

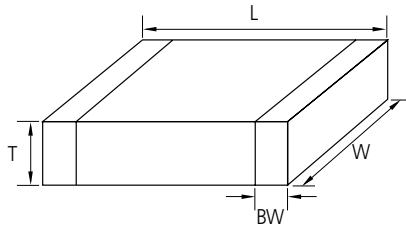
Feature

- Wide selection of size : from 0402 to 1812
- Highly reliable tolerance and high speed automatic chip placement on PCBs
- Wide capacitance range
- Highly reliable performance
- Highly resistant termination metal
- Tape & reel for surface mount assembly

Application

- Desktop PC, Note PC, HHP, DC-DC Converter, DSC
- LCD TV, LCD Monitor
- ※ For using special purpose like Military, 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	0.25±0.10
10	0603	1.60±0.10	0.80±0.10	0.50+0.0/-0.1(*)	5	0.30±0.20
		1.60±0.10	0.80±0.10	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
		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	
		2.00±0.15	1.25±0.15	1.25±0.15	Q	
		2.00±0.20	1.25±0.20	1.25±0.20	Y	
31	1206	3.20±0.20	1.60±0.20	0.60±0.10(*)	6	0.50±0.30
		3.20±0.15	1.60±0.15	0.85±0.15	C	
		3.20±0.20	1.60±0.20	0.85±0.10(*)	C	
		3.20±0.20	1.60±0.20	1.15±0.10(*)	P	
		3.20±0.15	1.60±0.15	1.25±0.15	F	
32	1210	3.20±0.20	1.60±0.20	1.60±0.20	H	0.60±0.30
		3.20±0.30	2.50±0.20	0.85±0.10(*)	C	
		3.20±0.30	2.50±0.20	0.90±0.10(*)	9	
		3.20±0.30	2.50±0.20	1.60±0.20	H	
		3.20±0.30	2.50±0.20	1.80±0.20(*)	U	
		3.20±0.30	2.50±0.20	2.00±0.20	I	
42	1808	3.20±0.30	2.50±0.30	2.50±0.30	V	0.80±0.30
		4.50±0.40	2.00±0.20	1.25±0.20	F	
		4.50±0.40	2.00±0.20	1.40±0.20	G	
43	1812	4.50±0.40	2.00±0.20	2.00±0.20	I	0.80±0.30
		4.50±0.40	3.20±0.30	1.25±0.20	F	
		4.50±0.40	3.20±0.30	2.50±0.20	J	
55	2220	4.50±0.40	3.20±0.30	3.20±0.30	L	1.00±0.30
		5.70±0.40	5.00±0.40	2.50±0.20	J	
		5.70±0.40	5.00±0.40	3.20±0.30	L	

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

* Note : This catalog has only typical specifications because there is no space for detailed specifications.

Please approve our product specifications or transact the approval sheet for product specifications before ordering.

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

High Capacitance Table_Low Profile (X5R)

Size(mm)	Tmax (mm)	Vr(V)	Capacitance (μF)					
			1	2.2	4.7	10	22	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						
	0.85	25						
		0.95	4					(Tmax=1.0)
			6.3					(Tmax=1.0)
			10					
			16					
			25					X6S
0.7	10							
1206(3216)	0.95	6.3						
		10						
		16						
		25					X6S	
		50					(Tmax=1.0) (Tmax=1.0)	
		100					(Tmax=1.0)	
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

High Capacitance Table (X7R)

Size(mm)	Vr(V)	Capacitance (μF)										
		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



High Capacitance Table (Y5V)

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

High Capacitance Table -Low Profile (Y5V)

Size(mm)	Vr(V)	Capacitance (μF)					
		1	2.2	4.7	10	22	47
0805(2012)	6.3						
	10						

Product Lineup (High Capacitance-X5R)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05A224KQ5NNN □	1.00×0.50	0.22 μF	6.3	±10%	0.55
2	CL05A224KR5NNN □		0.22 μF	4	±10%	0.55
3	CL05A224KA5NNN □		0.22 μF	25	±10%	0.55
4	CL05A224KO5NNN □		0.22 μF	16	±10%	0.55
5	CL05A224KP5NNN □		0.22 μF	10	±10%	0.55
6	CL05A334MA5NNN □		0.33 μF	25	±20%	0.55
7	CL05A334KQ5NNN □		0.33 μF	6.3	±10%	0.55
8	CL05A334KR5NNN □		0.33 μF	4	±10%	0.55
9	CL05A474KA5NNN □		0.47 μF	25	±10%	0.55
10	CL05A474KO5NNN □		0.47 μF	16	±10%	0.55
11	CL05A474KP5NNN □		0.47 μF	10	±10%	0.55
12	CL05A474KQ5NNN □		0.47 μF	6.3	±10%	0.55
13	CL05A474KR5NNN □		0.47 μF	4	±10%	0.55
14	CL05A105KA5NQN □		1 μF	25	±10%	0.60
15	CL05A105KO5NNN □		1 μF	16	±10%	0.55
16	CL05A105KO3LQN □		1 μF	16	±10%	0.33
17	CL05A105KP5NNN □		1 μF	10	±10%	0.55
18	CL05A105KP3LNN □		1 μF	10	±10%	0.33
19	CL05A105KQ5NNN □		1 μF	6.3	±10%	0.55
20	CL05A105KQ3LNN □		1 μF	6.3	±10%	0.33
21	CL05A105KR5NNN □		1 μF	4	±10%	0.55
22	CL05A105KR3LNN □		1 μF	4	±10%	0.33
23	CL05A225MA5NUN □		2.2 μF	25	±20%	0.70
24	CL05A225KO5NQN □		2.2 μF	16	±10%	0.60
25	CL05A225MP5NSN □		2.2 μF	10	±20%	0.57
26	CL05A225KP3LRN □		2.2 μF	10	±10%	0.33
27	CL05A225MQ5NNN □		2.2 μF	6.3	±20%	0.55
28	CL05A225KQ3LRN □		2.2 μF	6.3	±10%	0.33
29	CL05A225MR5NNN □		2.2 μF	4	±20%	0.55
30	CL05A225KR3LRN □		2.2 μF	4	±10%	0.33
31	CL05A475MO5NUN □		4.7 μF	16	±20%	0.70
32	CL05A475MP5NRN □		4.7 μF	10	±20%	0.65
33	CL05A475MQ5NRN □		4.7 μF	6.3	±20%	0.65
34	CL05A475MR5NRN □		4.7 μF	4	±20%	0.65
35	CL05A106MP5NUN □		10 μF	10	±20%	0.70
36	CL05A106MQ5NUN □		10 μF	6.3	±20%	0.70
37	CL05A106MR5NRN □		10 μF	4	±20%	0.65
38	CL05A156MR5NUN □		15 μF	4	±20%	0.70
1	CL10A474KB8NNN □	1.60×0.80	0.47 μF	50	±10%	0.90
2	CL10A474KA8NNN □		0.47 μF	25	±10%	0.90
3	CL10A474KP8NNN □		0.47 μF	10	±10%	0.90
4	CL10A474KQ8NNN □		0.47 μF	6.3	±10%	0.90
5	CL10A474KR8NNN □		0.47 μF	4	±10%	0.90
6	CL10A105KB8NNN □		1 μF	50	±10%	0.90
7	CL10A105KA5LNN □		1 μF	25	±10%	0.50
8	CL10A105KA8NNN □		1 μF	25	±10%	0.90
9	CL10A105KO8NNN □		1 μF	16	±10%	0.90
10	CL10A105KO5LNN □		1 μF	16	±10%	0.50
11	CL10A105KP8NNN □		1 μF	10	±10%	0.90
12	CL10A105KP5LNN □		1 μF	10	±10%	0.50
13	CL10A105KQ8NNN □		1 μF	6.3	±10%	0.90
14	CL10A105KQ5LNN □		1 μF	6.3	±10%	0.50

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

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 (High Capacitance-X5R)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)	
15	CL10A105KR8NNN □	1.60×0.80	1 μF	4	±10%	0.90	
16	CL10A105KR5LNN □		1 μF	4	±10%	0.50	
17	CL10A105KA5LNN □		1 μF	25	±10%	0.50	
18	CL10A225KA8NNN □		2.2 μF	25	±10%	0.90	
19	CL10A225KO8NNN □		2.2 μF	16	±10%	0.90	
20	CL10A225KO5LNN □		2.2 μF	16	±10%	0.50	
21	CL10A225KP8NNN □		2.2 μF	10	±10%	0.90	
22	CL10A225KP5LNN □		2.2 μF	10	±10%	0.50	
23	CL10A225KQ8NNN □		2.2 μF	6.3	±10%	0.90	
24	CL10A225KQ5LNN □		2.2 μF	6.3	±10%	0.50	
25	CL10A225KR8NNN □		2.2 μF	4	±10%	0.90	
26	CL10A225KR5LNN □		2.2 μF	4	±10%	0.50	
27	CL10A335KQ8NNN □		3.3 μF	6.3	±10%	0.90	
28	CL10A335KR8NNN □		3.3 μF	4	±10%	0.90	
29	CL10A475KA8NQ □		4.7 μF	25	±10%	0.95	
30	CL10A475KO8NNN □		4.7 μF	16	±10%	0.90	
31	CL10A475KP8NNN □		4.7 μF	10	±10%	0.90	
32	CL10A475KP5LNN □		4.7 μF	10	±10%	0.50	
33	CL10A475KQ5LNN □		4.7 μF	6.3	±10%	0.50	
34	CL10A475KQ8NNN □		4.7 μF	6.3	±10%	0.90	
35	CL10A475KR5LNN □		4.7 μF	4	±10%	0.50	
36	CL10A475KR8NNN □		4.7 μF	4	±10%	0.90	
37	CL10A106KR8NNN □		10 μF	4	±10%	0.90	
38	CL10A106MR5LRN □		10 μF	4	±20%	0.50	
39	CL10A106KQ8NNN □		10 μF	6.3	±10%	0.90	
40	CL10A106MQ5LRN □		10 μF	6.3	±20%	0.50	
41	CL10A106MP8NNN □		10 μF	10	±20%	0.90	
42	CL10A106MO8NQ □		10 μF	16	±20%	0.95	
43	CL10A106MA8NRN □		10 μF	25	±20%	1.00	
44	CL10A226MR8NRN □		22 μF	4	±20%	1.00	
45	CL10A226MQ8NRN □		22 μF	6.3	±20%	1.00	
46	CL10A226MP8NRN □		22 μF	10	±20%	1.00	
47	CL10A226MP8NUN □		22 μF	10	±20%	1.05	
48	CL10A476MR8NZN □		47 μF	4	±20%	1.10	
1	CL21A105KBQNNN □		2.00×1.25	1 μF	50	±10%	1.40
2	CL21A105KAFNNN □			1 μF	25	±10%	1.35
3	CL21A105KA6LNN □			1 μF	25	±10%	0.70
4	CL21A105KOFNNN □			1 μF	16	±10%	1.35
5	CL21A105KO6LNN □			1 μF	16	±10%	0.70
6	CL21A105KQFNNN □			1 μF	6.3	±10%	1.35
7	CL21A105KRFNNN □			1 μF	4	±10%	1.35
8	CL21A225KBQNNN □			2.2 μF	50	±10%	1.40
9	CL21A225KAFNNN □			2.2 μF	25	±10%	1.35
10	CL21A225KO6LNN □			2.2 μF	16	±10%	0.70
11	CL21A225KOFNNN □			2.2 μF	16	±10%	1.35
12	CL21A225KPFNNN □			2.2 μF	10	±10%	1.35
13	CL21A225KQFNNN □			2.2 μF	6.3	±10%	1.35
14	CL21A225KRFNNN □			2.2 μF	4	±10%	1.35
15	CL21A475KBQNNN □	4.7 μF		50	±10%	1.40	
16	CL21A475KAQNNN □	4.7 μF		25	±10%	1.40	
17	CL21A475KACL RN □	4.7 μF		25	±10%	0.95	
18	CL21A475KOFNNN □	4.7 μF		16	±10%	1.35	

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p 80.

Product Lineup (High Capacitance-X5R)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
19	CL21A475KOCLNN □	2.00×1.25	4.7 μF	16	±10%	0.95
20	CL21A475KPFNNN □		4.7 μF	10	±10%	1.35
21	CL21A475KPCLNN □		4.7 μF	10	±10%	0.95
22	CL21A475KQFNNN □		4.7 μF	6.3	±10%	1.35
23	CL21A475KQCLNN □		4.7 μF	6.3	±10%	0.95
24	CL21A475KRFNNN □		4.7 μF	4	±10%	1.35
25	CL21A475KRCLNN □		4.7 μF	4	±10%	0.95
26	CL21A106KAYNNN □		10 μF	25	±10%	1.45
27	CL21A106KACLNN □		10 μF	25	±10%	0.95
28	CL21A106KA7LQN □		10 μF	25	±10%	0.80
29	CL21A106KOFNNN □		10 μF	16	±10%	1.35
30	CL21A106KOQNNN □		10 μF	16	±10%	1.40
31	CL21A106KOCLRN □		10 μF	16	±10%	0.95
32	CL21A106KOCL3R □		10 μF	16	±10%	0.95
33	CL21A106KPFNNN □		10 μF	10	±10%	1.35
34	CL21A106KPCLQN □		10 μF	10	±10%	0.95
35	CL21A106KQFNNN □		10 μF	6.3	±10%	1.35
36	CL21A106KQCLNN □		10 μF	6.3	±10%	0.95
37	CL21A106KRFNNN □		10 μF	4	±10%	1.35
38	CL21A106KRCLNN □		10 μF	4	±10%	0.95
39	CL21A226MAQNNN □		22 μF	25	±20%	1.40
40	CL21A226MPQNNN □		22 μF	10	±20%	1.40
41	CL21A226MPCLRN □		22 μF	10	±20%	0.95
42	CL21A226MQQNNN □		22 μF	6.3	±20%	1.40
43	CL21A226MQCLRN □		22 μF	6.3	±20%	0.95
44	CL21A226MRQNNN □		22 μF	4	±20%	1.40
45	CL21A226MRCLRN □		22 μF	4	±20%	0.95
46	CL21A336MQELNN □		33 μF	6.3	±20%	1.20
47	CL21A336MQ9LNN □		33 μF	6.3	±20%	1.00
48	CL21A336MRELNN □		33 μF	4	±20%	1.20
49	CL21A336MR9LNN □		33 μF	4	±20%	1.00
50	CL21A476MQYNNN □		47 μF	6.3	±20%	1.45
51	CL21A476MRYNNN □	47 μF	4	±20%	1.45	
52	CL21A476MQ9LRN □	47 μF	6.3	±20%	1.00	
1	CL31A225KC9LNN □	3.20×1.60	2.2 μF	100	±10%	1.00
2	CL31A475KBHNNN □		4.7 μF	50	±10%	1.80
3	CL31A475KB9LNN □		4.7 μF	50	±10%	1.00
4	CL31A475KAHNNN □		4.7 μF	25	±10%	1.80
5	CL31A475KACLNN □		4.7 μF	25	±10%	0.95
6	CL31A475KOHNNN □		4.7 μF	16	±10%	1.80
7	CL31A475KOCLNN □		4.7 μF	16	±10%	0.95
8	CL31A475KPHNNN □		4.7 μF	10	±10%	1.80
9	CL31A475KQHNNN □		4.7 μF	6.3	±10%	1.80
10	CL31A475KRHNNN □		4.7 μF	4	±10%	1.80
11	CL31A106KBHNNN □		10 μF	50	±10%	1.80
12	CL31A106KAHNNN □		10 μF	25	±10%	1.80
13	CL31A106KACLNN □		10 μF	25	±10%	0.95
14	CL31A106KOHNNN □		10 μF	16	±10%	1.80
15	CL31A106KOCLNN □		10 μF	16	±10%	0.95
16	CL31A106KPHNNN □		10 μF	10	±10%	1.80
17	CL31A106KPCLNN □		10 μF	10	±10%	0.95
18	CL31A106KQHNNN □		10 μF	6.3	±10%	1.80
19	CL31A106KRHNNN □		10 μF	4	±10%	1.80
20	CL31A156KQHNNN □		15 μF	6.3	±10%	1.80

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 (High Capacitance-X5R)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)	
21	CL31A156KRHNNN □	3.20×1.60	15 μ F	4	±10%	1.80	
22	CL31A226KAHNNN □		22 μ F	25	±10%	1.80	
23	CL31A226KOHNNN □		22 μ F	16	±10%	1.80	
24	CL31A226KOCLNN □		22 μ F	16	±10%	0.95	
25	CL31A226KPHNNN □		22 μ F	10	±10%	1.80	
26	CL31A226KPCLNN □		22 μ F	10	±10%	0.95	
27	CL31A226KQHNNN □		22 μ F	6.3	±10%	1.80	
28	CL31A226KRHNNN □		22 μ F	4	±10%	1.80	
29	CL31A476MQHNNN □		47 μ F	6.3	±20%	1.80	
30	CL31A476MRHNNN □		47 μ F	4	±20%	1.80	
31	CL31A107MQHNNN □		100 μ F	6.3	±20%	1.80	
32	CL31A107MRHNNN □		100 μ F	4	±20%	1.80	
1	CL32A106KQCLNN □		3.20×2.50	10 μ F	6.3	±10%	0.95
2	CL32A106KRCLNN □			10 μ F	4	±10%	0.95
3	CL32A106KBULNN □	10 μ F		50	±10%	2.00	
4	CL32A106KAJNNN □	10 μ F		25	±10%	2.70	
5	CL32A106KAULNN □	10 μ F		25	±10%	2.00	
6	CL32A106KOJNNN □	10 μ F		16	±10%	2.70	
7	CL32A106KPJNNN □	10 μ F		10	±10%	2.70	
8	CL32A226KAJNNN □	22 μ F		25	±10%	2.70	
9	CL32A226KOJNNN □	22 μ F		16	±10%	2.70	
10	CL32A226KOCLNN □	22 μ F		16	±10%	0.95	
11	CL32A226KPJNNN □	22 μ F		10	±10%	2.70	
12	CL32A226KQJNNN □	22 μ F		6.3	±10%	2.70	
13	CL32A226MQCLNN □	22 μ F		6.3	±20%	0.95	
14	CL32A226KRJNNN □	22 μ F		4	±10%	2.70	
15	CL32A226MRCLNN □	22 μ F		4	±20%	0.95	
16	CL32A476KOJNNN □	47 μ F		16	±10%	2.70	
17	CL32A476KPJNNN □	47 μ F		10	±10%	2.70	
18	CL32A476MQJNNN □	47 μ F		6.3	±20%	2.70	
19	CL32A476MRJNNN □	47 μ F		4	±20%	2.70	
20	CL32A107MPVNNN □	100 μ F		10	±20%	2.80	
21	CL32A107MQVNNN □	100 μ F		6.3	±20%	2.80	
22	CL32A107MRVNNN □	100 μ F		4	±20%	2.80	
23	CL32A157MQVNNN □	150 μ F		6.3	±20%	2.80	
24	CL32A227MQVNNN □	220 μ F		6.3	±20%	2.80	
1	CL43A476MQJNNN □	4.50×3.20	47 μ F	6.3	±20%	2.70	
2	CL43A476MRJNNN □		47 μ F	4	±20%	2.70	
3	CL43A107KQLNNN □		100 μ F	6.3	±10%	3.50	
4	CL43A107KRLNNN □		100 μ F	4	±10%	3.50	

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p 80.

Product Lineup (High Capacitance-X6S)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05X224KP5NNN □	1.00×0.50	0.22 μF	10	±10%	0.55
2	CL05X224KQ5NNN □		0.22 μF	6.3	±10%	0.55
3	CL05X224KR5NNN □		0.22 μF	4	±10%	0.55
4	CL05X474KP5NNN □		0.47 μF	10	±10%	0.55
5	CL05X474KQ5NNN □		0.47 μF	6.3	±10%	0.55
6	CL05X474KR5NNN □		0.47 μF	4	±10%	0.55
7	CL05X105KP5NNN □		1 μF	10	±10%	0.55
8	CL05X105MQ3LNN □		1 μF	6.3	±20%	0.33
9	CL05X105KQ5NNN □		1 μF	6.3	±10%	0.55
10	CL05X105MR3LNN □		1 μF	4	±20%	0.33
11	CL05X105KR5NNN □		1 μF	4	±10%	0.55
12	CL05X225MQ5NSN □		2.2 μF	6.3	±20%	0.57
13	CL05X225MR5NSN □		2.2 μF	4	±20%	0.57
1	CL10X474KA8NNN □	1.60×0.80	0.47 μF	25	±10%	0.90
2	CL10X474KO8NNN □		0.47 μF	16	±10%	0.90
3	CL10X474KP8NNN □		0.47 μF	10	±10%	0.90
4	CL10X474KQ8NNN □		0.47 μF	6.3	±10%	0.90
5	CL10X474KR8NNN □		0.47 μF	4	±10%	0.90
6	CL10X105KA8NNN □		1 μF	25	±10%	0.90
7	CL10X105KO8NNN □		1 μF	16	±10%	0.90
8	CL10X105KP8NNN □		1 μF	10	±10%	0.90
9	CL10X105KQ8NNN □		1 μF	6.3	±10%	0.90
10	CL10X105KR8NNN □		1 μF	4	±10%	0.90
11	CL10X225KO8NNN □		2.2 μF	16	±10%	0.90
12	CL10X225KP8NNN □		2.2 μF	10	±10%	0.90
13	CL10X225KQ8NNN □		2.2 μF	6.3	±10%	0.90
14	CL10X225KR8NNN □		2.2 μF	4	±10%	0.90
15	CL10X475KA8NQN □		4.7 μF	25	±10%	0.95
16	CL10X475KO8NQN □		4.7 μF	16	±10%	0.95
17	CL10X475KP5NNN □		4.7 μF	10	±10%	0.90
18	CL10X475KQ8NNN □		4.7 μF	6.3	±10%	0.90
19	CL10X475KR8NNN □		4.7 μF	4	±10%	0.90
20	CL10X106MP8NNN □		10 μF	10	±20%	0.90
21	CL10X106KQ8NNN □		10 μF	6.3	±10%	0.90
22	CL10X106KR8NNN □		10 μF	4	±10%	0.90
1	CL21X105KAFNNN □	2.00×1.25	1 μF	25	±10%	1.35
2	CL21X105KOFNNN □		1 μF	16	±10%	1.35
3	CL21X105KPFNNN □		1 μF	10	±10%	1.35
4	CL21X105KQFNNN □		1 μF	6.3	±10%	1.35
5	CL21X105KRFNNN □		1 μF	4	±10%	1.35
6	CL21X225KAFNNN □		2.2 μF	25	±10%	1.35
7	CL21X225KOFNNN □		2.2 μF	16	±10%	1.35
8	CL21X225KPFNNN □		2.2 μF	10	±10%	1.35
9	CL21X225KQFNNN □		2.2 μF	6.3	±10%	1.35
10	CL21X225KRFNNN □		2.2 μF	4	±10%	1.35
11	CL21X475KAQNNN □		4.7 μF	25	±10%	1.40
12	CL21X475KOFNNN □		4.7 μF	16	±10%	1.35
13	CL21X475KPFNNN □		4.7 μF	10	±10%	1.35
14	CL21X475KQFNNN □		4.7 μF	6.3	±10%	1.35

※ □ mark means packaging code. If you want to learn the code or quantity in detail, please see p 80.

- 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 (High Capacitance -X6S)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)	
15	CL21X475KRFNNN □	2.00×1.25	4.7μF	4	±10%	1.35	
16	CL21X106KACLRN □		10μF	25	±10%	0.95	
17	CL21X106KAYNNN □		10μF	25	±10%	1.45	
18	CL21X106KOYNNN □		10μF	16	±10%	1.45	
19	CL21X106KPCLNN □		10μF	10	±10%	0.95	
20	CL21X106KPYNNN □		10μF	10	±10%	1.45	
21	CL21X106KQQNNN □		10μF	6.3	±10%	1.40	
22	CL21X106KRQNNN □		10μF	4	±10%	1.40	
23	CL21X106KRCLNN □		10μF	4	±10%	0.95	
24	CL21X226MQQNNN □		22μF	6.3	±20%	1.40	
25	CL21X226MRQNNN □		22μF	4	±20%	1.40	
26	CL21X476MRYNNN □		47μF	4	±20%	1.45	
1	CL31X475KAHNNN □		3.20×1.60	4.7μF	25	±10%	1.80
2	CL31X475KACLNN □			4.7μF	25	±10%	0.95
3	CL31X475KOHNNN □	4.7μF		16	±10%	1.80	
4	CL31X475KPHNNN □	4.7μF		10	±10%	1.80	
5	CL31X475MQHNNN □	4.7μF		6.3	±20%	1.80	
6	CL31X475KRHNNN □	4.7μF		4	±10%	1.80	
7	CL31X106KACLNN □	10μF		25	±10%	0.95	
8	CL31X106KAHNNN □	10μF		25	±10%	1.80	
9	CL31X106KOHNNN □	10μF		16	±10%	1.80	
10	CL31X106KPHNNN □	10μF		10	±10%	1.80	
11	CL31X106KQHNNN □	10μF		6.3	±10%	1.80	
12	CL31X106KRHNNN □	10μF		4	±10%	1.80	
13	CL31X226KOHNNN □	22μF		16	±10%	1.80	
14	CL31X226KPHNNN □	22μF		10	±10%	1.80	
15	CL31X226KQHNNN □	22μF		6.3	±10%	1.80	
16	CL31X226KRHNNN □	22μF		4	±10%	1.80	
17	CL31X107MQHNNN □	100μF		6.3	±20%	1.80	
18	CL31X107MRHNNN □	100μF		4	±20%	1.80	
1	CL32X106KAUNNN □	3.20×2.50	10μF	25	±10%	2.00	
2	CL32X106KOJNNN □		10μF	16	±10%	2.70	
3	CL32X106KPJNNN □		10μF	10	±10%	2.70	
4	CL32X106KQJNNN □		10μF	6.3	±10%	2.70	
5	CL32X106KRJNNN □		10μF	4	±10%	2.70	
6	CL32X226KAJNNN □		22μF	25	±10%	2.70	
7	CL32X226KOJNNN □		22μF	16	±10%	2.70	
8	CL32X226KPJNNN □		22μF	10	±10%	2.70	
9	CL32X226KQJNNN □		22μF	6.3	±10%	2.70	
10	CL32X226KRJNNN □		22μF	4	±10%	2.70	
11	CL32X476MPJNNN □		47μF	10	±20%	2.70	
12	CL32X476KQJNNN □		47μF	6.3	±10%	2.70	
13	CL32X476KRJNNN □		47μF	4	±10%	2.70	
14	CL32X107MQVNNN □		100μF	6.3	±20%	2.80	
15	CL32X107MRVNNN □		100μF	4	±20%	2.80	

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

Product Lineup (High Capacitance -X7R, X7S)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05B224KO5NNN □	1.00×0.50	0.22 μF	16	±10%	0.55
2	CL05B224KP5NNN □		0.22 μF	10	±10%	0.55
3	CL05B224KQ5NNN □		0.22 μF	6.3	±10%	0.55
4	CL05B474KP5NNN □		0.47 μF	10	±10%	0.55
5	CL05B105KQ5NQN □		1 μF	6.3	±10%	0.60
1	CL05Y474KP5NNN □	1.00×0.50	0.47 μF	10	±10%	0.55
1	CL10B474KA8NNN □	1.60×0.80	0.47 μF	25	±10%	0.90
2	CL10B474KO8NNN □		0.47 μF	16	±10%	0.90
3	CL10B474KP8NNN □		0.47 μF	10	±10%	0.90
4	CL10B474KQ8NNN □		0.47 μF	6.3	±10%	0.90
5	CL10B105KA8NNN □		1 μF	25	±10%	0.90
6	CL10B105KO8NNN □		1 μF	16	±10%	0.90
7	CL10B105KP8NNN □		1 μF	10	±10%	0.90
8	CL10B105KQ8NNN □		1 μF	6.3	±10%	0.90
9	CL10B225KP8NNN □		2.2 μF	10	±10%	0.90
10	CL10B225KQ8NNN □		2.2 μF	6.3	±10%	0.90
11	CL10B106MQ8NRN □		10 μF	6.3	±20%	1.00
1	CL21B105KBFNNN □	2.00×1.25	1 μF	50	±10%	1.35
2	CL21B105KLFNNN □		1 μF	35	±10%	1.35
3	CL21B105KAFNNN □		1 μF	25	±10%	1.35
4	CL21B105KOFNNN □		1 μF	16	±10%	1.35
5	CL21B105KPFNNN □		1 μF	10	±10%	1.35
6	CL21B105KQFNNN □		1 μF	6.3	±10%	1.35
7	CL21B225KAFNNN □		2.2 μF	25	±10%	1.35
8	CL21B225KOFNNN □		2.2 μF	16	±10%	1.35
9	CL21B225KPFNNN □		2.2 μF	10	±10%	1.35
10	CL21B225KQFNNN □		2.2 μF	6.3	±10%	1.35
11	CL21B475KOFNFN □		4.7 μF	16	±10%	1.35
12	CL21B475KPFNFN □		4.7 μF	10	±10%	1.35
13	CL21B475KQQNFN □		4.7 μF	6.3	±10%	1.40
14	CL21B106KAYNNN □		10 μF	25	±10%	1.45
15	CL21B106KOQNNN □		10 μF	16	±10%	1.40
16	CL21B106KPQNNN □		10 μF	10	±10%	1.40
17	CL21B106KQQNNN □		10 μF	6.3	±10%	1.40
18	CL21B226MQQNN □		22 μF	6.3	±20%	1.40
1	CL31B475KBHNNN □	3.20×1.60	4.7 μF	50	±10%	1.80
2	CL31B475KLHNNN □		4.7 μF	35	±10%	1.80
3	CL31B475KAHNNN □		4.7 μF	25	±10%	1.80
4	CL31B475KOHNNN □		4.7 μF	16	±10%	1.80
5	CL31B475KPHNNN □		4.7 μF	10	±10%	1.80
6	CL31B475KQHNNN □		4.7 μF	6.3	±10%	1.80
7	CL31B106KLHNNN □		10 μF	35	±10%	1.80
8	CL31B106KAHNNN □		10 μF	25	±10%	1.80
9	CL31B106KOHNNN □		10 μF	16	±10%	1.80
10	CL31B106KPHNNN □		10 μF	10	±10%	1.80
11	CL31B106KQHNNN □		10 μF	6.3	±10%	1.80
12	CL31B226KPHNNN □		22 μF	10	±10%	1.80
1	CL32B106KBJNNN □	3.20×2.50	10 μF	50	±10%	2.70
2	CL32B106KAJNNN □		10 μF	25	±10%	2.70
3	CL32B106KOJNNN □		10 μF	16	±10%	2.70
4	CL32B106KPIJNNN □		10 μF	10	±10%	2.20
5	CL32B106KQJNNN □		10 μF	6.3	±10%	2.70
6	CL32B226KAJNNN □		22 μF	25	±10%	2.70
7	CL32B226KOJNNN □		22 μF	16	±10%	2.70
8	CL32B226KPIJNNN □		22 μF	10	±10%	2.70
9	CL32B226KQJNNN □		22 μF	6.3	±10%	2.70
10	CL32B476MQJNNN □		47 μF	6.3	±20%	2.70

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

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

Product Lineup (High Capacitance -Y5V)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL05F224ZO5NNN □	1.00×0.50	0.22 μ F	16	+80/-20%	0.55
2	CL05F224ZP5NNN □		0.22 μ F	10	+80/-20%	0.55
3	CL05F224ZQ5NNN □		0.22 μ F	6.3	+80/-20%	0.55
4	CL05F474ZP5NNN □		0.47 μ F	10	+80/-20%	0.55
5	CL05F474ZQ5NNN □		0.47 μ F	6.3	+80/-20%	0.55
6	CL05F105ZQ5NNN □		1 μ F	6.3	+80/-20%	0.55
1	CL10F474ZB8NNN □	1.60×0.80	0.47 μ F	50	+80/-20%	0.90
2	CL10F474ZA8NNN □		0.47 μ F	25	+80/-20%	0.90
3	CL10F474ZO8NNN □		0.47 μ F	16	+80/-20%	0.90
4	CL10F474ZP8NNN □		0.47 μ F	10	+80/-20%	0.90
5	CL10F105ZO8NNN □		1 μ F	16	+80/-20%	0.90
6	CL10F105ZP8NNN □		1 μ F	10	+80/-20%	0.90
7	CL10F225ZP8NNN □		2.2 μ F	10	+80/-20%	0.90
8	CL10F225ZQ8NNN □		2.2 μ F	6.3	+80/-20%	0.90
9	CL10F475ZQ8NNN □		4.7 μ F	6.3	+80/-20%	0.90
1	CL21F105ZBFNNN □	2.00×1.25	1 μ F	50	+80/-20%	1.35
2	CL21F105ZAFNNN □		1 μ F	25	+80/-20%	1.35
3	CL21F105ZOFNNN □		1 μ F	16	+80/-20%	1.35
4	CL21F225ZAFNNN □		2.2 μ F	25	+80/-20%	1.35
5	CL21F225ZOFNNN □		2.2 μ F	16	+80/-20%	1.35
6	CL21F475ZQFNNN □		4.7 μ F	6.3	+80/-20%	1.35
7	CL21F475ZOFNNN □		4.7 μ F	16	+80/-20%	1.35
8	CL21F475ZPFNNN □		4.7 μ F	10	+80/-20%	1.35
9	CL21F106ZPFNNN □		10 μ F	10	+80/-20%	1.35
10	CL21F106ZPCLNN □		10 μ F	10	+80/-20%	0.95
11	CL21F106ZQFNNN □		10 μ F	6.3	+80/-20%	1.35
12	CL21F106ZQCLNN □		10 μ F	6.3	+80/-20%	0.95
1	CL31F475ZOFNNN □	3.20×1.60	4.7 μ F	16	+80/-20%	1.40
2	CL31F475ZPFNNN □		4.7 μ F	10	+80/-20%	1.40
3	CL31F475ZQFNNN □		4.7 μ F	6.3	+80/-20%	1.40
4	CL31F106ZOHNNN □		10 μ F	16	+80/-20%	1.80
5	CL31F106ZPHNNN □		10 μ F	10	+80/-20%	1.80
6	CL31F106ZQHNNN □		10 μ F	6.3	+80/-20%	1.80
7	CL31F226ZPHNNN □		22 μ F	10	+80/-20%	1.80
8	CL31F226ZQHNNN □		22 μ F	6.3	+80/-20%	1.80
1	CL32F106ZAHNNN □	3.20×2.50	10 μ F	25	+80/-20%	1.80
2	CL32F106ZOELNN □		10 μ F	16	+80/-20%	1.20
3	CL32F226ZPJNNN □		22 μ F	10	+80/-20%	2.70
4	CL32F226ZPJLNN □		22 μ F	10	+80/-20%	2.70
5	CL32F476ZQINNN □		47 μ F	6.3	+80/-20%	2.20
6	CL32F107ZQJNNN □		100 μ F	6.3	+80/-20%	2.70

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