

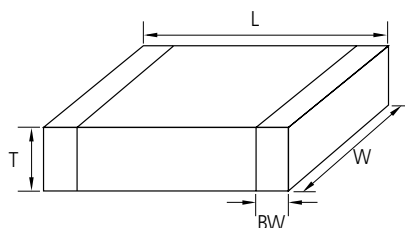
Feature

- Small chip size
- 03 Series(COG) MLCC shows very low ESR value.
- 02 and 03 Series are suited to only reflow soldering
- 02 and 03 Series are suited to miniature RF module, portable equipment and high frequency circuit

Application

- VCO, Tuner, RF Module
- MCM Module
- Mobile phone, Wireless LAN, Note PC
 - ※ For using special purpose like Military, Medical, Aviation, Automobile device should be following a special specification.

Structure and Dimensions



Code	EIA Code	Dimension(mm)			
		L	W	T	BW
02	01005	0.4 ± 0.02	0.2 ± 0.02	0.2 ± 0.02	0.07~0.14
03	0201	0.6 ± 0.03	0.3 ± 0.03	0.3 ± 0.03	0.15 ± 0.05

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



Super Small Size Capacitance Table (C0G)

Size(mm)	Tmax (mm)	Vr(V)	Capacitance (pF)								
			0.5	1	10	22	47	100	220	330	
C0G	01005(0402)	6.3									
		16									
	0201(0603)	25									
		50									20pF

Super Small Size Capacitance Table (X5R, X7R, Y5V)

TC	Size (mm)	Vr(V)	Capacitance (uF)								
			0.1	0.22	0.47	1	2.2	4.7	10	22	
X5R	01005(0402)	6.3									
		4	X5R or X6S								
	0201(0603)	6.3									
		10									
		16									
		25									
X7R	01005(0402)	10									
	0201(0603)	10									
		16									
Y5V	0201(0603)	6.3									

Product Lineup (Super Small Size Capacitors -C0G)

	Part Number	Size L × W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)	
1	CL02C0R5CO2ANN □	0.40 × 0.20	0.5 pF	16	±0.25 pF	0.22	
2	CL02C010CO2ANN □		1.0 pF	16	±0.25 pF	0.22	
3	CL02C1R2CO2ANN □		1.2 pF	16	±0.25 pF	0.22	
4	CL02C1R5CO2ANN □		1.5 pF	16	±0.25 pF	0.22	
5	CL02C1R8CO2ANN □		1.8 pF	16	±0.25 pF	0.22	
6	CL02C020CO2ANN □		2.0 pF	16	±0.25 pF	0.22	
7	CL02C2R2CO2ANN □		2.2 pF	16	±0.25 pF	0.22	
8	CL02C2R7CO2ANN □		2.7 pF	16	±0.25 pF	0.22	
9	CL02C030CO2ANN □		3.0 pF	16	±0.25 pF	0.22	
10	CL02C3R3CO2ANN □		3.3 pF	16	±0.25 pF	0.22	
11	CL02C3R9CO2ANN □		3.9 pF	16	±0.25 pF	0.22	
12	CL02C4R7CO2ANN □		4.7 pF	16	±0.25 pF	0.22	
13	CL02C5R6DO2ANN □		5.6 pF	16	±0.5 pF	0.22	
14	CL02C6R8DO2ANN □		6.8 pF	16	±0.5 pF	0.22	
15	CL02C8R2DO2ANN □		8.2 pF	16	±0.5 pF	0.22	
16	CL02C090DO2ANN □		9.0 pF	16	±0.5 pF	0.22	
17	CL02C100JO2ANN □		10 pF	16	±5%	0.22	
18	CL02C150JO2ANN □		15 pF	16	±5%	0.22	
19	CL02C180JO2ANN □		18 pF	16	±5%	0.22	
20	CL02C220JO2ANN □		22 pF	16	±5%	0.22	
21	CL02C270JO2ANN □		27 pF	16	±5%	0.22	
22	CL02C330JO2ANN □		33 pF	16	±5%	0.22	
23	CL02C390JO2ANN □		39 pF	16	±5%	0.22	
24	CL02C470JO2ANN □		47 pF	16	±5%	0.22	
25	CL02C560JQ2ANN □		56 pF	6.3	±5%	0.22	
26	CL02C680JQ2ANN □		68 pF	6.3	±5%	0.22	
27	CL02C820JQ2ANN □		82 pF	6.3	±5%	0.22	
28	CL02C101JQ2ANN □		100 pF	6.3	±5%	0.22	
1	CL03C0R5CA3GNN □	0.60 × 0.30	0.5 pF	25	±0.25 pF	0.33	High-Q
2	CL03C010CA3GNN □		1.0 pF	25	±0.25 pF	0.33	High-Q
3	CL03C1R2CA3GNN □		1.2 pF	25	±0.25 pF	0.33	High-Q
4	CL03C1R5CA3GNN □		1.5 pF	25	±0.25 pF	0.33	High-Q
5	CL03C1R8CA3GNN □		1.8 pF	25	±0.25 pF	0.33	High-Q
6	CL03C020CA3GNN □		2.0 pF	25	±0.25 pF	0.33	High-Q
7	CL03C2R2CA3GNN □		2.2 pF	25	±0.25 pF	0.33	High-Q
8	CL03C2R7CA3GNN □		2.7 pF	25	±0.25 pF	0.33	High-Q
9	CL03C030CA3GNN □		3.0 pF	25	±0.25 pF	0.33	High-Q
10	CL03C3R3CA3GNN □		3.3 pF	25	±0.25 pF	0.33	High-Q
11	CL03C3R9CA3GNN □		3.9 pF	25	±0.25 pF	0.33	High-Q
12	CL03C4R7CA3GNN □		4.7 pF	25	±0.25 pF	0.33	High-Q
13	CL03C5R6DA3GNN □		5.6 pF	25	±0.5 pF	0.33	High-Q
14	CL03C6R8DA3GNN □		6.8 pF	25	±0.5 pF	0.33	High-Q
15	CL03C8R2DA3GNN □		8.2 pF	25	±0.5 pF	0.33	High-Q
16	CL03C090DA3GNN □		9.0 pF	25	±0.5 pF	0.33	High-Q
17	CL03C100JA3GNN □		10 pF	25	±5%	0.33	High-Q
18	CL03C150JA3GNN □		15 pF	25	±5%	0.33	High-Q
19	CL03C180JA3GNN □		18 pF	25	±5%	0.33	High-Q
20	CL03C220JA3GNN □		22 pF	25	±5%	0.33	High-Q
21	CL03C270JA3GNN □		27 pF	25	±5%	0.33	High-Q
22	CL03C330JA3GNN □		33 pF	25	±5%	0.33	High-Q
23	CL03C390JA3ANN □		39 pF	25	±5%	0.33	
24	CL03C470JA3ANN □		47 pF	25	±5%	0.33	
25	CL03C101JA3ANN □		100 pF	25	±5%	0.33	

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

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Packaging Specification

Application Manual for Surface Mounting

Product Lineup (Super Small Size Capacitors -X7R)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL02B101KP2NNN □	0.40×0.20	100pF	10	±10%	0.22
2	CL02B151KP2NNN □		150pF	10	±10%	0.22
3	CL02B221KP2NNN □		220pF	10	±10%	0.22
4	CL02B331KP2NNN □		330pF	10	±10%	0.22
5	CL02B471KP2NNN □		470pF	10	±10%	0.22
6	CL02B681KP2NNN □		680pF	10	±10%	0.22
7	CL02B102KP2NNN □		1.0nF	10	±10%	0.22
1	CL03B331KO3NNN □	0.60×0.30	330pF	16	±10%	0.33
2	CL03B102KO3NNN □		1nF	16	±10%	0.33
3	CL03B472KQ3NNN □		4.7nF	6.3	±10%	0.33
4	CL03B103KP3NNN □		10nF	10	±10%	0.33

Product Lineup (Super Small Size Capacitors -X5R)

	Part Number	Size L×W (mm)	Capacitance	Rated Voltage (Vdc)	Capacitance Tolerance	Thickness Max. (mm)
1	CL02A151KQ2NNN □	0.40×0.20	150pF	6.3	±10%	0.22
2	CL02A221KQ2NNN □		220pF	6.3	±10%	0.22
3	CL02A331KQ2NNN □		330pF	6.3	±10%	0.22
4	CL02A471KQ2NNN □		470pF	6.3	±10%	0.22
5	CL02A681KQ2NNN □		680pF	6.3	±10%	0.22
6	CL02A102KQ2NNN □		1nF	6.3	±10%	0.22
7	CL02A152KQ2NNN □		1.5nF	6.3	±10%	0.22
8	CL02A222KQ2NNN □		2.2nF	6.3	±10%	0.22
9	CL02A332KQ2NNN □		3.2nF	6.3	±10%	0.22
10	CL02A472KQ2NNN □		4.7nF	6.3	±10%	0.22
11	CL02A682KQ2NNN □		6.8nF	6.3	±10%	0.22
12	CL02A103KQ2NNN □		10nF	6.3	±10%	0.22
13	CL02A104KQ2NNN □		100nF	6.3	±10%	0.22
1	CL03A103KP3NNN □	0.60×0.30	10nF	10	±10%	0.33
2	CL03A223KQ3NNN □		22nF	6.3	±10%	0.33
3	CL03A473KQ3NNN □		47nF	6.3	±10%	0.33
4	CL03A104MA3NNN □		100nF	25	±20%	0.33
5	CL03A104KO3NNN □		100nF	16	±10%	0.33
6	CL03A104KP3NNN □		100nF	10	±10%	0.33
7	CL03A104KQ3NNN □		100nF	6.3	±10%	0.33
8	CL03A224KQ3NNN □		220nF	6.3	±10%	0.33
9	CL03A224KP3NNN □		200nF	10	±10%	0.33
10	CL03A105MQ3CSN □		1μF	6.3	±20%	0.35

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