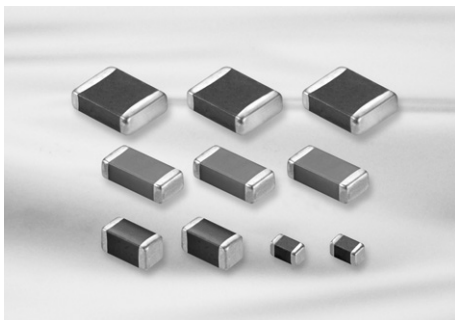


General Capacitors



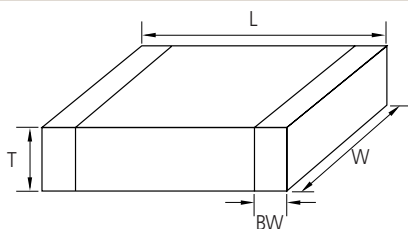
Feature

- Wide selection of size : from 0402 to 2220
- Highly reliable tolerance and high speed automatic chip placement on PCBs
- Wide capacitance range
- Wide temperature compensation and voltage range : from COG to Y5V and from 6.3V to 50V
- Highly reliable performance
- Highly resistant termination metal
- Tape & reel for surface mount assembly

Application

- HHP, DSC, DVC, LCD, TV, Memory Module, PDA, Game Machine
- Tuner (Product code C is suitable.)
- ※ Medical, Aviation, Automobile device should be following a special specification.

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	0.2+0.15/-0.1
10	0603	1.60±0.10	0.80±0.10	0.50+0.0/-0.1(*)	5	0.30±0.20
				0.80±0.10	8	
21	0805	2.00±0.10	1.25±0.10	0.85±0.10	C	0.5+0.2/-0.3
				1.25±0.10	F	
				1.25±0.15	Q	
21	0805	2.00±0.15	1.25±0.15	1.25±0.15	Y	0.5+0.2/-0.3
				1.25±0.20	Y	
				1.25±0.20	Y	
31	1206	3.20±0.20	1.60±0.20	0.60±0.10	6	0.50±0.30
				0.85±0.15	C	
				0.85±0.10(*)	C	
				1.15±0.10(*)	P	
31	1206	3.20±0.15	1.60±0.15	1.25±0.15	F	0.50±0.30
				1.60±0.20	H	
				1.60±0.20	H	
32	1210	3.20±0.30	2.50±0.20	0.85±0.15	C	0.60±0.30
				0.85±0.10(*)	C	
				0.90±0.10(*)	9	
				1.60±0.20	H	
				1.80±0.20(*)	U	
				2.00±0.20	I	
32	1210	3.20±0.40	2.50±0.30	2.50±0.20	J	0.60±0.30
				2.50±0.30	V	
42	1808	4.50±0.40	2.00±0.20	2.00±0.20	I	0.80±0.30
43	1812	4.50±0.40	3.20±0.30	3.20±0.30	L	0.80±0.30
55	2220	5.70±0.40	5.00±0.40	3.20±0.30	L	1.00±0.30

■ * Mark is only applicable to "L" code , 12th code in part number.

General Capacitors Table (COG)

Size(mm)	Vr(V)	Capacitance																					
		pF										nF											
		0.5	1	10	22	47	100	220	330	470	560	1	2.2	3.3	4.7	6.8	10	22	27	33	47	68	100
0402(1005)	25	█																					
	50	█																					
0603(1608)	25	█																					
	50	█																					
0805(2012)	25											█											
	50	█																					
1206(3216)	16											█											
	25											█											
	50	█																					
1210(3225)	50											█											
1812(4532)	25											█											
	50											█											
2220(5750)	50											█											

Part Numbering System

General Capacitors

High Capacitance Capacitors

Super Small Size Capacitors

Medium-High Voltage Capacitors

Array Type Capacitors

Low ESL Capacitors

Reliability Test Condition

Premium Capacitors for Automotive Applications

Packaging Specification

Application Manual for Surface Mounting



General Capacitors Table -Low Profile (X5R)

Size(mm)	Tmax (mm)	Vr(V)	Capacitance (μF)							
			1	2.2	4.7	10	22	33	47	
0402(1005)	0.3	6.3	X6S							
		10								
		16								
0603(1608)	0.5	6.3								
		10								
		16								
		25								
0805(2012)	0.7	10								
		16								
		25								
	0.95	4							(Tmax=1.0)	
		6.3							(Tmax=1.0)	
10										
1206(3216)	0.95	16								
		25								
		50								
		10								
		16								
1210(3225)	0.95	16								
		25								
	2.0	35								
		50								

Part Numbering System

General Capacitors

High Capacitance Capacitors

Super Small Size Capacitors

Medium-High Voltage Capacitors

Array Type Capacitors

Low ESL Capacitors

Reliability Test Condition

Premium Capacitors for Automotive Applications

Packaging Specification

Application Manual for Surface Mounting

General Capacitors Table (X7R)

Size(mm)	Vr(V)	Capacitance (μ F)									
		0.1	0.22	0.47	1	2.2	4.7	10	22	47	100
0402(1005)	6.3	■	■	■							
	10	■	■	X7S							
	16	■	■								
0603(1608)	6.3	■	■	■	■	■					
	10	■	■	■	■	■					
	16	■	■	■	■						
	25	■	■	■	■						
	50	■	■								
0805(2012)	6.3	■	■	■	■	■	■	■	■		
	10	■	■	■	■	■	■	■	■		
	16	■	■	■	■	■	■	■	■		
	25	■	■	■	■	■	X7S				
	35	■	■	■	■						
	50	■	■	■	■						
1206(3216)	6.3	■	■	■	■	■	■	■	■	■	
	10	■	■	■	■	■	■	■	■	■	
	16	■	■	■	■	■	■	■	■	■	
	25	■	■	■	■	■	■	■	■	■	
	35	■	■	■	■	■	■	■	■	■	
	50	■	■	■	■	■	■	■	■	■	
1210(3225)	6.3	■	■	■	■	■	■	■	■	■	X7T
	10	■	■	■	■	■	■	■	■	■	
	16	■	■	■	■	■	■	■	■	■	
	25	■	■	■	■	■	■	■	■	■	
	50	■	■	■	■	■	■	■	■	■	

Part Numbering System

General Capacitors

High Capacitance Capacitors

Super Small Size Capacitors

Medium-High Voltage Capacitors

Array Type Capacitors

Low ESL Capacitors

Reliability Test Condition

Premium Capacitors for Automotive Applications

Packaging Specification

Application Manual for Surface Mounting

Product Lineup (General Capacitors-C0G)

	Part Number	Size L × W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05C0R5CB5NNN □	1.00×0.50	0.5pF	50	±0.25pF	0.55
2	CL05CR75CB5NNN □		0.75pF	50	±0.25pF	0.55
3	CL05C010CB5NNN □		1.0pF	50	±0.25pF	0.55
4	CL05C1R2CB5NNN □		1.2pF	50	±0.25pF	0.55
5	CL05C1R5CB5NNN □		1.5pF	50	±0.25pF	0.55
6	CL05C1R8CB5NNN □		1.8pF	50	±0.25pF	0.55
7	CL05C020CB5NNN □		2.0pF	50	±0.25pF	0.55
8	CL05C2R2CB5NNN □		2.2pF	50	±0.25pF	0.55
9	CL05C2R4CB5NNN □		2.4pF	50	±0.25pF	0.55
10	CL05C2R5CB5NNN □		2.5pF	50	±0.25pF	0.55
11	CL05C2R7CB5NNN □		2.7pF	50	±0.25pF	0.55
12	CL05C030CB5NNN □		3.0pF	50	±0.25pF	0.55
13	CL05C3R3CB5NNN □		3.3pF	50	±0.25pF	0.55
14	CL05C3R5CB5NNN □		3.5pF	50	±0.25pF	0.55
15	CL05C3R6CB5NNN □		3.6pF	50	±0.25pF	0.55
16	CL05C3R9CB5NNN □		3.9pF	50	±0.25pF	0.55
17	CL05C040CB5NNN □		4.0pF	50	±0.25pF	0.55
18	CL05C4R3CB5NNN □		4.3pF	50	±0.25pF	0.55
19	CL05C4R7CB5NNN □		4.7pF	50	±0.25pF	0.55
20	CL05C050DB5NNN □		5.0pF	50	±0.5pF	0.55
21	CL05C5R6DB5NNN □		5.6pF	50	±0.5pF	0.55
22	CL05C060DB5NNN □		6.0pF	50	±0.5pF	0.55
23	CL05C6R2DB5NNN □		6.2pF	50	±0.5pF	0.55
24	CL05C6R8DB5NNN □		6.8pF	50	±0.5pF	0.55
25	CL05C070DB5NNN □		7.0pF	50	±0.5pF	0.55
26	CL05C080DB5NNN □		8.0pF	50	±0.5pF	0.55
27	CL05C8R2DB5NNN □		8.2pF	50	±0.5pF	0.55
28	CL05C090DB5NNN □		9.0pF	50	±0.5pF	0.55
29	CL05C9R1DB5NNN □		9.1pF	50	±0.5pF	0.55
30	CL05C100JB5NNN □		10pF	50	±5%	0.55
31	CL05C110JB5NNN □		11pF	50	±5%	0.55
32	CL05C120JB5NNN □		12pF	50	±5%	0.55
33	CL05C130JB5NNN □		13pF	50	±5%	0.55
34	CL05C150JB5NNN □		15pF	50	±5%	0.55
35	CL05C160JB5NNN □		16pF	50	±5%	0.55
36	CL05C180JB5NNN □		18pF	50	±5%	0.55
37	CL05C200JB5NNN □		20pF	50	±5%	0.55
38	CL05C220JA5NNN □		22pF	25	±5%	0.55
39	CL05C220JB5NNN □		22pF	50	±5%	0.55
40	CL05C240JB5NNN □		24pF	50	±5%	0.55
41	CL05C270JB5NNN □		27pF	50	±5%	0.55
42	CL05C270JA5NNN □		27pF	25	±5%	0.55
43	CL05C300JB5NNN □		30pF	50	±5%	0.55
44	CL05C330JB5NNN □		33pF	50	±5%	0.55
45	CL05C360JB5NNN □		36pF	50	±5%	0.55
46	CL05C390JB5NNN □		39pF	50	±5%	0.55
47	CL05C430JB5NNN □		43pF	50	±5%	0.55
48	CL05C470JB5NNN □		47pF	50	±5%	0.55
49	CL05C510JB5NNN □		51pF	50	±5%	0.55
50	CL05C560JB5NNN □		56pF	50	±5%	0.55

Part Numbering
SystemGeneral
CapacitorsHigh Capacitance
CapacitorsSuper Small Size
CapacitorsMedium-High
Voltage CapacitorsArray Type
CapacitorsLow ESL
CapacitorsReliability Test
ConditionPremium Capacitors
for Automotive
ApplicationsPackaging
SpecificationApplication Manual
for Surface Mounting

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.



SAMSUNG
ELECTRO-MECHANICS

Product Lineup (General Capacitors-C0G)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
51	CL05C620JB5NNN □	1.00×0.50	62 pF	50	±5%	0.55
52	CL05C680JB5NNN □		68 pF	50	±5%	0.55
53	CL05C750JB5NNN □		75 pF	50	±5%	0.55
54	CL05C820JB5NNN □		82 pF	50	±5%	0.55
55	CL05C910JB5NNN □		91 pF	50	±5%	0.55
56	CL05C101JB5NNN □		100 pF	50	±5%	0.55
57	CL05C121JB5NNN □		120 pF	50	±5%	0.55
58	CL05C151JB5NNN □		150 pF	50	±5%	0.55
59	CL05C181JB5NNN □		180 pF	50	±5%	0.55
60	CL05C201JB5NNN □		200 pF	50	±5%	0.55
61	CL05C221JB5NNN □		220 pF	50	±5%	0.55
62	CL05C271JB5NNN □		270 pF	50	±5%	0.55
63	CL05C331JB5NNN □		330 pF	50	±5%	0.55
64	CL05C391JB5NNN □		390 pF	50	±5%	0.55
65	CL05C471JB5NNN □		470 pF	50	±5%	0.55
66	CL05C471JO5NNN □		470 pF	16	±5%	0.55
67	CL05C681JB5NNN □		680 pF	50	±5%	0.55
68	CL05C821JB5NNN □		820 pF	50	±5%	0.55
69	CL05C102JB5NNN □		1 nF	50	±5%	0.55
70	CL05C102JA5NNN □		1 nF	25	±5%	0.55
71	CL05C102JO5NNN □		1 nF	16	±5%	0.55
1	CL10C0R3CB8NNN □	1.60×0.80	0.3 pF	50	±0.25 pF	0.90
2	CL10C0R5CB8NNN □		0.5 pF	50	±0.25 pF	0.90
3	CL10C0R75CB8NNN □		0.75 pF	50	±0.25 pF	0.90
4	CL10C010CB8NNN □		1.0 pF	50	±0.25 pF	0.90
5	CL10C1R2CB8NNN □		1.2 pF	50	±0.25 pF	0.90
6	CL10C1R5CB8NNN □		1.5 pF	50	±0.25 pF	0.90
7	CL10C1R8CB8NNN □		1.8 pF	50	±0.25 pF	0.90
8	CL10C020CB8NNN □		2.0 pF	50	±0.25 pF	0.90
9	CL10C2R2CB8NNN □		2.2 pF	50	±0.25 pF	0.90
10	CL10C2R4CB8NNN □		2.4 pF	50	±0.25 pF	0.90
11	CL10C2R5CB8NNN □		2.5 pF	50	±0.25 pF	0.90
12	CL10C2R7CB8NNN □		2.7 pF	50	±0.25 pF	0.90
13	CL10C030CB8NNN □		3.0 pF	50	±0.25 pF	0.90
14	CL10C3R3CB8NNN □		3.3 pF	50	±0.25 pF	0.90
15	CL10C3R5CB8NNN □		3.5 pF	50	±0.25 pF	0.90
16	CL10C3R6CB8NNN □		3.6 pF	50	±0.25 pF	0.90
17	CL10C3R9CB8NNN □		3.9 pF	50	±0.25 pF	0.90
18	CL10C040CB8NNN □		4.0 pF	50	±0.25 pF	0.90
19	CL10C4R3CB8NNN □		4.3 pF	50	±0.25 pF	0.90
20	CL10C4R7CB8NNN □		4.7 pF	50	±0.25 pF	0.90
21	CL10C050DB8NNN □		5.0 pF	50	±0.5 pF	0.90
22	CL10C5R6DB8NNN □		5.6 pF	50	±0.5 pF	0.90
23	CL10C060DB8NNN □		6.0 pF	50	±0.5 pF	0.90
24	CL10C6R2DB8NNN □		6.2 pF	50	±0.5 pF	0.90
25	CL10C6R8DB8NNN □		6.8 pF	50	±0.5 pF	0.90
26	CL10C070DB8NNN □		7.0 pF	50	±0.5 pF	0.90
27	CL10C7R5DB8NNN □		7.5 pF	50	±0.5 pF	0.90
28	CL10C080DB8NNN □		8.0 pF	50	±0.5 pF	0.90
29	CL10C8R2DB8NNN □		8.2 pF	50	±0.5 pF	0.90

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

Product Lineup (General Capacitors-C0G)

	Part Number	Size L × W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
30	CL10C090DB8NNN □	1.60×0.80	9.0pF	50	±0.5pF	0.90
31	CL10C9R1DB8NNN □		9.1pF	50	±0.5pF	0.90
32	CL10C100JB8NNN □		10pF	50	±5%	0.90
33	CL10C110JB8NNN □		11pF	50	±5%	0.90
34	CL10C120JB8NNN □		12pF	50	±5%	0.90
35	CL10C130JB8NNN □		13pF	50	±5%	0.90
36	CL10C140JB8NNN □		14pF	50	±5%	0.90
37	CL10C150JB8NNN □		15pF	50	±5%	0.90
38	CL10C160JB8NNN □		16pF	50	±5%	0.90
39	CL10C180JB8NNN □		18pF	50	±5%	0.90
40	CL10C200JB8NNN □		20pF	50	±5%	0.90
41	CL10C220JB8NNN □		22pF	50	±5%	0.90
42	CL10C240JB8NNN □		24pF	50	±5%	0.90
43	CL10C250JB8NNN □		25pF	50	±5%	0.90
44	CL10C270JB8NNN □		27pF	50	±5%	0.90
45	CL10C300JB8NNN □		30pF	50	±5%	0.90
46	CL10C330JB8NNN □		33pF	50	±5%	0.90
47	CL10C360JB8NNN □		36pF	50	±5%	0.90
48	CL10C390JB8NNN □		39pF	50	±5%	0.90
49	CL10C430JB8NNN □		43pF	50	±5%	0.90
50	CL10C470JB8NNN □		47pF	50	±5%	0.90
51	CL10C510JB8NNN □		51pF	50	±5%	0.90
52	CL10C560JB8NNN □		56pF	50	±5%	0.90
53	CL10C620JB8NNN □		62pF	50	±5%	0.90
54	CL10C680JB8NNN □		68pF	50	±5%	0.90
55	CL10C750JB8NNN □		75pF	50	±5%	0.90
56	CL10C820JB8NNN □		82pF	50	±5%	0.90
57	CL10C910JB8NNN □		91pF	50	±5%	0.90
58	CL10C101JB8NNN □		100pF	50	±5%	0.90
59	CL10C111JB8NNN □		110pF	50	±5%	0.90
60	CL10C121JB8NNN □		120pF	50	±5%	0.90
61	CL10C131JB8NNN □		130pF	50	±5%	0.90
62	CL10C151JB8NNN □		150pF	50	±5%	0.90
63	CL10C161JB8NNN □		160pF	50	±5%	0.90
64	CL10C181JB8NNN □		180pF	50	±5%	0.90
65	CL10C201JB8NNN □		200pF	50	±5%	0.90
66	CL10C221JB8NNN □		220pF	50	±5%	0.90
67	CL10C241JB8NNN □		240pF	50	±5%	0.90
68	CL10C271JB8NNN □		270pF	50	±5%	0.90
69	CL10C301JB8NNN □		300pF	50	±5%	0.90
70	CL10C331JB8NNN □		330pF	50	±5%	0.90
71	CL10C361JB8NNN □		360pF	50	±5%	0.90
72	CL10C391JB8NNN □		390pF	50	±5%	0.90
73	CL10C431JB8NNN □		430pF	50	±5%	0.90
74	CL10C471JB8NNN □		470pF	50	±5%	0.90
75	CL10C511JB8NNN □		510pF	50	±5%	0.90
76	CL10C561JB8NNN □		560pF	50	±5%	0.90
77	CL10C621JB8NNN □		620pF	50	±5%	0.90
78	CL10C681JB8NNN □		680pF	50	±5%	0.90
79	CL10C751JB8NNN □		750pF	50	±5%	0.90

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※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.



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Product Lineup (General Capacitors-C0G)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
80	CL10C821JB8NNN □	1.60×0.80	820pF	50	±5%	0.90
81	CL10C102JB8NNN □		1nF	50	±5%	0.90
82	CL10C182JB8NNN □		1.8nF	50	±5%	0.90
83	CL10C222JB8NNN □		2.2nF	50	±5%	0.90
84	CL10C562JB8NNN □		5.6nF	50	±5%	0.90
1	CL21CR47CBANNN □	2.00×1.25	0.47pF	50	±0.25pF	0.75
2	CL21C0R5CBANNN □		0.5pF	50	±0.25pF	0.75
3	CL21C010CBANNN □		1.0pF	50	±0.25pF	0.75
4	CL21C1R2CBANNN □		1.2pF	50	±0.25pF	0.75
5	CL21C1R5CBANNN □		1.5pF	50	±0.25pF	0.75
6	CL21C1R8CBANNN □		1.8pF	50	±0.25pF	0.75
7	CL21C020CBANNN □		2.0pF	50	±0.25pF	0.75
8	CL21C2R2CBANNN □		2.2pF	50	±0.25pF	0.75
9	CL21C2R4CBANNN □		2.4pF	50	±0.25pF	0.75
10	CL21C2R5CBANNN □		2.5pF	50	±0.25pF	0.75
11	CL21C2R7CBANNN □		2.7pF	50	±0.25pF	0.75
12	CL21C030CBANNN □		3.0pF	50	±0.25pF	0.75
13	CL21C3R2CBANNN □		3.2pF	50	±0.25pF	0.75
14	CL21C3R3CBANNN □		3.3pF	50	±0.25pF	0.75
15	CL21C3R6CBANNN □		3.6pF	50	±0.25pF	0.75
16	CL21C3R9CBANNN □		3.9pF	50	±0.25pF	0.75
17	CL21C040CBANNN □		4.0pF	50	±0.25pF	0.75
18	CL21C4R7CBANNN □		4.7pF	50	±0.25pF	0.75
19	CL21C5R6DBANNN □		5.6pF	50	±0.5pF	0.75
20	CL21C060DBANNN □		6.0pF	50	±0.5pF	0.75
21	CL21C6R8DBANNN □		6.8pF	50	±0.5pF	0.75
22	CL21C070DBANNN □		7.0pF	50	±0.5pF	0.75
23	CL21C7R5DBANNN □		7.5pF	50	±0.5pF	0.75
24	CL21C080DBANNN □		8.0pF	50	±0.5pF	0.75
25	CL21C8R2DBANNN □		8.2pF	50	±0.5pF	0.75
26	CL21C090DBANNN □		9.0pF	50	±0.5pF	0.75
27	CL21C100JBANNN □		10pF	50	±5%	0.75
28	CL21C120JBANNN □		12pF	50	±5%	0.75
29	CL21C130JBANNN □		13pF	50	±5%	0.75
30	CL21C140JBANNN □		14pF	50	±5%	0.75
31	CL21C150JBANNN □		15pF	50	±5%	0.75
32	CL21C160JBANNN □		16pF	50	±5%	0.75
33	CL21C180JBANNN □		18pF	50	±5%	0.75
34	CL21C200JBANNN □		20pF	50	±5%	0.75
35	CL21C220JBANNN □		22pF	50	±5%	0.75
36	CL21C240JBANNN □		24pF	50	±5%	0.75
37	CL21C250JBANNN □		25pF	50	±5%	0.75
38	CL21C270JBANNN □		27pF	50	±5%	0.75
39	CL21C300JBANNN □		30pF	50	±5%	0.75
40	CL21C330JBANNN □		33pF	50	±5%	0.75
41	CL21C360JBANNN □		36pF	50	±5%	0.75
42	CL21C390JBANNN □		39pF	50	±5%	0.75
43	CL21C430JBANNN □		43pF	50	±5%	0.75
44	CL21C470JBANNN □		47pF	50	±5%	0.75
45	CL21C510JBANNN □		51pF	50	±5%	0.75

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

Product Lineup (General Capacitors-C0G)

	Part Number	Size L × W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
46	CL21C560JBANNN □	2.00 × 1.25	56pF	50	±5%	0.75
47	CL21C620JBANNN □		62pF	50	±5%	0.75
48	CL21C680JBANNN □		68pF	50	±5%	0.75
49	CL21C750JBANNN □		75pF	50	±5%	0.75
50	CL21C820JBANNN □		82pF	50	±5%	0.75
51	CL21C910JBANNN □		91pF	50	±5%	0.75
52	CL21C101JBANNN □		100pF	50	±5%	0.75
53	CL21C111JBANNN □		110pF	50	±5%	0.75
54	CL21C121JBANNN □		120pF	50	±5%	0.75
55	CL21C131JBANNN □		130pF	50	±5%	0.75
56	CL21C151JBANNN □		150pF	50	±5%	0.75
57	CL21C161JBANNN □		160pF	50	±5%	0.75
58	CL21C181JBANNN □		180pF	50	±5%	0.75
59	CL21C201JBANNN □		200pF	50	±5%	0.75
60	CL21C221JBANNN □		220pF	50	±5%	0.75
61	CL21C241JBANNN □		240pF	50	±5%	0.75
62	CL21C271JBANNN □		270pF	50	±5%	0.75
63	CL21C301JBANNN □		300pF	50	±5%	0.75
64	CL21C331JBANNN □		330pF	50	±5%	0.75
65	CL21C361JBANNN □		360pF	50	±5%	0.75
66	CL21C391JBANNN □		390pF	50	±5%	0.75
67	CL21C431JBANNN □		430pF	50	±5%	0.75
68	CL21C471JBANNN □		470pF	50	±5%	0.75
69	CL21C511JBANNN □		510pF	50	±5%	0.75
70	CL21C561JBANNN □		560pF	50	±5%	0.75
71	CL21C621JBCNNN □		620pF	50	±5%	0.95
72	CL21C681JBCNNN □		680pF	50	±5%	0.95
73	CL21C751JBCNNN □		750pF	50	±5%	0.95
74	CL21C821JBCNNN □		820pF	50	±5%	0.95
75	CL21C102JBCNNN □		1nF	50	±5%	0.95
76	CL21C122JBFNNN □		1.2nF	50	±5%	1.35
77	CL21C152JBFNNN □		1.5nF	50	±5%	1.35
78	CL21C182JBFNNN □		1.8nF	50	±5%	1.35
79	CL21C222JBFNNN □		2.2nF	50	±5%	1.35
80	CL21C332JAFNNN □		3.3nF	25	±5%	1.35
81	CL21C332JBFNNN □		3.3nF	50	±5%	1.35
82	CL21C392JAFNNN □		3.9nF	25	±5%	0.75
83	CL21C392JBFNNN □		3.9nF	50	±5%	1.35
84	CL21C472JAFNNN □	4.7nF	25	±5%	1.35	
85	CL21C472JBFNNN □	4.7nF	50	±5%	1.35	
86	CL21C562JBFNNN □	5.6nF	50	±5%	1.35	
87	CL21C822JAFNNN □	8.2nF	25	±5%	1.35	
88	CL21C103JBFNNN □	10nF	50	±5%	1.35	
1	CL31C0R5CBCNNN □	3.20 × 1.60	0.5pF	50	±0.25pF	1.0
2	CL31C010CBCNNN □		1.0pF	50	±0.25pF	1.0
3	CL31C1R5CBCNNN □		1.5pF	50	±0.25pF	1.0
4	CL31C1R8CBCNNN □		1.8pF	50	±0.25pF	1.0
5	CL31C020CBCNNN □		2.0pF	50	±0.25pF	1.0
6	CL31C2R2CBCNNN □		2.2pF	50	±0.25pF	1.0
7	CL31C2R7CBCNNN □		2.7pF	50	±0.25pF	1.0

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

Part Numbering
SystemGeneral
CapacitorsHigh Capacitance
CapacitorsSuper Small Size
CapacitorsMedium-High
Voltage CapacitorsArray Type
CapacitorsLow ESL
CapacitorsReliability Test
ConditionPremium Capacitors
for Automotive
ApplicationsPackaging
SpecificationApplication Manual
for Surface Mounting


**SAMSUNG
ELECTRO-MECHANICS**
Product Lineup (General Capacitors-C0G)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
8	CL31C030CBCNNN □	3.20×1.60	3.0pF	50	±0.25pF	1.0
9	CL31C3R3CBCNNN □		3.3pF	50	±0.25pF	1.0
10	CL31C040CBCNNN □		4.0pF	50	±0.25pF	1.0
11	CL31C4R7CBCNNN □		4.7pF	50	±0.25pF	1.0
12	CL31C100JBCNNN □		10pF	50	±5%	1.0
13	CL31C120JBCNNN □		12pF	50	±5%	1.0
14	CL31C150JBCNNN □		15pF	50	±5%	1.0
15	CL31C180JBCNNN □		18pF	50	±5%	1.0
16	CL31C200JBCNNN □		20pF	50	±5%	1.0
17	CL31C220JBCNNN □		22pF	50	±5%	1.0
18	CL31C270JBCNNN □		27pF	50	±5%	1.0
19	CL31C300JBCNNN □		30pF	50	±5%	1.0
20	CL31C330JBCNNN □		33pF	50	±5%	1.0
21	CL31C390JBCNNN □		39pF	50	±5%	1.0
22	CL31C470JBCNNN □		47pF	50	±5%	1.0
23	CL31C510JBCNNN □		51pF	50	±5%	1.0
24	CL31C560JBCNNN □		56pF	50	±5%	1.0
25	CL31C680JBCNNN □		68pF	50	±5%	1.0
26	CL31C750JBCNNN □		75pF	50	±5%	1.0
27	CL31C820JBCNNN □		82pF	50	±5%	1.0
28	CL31C101JBCNNN □		100pF	50	±5%	1.0
29	CL31C121JBCNNN □		120pF	50	±5%	1.0
30	CL31C151JBCNNN □		150pF	50	±5%	1.0
31	CL31C181JBCNNN □		180pF	50	±5%	1.0
32	CL31C221JBCNNN □		220pF	50	±5%	1.0
33	CL31C271JBCNNN □		270pF	50	±5%	1.0
34	CL31C331JBCNNN □		330pF	50	±5%	1.0
35	CL31C391JBCNNN □		390pF	50	±5%	1.0
36	CL31C471JBCNNN □		470pF	50	±5%	1.0
37	CL31C561JBCNNN □		560pF	50	±5%	1.0
38	CL31C681JBCNNN □		680pF	50	±5%	1.0
39	CL31C821JBCNNN □	820pF	50	±5%	1.0	
40	CL31C102JBCNNN □	1nF	50	±5%	1.0	
41	CL31C122JBCNNN □	1.2nF	50	±5%	1.0	
42	CL31C152JBCNNN □	1.5nF	50	±5%	1.0	
43	CL31C182JBCNNN □	1.8nF	50	±5%	1.0	
44	CL31C222JBCNNN □	2.2nF	50	±5%	1.0	
45	CL31C272JBFNNN □	2.7nF	50	±5%	1.4	
46	CL31C332JBFNNN □	3.3nF	50	±5%	1.4	
47	CL31C472JBFNNN □	4.7nF	50	±5%	1.4	
48	CL31C682JBHNNN □	6.8nF	50	±5%	1.8	
49	CL31C103JAFNNN □	10nF	25	±5%	1.4	
50	CL31C223JBHNNN □	22nF	50	±5%	1.8	
51	CL31C333JBHNNN □	33nF	50	±5%	1.8	
1	CL32C472JBFNNN □	3.20×2.50	4.7nF	50	±5%	1.45
2	CL32C103JBFNNN □		10nF	50	±5%	1.45
3	CL32C223JBHNNN □		22nF	50	±5%	1.80

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

Product Lineup (General Capacitors-X7R)

	Part Number	Size L × W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05B471KB5NNN □	1.00×0.50	470pF	50	±10%	0.55
2	CL05B221KB5NNN □		220pF	50	±10%	0.55
3	CL05B681KB5NNN □		680pF	50	±10%	0.55
4	CL05B102KB5NNN □		1nF	50	±10%	0.55
5	CL05B102KA5NNN □		1nF	25	±10%	0.55
6	CL05B222KB5NNN □		2.2nF	50	±10%	0.55
7	CL05B472KB5NNN □		4.7nF	50	±10%	0.55
8	CL05B472KA5NNN □		4.7nF	25	±10%	0.55
9	CL05B682KB5NNN □		6.8nF	50	±10%	0.55
10	CL05B682KA5NNN □		6.8nF	25	±10%	0.55
11	CL05B103KB5NNN □		10nF	50	±10%	0.55
12	CL05B103KA5NNN □		10nF	25	±10%	0.55
13	CL05B223KA5NNN □		22nF	25	±10%	0.55
14	CL05B473KO5NNN □		47nF	16	±10%	0.55
15	CL05B473KP5NNN □		47nF	10	±10%	0.55
16	CL05B683KO5NNN □		68nF	16	±10%	0.55
17	CL05B683KP5NNN □		68nF	10	±10%	0.55
18	CL05B104KO5NNN □		100nF	16	±10%	0.55
19	CL05B104KP5NNN □		100nF	10	±10%	0.55
20	CL05B104KQ5NNN □		100nF	6.3	±10%	0.55
1	CL10B101KB8NNN □	1.60×0.80	100pF	50	±10%	0.9
2	CL10B221KB8NNN □		220pF	50	±10%	0.9
3	CL10B471KB8NNN □		470pF	50	±10%	0.9
4	CL10B681KB8NNN □		680pF	50	±10%	0.9
5	CL10B102KB8NNN □		1nF	50	±10%	0.9
6	CL10B102KA8NNN □		1nF	25	±10%	0.9
7	CL10B222KB8NNN □		2.2nF	50	±10%	0.9
8	CL10B472KB8NNN □		4.7nF	50	±10%	0.9
9	CL10B472KA8NNN □		4.7nF	25	±10%	0.9
10	CL10B682KB8NNN □		6.8nF	50	±10%	0.9
11	CL10B103KB8NNN □		10nF	50	±10%	0.9
12	CL10B103KA8NNN □		10nF	25	±10%	0.9
13	CL10B223KA8NNN □		22nF	25	±10%	0.9
14	CL10B473KB8NNN □		47nF	50	±10%	0.9
15	CL10B473KA8NNN □		47nF	25	±10%	0.9
16	CL10B683KB8NNN □		68nF	50	±10%	0.9
17	CL10B683KA8NNN □		68nF	25	±10%	0.9
18	CL10B104KB8NNN □		100nF	50	±10%	0.9
19	CL10B224KA8NNN □		220nF	25	±10%	0.9
20	CL10B224KO8NNN □		220nF	16	±10%	0.9
21	CL10B225KQ8NNN □		2.2μF	63	±10%	0.9
1	CL21B221KBANNN □	2.00×1.25	220pF	50	±10%	0.75
2	CL21B471KBANNN □		470pF	50	±10%	0.75
3	CL21B681KBANNN □		680pF	50	±10%	0.75
4	CL21B102KBANNN □		1nF	50	±10%	0.75
5	CL21B102KBCNNN □		1nF	50	±10%	0.95
6	CL21B222KBANNN □		2.2nF	50	±10%	0.75
7	CL21B222KBCNNN □		2.2nF	50	±10%	0.95
8	CL21B682KBANNN □		6.8nF	50	±10%	0.75
9	CL21B103KBANNN □		10nF	50	±10%	0.75

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

※ For parts of higher capacitance than those above listed, refer to the product lineup of 'High Capacitance' subcategory.

Part Numbering
SystemGeneral
CapacitorsHigh Capacitance
CapacitorsSuper Small Size
CapacitorsMedium-High
Voltage CapacitorsArray Type
CapacitorsLow ESL
CapacitorsReliability Test
ConditionPremium Capacitors
for Automotive
ApplicationsPackaging
SpecificationApplication Manual
for Surface Mounting



SAMSUNG
ELECTRO-MECHANICS

Product Lineup (General Capacitors-X7R)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)	
10	CL21B103KBCNNN □	2.00×1.25	10nF	50	±10%	0.95	
11	CL21B223KBANNN □		22nF	50	±10%	0.75	
12	CL21B223KBCNNN □		22nF	50	±10%	0.95	
13	CL21B473KBANNN □		47nF	50	±10%	0.75	
14	CL21B473KBCNNN □		47nF	50	±10%	0.95	
15	CL21B683KAANNN □		68nF	25	±10%	0.75	
16	CL21B683KBCNNN □		68nF	50	±10%	0.95	
17	CL21B683KBFNNN □		68nF	50	±10%	1.35	
18	CL21B104KBCNNN □		100nF	50	±10%	0.95	
19	CL21B104KBFNNN □		100nF	50	±10%	1.35	
20	CL21B224KBFNNN □		220nF	50	±10%	1.35	
21	CL21B224KAFNNN □		220nF	25	±10%	1.35	
22	CL21B224KOCNNN □		220nF	16	±10%	0.95	
23	CL21B224KOFNNN □		220nF	16	±10%	1.35	
24	CL21B474KBFNNN □		470nF	50	±10%	1.35	
25	CL21B474KAFNNN □		470nF	25	±10%	1.35	
26	CL21B474KOFNNN □		470nF	16	±10%	1.35	
27	CL21B684KOFNNN □		680nF	16	±10%	1.35	
28	CL21B684KPFNNN □		680nF	10	±10%	1.35	
1	CL31B221KBCNNN □		3.20×1.60	220pF	50	±10%	1.0
2	CL31B471KBCNNN □			470pF	50	±10%	1.0
3	CL31B681KBCNNN □			680pF	50	±10%	1.0
4	CL31B102KBCNNN □			1nF	50	±10%	1.0
5	CL31B222KBCNNN □			2.2nF	50	±10%	1.0
6	CL31B472KBCNNN □			4.7nF	50	±10%	1.0
7	CL31B682KBCNNN □			6.8nF	50	±10%	1.0
8	CL31B103KBCNNN □			10nF	50	±10%	1.0
9	CL31B223KBCNNN □			22nF	50	±10%	1.0
10	CL31B473KBCNNN □	47nF		50	±10%	1.0	
11	CL31B683KBCNNN □	68nF		50	±10%	1.0	
12	CL31B104KBCNNN □	100nF		50	±10%	1.0	
13	CL31B104KACNNN □	100nF		25	±10%	1.0	
14	CL31B224KBCNNN □	220nF		50	±10%	1.0	
15	CL31B224KAFNNN □	220nF		25	±10%	1.4	
16	CL31B474KBFNNN □	470nF		50	±10%	1.4	
17	CL31B474KAHNNN □	470nF		25	±10%	1.8	
18	CL31B474KOCNNN □	470nF		16	±10%	1.0	
19	CL31B684KBHNNN □	680nF		50	±10%	1.8	
20	CL31B684KAHNNN □	680nF		25	±10%	1.8	
21	CL31B105KBHNNN □	1μF		50	±10%	1.8	
22	CL31B105KAHNNN □	1μF		25	±10%	1.8	
23	CL31B105KOFNNN □	1μF		16	±10%	1.4	
24	CL31B225KBHNNN □	2.2μF		50	±10%	1.8	
25	CL31B225KAHNNN □	2.2μF		25	±10%	1.8	
26	CL31B225KOHNNN □	2.2μF		16	±10%	1.8	
27	CL31B225KPFNNN □	2.2μF		10	±10%	1.4	
1	CL32B104KBFNNN □	3.20×2.50	100nF	50	±10%	1.45	
2	CL32B224KBFNNN □		220nF	50	±10%	1.45	
3	CL32B105KBFNNN □		1μF	50	±10%	1.45	
4	CL32B105KAHNNN □		1μF	25	±10%	1.8	

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

※ For parts of higher capacitance than those above listed, refer to the product lineup of 'High Capacitance' subcategory.

Product Lineup (General Capacitors-X7R)

	Part Number	Size L × W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
5	CL32B225KBINNN □	3.20 × 2.50	2.2 μF	50	± 10%	2.2
6	CL32B225KAJNNN □		2.2 μF	25	± 10%	2.7
7	CL32B474KBFNNN □		470 nF	50	± 10%	1.45
8	CL32B474KAFNNN □		470 nF	25	± 10%	1.45
9	CL32B475KOINNN □		4.7 μF	16	± 10%	2.2
1	CL43B224KBFNNN □	4.50 × 3.20	220 nF	50	± 10%	1.45
2	CL43B474KBFNNN □		470 nF	50	± 10%	1.45
3	CL43B684KBFNNN □		680 nF	50	± 10%	1.45
4	CL43B105KBFNNN □		1 μF	50	± 10%	1.45
5	CL43B106KALNNN □		10 μF	25	± 10%	3.5
6	CL43B226KPJNNN □		22 μF	10	± 10%	2.7
1	CL55B475KBJNNN □	5.70 × 5.00	4.7 μF	50	± 10%	2.7

Part Numbering System

General Capacitors

High Capacitance Capacitors

Super Small Size Capacitors

Medium-High Voltage Capacitors

Array Type Capacitors

Low ESL Capacitors

Reliability Test Condition

Premium Capacitors for Automotive Applications

Packaging Specification

Application Manual for Surface Mounting

Product Lineup (General Capacitors-X5R)

	Part Number	Size L × W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05A223KO5NNN □	1.00 × 0.50	22 nF	16	± 10%	0.55
2	CL05A104KA5NNN □		100 nF	25	± 10%	0.55
3	CL05A104KO5NNN □		100 nF	16	± 10%	0.55
4	CL05A104KP5NNN □		100 nF	10	± 10%	0.55
5	CL05A104KQ5NNN □		100 nF	6.3	± 10%	0.55

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

※ For parts of higher capacitance than those above listed, refer to the product lineup of 'High Capacitance' subcategory.

Product Lineup (General Capacitors-Y5V)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05F103ZB5NNN □	1.00×0.50	10nF	50	+80/-20%	0.55
2	CL05F103ZO5NNN □		10nF	16	+80/-20%	0.55
3	CL05F223ZA5NNN □		22nF	25	+80/-20%	0.55
4	CL05F223ZO5NNN □		22nF	16	+80/-20%	0.55
5	CL05F473ZO5NNN □		47nF	16	+80/-20%	0.55
6	CL05F683ZO5NNN □		68nF	16	+80/-20%	0.55
7	CL05F104ZO5NNN □		100nF	16	+80/-20%	0.55
1	CL10F103ZB8NNN □	1.60×0.80	10nF	50	+80/-20%	0.9
2	CL10F223ZB8NNN □		22nF	50	+80/-20%	0.9
3	CL10F473ZB8NNN □		47nF	50	+80/-20%	0.9
4	CL10F473ZA8NNN □		47nF	25	+80/-20%	0.9
5	CL10F473ZO8NNN □		47nF	16	+80/-20%	0.9
6	CL10F683ZB8NNN □		68nF	50	+80/-20%	0.9
7	CL10F104ZB8NNN □		100nF	50	+80/-20%	0.9
8	CL10F104ZA8NNN □		100nF	25	+80/-20%	0.9
9	CL10F224ZB8NNN □		220nF	50	+80/-20%	0.9
10	CL10F224ZA8NNN □		220nF	25	+80/-20%	0.9
11	CL10F225ZP8NNN □		2.2μF	10	+80/-20%	0.9
12	CL10F225ZQ8NNN □		2.2μF	6.3	+80/-20%	0.9
1	CL21F103ZBANNN □	2.00×1.25	10nF	50	+80/-20%	0.75
2	CL21F223ZBANNN □		22nF	50	+80/-20%	0.75
3	CL21F473ZBANNN □		47nF	50	+80/-20%	0.75
4	CL21F683ZBANNN □		68nF	50	+80/-20%	0.75
5	CL21F104ZBANNN □		100nF	50	+80/-20%	0.75
6	CL21F104ZBCNNN □		100nF	50	+80/-20%	0.95
7	CL21F224ZBCNNN □		220nF	50	+80/-20%	0.95
8	CL21F224ZBFNNN □		220nF	50	+80/-20%	1.35
9	CL21F224ZOANNN □		220nF	16	+80/-20%	0.75
10	CL21F474ZACNNN □		470nF	25	+80/-20%	0.95
11	CL21F474ZBFNNN □		470nF	50	+80/-20%	1.35
12	CL21F474ZBFNNN □		470nF	50	+80/-20%	1.35
13	CL21F684ZAFNNN □		680nF	25	+80/-20%	1.35
14	CL21F684ZOANNN □		680nF	16	+80/-20%	0.75
15	CL21F225ZAFNNN □		2.2μF	25	+80/-20%	1.35
16	CL21F225ZOFNNN □		2.2μF	16	+80/-20%	1.35
1	CL31F103ZBCNNN □	3.20×1.60	10nF	50	+80/-20%	1.0
2	CL31F104ZBCNNN □		100nF	50	+80/-20%	1.0
3	CL31F224ZBCNNN □		220nF	50	+80/-20%	1.0
4	CL31F474ZBCNNN □		470nF	50	+80/-20%	1.0
5	CL31F105ZBCNNN □		1μF	50	+80/-20%	1.0
6	CL31F105ZAFNNN □		1μF	25	+80/-20%	1.4
7	CL31F105ZOCNNN □		1μF	16	+80/-20%	1.0
8	CL31F225ZAFNNN □		2.2μF	25	+80/-20%	1.4
9	CL31F225ZOCNNN □		2.2μF	16	+80/-20%	1.0
1	CL32F475ZAHNNN □	3.20×2.50	4.7μF	25	+80/-20%	1.8
1	CL43A476MQJNNN □	4.50×3.20	10μF	6.3	+80/-20%	2.7
2	CL43A107MQLNNN □		100μF	6.3	+80/-20%	3.5

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p80.

※ For parts of higher capacitance than those above listed, refer to the product lineup of 'High Capacitance' subcategory.

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