



MULTILAYER CERAMIC CAPACITORS

SAMSUNG
ELECTRO-MECHANICS



MULTILAYER CERAMIC CAPACITORS



Interactive User Guide

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Explanation of Ceramic Capacitors

Normal Capacitors

Normal Capacitors

Standard

High Level I

High Level II

Improved Reliability
(65°C, 90%RH, 1Vr, 500H)

Reinforced Reliability
(85°C, 85%RH, 1Vr, 1000H)

Embedded/LSC Capacitors

Lower thickness and space saving

Embedded/LSC

High Bending Strength Capacitors

More Resistant to stress caused by board bending

High-bending
Strength



► **Explanation of Ceramic Capacitors**

Part Numbering
Reliability Level Description
Normal Capacitors_Standard
Normal Capacitors_High Level I
Normal Capacitors_High Level II

Embedded/LSC Capacitors
High Bending Strength Capacitors
Low Acoustic Noise Capacitors
Low ESL Capacitors
Array Type Capacitors
Application Guide

Reliability Test Conditions
Packaging Specifications
Caution/Notice
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Explanation of Ceramic Capacitors

Low Acoustic Noise Capacitors

A solution that effectively reduces audible noise

Low Acoustic
Noise

Low ESL Capacitors

Space Saving & High Speed Energy Transfer

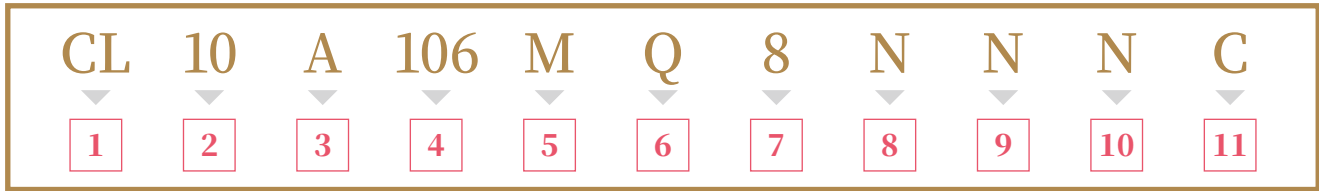
Low ESL

Array Type Capacitors

Reduces mounting cost and ripple voltage

Array

Part Numbering



1 SERIES CODE

CL = Multilayer Ceramic Capacitors

2 SIZE CODE

Code	mm (inch)
02	0402 (01005)
03	0603 (0201)
05	1005 (0402)
10	1608 (0603)

Code	mm (inch)
21	2012 (0805)
31	3216 (1206)
32	3225 (1210)

Code	mm (inch)
42	4520 (1808)
43	4532 (1812)
55	5750 (2220)

3 DIELECTRIC CODE

Class I (Temperature Compensation)

Symbol	EIA Code	Operation Temperature Range (°C)	Temperature Coefficient Range (ppm/°C)
C	COG	-55 ~ +125	0 ± 30

Class II (High Dielectric Constant)

Symbol	EIA Code	Operation Temperature Range (°C)	Capacitance Change (ΔC %)
A	X5R	-55 ~ +85	±15
B	X7R	-55 ~ +125	±15
X	X6S	-55 ~ +105	±22
F	Y5V	-30 ~ +85	-82 ~ +22
Y	X7S	-55 ~ +125	±22
Z	X7T	-55 ~ +125	-33 ~ +22

4 CAPACITANCE CODE

Capacitance expressed in pF. 2 significant digits plus number of zeros.
 example) 106=10×10⁶=10,000,000pF

For Values < 10pF, Letter R denotes decimal point
 example) 1R5 =1.5pF

5 CAPACITANCE TOLERANCE CODE

Code	Tolerance	Code	Tolerance	Code	Tolerance	Code	Tolerance
N	±0.03pF	H	+ 0.25pF	F	±1%	V	- 5%
A	±0.05pF	L	- 0.25pF	G	±2%	K	±10%
B	±0.1pF	D	±0.5pF	J	±5%	M	±20%
C	±0.25pF	F*	±1pF	U	+ 5%	Z	-20, +80%

*For Values < 10pF, F=±1pF / Values≥10pF, F=±1%

Part Numbering

Series	Nominal Capacitance											
E-3	1.0				2.2				4.7			
E-6	1.0		1.5		2.2		3.3		4.7		6.8	
E-12	1.0	1.2	1.5	1.8	2.2	2.7	3.3	3.9	4.7	5.6	6.8	8.2
E-24	1.0	1.2	1.5	1.8	2.2	2.7	3.3	3.9	4.7	5.6	6.8	8.2
	1.1	1.3	1.6	2.0	2.4	3.0	3.6	4.3	5.1	6.2	7.5	9.1

6 RATED VOLTAGE CODE

Code	Voltage	Code	Voltage	Code	Voltage	Code	Voltage
S	2.5Vdc	O	16Vdc	C	100Vdc	H	630Vdc
R	4.0Vdc	A	25Vdc	D	200Vdc	I	1kVdc
Q	6.3Vdc	L	35Vdc	E	250Vdc	J	2kVdc
P	10Vdc	B	50Vdc	G	500Vdc	K	3kVdc

7 THICKNESS CODE

Size mm (inch)	Code	Thickness	Tolerance
0402 (01005)	2	0.20	±0.02
0603 (0201)	3	0.30	±0.03
1005 (0402)	3	0.30	±0.03*
	5	0.50	±0.05
1608 (0603)	5	0.50	+0.0/-0.1*
	8	0.80	±0.10
2012 (0805)	A	0.65	±0.10
	C	0.85	±0.10*
	C	0.85	±0.10
	M	1.15	±0.10
	F	1.25	±0.10
	Q	1.25	±0.15
3216 (1206)	Y	1.25	±0.20
	C	0.85	±0.15
	C	0.85	±0.10*
	E	1.10	±0.15
	E	1.10	±0.10*
	P	1.15	±0.10*
	M	1.15	±0.15
	F	1.25	±0.15
H	1.6	±0.20	

Size mm (inch)	Code	Thickness	Tolerance
3225 (1210)	C	0.85	±0.10*
	9	0.90	±0.10*
	F	1.25	±0.20
	S	1.35	±0.15*
	H	1.60	±0.20
	U	1.80	±0.20*
	I	2.00	±0.20
	J	2.50	±0.20
	V	2.50	±0.30
4520 (1808)	F	1.25	±0.20
	G	1.40	±0.20
	I	2.00	±0.20
4532 (1812)	F	1.25	±0.20
	H	1.60	±0.20
	I	2.00	±0.20
	J	2.50	±0.20
5750 (2220)	L	3.20	±0.30
	H	1.60	±0.20
	I	2.00	±0.20
	J	2.50	±0.20
	L	3.20	±0.30

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

Part Numbering

8 INNER ELECTRODE/TERMINATION/PLATING CODE

Code	Thickness division	Inner electrode	Termination	Plating material
N	Normal	Ni	Cu	Ni / Sn _100%
G	Normal	Cu	Cu	Ni / Sn _100%
S	Normal	Ni	Metal Epoxy	Ni / Sn _100%
C	Normal	Ni	Control Code	Ni / Sn _100%
L	Low profile	Ni	Cu	Ni / Sn _100%
Y	Low profile	Ni	Metal Epoxy	Ni / Sn _100%
Z	Normal	Ni	Metal Epoxy	Ni / Sn _100%
F	Low profile	Ni	Metal Epoxy	Ni / Sn _100%

9 PRODUCT CODE OR SIZE CONTROL CODE

N=Normal

A=Array (2-element)

B=Array (4-element)

L=LICC (Low Inductance Ceramic Capacitor)

J=SLIC (Super Low Inductance Capacitor)

(Unit : mm (inch))

Code	Size	0402 (01005)	0603 (0201)	1005 (0402)	1608 (0603)	2012 (0805)	3216 (1206)
S		±0.03	±0.05	±0.07	±0.07		±0.30
Q		±0.05	±0.07	±0.10	±0.15	±0.15	
R		±0.07	±0.09	±0.15	±0.20	±0.20	
U		±0.09		±0.20	±0.25	±0.25	
Z				±0.40	±0.30	±0.30	
9				±0.30			

10 CONTROL CODE

N= Reserved for future use

11 PACKAGING CODE

Cardboard Tape (paper)	
Code	Taping Type
8/C/H	Normal, 7"reel (Quantity option)
J	1mm Pitch, 7"reel
Z	Chip aligned for horizontal, 7"reel
Y	Chip aligned for vertical, 7"reel
O	Normal, 10"reel
3/D/L	Normal, 13"reel (Quantity option)
2	1mm Pitch, 13"reel
7	Chip aligned for vertical, 13"reel

Embossed Tape (plastic)	
Code	Taping Type
E/G	Normal, 7"reel (Quantity option)
R	Chip aligned for horizontal, 7"reel
W	Chip aligned for vertical, 7"reel
S	Normal, 10"reel
F	Normal, 13"reel (Quantity option)

Reliability Level Description

Reliability Level	Standard	High Level I	High Level II	AEC-Q200
Humidity Test	40°C, 95%RH, 1Vr, 500h	65°C, 90%RH, 1Vr, 500h	85°C, 85%RH, 1Vr, 1000h	85°C, 85%RH, 1.3~1.5Vr, 1000h
High Temp Load Test	Max. Temp, 1.5Vr, 1000h	Max. Temp, 1.5Vr, 1000h	Max. Temp, 1.5Vr, 1000h	Max. Temp, 2Vr, 1000h
Board Flex	1mm	1mm	2mm	2mm
Temp. Cycling	5cycle	5cycle	1000cycle	1000cycle

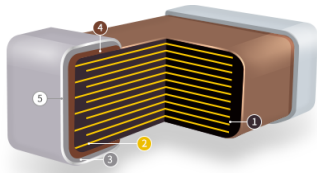
1. The part marked 'derating' is less than 150% of rated voltage in the durability and operational life test.
2. Some of the parts are applicable in rated voltage × 150% or × 120%. Please refer to individual specifications.
3. Some of parts are 3mm bending guaranteed. Please refer to individual specifications.

Normal Capacitors_Standard

Normal Standard

Features

- A Normal MLCC temporarily charges and remove noise in electronic circuits, and is the most broadly available chip-type capacitor.
- The product line allows realization of various sizes and a wide range of capacitance.
- It also has the structural capacity to mount chips on a PCB at a high speed.



- ① Ceramic Body
- ② Electrode (Ni/Cu*)
- ③ Plating (Ni)
- ④ Termination (Cu or Cu+Metal Epoxy)
- ⑤ Plating (Sn)

* Internal Cu electrode is only applied to limited products.

Wide Selection of Size & Wide Capacitance Range

Products offered with various sizes and a wide range of capacities

Excellent DC Bias Characteristics

Capacitor with Excellent DC Bias Characteristics

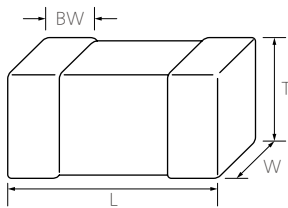
High Speed Automatic Chip Placement on PCBs

Chip Mountable on PCB at High Speed

Application

- Smart Phone, PC, HDD/SSD Board, Tablet, Display, Game Machine, DC-DC Converter

Structure and Dimensions



Size Code	Dimension (mm)				EIA (inch)
	L	W	T	BW	
02	0.40±0.02	0.20±0.02	0.20±0.02	0.1±0.03	01005
05025	0.50±0.025	0.25±0.025	0.25±0.025	0.13±0.04	15008
03	0.60±0.03	0.30±0.03	0.30±0.03	0.15±0.05	0201
	0.60±0.05	0.30±0.05	0.30±0.05		
	0.60±0.09	0.30±0.09	0.50±0.05		
	0.60±0.09	0.30±0.09	0.30±0.09		
05	1.00±0.05	0.50±0.05	0.50±0.05	0.25±0.10	0402
	1.00±0.05	0.50±0.05	0.30±0.03		
	1.00±0.05	0.50±0.05	0.20±0.02		
	1.00±0.07	0.50±0.07	0.50±0.07		
	1.00±0.10	0.50±0.10	0.50±0.10		
	1.00±0.10	0.50±0.10	0.30±0.03		
	1.00±0.15	0.50±0.15	0.50±0.15		
	1.00±0.15	0.50±0.15	0.30±0.03		
	1.00±0.20	0.50±0.20	0.50±0.20		
	1.00±0.20	0.50±0.25	0.70±0.10		
	1.00±0.20	0.50±0.20	0.60±0.20		
	1.00±0.20	0.50±0.20	0.50±0.05		
	1.15±0.05	0.70±0.05	0.70±0.05		



Normal Capacitors_Standard

Size Code	Dimension (mm)			BW	EIA (inch)
	L	W	T		
10	1.60±0.10	0.80±0.10	0.80±0.10	0.30±0.20	0603
	1.60±0.10	0.80±0.10	0.50+0.00/-0.10		
	1.60±0.15	0.80±0.15	0.80±0.15		
	1.60±0.20	0.80±0.20	0.80±0.20		
	1.60±0.20	0.80±0.20	0.80±0.20		
	1.60±0.20	0.80±0.20	0.70±0.20		
	1.60±0.25	0.80±0.25	0.70±0.10		
	1.60±0.25	0.80±0.25	0.80±0.25		
	1.60±0.30	0.80±0.30	0.70±0.10		
	1.60±0.30	0.80±0.30	0.80±0.30		
	1.60±0.30	0.80±0.30	0.50±0.30		
	1.80±0.10	1.00±0.10	0.70±0.10		
21	2.00±0.10	1.25±0.10	0.65±0.10	0.5+0.2/-0.3	0805
	2.00±0.10	1.25±0.10	0.85±0.10		
	2.00±0.10	1.25±0.10	0.90±0.10		
	2.00±0.10	1.25±0.10	1.25±0.10		
	2.00±0.15	1.25±0.15	0.85±0.10		
	2.00±0.15	1.25±0.15	1.25±0.15		
	2.00±0.20	1.25±0.20	0.70±0.10		
	2.00±0.20	1.25±0.20	0.80±0.10		
	2.00±0.20	1.25±0.20	0.85±0.10		
	2.00±0.20	1.25±0.20	0.90±0.10		
	2.00±0.20	1.25±0.20	1.10±0.10		
	2.00±0.20	1.25±0.20	1.25±0.20		
31	3.20±0.15	1.60±0.15	0.85±0.15	0.50±0.30	1206
	3.20±0.15	1.60±0.15	1.25±0.15		
	3.20±0.20	1.60±0.20	0.85±0.10		
	3.20±0.20	1.60±0.20	0.90±0.10		
	3.20±0.20	1.60±0.20	1.15±0.10		
	3.20±0.20	1.60±0.20	1.15±0.15		
32	3.20±0.30	2.50±0.20	0.85±0.10	0.60±0.30	1210
	3.20±0.30	2.50±0.20	1.25±0.20		
	3.20±0.30	2.50±0.20	1.35±0.15		
	3.20±0.30	2.50±0.20	1.40±0.20		
	3.20±0.30	2.50±0.20	1.60±0.10		
	3.20±0.30	2.50±0.20	1.60±0.20		
	3.20±0.30	2.50±0.20	1.80±0.20		
	3.20±0.30	2.50±0.20	2.50±0.20		
	3.20±0.30	2.50±0.20	2.00±0.20		
	3.20±0.40	2.50±0.30	2.50±0.20		
	3.20±0.40	2.50±0.30	2.50±0.30		
43	4.50±0.40	3.20±0.30	1.60±0.20	0.80±0.30	1812



Normal Capacitors_Standard

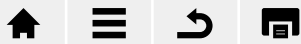
Product Line Up (COG)

Size : 0.20 × 0.10mm (inch : 01005)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
1	0.22	16	COG	0.3pF	±0.10pF	CL02C0R3B02GNN#
2	0.22	16	COG	0.4pF	±0.10pF	CL02C0R4B02GNN#
3	0.22	16	COG	0.5pF	±0.10pF	CL02C0R5B02GNN#
4	0.22	16	COG	0.9pF	±0.10pF	CL02C0R9B02GNN#
5	0.22	16	COG	1pF	±0.10pF	CL02C010B02GNN#
6	0.22	16	COG	1.2pF	±0.10pF	CL02C1R2B02GNN#
7	0.22	16	COG	1.5pF	±0.10pF	CL02C1R5B02GNN#
8	0.22	16	COG	1.6pF	±0.10pF	CL02C1R6B02GNN#
9	0.22	16	COG	1.7pF	±0.10pF	CL02C1R7B02GNN#
10	0.22	16	COG	1.8pF	±0.10pF	CL02C1R8B02GNN#
11	0.22	16	COG	2pF	±0.10pF	CL02C020B02GNN#
12	0.22	16	COG	2.4pF	±0.10pF	CL02C2R4B02GNN#
13	0.22	16	COG	2.9pF	±0.10pF	CL02C2R9B02GNN#
14	0.22	16	COG	3pF	±0.10pF	CL02C030B02GNN#
15	0.22	16	COG	3.3pF	±0.25pF	CL02C3R3C02GNN#
16	0.22	16	COG	4pF	±0.10pF	CL02C040B02GNN#
17	0.22	16	COG	5.6pF	±0.10pF	CL02C5R6B02GNN#
18	0.22	16	COG	5.6pF	±0.25pF	CL02C5R6C02GNN#
19	0.22	16	COG	22pF	±2%	CL02C220G02GNN#
20	0.22	16	COG	27pF	±5%	CL02C270J02NNN#

Size : 0.60 × 0.30mm (inch : 0201)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
1	0.33	25	COG	0.2pF	±0.10pF	CL03C0R2BA3GNN#
2	0.33	25	COG	0.3pF	±0.10pF	CL03C0R3BA3GNN#
3	0.33	25	COG	0.4pF	±0.10pF	CL03C0R4BA3GNN#
4	0.33	25	COG	0.4pF	±0.25pF	CL03C0R4CA3GNN#
5	0.33	25	COG	0.5pF	±0.10pF	CL03C0R5BA3GNN#
6	0.33	25	COG	0.5pF	±0.25pF	CL03C0R5CA3GNN#
7	0.33	25	COG	0.6pF	±0.10pF	CL03C0R6BA3GNN#
8	0.33	25	COG	0.6pF	±0.25pF	CL03C0R6CA3GNN#
9	0.33	25	COG	0.7pF	±0.10pF	CL03C0R7BA3GNN#
10	0.33	25	COG	0.8pF	±0.10pF	CL03C0R8BA3GNN#
11	0.33	25	COG	0.8pF	±0.25pF	CL03C0R8CA3GNN#
12	0.33	25	COG	0.9pF	±0.10pF	CL03C0R9BA3GNN#
13	0.33	25	COG	0.9pF	±0.25pF	CL03C0R9CA3GNN#
14	0.33	25	COG	1pF	±0.10pF	CL03C010BA3GNN#
15	0.33	25	COG	1pF	±0.25pF	CL03C010CA3GNN#
16	0.33	25	COG	1.2pF	±0.10pF	CL03C1R2BA3GNN#
17	0.33	25	COG	1.2pF	±0.25pF	CL03C1R2CA3GNN#
18	0.33	25	COG	1.5pF	±0.25pF	CL03C1R5CA3GNN#
19	0.33	25	COG	1.6pF	±0.10pF	CL03C1R6BA3GNN#
20	0.33	25	COG	1.8pF	±0.10pF	CL03C1R8BA3GNN#



Normal Capacitors_Standard

Size : 0.60 × 0.30mm (inch : 0201)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
21	0.33	25	COG	1.8pF	±0.25pF	CL03C1R8CA3GNN#
22	0.33	25	COG	2pF	±0.10pF	CL03C020BA3GNN#
23	0.33	25	COG	2.2pF	±0.10pF	CL03C2R2BA3GNN#
24	0.33	25	COG	2.2pF	±0.25pF	CL03C2R2CA3GNN#
25	0.33	25	COG	2.4pF	±0.10pF	CL03C2R4BA3GNN#
26	0.33	25	COG	2.4pF	±0.25pF	CL03C2R4CA3GNN#
27	0.33	25	COG	2.6pF	±0.10pF	CL03C2R6BA3GNN#
28	0.33	25	COG	2.7pF	±0.10pF	CL03C2R7BA3GNN#
29	0.33	25	COG	2.7pF	±0.25pF	CL03C2R7CA3GNN#
30	0.33	25	COG	3pF	±0.10pF	CL03C030BA3GNN#
31	0.33	25	COG	3.6pF	±0.10pF	CL03C3R6BA3GNN#
32	0.33	25	COG	3.6pF	±0.25pF	CL03C3R6CA3GNN#
33	0.33	25	COG	3.9pF	±0.10pF	CL03C3R9BA3GNN#
34	0.33	25	COG	4.3pF	±0.10pF	CL03C4R3BA3GNN#
35	0.33	25	COG	4.3pF	±0.25pF	CL03C4R3CA3GNN#
36	0.33	25	COG	4.7pF	±0.25pF	CL03C4R7CA3GNN#
37	0.33	25	COG	5pF	±0.25pF	CL03C050CA3GNN#
38	0.33	25	COG	5.1pF	±0.10pF	CL03C5R1BA3GNN#
39	0.33	25	COG	5.1pF	±0.25pF	CL03C5R1CA3GNN#
40	0.33	25	COG	5.6pF	±0.10pF	CL03C5R6BA3GNN#
41	0.33	25	COG	5.6pF	±0.25pF	CL03C5R6CA3GNN#
42	0.33	25	COG	6pF	±0.10pF	CL03C060BA3GNN#
43	0.33	25	COG	6pF	±0.50pF	CL03C060DA3GNN#
44	0.33	25	COG	6.2pF	±0.10pF	CL03C6R2BA3GNN#
45	0.33	25	COG	6.8pF	±0.10pF	CL03C6R8BA3GNN#
46	0.33	25	COG	6.8pF	±0.25pF	CL03C6R8CA3GNN#
47	0.33	25	COG	7pF	±0.10pF	CL03C070BA3GNN#
48	0.33	25	COG	7.5pF	±0.10pF	CL03C7R5BA3GNN#
49	0.33	25	COG	8pF	±0.50pF	CL03C080DA3GNN#
50	0.33	25	COG	8.2pF	±0.10pF	CL03C8R2BA3GNN#
51	0.33	25	COG	8.2pF	±0.25pF	CL03C8R2CA3GNN#
52	0.33	25	COG	9pF	±0.25pF	CL03C090CA3GNN#
53	0.33	25	COG	9.1pF	±0.25pF	CL03C9R1CA3GNN#
54	0.33	25	COG	10pF	±0.50pF	CL03C100DA3GNN#
55	0.33	25	COG	10pF	±5%	CL03C100JA3GNN#
56	0.33	25	COG	11pF	±2%	CL03C110GA3GNN#
57	0.33	25	COG	11pF	±5%	CL03C110JA3GNN#
58	0.33	25	COG	12pF	±5%	CL03C120JA3GNN#
59	0.33	25	COG	12pF	±5%	CL03C120JA3NNN#
60	0.33	25	COG	13pF	±5%	CL03C130JA3GNN#
61	0.33	25	COG	15pF	±5%	CL03C150JA3NNN#
62	0.33	25	COG	16pF	±2%	CL03C160GA3GNN#
63	0.33	25	COG	16pF	±5%	CL03C160JA3GNN#
64	0.33	25	COG	18pF	±5%	CL03C180JA3GNN#
65	0.33	25	COG	18pF	±5%	CL03C180JA3NNN#
66	0.33	25	COG	20pF	±5%	CL03C200JA3GNN#
67	0.33	25	COG	22pF	±2%	CL03C220GA3GNN#



Normal Capacitors_Standard

Size : 0.60 × 0.30mm (inch : 0201)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
68	0.33	25	COG	22pF	±5%	CL03C220JA3GNN#
69	0.33	25	COG	22pF	±5%	CL03C220JA3NNN#
70	0.33	25	COG	24pF	±5%	CL03C240JA3GNN#
71	0.33	25	COG	27pF	±5%	CL03C270JA3GNN#
72	0.33	25	COG	27pF	±5%	CL03C270JA3NNN#
73	0.33	25	COG	33pF	±5%	CL03C330JA3NNN#
74	0.33	25	COG	39pF	±5%	CL03C390JA3NNN#
75	0.33	25	COG	47pF	±5%	CL03C470JA3NNN#
76	0.33	25	COG	56pF	±5%	CL03C560JA3NNN#
77	0.33	25	COG	68pF	±5%	CL03C680JA3NNN#
78	0.33	25	COG	82pF	±5%	CL03C820JA3NNN#
79	0.33	25	COG	100pF	±5%	CL03C101JA3NNN#
80	0.33	50	COG	1pF	±0.10pF	CL03C010BB3GNN#
81	0.33	50	COG	1.2pF	±0.10pF	CL03C1R2BB3GNN#
82	0.33	50	COG	1.5pF	±0.10pF	CL03C1R5BB3GNN#
83	0.33	50	COG	2.7pF	±0.10pF	CL03C2R7BB3GNN#
84	0.33	50	COG	3pF	±0.25pF	CL03C030CB3GNN#
85	0.33	50	COG	3.3pF	±0.10pF	CL03C3R3BB3GNN#
86	0.33	50	COG	10pF	±5%	CL03C100JB3GNN#
87	0.33	50	COG	10pF	±5%	CL03C100JB3NNN#
88	0.33	50	COG	33pF	±5%	CL03C330JB3NNN#
89	0.33	50	COG	100pF	±5%	CL03C101JB3NNN#

Size : 1.00 × 0.50mm (inch : 0402)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
1	0.55	16	COG	1nF	±5%	CL05C102J05NNN#
2	0.55	25	COG	27pF	±5%	CL05C270JA5NNN#
3	0.55	25	COG	180pF	±5%	CL05C181JA5NNN#
4	0.55	50	COG	0.5pF	±0.10pF	CL05C0R5BB5NNN#
5	0.55	50	COG	0.75pF	±0.10pF	CL05CR75BB5NNN#
6	0.55	50	COG	1pF	±0.10pF	CL05C010BB5NCN#
7	0.55	50	COG	1pF	±0.10pF	CL05C010BB5NNN#
8	0.55	50	COG	1pF	±0.25pF	CL05C010CB5NNN#
9	0.55	50	COG	1.2pF	±0.10pF	CL05C1R2BB5NCN#
10	0.55	50	COG	1.2pF	±0.10pF	CL05C1R2BB5NNN#
11	0.55	50	COG	1.2pF	±0.25pF	CL05C1R2CB5NNN#
12	0.55	50	COG	1.3pF	±0.10pF	CL05C1R3BB5NNN#
13	0.55	50	COG	1.5pF	±0.10pF	CL05C1R5BB5NNN#
14	0.55	50	COG	1.5pF	±0.25pF	CL05C1R5CB5NCN#
15	0.55	50	COG	1.8pF	±0.10pF	CL05C1R8BB5NNN#
16	0.55	50	COG	2.2pF	±0.10pF	CL05C2R2BB5NNN#
17	0.55	50	COG	2.4pF	±0.10pF	CL05C2R4BB5NNN#
18	0.55	50	COG	2.4pF	±0.25pF	CL05C2R4CB5NNN#
19	0.55	50	COG	2.5pF	±0.10pF	CL05C2R5BB5NNN#



Normal Capacitors_Standard

Size : 1.00 × 0.50mm (inch : 0402)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
20	0.55	50	COG	2.5pF	±0.25pF	CL05C2R5CB5NINN#
21	0.55	50	COG	2.7pF	±0.10pF	CL05C2R7BB5NINN#
22	0.55	50	COG	3.3pF	±0.10pF	CL05C3R3BB5NINN#
23	0.55	50	COG	3.3pF	±0.25pF	CL05C3R3CB5NINN#
24	0.55	50	COG	3.6pF	±0.25pF	CL05C3R6CB5NINN#
25	0.55	50	COG	3.9pF	±0.25pF	CL05C3R9CB5NINN#
26	0.55	50	COG	4.7pF	±0.25pF	CL05C4R7CB5NINN#
27	0.55	50	COG	5pF	±0.10pF	CL05C050BB5NINN#
28	0.55	50	COG	5pF	±0.25pF	CL05C050CB5NINN#
29	0.55	50	COG	5pF	±0.50pF	CL05C050DB5NINN#
30	0.55	50	COG	5.1pF	±0.25pF	CL05C5R1CB5NINN#
31	0.55	50	COG	5.6pF	±0.10pF	CL05C5R6BB5NINN#
32	0.55	50	COG	5.6pF	±0.50pF	CL05C5R6DB5NINN#
33	0.55	50	COG	6pF	±0.25pF	CL05C060CB5NINN#
34	0.55	50	COG	6pF	±0.50pF	CL05C060DB5NINN#
35	0.55	50	COG	6.2pF	±0.25pF	CL05C6R2CB5NINN#
36	0.55	50	COG	6.2pF	±0.50pF	CL05C6R2DB5NINN#
37	0.55	50	COG	6.8pF	±0.25pF	CL05C6R8CB5NINN#
38	0.55	50	COG	7pF	±0.25pF	CL05C070CB5NINN#
39	0.55	50	COG	7pF	±0.50pF	CL05C070DB5NINN#
40	0.55	50	COG	8pF	±0.25pF	CL05C080CB5NINN#
41	0.55	50	COG	8.2pF	±0.25pF	CL05C8R2CB5NINN#
42	0.55	50	COG	9pF	±0.25pF	CL05C090CB5NINN#
43	0.55	50	COG	9pF	±0.50pF	CL05C090DB5NINN#
44	0.55	50	COG	10pF	±0.25pF	CL05C100CB5NINN#
45	0.55	50	COG	10pF	±0.25pF	CL05C100CB5NINN#
46	0.55	50	COG	10pF	±0.50pF	CL05C100DB5NINN#
47	0.55	50	COG	10pF	±0.50pF	CL05C100DB5NINN#
48	0.55	50	COG	10pF	±5%	CL05C100JB5NINN#
49	0.55	50	COG	10pF	±5%	CL05C100JB5NINN#
50	0.55	50	COG	11pF	±5%	CL05C110JB5NINN#
51	0.55	50	COG	12pF	±2%	CL05C120GB5NINN#
52	0.55	50	COG	12pF	±5%	CL05C120JB5NINN#
53	0.55	50	COG	15pF	±5%	CL05C150JB5NINN#
54	0.55	50	COG	15pF	±5%	CL05C150JB5NINN#
55	0.55	50	COG	16pF	±5%	CL05C160JB5NINN#
56	0.55	50	COG	18pF	±2%	CL05C180GB5NINN#
57	0.55	50	COG	18pF	±5%	CL05C180JB5NINN#
58	0.55	50	COG	18pF	±5%	CL05C180JB5NINN#
59	0.55	50	COG	18pF	±5%	CL05C180JB5NINN#
60	0.55	50	COG	20pF	±2%	CL05C200GB5NINN#
61	0.55	50	COG	22pF	±5%	CL05C220JB5NINN#
62	0.55	50	COG	22pF	±5%	CL05C220JB5NINN#
63	0.55	50	COG	22pF	±5%	CL05C220JB5NINN#
64	0.55	50	COG	24pF	±5%	CL05C240JB5NINN#
65	0.55	50	COG	27pF	±5%	CL05C270JB5NINN#
66	0.55	50	COG	30pF	±5%	CL05C300JB5NINN#



Normal Capacitors_Standard

Size : 1.00 × 0.50mm (inch : 0402)

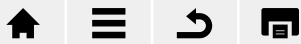
No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
67	0.55	50	COG	33pF	±1pF	CL05C330FB5NHN#
68	0.55	50	COG	33pF	±5%	CL05C330JB5NHN#
69	0.55	50	COG	33pF	±5%	CL05C330JB5NHN#
70	0.55	50	COG	33pF	±5%	CL05C330JB5NHN#
71	0.55	50	COG	36pF	±5%	CL05C360JB5NHN#
72	0.55	50	COG	39pF	±5%	CL05C390JB5NHN#
73	0.55	50	COG	43pF	±5%	CL05C430JB5NHN#
74	0.55	50	COG	47pF	±1pF	CL05C470FB5NHN#
75	0.55	50	COG	47pF	±5%	CL05C470JB5NHN#
76	0.55	50	COG	47pF	±5%	CL05C470JB5NHN#
77	0.55	50	COG	56pF	±1pF	CL05C560FB5NHN#
78	0.55	50	COG	56pF	±5%	CL05C560JB5NHN#
79	0.55	50	COG	62pF	±5%	CL05C620JB5NHN#
80	0.55	50	COG	68pF	±5%	CL05C680JB5NHN#
81	0.55	50	COG	75pF	±5%	CL05C750JB5NHN#
82	0.55	50	COG	82pF	±5%	CL05C820JB5NHN#
83	0.55	50	COG	91pF	±5%	CL05C910JB5NHN#
84	0.55	50	COG	100pF	±1pF	CL05C101FB5NHN#
85	0.55	50	COG	100pF	±5%	CL05C101JB5NHN#
86	0.55	50	COG	100pF	±5%	CL05C101JB5NHN#
87	0.55	50	COG	100pF	±5%	CL05C101JB5NHN#
88	0.55	50	COG	100pF	±10%	CL05C101KB5NHN#
89	0.55	50	COG	120pF	±5%	CL05C121JB5NHN#
90	0.55	50	COG	150pF	±5%	CL05C151JB5NHN#
91	0.55	50	COG	180pF	±5%	CL05C181JB5NHN#
92	0.55	50	COG	200pF	±5%	CL05C201JB5NHN#
93	0.55	50	COG	220pF	±5%	CL05C221JB5NHN#
94	0.55	50	COG	220pF	±5%	CL05C221JB5NHN#
95	0.55	50	COG	270pF	±5%	CL05C271JB5NHN#
96	0.55	50	COG	330pF	±5%	CL05C331JB5NHN#
97	0.55	50	COG	390pF	±5%	CL05C391JB5NHN#
98	0.55	50	COG	470pF	±5%	CL05C471JB5NHN#
99	0.55	50	COG	470pF	±5%	CL05C471JB5NHN#
100	0.55	50	COG	680pF	±5%	CL05C681JB5NHN#
101	0.55	50	COG	820pF	±5%	CL05C821JB5NHN#
102	0.55	50	COG	820pF	±5%	CL05C821JB5NHN#
103	0.55	50	COG	1nF	±5%	CL05C102JB5NHN#
104	0.55	50	COG	1nF	±5%	CL05C102JB5NHN#
105	0.55	100	COG	100pF	±5%	CL05C101JC5NHN#



Normal Capacitors_Standard

Size : 1.60 × 0.80mm (inch : 0603)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
1	0.90	25	COG	680pF	±5%	CL10C681JA8NNN#
2	0.90	25	COG	1nF	±5%	CL10C102JA8NFN#
3	0.90	25	COG	1nF	±5%	CL10C102JA8NNN#
4	0.90	25	COG	3.3nF	±5%	CL10C332JA8NNN#
5	0.90	50	COG	0.3pF	±0.10pF	CL10C0R3BB8NNN#
6	0.90	50	COG	0.5pF	±0.25pF	CL10C0R5CB8NNN#
7	0.90	50	COG	0.56pF	±0.10pF	CL10CR56BB8NNN#
8	0.90	50	COG	0.75pF	±0.25pF	CL10CR75CB8NNN#
9	0.90	50	COG	0.8pF	±0.10pF	CL10C0R8BB8NNN#
10	0.90	50	COG	1pF	±0.10pF	CL10C010BB8NNN#
11	0.90	50	COG	1.8pF	±0.10pF	CL10C1R8BB8NNN#
12	0.90	50	COG	2pF	±0.25pF	CL10C020CB8NNN#
13	0.90	50	COG	2.2pF	±0.25pF	CL10C2R2CB8NNN#
14	0.90	50	COG	2.4pF	±0.10pF	CL10C2R4BB8NNN#
15	0.90	50	COG	2.4pF	±0.25pF	CL10C2R4CB8NNN#
16	0.90	50	COG	3.5pF	±0.25pF	CL10C3R5CB8NNN#
17	0.90	50	COG	3.6pF	±0.10pF	CL10C3R6BB8NNN#
18	0.90	50	COG	3.6pF	±0.25pF	CL10C3R6CB8NNN#
19	0.90	50	COG	4pF	±0.10pF	CL10C040BB8NNN#
20	0.90	50	COG	4pF	±0.25pF	CL10C040CB8NNN#
21	0.90	50	COG	4.3pF	±0.10pF	CL10C4R3BB8NNN#
22	0.90	50	COG	4.7pF	±0.10pF	CL10C4R7BB8NNN#
23	0.90	50	COG	5pF	±0.10pF	CL10C050BB8NNN#
24	0.90	50	COG	5pF	±0.25pF	CL10C050CB8NFN#
25	0.90	50	COG	5pF	±0.50pF	CL10C050DB8NNN#
26	0.90	50	COG	5.1pF	±0.25pF	CL10C5R1CB8NNN#
27	0.90	50	COG	5.6pF	±0.10pF	CL10C5R6BB8NNN#
28	0.90	50	COG	5.6pF	±0.50pF	CL10C5R6DB8NNN#
29	0.90	50	COG	6pF	±0.50pF	CL10C060DB8NNN#
30	0.90	50	COG	6.2pF	±0.25pF	CL10C6R2CB8NNN#
31	0.90	50	COG	6.2pF	±0.50pF	CL10C6R2DB8NNN#
32	0.90	50	COG	6.8pF	±0.25pF	CL10C6R8CB8NNN#
33	0.90	50	COG	7pF	±0.10pF	CL10C070BB8NNN#
34	0.90	50	COG	7pF	±0.25pF	CL10C070CB8NNN#
35	0.90	50	COG	7pF	±0.50pF	CL10C070DB8NNN#
36	0.90	50	COG	7.5pF	±0.10pF	CL10C7R5BB8NNN#
37	0.90	50	COG	7.5pF	±0.25pF	CL10C7R5CB8NNN#
38	0.90	50	COG	7.5pF	±0.50pF	CL10C7R5DB8NNN#
39	0.90	50	COG	8.2pF	±0.50pF	CL10C8R2DB8NNN#
40	0.90	50	COG	9.1pF	±0.25pF	CL10C9R1CB8NNN#
41	0.90	50	COG	9.1pF	±0.50pF	CL10C9R1DB8NNN#
42	0.90	50	COG	10pF	±0.10pF	CL10C100BB8NNN#
43	0.90	50	COG	10pF	±0.25pF	CL10C100CB8NNN#
44	0.90	50	COG	10pF	±1pF	CL10C100FB8NNN#
45	0.90	50	COG	10pF	±5%	CL10C100JB8NCN#
46	0.90	50	COG	10pF	±5%	CL10C100JB8NFN#
47	0.90	50	COG	10pF	±5%	CL10C100JB8NNN#
48	0.90	50	COG	10pF	±10%	CL10C100KB8NNN#
49	0.90	50	COG	11pF	±5%	CL10C110JB8NNN#



Normal Capacitors_Standard

Size : 1.60 × 0.80mm (inch : 0603)

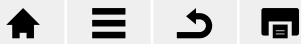
No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
50	0.90	50	COG	12pF	±5%	CL10C120JB8NFN#
51	0.90	50	COG	12pF	±5%	CL10C120JB8NINN#
52	0.90	50	COG	13pF	±5%	CL10C130JB8NINN#
53	0.90	50	COG	14pF	±5%	CL10C140JB8NINN#
54	0.90	50	COG	15pF	±1pF	CL10C150FB8NINN#
55	0.90	50	COG	15pF	±5%	CL10C150JB8NIN#
56	0.90	50	COG	15pF	±5%	CL10C150JB8NFN#
57	0.90	50	COG	15pF	±5%	CL10C150JB8NINN#
58	0.90	50	COG	15pF	±10%	CL10C150KB8NINN#
59	0.90	50	COG	16pF	±5%	CL10C160JB8NFN#
60	0.90	50	COG	18pF	±5%	CL10C180JB8NFN#
61	0.90	50	COG	18pF	±5%	CL10C180JB8NINN#
62	0.90	50	COG	20pF	±5%	CL10C200JB8NIN#
63	0.90	50	COG	20pF	±5%	CL10C200JB8NFN#
64	0.90	50	COG	20pF	±5%	CL10C200JB8NINN#
65	0.90	50	COG	22pF	±5%	CL10C220JB8NFN#
66	0.90	50	COG	22pF	±5%	CL10C220JB8NINN#
67	0.90	50	COG	24pF	±5%	CL10C240JB8NIN#
68	0.90	50	COG	25pF	±5%	CL10C250JB8NINN#
69	0.90	50	COG	27pF	±1pF	CL10C270FB8NINN#
70	0.90	50	COG	27pF	±2%	CL10C270GB8NINN#
71	0.90	50	COG	27pF	±5%	CL10C270JB8NFN#
72	0.90	50	COG	27pF	±5%	CL10C270JB8NINN#
73	0.90	50	COG	30pF	±1pF	CL10C300FB8NINN#
74	0.90	50	COG	30pF	±5%	CL10C300JB8NIN#
75	0.90	50	COG	33pF	±1pF	CL10C330FB8NINN#
76	0.90	50	COG	33pF	±2%	CL10C330GB8NINN#
77	0.90	50	COG	33pF	±5%	CL10C330JB8NFN#
78	0.90	50	COG	33pF	±5%	CL10C330JB8NINN#
79	0.90	50	COG	33pF	±10%	CL10C330KB8NINN#
80	0.90	50	COG	39pF	±2%	CL10C390GB8NINN#
81	0.90	50	COG	39pF	±5%	CL10C390JB8NIN#
82	0.90	50	COG	43pF	±5%	CL10C430JB8NINN#
83	0.90	50	COG	47pF	±1pF	CL10C470FB8NINN#
84	0.90	50	COG	47pF	±2%	CL10C470GB8NINN#
85	0.90	50	COG	47pF	±5%	CL10C470JB8NFN#
86	0.90	50	COG	47pF	±5%	CL10C470JB8NINN#
87	0.90	50	COG	51pF	±5%	CL10C510JB8NINN#
88	0.90	50	COG	56pF	±1pF	CL10C560FB8NINN#
89	0.90	50	COG	56pF	±5%	CL10C560JB8NFN#
90	0.90	50	COG	56pF	±5%	CL10C560JB8NINN#
91	0.90	50	COG	62pF	±5%	CL10C620JB8NINN#
92	0.90	50	COG	68pF	±2%	CL10C680GB8NINN#
93	0.90	50	COG	68pF	±5%	CL10C680JB8NFN#
94	0.90	50	COG	68pF	±5%	CL10C680JB8NINN#
95	0.90	50	COG	82pF	±2%	CL10C820GB8NINN#
96	0.90	50	COG	82pF	±5%	CL10C820JB8NFN#
97	0.90	50	COG	91pF	±5%	CL10C910JB8NINN#
98	0.90	50	COG	100pF	±2%	CL10C101GB8NINN#



Normal Capacitors_Standard

Size : 1.60 × 0.80mm (inch : 0603)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
99	0.90	50	COG	100pF	±5%	CL10C101JB8NCN#
100	0.90	50	COG	100pF	±5%	CL10C101JB8NFN#
101	0.90	50	COG	100pF	±5%	CL10C101JB8NNN#
102	0.90	50	COG	110pF	±5%	CL10C111JB8NNN#
103	0.90	50	COG	120pF	±1pF	CL10C121FB8NNN#
104	0.90	50	COG	120pF	±5%	CL10C121JB8NCN#
105	0.90	50	COG	120pF	±5%	CL10C121JB8NFN#
106	0.90	50	COG	120pF	±5%	CL10C121JB8NNN#
107	0.90	50	COG	150pF	±1pF	CL10C151FB8NNN#
108	0.90	50	COG	150pF	±2%	CL10C151GB8NNN#
109	0.90	50	COG	150pF	±5%	CL10C151JB8NCN#
110	0.90	50	COG	150pF	±5%	CL10C151JB8NFN#
111	0.90	50	COG	150pF	±5%	CL10C151JB8NNN#
112	0.90	50	COG	160pF	±5%	CL10C161JB8NNN#
113	0.90	50	COG	180pF	±1pF	CL10C181FB8NNN#
114	0.90	50	COG	180pF	±5%	CL10C181JB8NFN#
115	0.90	50	COG	180pF	±5%	CL10C181JB8NNN#
116	0.90	50	COG	200pF	±5%	CL10C201JB8NNN#
117	0.90	50	COG	220pF	±1pF	CL10C221FB8NNN#
118	0.90	50	COG	220pF	±2%	CL10C221GB8NNN#
119	0.90	50	COG	220pF	±5%	CL10C221JB8NCN#
120	0.90	50	COG	220pF	±5%	CL10C221JB8NFN#
121	0.90	50	COG	220pF	±5%	CL10C221JB8NNN#
122	0.90	50	COG	220pF	±10%	CL10C221KB8NNN#
123	0.90	50	COG	240pF	±5%	CL10C241JB8NNN#
124	0.90	50	COG	270pF	±2%	CL10C271GB8NNN#
125	0.90	50	COG	270pF	±5%	CL10C271JB8NNN#
126	0.90	50	COG	330pF	±1pF	CL10C331FB8NNN#
127	0.90	50	COG	330pF	±2%	CL10C331GB8NNN#
128	0.90	50	COG	330pF	±5%	CL10C331JB8NFN#
129	0.90	50	COG	330pF	±5%	CL10C331JB8NNN#
130	0.90	50	COG	360pF	±5%	CL10C361JB8NNN#
131	0.90	50	COG	390pF	±5%	CL10C391JB8NFN#
132	0.90	50	COG	430pF	±5%	CL10C431JB8NNN#
133	0.90	50	COG	470pF	±5%	CL10C471JB8NCN#
134	0.90	50	COG	470pF	±5%	CL10C471JB8NFN#
135	0.90	50	COG	470pF	±5%	CL10C471JB8NNN#
136	0.90	50	COG	510pF	±5%	CL10C511JB8NNN#
137	0.90	50	COG	560pF	±5%	CL10C561JB8NFN#
138	0.90	50	COG	560pF	±5%	CL10C561JB8NNN#
139	0.90	50	COG	680pF	±1pF	CL10C681FB8NNN#
140	0.90	50	COG	680pF	±5%	CL10C681JB8NFN#
141	0.90	50	COG	680pF	±5%	CL10C681JB8NNN#
142	0.90	50	COG	750pF	±5%	CL10C751JB8NNN#
143	0.90	50	COG	820pF	±5%	CL10C821JB8NFN#
144	0.90	50	COG	1nF	±1pF	CL10C102FB8NNN#
145	0.90	50	COG	1nF	±5%	CL10C102JB8NFN#
146	0.90	50	COG	1nF	±5%	CL10C102JB8NNN#
147	0.90	50	COG	1.2nF	±5%	CL10C122JB8NNN#
148	0.90	50	COG	1.5nF	±5%	CL10C152JB8NFN#



Normal Capacitors_Standard

Size : 1.60 × 0.80mm (inch : 0603)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
149	0.90	50	COG	1.5nF	±5%	CL10C152JB8NNN#
150	0.90	50	COG	1.8nF	±5%	CL10C182JB8NFN#
151	0.90	50	COG	1.8nF	±5%	CL10C182JB8NNN#
152	0.90	50	COG	2.2nF	±5%	CL10C222JB8NFN#
153	0.90	50	COG	2.2nF	±5%	CL10C222JB8NNN#
154	0.90	50	COG	2.7nF	±5%	CL10C272JB8NNN#
155	0.90	50	COG	3.3nF	±5%	CL10C332JB8NFN#
156	0.90	50	COG	3.3nF	±5%	CL10C332JB8NNN#
157	0.90	50	COG	4.7nF	±5%	CL10C472JB8NNN#
158	0.90	50	COG	5.6nF	±5%	CL10C562JB8NNN#
159	0.90	100	COG	10pF	±5%	CL10C100JC8NNN#
160	0.90	100	COG	12pF	±5%	CL10C120JC8NNN#
161	0.90	100	COG	47pF	±5%	CL10C470JC8NNN#
162	0.90	100	COG	68pF	±5%	CL10C680JC8NNN#
163	0.90	100	COG	100pF	±5%	CL10C101JC8NNN#
164	0.90	100	COG	220pF	±10%	CL10C221KC8NNN#
165	0.90	100	COG	330pF	±5%	CL10C331JC8NNN#
166	0.90	100	COG	470pF	±5%	CL10C471JC8NFN#
167	0.90	100	COG	470pF	±5%	CL10C471JC8NNN#
168	0.90	100	COG	1nF	±5%	CL10C102JC8NNN#
169	0.90	200	COG	220pF	±10%	CL10C221KD8NNN#
170	0.90	250	COG	470pF	±5%	CL10C471JE8NNN#

Size : 2.00 × 1.25mm (inch : 0805)

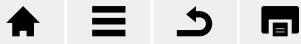
No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
1	0.75	25	COG	3.9nF	±5%	CL21C392JAANNN#
2	1.35	25	COG	4.7nF	±5%	CL21C472JAFNNN#
3	0.75	50	COG	0.47pF	±0.10pF	CL21CR47BBANNN#
4	0.75	50	COG	0.47pF	±0.25pF	CL21CR47CBANNN#
5	0.75	50	COG	0.68pF	±0.10pF	CL21CR68BBANNN#
6	0.75	50	COG	1pF	±0.10pF	CL21C010BBANNN#
7	0.75	50	COG	1.2pF	±0.10pF	CL21C1R2BBANNN#
8	0.75	50	COG	1.2pF	±0.25pF	CL21C1R2CBANNN#
9	0.75	50	COG	1.5pF	±0.10pF	CL21C1R5BBANNN#
10	0.75	50	COG	1.5pF	±0.25pF	CL21C1R5CBANNN#
11	0.75	50	COG	1.8pF	±0.10pF	CL21C1R8BBANNN#
12	0.75	50	COG	1.8pF	±0.25pF	CL21C1R8CBANNN#
13	0.75	50	COG	2.2pF	±0.10pF	CL21C2R2BBANNN#
14	0.75	50	COG	2.4pF	±0.25pF	CL21C2R4CBANNN#
15	0.75	50	COG	2.5pF	±0.25pF	CL21C2R5CBANNN#
16	0.75	50	COG	2.7pF	±0.10pF	CL21C2R7BBANNN#
17	0.75	50	COG	2.7pF	±0.25pF	CL21C2R7CBANNN#
18	0.75	50	COG	3pF	±0.10pF	CL21C030BBANNN#
19	0.75	50	COG	3pF	±0.25pF	CL21C030CBANNN#
20	0.75	50	COG	3.9pF	±0.25pF	CL21C3R9CBANNN#
21	0.75	50	COG	4.7pF	±0.10pF	CL21C4R7BBANNN#



Normal Capacitors_Standard

Size : 2.00 × 1.25mm (inch : 0805)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
22	0.75	50	COG	5pF	±0.25pF	CL21C050CBANNN#
23	0.75	50	COG	5.6pF	±0.10pF	CL21C5R6BBANNN#
24	0.75	50	COG	5.6pF	±0.25pF	CL21C5R6CBANNN#
25	0.75	50	COG	5.6pF	±0.50pF	CL21C5R6DBANNN#
26	0.75	50	COG	6pF	±0.25pF	CL21C060CBANNN#
27	0.75	50	COG	6pF	±0.50pF	CL21C060DBANNN#
28	0.75	50	COG	6.8pF	±0.25pF	CL21C6R8CBANNN#
29	0.75	50	COG	6.8pF	±0.50pF	CL21C6R8DBANNN#
30	0.75	50	COG	7pF	±0.25pF	CL21C070CBANNN#
31	0.75	50	COG	8pF	±0.25pF	CL21C080CBANNN#
32	0.75	50	COG	8pF	±0.50pF	CL21C080DBANNN#
33	0.75	50	COG	8.2pF	±0.50pF	CL21C8R2DBANNN#
34	0.75	50	COG	9pF	±0.25pF	CL21C090CBANNN#
35	0.75	50	COG	9pF	±0.50pF	CL21C090DBANNN#
36	0.75	50	COG	10pF	±0.25pF	CL21C100CBANNN#
37	0.75	50	COG	10pF	±5%	CL21C100JBANFN#
38	0.75	50	COG	12pF	±1pF	CL21C120FBANNN#
39	0.75	50	COG	13pF	±5%	CL21C130JBANNN#
40	0.75	50	COG	15pF	±2%	CL21C150GBANNN#
41	0.75	50	COG	20pF	±5%	CL21C200JBANNN#
42	0.75	50	COG	22pF	±1pF	CL21C220FBANNN#
43	0.75	50	COG	22pF	±2%	CL21C220GBANNN#
44	0.75	50	COG	22pF	±5%	CL21C220JBANFN#
45	0.75	50	COG	22pF	±5%	CL21C220JBANNN#
46	0.75	50	COG	24pF	±5%	CL21C240JBANNN#
47	0.75	50	COG	33pF	±5%	CL21C330JBANFN#
48	0.75	50	COG	33pF	±10%	CL21C330KBANNN#
49	0.75	50	COG	36pF	±5%	CL21C360JBANNN#
50	0.75	50	COG	39pF	±5%	CL21C390JBANNN#
51	0.75	50	COG	43pF	±5%	CL21C430JBANNN#
52	0.75	50	COG	47pF	±1pF	CL21C470FBANNN#
53	0.75	50	COG	47pF	±5%	CL21C470JBANFN#
54	0.75	50	COG	47pF	±5%	CL21C470JBANNN#
55	0.75	50	COG	51pF	±5%	CL21C510JBANNN#
56	0.75	50	COG	62pF	±5%	CL21C620JBANNN#
57	0.75	50	COG	68pF	±1pF	CL21C680FBANNN#
58	0.75	50	COG	68pF	±2%	CL21C680GBANNN#
59	0.75	50	COG	75pF	±5%	CL21C750JBANNN#
60	0.75	50	COG	82pF	±2%	CL21C820GBANNN#
61	0.75	50	COG	91pF	±5%	CL21C910JBANNN#
62	0.75	50	COG	100pF	±5%	CL21C101JBANFN#
63	0.75	50	COG	100pF	±5%	CL21C101JBANNN#
64	0.75	50	COG	100pF	±10%	CL21C101KBANFN#
65	0.75	50	COG	150pF	±1pF	CL21C151FBANNN#
66	0.75	50	COG	150pF	±5%	CL21C151JBANFN#
67	0.75	50	COG	150pF	±5%	CL21C151JBANNN#
68	0.75	50	COG	180pF	±5%	CL21C181JBANNN#



Normal Capacitors_Standard

Size : 2.00 × 1.25mm (inch : 0805)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
69	0.75	50	COG	200pF	±5%	CL21C201JBANNN#
70	0.75	50	COG	220pF	±1pF	CL21C221FBANNN#
71	0.75	50	COG	220pF	±2%	CL21C221GBANNN#
72	0.75	50	COG	220pF	±5%	CL21C221JBANFN#
73	0.75	50	COG	220pF	±5%	CL21C221JBANNN#
74	0.75	50	COG	270pF	±2%	CL21C271GBANNN#
75	0.75	50	COG	270pF	±5%	CL21C271JBANNN#
76	0.75	50	COG	300pF	±5%	CL21C301JBANNN#
77	0.75	50	COG	330pF	±1pF	CL21C331FBANNN#
78	0.75	50	COG	330pF	±2%	CL21C331GBANNN#
79	0.75	50	COG	330pF	±5%	CL21C331JBANFN#
80	0.75	50	COG	360pF	±5%	CL21C361JBANNN#
81	0.75	50	COG	390pF	±2%	CL21C391GBANNN#
82	0.75	50	COG	390pF	±5%	CL21C391JBANNN#
83	0.75	50	COG	430pF	±5%	CL21C431JBANNN#
84	0.75	50	COG	470pF	±1pF	CL21C471FBANNN#
85	0.75	50	COG	470pF	±2%	CL21C471GBANNN#
86	0.75	50	COG	470pF	±5%	CL21C471JBANFN#
87	0.95	50	COG	620pF	±5%	CL21C621JBCNNN#
88	0.75	50	COG	680pF	±5%	CL21C681JBANNN#
89	0.95	50	COG	680pF	±5%	CL21C681JBCNFN#
90	0.95	50	COG	910pF	±5%	CL21C911JBCNNN#
91	0.95	50	COG	1nF	±2%	CL21C102GBCNNN#
92	0.95	50	COG	1nF	±5%	CL21C102JBCNFN#
93	1.35	50	COG	1.2nF	±5%	CL21C122JBFNNN#
94	1.35	50	COG	1.5nF	±5%	CL21C152JBFNFN#
95	1.35	50	COG	1.8nF	±5%	CL21C182JBFNNN#
96	1.35	50	COG	2.2nF	±2%	CL21C222GBFNNN#
97	1.35	50	COG	2.2nF	±5%	CL21C222JBFNFN#
98	1.35	50	COG	2.2nF	±5%	CL21C222JBFNNN#
99	1.35	50	COG	2.7nF	±5%	CL21C272JBFNNN#
100	1.35	50	COG	4.7nF	±5%	CL21C472JBFNFN#
101	1.35	50	COG	4.7nF	±5%	CL21C472JBFNNN#
102	1.35	50	COG	5.6nF	±5%	CL21C562JBFNNN#
103	1.35	50	COG	10nF	±5%	CL21C103JBFNFN#
104	1.35	50	COG	10nF	±5%	CL21C103JBFNNN#
105	0.75	100	COG	10pF	±0.25pF	CL21C100CCANNN#
106	0.75	100	COG	18pF	±2%	CL21C180GCANNN#
107	0.75	100	COG	27pF	±5%	CL21C270JCANNN#
108	0.75	100	COG	47pF	±5%	CL21C470JCANNN#
109	0.75	100	COG	68pF	±5%	CL21C680JCANNN#
110	0.75	100	COG	100pF	±5%	CL21C101JCANNN#
111	0.75	100	COG	150pF	±1pF	CL21C151FCANNN#
112	0.75	100	COG	330pF	±5%	CL21C331JCANNN#
113	0.95	100	COG	470pF	±5%	CL21C471JCCNFN#
114	0.95	100	COG	680pF	±5%	CL21C681JCCNNN#
115	1.35	100	COG	1nF	±5%	CL21C102JCFNNN#

Normal Capacitors_Standard

Size : 2.00 × 1.25mm (inch : 0805)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
116	1.35	100	COG	2.2nF	±5%	CL21C222JCFNNN#
117	0.95	200	COG	100pF	±5%	CL21C101JDCNFN#
118	0.95	200	COG	100pF	±5%	CL21C101JDCN#
119	0.95	200	COG	120pF	±5%	CL21C121JDCN#
120	0.95	200	COG	220pF	±5%	CL21C221JDCNFN#
121	0.95	200	COG	220pF	±5%	CL21C221JDCN#
122	1.35	200	COG	1nF	±5%	CL21C102JDFNFN#
123	1.35	250	COG	1nF	±5%	CL21C102JEFNFN#
124	1.35	250	COG	1nF	±5%	CL21C102JEFN#

Size : 3.20 × 1.60mm (inch : 1206)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
1	1.40	25	COG	10nF	±5%	CL31C103JAFNNN#
2	1.00	50	COG	1pF	±0.25pF	CL31C010CBCN#
3	1.00	50	COG	2.2pF	±0.25pF	CL31C2R2CBCN#
4	1.00	50	COG	3.9pF	±0.10pF	CL31C3R9BBCN#
5	1.00	50	COG	4.7pF	±0.25pF	CL31C4R7CBCN#
6	1.00	50	COG	6.8pF	±0.25pF	CL31C6R8CBCN#
7	1.00	50	COG	10pF	±0.50pF	CL31C100DBCN#
8	1.00	50	COG	10pF	±5%	CL31C100JBCN#
9	1.00	50	COG	12pF	±5%	CL31C120JBCN#
10	1.00	50	COG	15pF	±5%	CL31C150JBCN#
11	1.00	50	COG	18pF	±5%	CL31C180JBCN#
12	1.00	50	COG	20pF	±5%	CL31C200JBCN#
13	1.00	50	COG	22pF	±5%	CL31C220JBCN#
14	1.00	50	COG	27pF	±1pF	CL31C270FBCN#
15	1.00	50	COG	27pF	±5%	CL31C270JBCN#
16	1.00	50	COG	30pF	±5%	CL31C300JBCN#
17	1.00	50	COG	56pF	±5%	CL31C560JBCN#
18	1.00	50	COG	82pF	±5%	CL31C820JBCN#
19	1.00	50	COG	100pF	±1pF	CL31C101FBCN#
20	1.00	50	COG	100pF	±5%	CL31C101JBCNFN#
21	1.00	50	COG	100pF	±10%	CL31C101KBCN#
22	1.00	50	COG	120pF	±5%	CL31C121JBCN#
23	1.00	50	COG	180pF	±5%	CL31C181JBCN#
24	1.00	50	COG	220pF	±5%	CL31C221JBCNFN#
25	1.00	50	COG	220pF	±5%	CL31C221JBCN#
26	1.00	50	COG	270pF	±5%	CL31C271JBCN#
27	1.00	50	COG	330pF	±5%	CL31C331JBCN#
28	1.00	50	COG	390pF	±5%	CL31C391JBCN#
29	1.00	50	COG	560pF	±5%	CL31C561JBCN#
30	1.00	50	COG	680pF	±5%	CL31C681JBCN#
31	1.00	50	COG	820pF	±5%	CL31C821JBCN#
32	1.00	50	COG	1nF	±1pF	CL31C102FBCN#
33	1.00	50	COG	1.2nF	±5%	CL31C122JBCN#



Normal Capacitors_Standard

Size : 3.20 × 1.60mm (inch : 1206)

No.	Thickness Max. (mm)	Rated Voltage (Vdc)	TC code	Capacitance	Capacitance Tolerance	Part Number
34	1.00	50	COG	1.5nF	±5%	CL31C152JBCNNN#
35	1.00	50	COG	2.2nF	±5%	CL31C222JBCNNN#
36	1.40	50	COG	3.3nF	±1pF	CL31C332FBFNNN#
37	1.40	50	COG	3.3nF	±5%	CL31C332JBFNNN#
38	1.80	50	COG	22nF	±5%	CL31C223JBHNNN#
39	1.80	50	COG	47nF	±5%	CL31C473JBHNNN#
40	1.00	100	COG	22pF	±5%	CL31C220JCCNNN#
41	1.00	100	COG	100pF	±5%	CL31C101JCCNFN#
42	1.00	100	COG	220pF	±5%	CL31C221JCCNNN#
43	1.00	100	COG	1.5nF	±5%	CL31C152JCCNNN#
44	1.00	100	COG	2.2nF	±5%	CL31C222JCCNNN#
45	1.40	200	COG	1nF	±5%	CL31C102JDFNFN#
46	1.40	500	COG	10pF	±5%	CL31C100JGFNFN#
47	1.40	500	COG	100pF	±5%	CL31C101JGFNFN#
48	1.40	500	COG	100pF	±5%	CL31C101JGFNFN#
49	1.40	500	COG	100pF	±10%	CL31C101KGFNFN#
50	1.40	500	COG	150pF	±5%	CL31C151JGFNFN#
51	1.40	500	COG	220pF	±5%	CL31C221JGFNFN#
52	1.40	500	COG	220pF	±5%	CL31C221JGFNFN#
53	1.40	500	COG	270pF	±5%	CL31C271JGFNFN#
54	1.40	500	COG	470pF	±5%	CL31C471JGFNFN#
55	1.80	500	COG	680pF	±5%	CL31C681JGHNFN#
56	1.80	500	COG	1nF	±5%	CL31C102JGHNFN#
57	1.40	630	COG	10pF	±5%	CL31C100JHFNFN#
58	1.40	630	COG	15pF	±5%	CL31C150JHFNFN#
59	1.40	630	COG	22pF	±5%	CL31C220JHFNFN#
60	1.40	630	COG	22pF	±5%	CL31C220JHFNFC#
61	1.40	630	COG	22pF	±5%	CL31C220JHFNFN#
62	1.40	630	COG	27pF	±5%	CL31C270JHFNFN#
63	1.40	630	COG	33pF	±5%	CL31C330JHFNFN#
64	1.40	630	COG	47pF	±5%	CL31C470JHFNFN#
65	1.40	630	COG	47pF	±5%	CL31C470JHFNFN#
66	1.40	630	COG	68pF	±5%	CL31C680JHFNFN#
67	1.40	630	COG	100pF	±5%	CL31C101JHFNFN#
68	1.40	630	COG	100pF	±5%	CL31C101JHFNFN#
69	1.40	630	COG	150pF	±5%	CL31C151JHFNFN#
70	1.40	630	COG	150pF	±5%	CL31C151JHFNFN#
71	1.40	630	COG	220pF	±5%	CL31C221JHFNFN#
72	1.40	630	COG	220pF	±5%	CL31C221JHFNFN#
73	1.40	630	COG	330pF	±5%	CL31C331JHFNFN#
74	1.40	630	COG	330pF	±5%	CL31C331JHFNFN#
75	1.40	630	COG	390pF	±5%	CL31C391JHFNFN#
76	1.40	630	COG	470pF	±5%	CL31C471JHFNFN#
77	1.40	630	COG	470pF	±5%	CL31C471JHFNFN#
78	1.80	630	COG	680pF	±5%	CL31C681JHHNFN#
79	1.80	630	COG	680pF	±5%	CL31C681JHHNNN#
80	1.80	630	COG	820pF	±5%	CL31C821JHHNNN#