JGFNNN□			47pF	±5%	CL31C470JIFNNN□			
		39pF	±2%	CL31C390GGFNNN□			56pF	±5%	CL31C560JIFNNN□			
		39pF	±5%	CL31C390JGFNNN□			68pF	±5%	CL31C680JIFNNN□			
		47pF	±2%	CL31C470GGFNNN□			82pF	±5%	CL31C820JIFNNN□			
		47pF	±5%	CL31C470JGFNNN□			100pF	±5%	CL31C101JIFNNN□			
		68pF	±2%	CL31C680GGFNNN□			100pF	±5%	CL31C101JIFNNC□	dv/dt		
		68pF	±5%	CL31C680JGFNNN□			120pF	±5%	CL31C121JIFNNN□			
		82pF	±5%	CL31C820JGFNNN□			150pF	±5%	CL31C151JIFNNN□			
		100pF	±2%	CL31C101GGFNNN□			470pF	±5%	CL31C471JIFNNN□			
		100pF	±5%	CL31C101JGFNNN□			1.80mm	100Vdc	3.9nF	±5%	CL31C392JCHNNN□	
		100pF	±10%	CL31C101KGFNNN□					4.7nF	±5%	CL31C472JCHNNN□	
		150pF	±5%	CL31C151JGFNNN□					10nF	±5%	CL31C103JCHNNN□	
		220pF	±2%	CL31C221GGFNNN□				200Vdc	2.2nF	±5%	CL31C222JDHNNN□	
		220pF	±5%	CL31C221JGFNNN□					2.2nF	±10%	CL31C222KDHNNN□	
220pF	±10%	CL31C221KGFNNN□		250Vdc	2.2nF				±5%	CL31C222JEHNNN□		
270pF	±2%	CL31C271GGFNNN□			3.9nF			±5%	CL31C392JEHNNN□			
270pF	±5%	CL31C271JGFNNN□			4.7nF			±5%	CL31C472JEHNNN□			
330pF	±5%	CL31C331JGFNNN□			5.6nF			±5%	CL31C562JEHNNN□			
470pF	±2%	CL31C471GGFNNN□		6.8nF	±5%			CL31C682JEHNNN□				
470pF	±5%	CL31C471JGFNNN□										

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p.148

Medium – High Voltage Capacitors

Product Line Up (COG)

■ Size : 3.20 X 1.60mm (inch : 1206)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark	
1.80mm	250Vdc	8.2nF	±5%	CL31C822JEHNNN□		
		500Vdc	1.0nF	±2%	CL31C102JGHNNN□	
			1.0nF	±5%	CL31C102JGHNNN□	
			1.5nF	±5%	CL31C152JGHNNN□	
			2.2nF	±5%	CL31C222JGHNNN□	
	630Vdc	680pF	±5%	CL31C681JHHNNN□		
		1.0nF	±5%	CL31C102JHHNNN□		
		1.0nF	±5%	CL31C102JHHNNC□	dv/dt	
		1.2nF	±5%	CL31C122JHHNNN□		
		1.5nF	±5%	CL31C152JHHNNN□		
		2.2nF	±5%	CL31C222JHHNNN□		
		2.7nF	±5%	CL31C272JHHNNN□		
		3.3nF	±5%	CL31C332JHHNNN□		
		1kVdc	33pF	±5%	CL31C330JHHNNN□	
	150pF		±5%	CL31C151JHHNNN□		
	180pF		±5%	CL31C181JHHNNN□		
	220pF		±5%	CL31C221JHHNNN□		
	220pF		±5%	CL31C221JHHNNC□	dv/dt	
	270pF		±5%	CL31C271JHHNNN□		
	270pF		±5%	CL31C271JHHNNC□	dv/dt	
330pF	±5%		CL31C331JHHNNN□			
330pF	±5%		CL31C331JHHNNC□	dv/dt		
470pF	±5%		CL31C471JHHNNN□			
470pF	±5%		CL31C471JHHNNC□	dv/dt		
2kVdc	10pF	±5%	CL31C100JHHNNN□			
	10pF	±5%	CL31C100JHHNNC□	dv/dt		
	15pF	±5%	CL31C150JHHNNN□			
	22pF	±5%	CL31C220JHHNNN□			
	33pF	±5%	CL31C330JHHNNN□			
	47pF	±5%	CL31C470JHHNNN□			
	47pF	±5%	CL31C470JHHNNC□	dv/dt		
	68pF	±5%	CL31C680JHHNNN□			
	100pF	±5%	CL31C101JHHNNN□			

■ Size : 4.50 X 2.00mm (inch : 1808)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark
1.45mm	3kVdc	5pF	±5%	CL42C050JKFNNN□	
		10pF	±5%	CL42C100JKFNNN□	
		12pF	±5%	CL42C120JKFNNN□	
		15pF	±5%	CL42C150JKFNNN□	
		18pF	±5%	CL42C180JKFNNN□	
		22pF	±5%	CL42C220JKFNNN□	
		27pF	±5%	CL42C270JKFNNN□	
		33pF	±5%	CL42C330JKFNNN□	
		47pF	±5%	CL42C470JKFNNN□	
		68pF	±5%	CL42C680JKFNNN□	
		100pF	±5%	CL42C101JKFNNN□	
1.80mm	2kVdc	220pF	±5%	CL42C221JHHNNN□	
2.20mm	3kVdc	150pF	±5%	CL42C151JKINNN□	

■ Size : 4.50 X 3.20mm (inch : 1812)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark	
1.45mm	100Vdc	10nF	±5%	CL43C103JCFNNN□		
1.80mm	1kVdc	820pF	±5%	CL43C821JHHNNN□		
		1.0nF	±5%	CL43C102JHHNNN□		
2.20mm	1kVdc	1.2nF	±5%	CL43C122JHHNNN□		
2.70mm	630Vdc	22nF	±5%	CL43C223JHHNNN□		
		1kVdc	1.3nF	±5%	CL43C132JHHNNN□	
			1.5nF	±5%	CL43C152JHHNNN□	
			1.6nF	±5%	CL43C162JHHNNN□	
			1.8nF	±5%	CL43C182JHHNNN□	

■ Size : 5.70 X 5.50mm (inch : 2220)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark
2.70mm	3kVdc	1.0nF	±5%	CL55C102JKJNNN□	

■ Size : 3.20 X 2.50mm (inch : 1210)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark		
1.45mm	100Vdc	1.0nF	±10%	CL32C102KCFNNN□			
		1.5nF	±10%	CL32C152KCFNNN□			
		4.7nF	±5%	CL32C472JCFNNN□			
	500Vdc	680pF	±5%	CL32C681JGFNNN□			
		1kVdc	330pF	±5%	CL32C331JIFNNN□		
			2kVdc	100pF	±5%	CL32C101JHFNNN□	
				100pF	±10%	CL32C101KJFNNN□	
				150pF	±5%	CL32C151JHFNNN□	
1.80mm	630Vdc	1.8nF	±5%	CL32C182JHHNNN□			
	1kVdc	470pF	±5%	CL32C471JHHNNN□			
	2kVdc	220pF	±5%	CL32C221JHHNNN□			
2.20mm	2kVdc	330pF	±5%	CL32C331JHNNN□			
2.70mm	630Vdc	6.8nF	±10%	CL32C682KHJNNN□			
		8.2nF	±5%	CL32C822JHJNNN□			
	2kVdc	470pF	±5%	CL32C471JHNNN□			

* □ mark means packaging code. If you want to learn the code or quantity in detail, please see p.148

Product Line Up (X7R)

■ Size : 1.60 X 0.80mm (inch : 0603)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark
0.90mm	100Vdc	220pF	±10%	CL10B221KC8NNN□	
		470pF	±10%	CL10B471KC8NNN□	
		680pF	±5%	CL10B681JC8NNN□	
		1.0nF	±10%	CL10B102KC8NNN□	
		1.5nF	±10%	CL10B152KC8NNN□	
		1.8nF	±10%	CL10B182KC8NNN□	
		2.2nF	±10%	CL10B222KC8NNN□	
		2.7nF	±10%	CL10B272KC8NNN□	
		3.3nF	±5%	CL10B332JC8NNN□	
		3.3nF	±10%	CL10B332KC8NNN□	
		3.9nF	±10%	CL10B392KC8NNN□	
		4.7nF	±10%	CL10B472KC8NNN□	
		10nF	±10%	CL10B103KC8NNN□	
		100nF	±10%	CL10B104KC8NNN□	

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark
1.35mm	100Vdc	100nF	±10%	CL21B104KCFNNN□	
		220nF	±10%	CL21B224KCFNNN□	
	250Vdc	4.7nF	±10%	CL21B472KEFNNN□	
		10nF	±10%	CL21B103KEFNNN□	
		15nF	±10%	CL21B153KEFNNN□	

■ Size : 3.20 X 1.60mm (inch : 1206)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark			
1.00mm	100Vdc	330pF	±10%	CL31B331KCCNNN□				
		470pF	±10%	CL31B471KCCNNN□				
		1.0nF	±10%	CL31B102KCCNNN□				
		1.5nF	±10%	CL31B152KCCNNN□				
		2.2nF	±10%	CL31B222KCCNNN□				
		2.7nF	±5%	CL31B272JCCNNN□				
		3.3nF	±10%	CL31B332KCCNNN□				
		3.9nF	±10%	CL31B392KCCNNN□				
		4.7nF	±10%	CL31B472KCCNNN□				
		6.8nF	±10%	CL31B682KCCNNN□				
		10nF	±10%	CL31B103KCCNNN□				
		18nF	±10%	CL31B183KCCNNN□				
		22nF	±10%	CL31B223KCCNNN□				
		33nF	±10%	CL31B333KCCNNN□				
		47nF	±5%	CL31B473JCCNNN□				
		47nF	±10%	CL31B473KCCNNN□				
		47nF	±20%	CL31B473MCCNNN□				
		200Vdc	470pF	±10%	CL31B471KDCNNN□			
			680pF	±10%	CL31B681KDCNNN□			
			1.0nF	±10%	CL31B102KDCNNN□			
			2.2nF	±10%	CL31B222KDCNNN□			
	3.3nF		±10%	CL31B332KDCNNN□				
	4.7nF		±10%	CL31B472KDCNNN□				
	6.8nF		±10%	CL31B682KDCNNN□				
	8.2nF		±10%	CL21B822KCANNN□				
	10nF		±5%	CL21B103JCANNN□				
	10nF		±10%	CL21B103KCANNN□				
	1.40mm		100Vdc	470pF	±10%	CL31B471KCFNNN□		
				100nF	±5%	CL31B104JCFNNN□		
				100nF	±10%	CL31B104KCFNNN□		
			200Vdc	33nF	±10%	CL31B333KDFNNN□		
				47nF	±10%	CL31B473KDFNNN□		
			250Vdc	22nF	±10%	CL31B223KEFNNN□		
				500Vdc	220pF	±10%	CL31B221KGFNNN□	
					470pF	±10%	CL31B471KGFNNN□	
					470pF	±20%	CL31B471MGFNNN□	
				500Vdc	560pF	±10%	CL31B561KGFNNN□	
	680pF				±10%	CL31B681KGFNNN□		
	1.0nF	±10%	CL31B102KGFNNN□					
	1.0nF	±20%	CL31B102MGFNNN□					
	1.5nF	±10%	CL31B152KGFNNN□					
	1.8nF	±5%	CL31B182JGFNNN□					

■ Size : 2.00 X 1.25mm (inch : 0805)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark		
0.75mm	100Vdc	100pF	±5%	CL21B101JCANNN□			
		220pF	±10%	CL21B221KCANNN□			
		270pF	±10%	CL21B271KCANNN□			
		330pF	±5%	CL21B331JCANNN□			
		330pF	±10%	CL21B331KCANNN□			
		470pF	±10%	CL21B471KCANNN□			
		1.0nF	±5%	CL21B102JCANNN□			
		1.0nF	±10%	CL21B102KCANNN□			
		1.5nF	±10%	CL21B152KCANNN□			
		2.2nF	±10%	CL21B222KCANNN□			
		3.3nF	±10%	CL21B332KCANNN□			
		3.9nF	±10%	CL21B392KCANNN□			
		4.7nF	±10%	CL21B472KCANNN□			
		6.8nF	±10%	CL21B682KCANNN□			
		8.2nF	±10%	CL21B822KCANNN□			
		10nF	±5%	CL21B103JCANNN□			
		10nF	±10%	CL21B103KCANNN□			
		0.95mm	100Vdc	15nF	±10%	CL21B153KCCNNN□	
				330pF	±10%	CL21B331KDCNNN□	
				470pF	±10%	CL21B471KDCNNN□	
560pF	±10%			CL21B561KDCNNN□			
1.0nF	±5%			CL21B102JDCNNN□			
1.0nF	±10%			CL21B102KDCNNN□			
1.5nF	±10%			CL21B152KDCNNN□			
200Vdc	2.2nF		±10%	CL21B222KDCNNN□			
	3.3nF		±10%	CL21B332KDCNNN□			
	4.7nF		±10%	CL21B472KDCNNN□			
	6.8nF		±10%	CL21B682KDCNNN□			
	10nF		±10%	CL21B103KDCNNN□			
	10nF		±10%	CL21B103KDCNNN□			
	15nF		±10%	CL21B153KDCNNN□			
250Vdc	560pF	±10%	CL21B561KECNNN□				
	100Vdc	22nF	±10%	CL21B223KCFNNN□			
		27nF	±10%	CL21B273KCFNNN□			
		33nF	±10%	CL21B333KCFNNN□			
		47nF	±10%	CL21B473KCFNNN□			
		68nF	±10%	CL21B683KCFNNN□			

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p.148

Medium – High Voltage Capacitors

Product Line Up (X7R)

■ Size : 3.20 X 1.60mm (inch : 1206)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark		
1.40mm	500Vdc	1.8nF	±10%	CL31B182KGFNNN□			
		2.2nF	±10%	CL31B222KGFNNN□			
		2.2nF	±20%	CL31B222MGFNNN□			
		2.7nF	±10%	CL31B272KGFNNN□			
		3.3nF	±10%	CL31B332KGFNNN□			
		4.7nF	±10%	CL31B472KGFNNN□			
		6.8nF	±10%	CL31B682KGFNNN□			
		8.2nF	±10%	CL31B822KGFNNN□			
		10nF	±10%	CL31B103KGFNNN□			
		12nF	±10%	CL31B123KGFNNN□			
		15nF	±10%	CL31B153KGFNNN□			
		630Vdc	220pF	±10%	CL31B221KHFNNN□		
			330pF	±10%	CL31B331KHFNNN□		
			470pF	±10%	CL31B471KHFNNN□		
	560pF		±10%	CL31B561KHFNNN□			
	680pF		±10%	CL31B681KHFNNN□			
	1.0nF		±10%	CL31B102KHFNNN□			
	1.5nF		±10%	CL31B152KHFNNN□			
	2.2nF		±10%	CL31B222KHFNNN□			
	3.3nF		±10%	CL31B332KHFNNN□			
	4.7nF		±10%	CL31B472KHFNNN□			
	6.8nF		±10%	CL31B682KHFNNN□			
	8.2nF		±5%	CL31B822JHFNNN□			
	10nF		±10%	CL31B103KHFNNN□			
	15nF		±10%	CL31B153KHFNNN□			
	1kVdc	680pF	±10%	CL31B681KIFNNN□	Derating		
		1.0nF	±10%	CL31B102KIFNNN□	Derating		
		2.2nF	±10%	CL31B222KIFNNN□	Derating		
		2.5nF	±10%	CL31B252KIFNNN□	Derating		
		3.3nF	±5%	CL31B332JIFNNN□	Derating		
		4.7nF	±10%	CL31B472KIFNNN□	Derating		
	1.80mm	100Vdc	150nF	±10%	CL31B154KCHNNN□		
			220nF	±10%	CL31B224KCHNNN□		
			470nF	±10%	CL31B474KCHNNN□		
			1.0uF	±10%	CL31B105KCHNNN□		
			200Vdc	68nF	±10%	CL31B683KDHNNN□	
				100nF	±10%	CL31B104KDHNNN□	
		250Vdc		33nF	±10%	CL31B333KEHNNN□	
			39nF	±10%	CL31B393KEHNNN□		
			47nF	±10%	CL31B473KEHNNN□		
		500Vdc	100nF	±10%	CL31B104KEHNNN□		
			33nF	±10%	CL31B333KGHNNN□		
630Vdc		22nF	±10%	CL31B223KHNNN□			
		2kVdc	220pF	±10%	CL31B221KJHNNN□	Derating	
			470pF	±10%	CL31B471KJHNNN□	Derating	
			1.0nF	±10%	CL31B102KJHNNN□	Derating	
			1.0nF	±20%	CL31B102MJHNNN□	Derating	
			1.5nF	±10%	CL31B152KJHNNN□	Derating	

■ Size : 3.20 X 2.50mm (inch : 1210)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark		
1.45mm	100Vdc	2.2nF	±10%	CL32B222KCFNNN□			
		4.7nF	±10%	CL32B472KCFNNN□			
		10nF	±10%	CL32B103KCFNNN□			
		47nF	±10%	CL32B473KCFNNN□			
		100nF	±5%	CL32B104JCFNNN□			
		100nF	±10%	CL32B104KCFNNN□			
		150nF	±10%	CL32B154KCFNNN□			
		200Vdc	10nF	±10%	CL32B103KDFNNN□		
			500Vdc	1.8nF	±5%	CL32B182JGFNNN□	
				10nF	±10%	CL32B103KGFNNN□	
				10nF	±20%	CL32B103MGFNNN□	
				15nF	±20%	CL32B153MGFNNN□	
	22nF			±10%	CL32B223KGFNNN□		
	630Vdc	4.7nF		±20%	CL32B472MHFNNN□		
	1kVdc	4.7nF	±10%	CL32B472KIFNNN□	Derating		
		2kVdc	1.0nF	±10%	CL32B102KJFNNN□		
	1.80mm	100Vdc	220nF	±5%	CL32B224JCHNNN□		
			220nF	±10%	CL32B224KCHNNN□		
			330nF	±10%	CL32B334KCHNNN□		
			47nF	±10%	CL32B473KEHNNN□		
		250Vdc	47nF	±10%	CL32B473KGHNNN□		
			630Vdc	33nF	±10%	CL32B333KHNNN□	
		2.20mm	100Vdc	330nF	±10%	CL32B334KCHNNN□	
				470nF	±10%	CL32B474KCHNNN□	
2.70mm	100Vdc	430nF	±10%	CL32B434KCHNNN□			
		430nF	±20%	CL32B434MCJNNN□			
		470nF	±10%	CL32B474KCHNNN□			
		1.0uF	±10%	CL32B105KCHNNN□			
	250Vdc	100nF	±10%	CL32B104KEJNNN□			
		150nF	±10%	CL32B154KEJNNN□			

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p.148

Product Line Up (X7R)

■ Size : 4.50 X 2.00mm (inch : 1808)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark
1.45mm	1kVdc	1.0nF	±10%	CL42B102KIFNNN □	Derating
	2kVdc	1.0nF	±10%	CL42B102KJFNNN □	Derating

■ Size : 5.70 X 5.00mm (inch : 2220)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark
1.80mm	100Vdc	820nF	±10%	CL55B824KCHNNN □	
	2kVdc	10nF	±10%	CL55B103KJHNNN □	Derating
2.70mm	100Vdc	470nF	±10%	CL55B474KJNNN □	
		2.2uF	±10%	CL55B225KJNNN □	
		3.3uF	±10%	CL55B335KJNNN □	
		4.7uF	±10%	CL55B475KJNNN □	
	630Vdc	220nF	±10%	CL55B224KHJNNN □	

■ Size : 4.50 X 3.20mm (inch : 1812)

Thickness Max.	Rated Voltage	Capacitance	Capacitance Tolerance	Part Number	Remark
1.45mm	100Vdc	100nF	±10%	CL43B104KCFNNN □	
		100nF	±20%	CL43B104MCFNNN □	
		220nF	±10%	CL43B224KCFNNN □	
		330nF	±10%	CL43B334KCFNNN □	
	200Vdc	1.0nF	±10%	CL43B102KDFNNN □	
		47nF	±10%	CL43B473KDFNNN □	
		47nF	±20%	CL43B473MDFNNN □	
	500Vdc	100nF	±10%	CL43B104KDFNNN □	
		3.3nF	±10%	CL43B332KGFNNN □	
		10nF	±10%	CL43B103KGFNNN □	
		22nF	±10%	CL43B223KGFNNN □	
	1kVdc	33nF	±10%	CL43B333KGFNNN □	
		47nF	±10%	CL43B473KGFNNN □	
		1.0nF	±10%	CL43B102KIFNNN □	Derating
		1.5nF	±10%	CL43B152KIFNNN □	Derating
	2kVdc	2.2nF	±10%	CL43B222KIFNNN □	Derating
		2.7nF	±10%	CL43B272KIFNNN □	Derating
		3.3nF	±10%	CL43B332KIFNNN □	Derating
		4.7nF	±10%	CL43B472KIFNNN □	Derating
		5.0nF	±10%	CL43B502KIFNNN □	Derating
		10nF	±10%	CL43B103KIFNNN □	Derating
		10nF	±20%	CL43B103MIFNNN □	Derating
		1.0nF	±10%	CL43B102KJFNNN □	Derating
	1.5nF	±10%	CL43B152KJFNNN □	Derating	
2.2nF	±10%	CL43B222KJFNNN □	Derating		
1.80mm	100Vdc	470nF	±10%	CL43B474KCHNNN □	
		470nF	±20%	CL43B474MCHNNN □	
2.20mm	500Vdc	100nF	±10%	CL43B104KGINNN □	
2.70mm	100Vdc	680nF	±10%	CL43B684KJNNN □	
		820nF	±10%	CL43B824KJNNN □	
		1.0uF	±10%	CL43B105KJNNN □	
	200Vdc	470nF	±10%	CL43B474KJNNN □	
	250Vdc	220nF	±10%	CL43B224KEJNNN □	
		220nF	±20%	CL43B224MEJNNN □	
		470nF	±10%	CL43B474KEJNNN □	

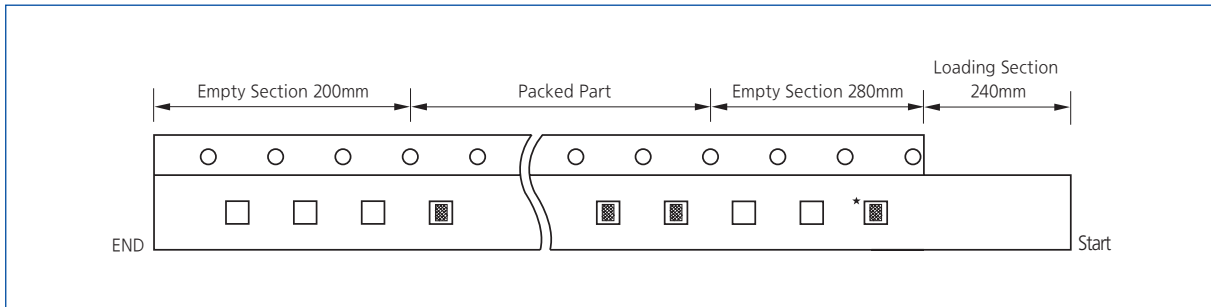
※ Remarks : Symbols in this catalog have the following definition.

- Derating** This capacitor with derating is designed for 70% of the rated voltage or less.
- dv/dt** dv/dt means Pulse(dv/dt) Guarantee Capacitor, 10,000V/us(=10V/ns) max.10,000 cycles guarantee(@Vr, Room temp)
- Ref.** Reference means that CAP & TCC have the exceptional measurement conditions for Capacitance and Temperature Characteristics of Capacitance. So please refer to the individual specification for CAP and the individual characteristics data for TCC on Website.

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p.148

Packaging Specifications

Taping figure



★The chip is only use for identifying the label and packaged products. Please don't use the chip.

Packaging Code & Quantity

Unit : kpcs

Size inch(mm)	Thickness code	Cardboard(Paper) Type										
		7" Reel					10" Reel	13" Reel				
		C	8	H	Z*	Y*	O	D	L	2*	7*	3
01005(0402)	2	20	-	-	-	-	-	100	50	-	-	-
0201(0603)	3	10	-	15	10	10	30	50	-	150	50	-
0402(1005)	3	10	-	15	-	-	30	50	-	-	-	-
	5	10	8	-	10	10	30	50	40	100	50	-
	7,8(THMC)	-	8	-	-	-	-	-	-	-	-	30
0504(1410)	8	4	-	-	-	-	10	10	15	-	-	-
	5	4	-	-	-	-	30	50	-	-	-	-
0603(1608)	8	4	-	-	4	4	10	10	15	-	-	-
	9,N	4	-	-	-	-	-	-	-	-	-	-
0805(2012)	A,C	4	-	-	-	-	10	10	15	-	-	-
1206(3216)	C	4	-	-	-	-	10	10	15	-	-	-

* 2 = 1mm Pitch / Z = Chip aligned for horizontal / Y, 7 = Chip aligned for vertical

Unit : kpcs

Size inch(mm)	Thickness code	Embossed(Plastic) Type							Bulk case Type	Bulk Type
		7" Reel				10" Reel	13" Reel			
		E	G	W*	R*	S	F	P		
01005(0402)	2	50	-	-	-	-	-	-	-	-
0201(0603)	1	10	-	-	-	-	-	-	-	-
0402(1005)	1,2,L	15	-	-	-	-	-	-	-	-
	3,5	-	-	-	-	-	-	50	-	-
0603(1608)	8	3	-	-	3	-	10	15	-	-
	E,M	3	-	-	-	-	-	-	-	-
0604(1610)	D	3	-	3	-	6	10	-	-	-
	A,C	-	-	-	-	-	-	10	-	-
0805(2012)	E	2	3	2	-	6	10	5	-	-
	F	2	3	2	-	6	10	5	-	-
	Q	2	3	2	-	6	10	5	-	-
1206(3216)	E,P,F	2	3	-	-	6	10	-	-	-
	H	2	-	2	-	4	8	-	-	-
1210(3225)	9,D,C,O	2	-	-	-	-	10	-	-	-
	E,F,M	2	-	-	-	-	10	-	-	-
	H,T	2	-	-	-	4	8	-	-	-
	I,U	2	-	-	-	-	4	-	-	-
	J,V	1	-	1	-	-	4	-	-	-
	S	2	-	-	-	-	8	-	-	-
1808(4520)	F	2	-	-	-	-	-	-	-	-
1812(4532)	F	1	-	-	-	-	4	-	-	-
	H,I	1	-	-	-	-	4	-	-	-
	J,L	-	-	-	-	-	2	-	-	-
2220(5750)	H,I,J	-	-	-	-	-	2	-	-	-

* R = Chip aligned for horizontal / W = Chip aligned for vertical