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MULTILAYER CERAMIC CHIP CAPACITORS



C Series General Application

Type: C0402 [EIA CC01005]
C0603 [EIA CC0201]
C1005 [EIA CC0402]
C1608 [EIA CC0603]
C2012 [EIA CC0805]
C3216 [EIA CC1206]
C3225 [EIA CC1210]
C4532 [EIA CC1812]
C5750 [EIA CC2220]

Issue date: April 2011



**TDK MLCC
US Catalog**

Version B11

REMINDERS

Please read before using this product

SAFETY REMINDERS



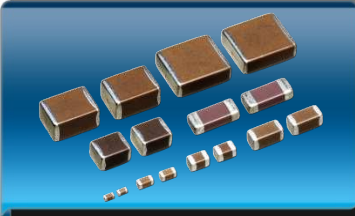
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C Series General Application

Type: C0402, C0603, C1005, C1608,
C2012, C3216, C3225, C4532, C5750



Features



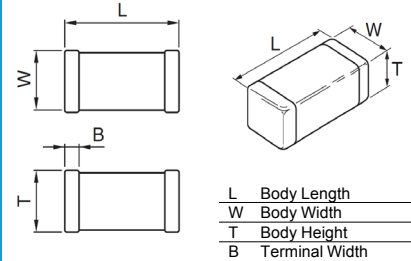
- High capacitance has been achieved through precision technologies that enable the use of multiple thinner ceramic dielectric layers.
- A monolithic structure ensures superior mechanical strength and reliability.
- High-accuracy automatic mounting is facilitated through the maintenance of very precise dimensional tolerances.
- Composed of only ceramics and metals, these capacitors provide extremely dependable performance, exhibiting virtually no degradation even when subjected to temperature extremes.
- Low stray capacitance ensures high conformity with nominal values, thereby simplifying the circuit design process.
- Low residual inductance assures superior frequency characteristics.
- Because electrostatic capacity has been obtained up to the electrolytic capacitor range, these capacitors offer long service life and are optimally suited for power supply designs that require high levels of reliability.
- Owing to their low ESR and excellent frequency characteristics, these products are optimally suited for high frequency and high-density type power supplies.

Applications



- Electronics equipment
- Mobile communications equipment
- Office automation equipment
- Automotive electronics
- Test and measurement equipment
- Hybrid ICs, etc.
- Decoupling
- Smoothing
- Charge pump

Shape & Dimensions



Dimensions in mm

L	Body Length
W	Body Width
T	Body Height
B	Terminal Width

Part Number Construction

Series Name **C 2012 X7R 1E 105 K T XXXX**

Dimensions L x W (mm)

Case Code	Length	Width
C0402	0.40 ± 0.02	0.20 ± 0.02
C0603	0.60 ± 0.03	0.30 ± 0.03
C1005	1.00 ± 0.05	0.50 ± 0.05
C1608	1.60 ± 0.10	0.80 ± 0.10
C2012	2.00 ± 0.20	1.25 ± 0.20
C3216	3.20 ± 0.20	1.60 ± 0.20
C3225	3.20 ± 0.40	2.50 ± 0.30
C4532	4.50 ± 0.40	3.20 ± 0.40
C5750	5.70 ± 0.40	5.00 ± 0.40

Temperature Characteristic

Temperature Characteristics	Capacitance Change	Temperature Range
C0G	0±30 ppm/°C	-55 to +125°C
SL	+350/-1000 ppm/°C	-25 to +85°C
X5R	±15%	-55 to +85°C
X6S	+22%	-55 to +105°C
X7R	±15%	-55 to +125°C
X7S	+22%	-55 to +125°C
Y5V	+22/-82%	-33 to +85°C

Rated Voltage (DC)

Voltage Code	Voltage (DC)	Voltage Code	Voltage (DC)	Voltage Code	Voltage (DC)
0G	4V	1C	16V	1H	50V
0J	6.3V	1E	25V		
1A	10V	1V	35V		

Internal Codes

Packaging Style

Packaging Code	Style
T	Tape & Reel

Capacitance Tolerance

Tolerance Code	Tolerance
W	± 0.05 pF
B	± 0.10 pF
C	± 0.25 pF
D	± 0.50 pF
E	± 0.20 pF
G	± 2%
J	± 5%
K	± 10%
M	± 20%
Z	+80-20%

Nominal Capacitance (pF)

The capacitance is expressed in three digit codes and in units of pico Farads (pF). The first and second digits identify the first and second significant figures of the capacitance. The third digit identifies the multiplier. R designates a decimal point.

Capacitance Code	Capacitance
0R5	0.5pF
010	1pF
102	1,000pF (1nF)
105	1,000,000pF (1µF)



Capacitance Range Chart

C0402 [EIA CC01005]

Capacitance Range Chart

Temperature Characteristics: C0G ($0 \pm 30\text{ppm}/^\circ\text{C}$)
 Rated Voltage: 16V (1C)

Capacitance (pF)	Cap Code	Tolerance	C0G
			1C (16V)
0.1	0R1	W: $\pm 0.05\text{pF}$	
0.2	0R2	B: $\pm 0.10\text{pF}$	
0.3	0R3	C: $\pm 0.25\text{pF}$	
0.4	0R4	D: $\pm 0.50\text{pF}$	
0.5	0R5		
0.6	0R6		
0.7	0R7		
0.8	0R8		
0.9	0R9		
1	010		
1.1	1R1		
1.2	1R2		
1.3	1R3		
1.5	1R5		
1.6	1R6		
1.8	1R8		
2	020		
2.2	2R2		
2.4	2R4		
2.7	2R7		
3	030		
3.3	3R3		
3.6	3R6		
3.9	3R9		
4.3	4R3		
4.7	4R7		
5.1	5R1		
5.6	5R6		
6.2	6R2		

Capacitance (pF)	Cap Code	Tolerance	C0G
			1C (16V)
6.8	6R8	B: $\pm 0.10\text{pF}$	
7.5	7R5	E: $\pm 0.20\text{pF}$	
8.2	8R2	C: $\pm 0.25\text{pF}$	
9.1	9R1	D: $\pm 0.50\text{pF}$	
10	100	G: $\pm 2\%$	
11	110	J: $\pm 5\%$	
12	120		
13	130		
15	150		
16	160		
18	180		
20	200		
22	220		
24	240		
27	270		
30	300		
33	330		
36	360		
39	390		
43	430		
47	470		
51	510		
56	560		
62	620		
68	680		
75	750		
82	820		
91	910		
100	101		

• Standard capacitance is shown. Please refer to Capacitance Range Table for additional capacitance values.

Capacitance Range Chart

Temperature Characteristics: X7R ($\pm 15\%$), X5R ($\pm 15\%$)
 Rated Voltage: 16V (1C), 10V (1A), 6.3V (0J)

Capacitance (pF)	Cap Code	Tolerance	X7R		X5R	
			1A (10V)	1C (16V)	1A (10V)	0J (6.3V)
100	101	K: $\pm 10\%$				
150	151					
220	221					
330	331					
470	471					
680	681					
1,000	102					
1,500	152					
2,200	222					
3,300	332					
4,700	472					
6,800	682					
10,000	103					

Standard Thickness

0.20 mm



Capacitance Range Table

C0402 [EIA CC01005]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0402C0G1C0R2W	C0G	16V	0.2	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R2B	C0G	16V	0.2	± 0.10pF	0.20 ± 0.02
C0402C0G1C0R3W	C0G	16V	0.3	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R3B	C0G	16V	0.3	± 0.10pF	0.20 ± 0.02
C0402C0G1C0R4W	C0G	16V	0.4	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R4B	C0G	16V	0.4	± 0.10pF	0.20 ± 0.02
C0402C0G1C0R5W	C0G	16V	0.5	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R5C	C0G	16V	0.5	± 0.25pF	0.20 ± 0.02
C0402C0G1C0R5B	C0G	16V	0.5	± 0.10pF	0.20 ± 0.02
C0402C0G1C0R6W	C0G	16V	0.6	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R6B	C0G	16V	0.6	± 0.10pF	0.20 ± 0.02
C0402C0G1C0R7W	C0G	16V	0.7	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R7B	C0G	16V	0.7	± 0.10pF	0.20 ± 0.02
C0402C0G1C0R8W	C0G	16V	0.8	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R8B	C0G	16V	0.8	± 0.10pF	0.20 ± 0.02
C0402C0G1C0R9W	C0G	16V	0.9	± 0.05pF	0.20 ± 0.02
C0402C0G1C0R9B	C0G	16V	0.9	± 0.10pF	0.20 ± 0.02
C0402C0G1C010B	C0G	16V	1.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C010C	C0G	16V	1.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C1R1B	C0G	16V	1.1	± 0.10pF	0.20 ± 0.02
C0402C0G1C1R1C	C0G	16V	1.1	± 0.25pF	0.20 ± 0.02
C0402C0G1C1R2B	C0G	16V	1.2	± 0.10pF	0.20 ± 0.02
C0402C0G1C1R2C	C0G	16V	1.2	± 0.25pF	0.20 ± 0.02
C0402C0G1C1R3B	C0G	16V	1.3	± 0.10pF	0.20 ± 0.02
C0402C0G1C1R3C	C0G	16V	1.3	± 0.25pF	0.20 ± 0.02
C0402C0G1C1R5B	C0G	16V	1.5	± 0.10pF	0.20 ± 0.02
C0402C0G1C1R5C	C0G	16V	1.5	± 0.25pF	0.20 ± 0.02
C0402C0G1C1R6B	C0G	16V	1.6	± 0.10pF	0.20 ± 0.02
C0402C0G1C1R6C	C0G	16V	1.6	± 0.25pF	0.20 ± 0.02
C0402C0G1C1R8B	C0G	16V	1.8	± 0.10pF	0.20 ± 0.02
C0402C0G1C1R8C	C0G	16V	1.8	± 0.25pF	0.20 ± 0.02
C0402C0G1C020B	C0G	16V	2.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C020C	C0G	16V	2.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C2R2B	C0G	16V	2.2	± 0.10pF	0.20 ± 0.02
C0402C0G1C2R2C	C0G	16V	2.2	± 0.25pF	0.20 ± 0.02
C0402C0G1C2R4B	C0G	16V	2.4	± 0.10pF	0.20 ± 0.02
C0402C0G1C2R4C	C0G	16V	2.4	± 0.25pF	0.20 ± 0.02
C0402C0G1C2R7B	C0G	16V	2.7	± 0.10pF	0.20 ± 0.02
C0402C0G1C2R7C	C0G	16V	2.7	± 0.25pF	0.20 ± 0.02
C0402C0G1C030B	C0G	16V	3.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C030C	C0G	16V	3.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C3R3B	C0G	16V	3.3	± 0.10pF	0.20 ± 0.02
C0402C0G1C3R3C	C0G	16V	3.3	± 0.25pF	0.20 ± 0.02
C0402C0G1C3R6B	C0G	16V	3.6	± 0.10pF	0.20 ± 0.02



Capacitance Range Table

C0402 [EIA CC01005]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0402C0G1C3R6C	C0G	16V	3.6	± 0.25pF	0.20 ± 0.02
C0402C0G1C3R9B	C0G	16V	3.9	± 0.10pF	0.20 ± 0.02
C0402C0G1C3R9C	C0G	16V	3.9	± 0.25pF	0.20 ± 0.02
C0402C0G1C040B	C0G	16V	4.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C040C	C0G	16V	4.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C4R3B	C0G	16V	4.3	± 0.10pF	0.20 ± 0.02
C0402C0G1C4R3C	C0G	16V	4.3	± 0.25pF	0.20 ± 0.02
C0402C0G1C4R7B	C0G	16V	4.7	± 0.10pF	0.20 ± 0.02
C0402C0G1C4R7C	C0G	16V	4.7	± 0.25pF	0.20 ± 0.02
C0402C0G1C050B	C0G	16V	5.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C050C	C0G	16V	5.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C5R1B	C0G	16V	5.1	± 0.10pF	0.20 ± 0.02
C0402C0G1C5R1C	C0G	16V	5.1	± 0.25pF	0.20 ± 0.02
C0402C0G1C5R1D	C0G	16V	5.1	± 0.50pF	0.20 ± 0.02
C0402C0G1C5R6B	C0G	16V	5.6	± 0.10pF	0.20 ± 0.02
C0402C0G1C5R6C	C0G	16V	5.6	± 0.25pF	0.20 ± 0.02
C0402C0G1C5R6D	C0G	16V	5.6	± 0.50pF	0.20 ± 0.02
C0402C0G1C060B	C0G	16V	6.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C060C	C0G	16V	6.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C060D	C0G	16V	6.0	± 0.50pF	0.20 ± 0.02
C0402C0G1C6R2B	C0G	16V	6.2	± 0.10pF	0.20 ± 0.02
C0402C0G1C6R2C	C0G	16V	6.2	± 0.25pF	0.20 ± 0.02
C0402C0G1C6R2D	C0G	16V	6.2	± 0.50pF	0.20 ± 0.02
C0402C0G1C6R8B	C0G	16V	6.8	± 0.10pF	0.20 ± 0.02
C0402C0G1C6R8C	C0G	16V	6.8	± 0.25pF	0.20 ± 0.02
C0402C0G1C6R8D	C0G	16V	6.8	± 0.50pF	0.20 ± 0.02
C0402C0G1C070B	C0G	16V	7.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C070C	C0G	16V	7.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C070D	C0G	16V	7.0	± 0.50pF	0.20 ± 0.02
C0402C0G1C7R5B	C0G	16V	7.5	± 0.10pF	0.20 ± 0.02
C0402C0G1C7R5C	C0G	16V	7.5	± 0.25pF	0.20 ± 0.02
C0402C0G1C7R5D	C0G	16V	7.5	± 0.50pF	0.20 ± 0.02
C0402C0G1C080B	C0G	16V	8.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C080C	C0G	16V	8.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C080D	C0G	16V	8.0	± 0.50pF	0.20 ± 0.02
C0402C0G1C8R2B	C0G	16V	8.2	± 0.10pF	0.20 ± 0.02
C0402C0G1C8R2C	C0G	16V	8.2	± 0.25pF	0.20 ± 0.02
C0402C0G1C8R2D	C0G	16V	8.2	± 0.50pF	0.20 ± 0.02
C0402C0G1C090B	C0G	16V	9.0	± 0.10pF	0.20 ± 0.02
C0402C0G1C090C	C0G	16V	9.0	± 0.25pF	0.20 ± 0.02
C0402C0G1C090D	C0G	16V	9.0	± 0.50pF	0.20 ± 0.02
C0402C0G1C9R1B	C0G	16V	9.1	± 0.10pF	0.20 ± 0.02
C0402C0G1C9R1C	C0G	16V	9.1	± 0.25pF	0.20 ± 0.02
C0402C0G1C9R1D	C0G	16V	9.1	± 0.50pF	0.20 ± 0.02



Capacitance Range Table

C0402 [EIA CC01005]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0402C0G1C100E	C0G	16V	10	± 0.20pF	0.20 ± 0.02
C0402C0G1C100D	C0G	16V	10	± 0.50pF	0.20 ± 0.02
C0402C0G1C110G	C0G	16V	11	± 2%	0.20 ± 0.02
C0402C0G1C110J	C0G	16V	11	± 5%	0.20 ± 0.02
C0402C0G1C120G	C0G	16V	12	± 2%	0.20 ± 0.02
C0402C0G1C120J	C0G	16V	12	± 5%	0.20 ± 0.02
C0402C0G1C130G	C0G	16V	13	± 2%	0.20 ± 0.02
C0402C0G1C130J	C0G	16V	13	± 5%	0.20 ± 0.02
C0402C0G1C150G	C0G	16V	15	± 2%	0.20 ± 0.02
C0402C0G1C150J	C0G	16V	15	± 5%	0.20 ± 0.02
C0402C0G1C160G	C0G	16V	16	± 2%	0.20 ± 0.02
C0402C0G1C160J	C0G	16V	16	± 5%	0.20 ± 0.02
C0402C0G1C180G	C0G	16V	18	± 2%	0.20 ± 0.02
C0402C0G1C180J	C0G	16V	18	± 5%	0.20 ± 0.02
C0402C0G1C200G	C0G	16V	20	± 2%	0.20 ± 0.02
C0402C0G1C200J	C0G	16V	20	± 5%	0.20 ± 0.02
C0402C0G1C220G	C0G	16V	22	± 2%	0.20 ± 0.02
C0402C0G1C220J	C0G	16V	22	± 5%	0.20 ± 0.02
C0402C0G1C240G	C0G	16V	24	± 2%	0.20 ± 0.02
C0402C0G1C240J	C0G	16V	24	± 5%	0.20 ± 0.02
C0402C0G1C270G	C0G	16V	27	± 2%	0.20 ± 0.02
C0402C0G1C270J	C0G	16V	27	± 5%	0.20 ± 0.02
C0402C0G1C300G	C0G	16V	30	± 2%	0.20 ± 0.02
C0402C0G1C300J	C0G	16V	30	± 5%	0.20 ± 0.02
C0402C0G1C330G	C0G	16V	33	± 2%	0.20 ± 0.02
C0402C0G1C330J	C0G	16V	33	± 5%	0.20 ± 0.02
C0402C0G1C360G	C0G	16V	36	± 2%	0.20 ± 0.02
C0402C0G1C360J	C0G	16V	36	± 5%	0.20 ± 0.02
C0402C0G1C390G	C0G	16V	39	± 2%	0.20 ± 0.02
C0402C0G1C390J	C0G	16V	39	± 5%	0.20 ± 0.02
C0402C0G1C430G	C0G	16V	43	± 2%	0.20 ± 0.02
C0402C0G1C430J	C0G	16V	43	± 5%	0.20 ± 0.02
C0402C0G1C470G	C0G	16V	47	± 2%	0.20 ± 0.02
C0402C0G1C470J	C0G	16V	47	± 5%	0.20 ± 0.02
C0402C0G1C510G	C0G	16V	51	± 2%	0.20 ± 0.02
C0402C0G1C510J	C0G	16V	51	± 5%	0.20 ± 0.02
C0402C0G1C560G	C0G	16V	56	± 2%	0.20 ± 0.02
C0402C0G1C560J	C0G	16V	56	± 5%	0.20 ± 0.02
C0402C0G1C620G	C0G	16V	62	± 2%	0.20 ± 0.02
C0402C0G1C620J	C0G	16V	62	± 5%	0.20 ± 0.02
C0402C0G1C680G	C0G	16V	68	± 2%	0.20 ± 0.02
C0402C0G1C680J	C0G	16V	68	± 5%	0.20 ± 0.02
C0402C0G1C750G	C0G	16V	75	± 2%	0.20 ± 0.02
C0402C0G1C750J	C0G	16V	75	± 5%	0.20 ± 0.02



Capacitance Range Table

C0402 [EIA CC01005]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0402C0G1C820G	C0G	16V	82	± 2%	0.20 ± 0.02
C0402C0G1C820J	C0G	16V	82	± 5%	0.20 ± 0.02
C0402C0G1C910G	C0G	16V	91	± 2%	0.20 ± 0.02
C0402C0G1C910J	C0G	16V	91	± 5%	0.20 ± 0.02
C0402C0G1C101G	C0G	16V	100	± 2%	0.20 ± 0.02
C0402C0G1C101J	C0G	16V	100	± 5%	0.20 ± 0.02

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%), X5R (-55 to +85°C, ±15%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0402X7R1A101K	X7R	10V	100	± 10%	0.20 ± 0.02
C0402X7R1A151K	X7R	10V	150	± 10%	0.20 ± 0.02
C0402X7R1A221K	X7R	10V	220	± 10%	0.20 ± 0.02
C0402X7R1A331K	X7R	10V	330	± 10%	0.20 ± 0.02
C0402X7R1A471K	X7R	10V	470	± 10%	0.20 ± 0.02
C0402X7R1A681K	X7R	10V	680	± 10%	0.20 ± 0.02
C0402X5R1C101K	X5R	16V	100	± 10%	0.20 ± 0.02
C0402X5R1C151K	X5R	16V	150	± 10%	0.20 ± 0.02
C0402X5R1C221K	X5R	16V	220	± 10%	0.20 ± 0.02
C0402X5R1C331K	X5R	16V	330	± 10%	0.20 ± 0.02
C0402X5R1C471K	X5R	16V	470	± 10%	0.20 ± 0.02
C0402X5R1C681K	X5R	16V	680	± 10%	0.20 ± 0.02
C0402X5R1A101K	X5R	10V	100	± 10%	0.20 ± 0.02
C0402X5R1A221K	X5R	10V	220	± 10%	0.20 ± 0.02
C0402X5R1A471K	X5R	10V	470	± 10%	0.20 ± 0.02
C0402X5R1A102K	X5R	10V	1,000	± 10%	0.20 ± 0.02
C0402X5R1A152K	X5R	10V	1,500	± 10%	0.20 ± 0.02
C0402X5R1A222K	X5R	10V	2,200	± 10%	0.20 ± 0.02
C0402X5R0J681K	X5R	6.3V	680	± 10%	0.20 ± 0.02
C0402X5R0J102K	X5R	6.3V	1,000	± 10%	0.20 ± 0.02
C0402X5R0J152K	X5R	6.3V	1,500	± 10%	0.20 ± 0.02
C0402X5R0J222K	X5R	6.3V	2,200	± 10%	0.20 ± 0.02
C0402X5R0J332K	X5R	6.3V	3,300	± 10%	0.20 ± 0.02
C0402X5R0J472K	X5R	6.3V	4,700	± 10%	0.20 ± 0.02
C0402X5R0J682K	X5R	6.3V	6,800	± 10%	0.20 ± 0.02
C0402X5R0J103K	X5R	6.3V	10,000	± 10%	0.20 ± 0.02



Capacitance Range Chart

C0603 [EIA CC0201]

Capacitance Range Chart

Temperature Characteristics: C0G ($0 \pm 30\text{ppm}/^\circ\text{C}$)
 Rated Voltage: 50V (1H), 25V (1E)

Capacitance (pF)	Cap Code	Tolerance	C0G		Capacitance (pF)	Cap Code	Tolerance	C0G	
			1H (50V)	1E (25V)				1H (50V)	1E (25V)
0.2	0R2	W: $\pm 0.05\text{pF}$			6.8	6R8	B: $\pm 0.10\text{pF}$		
0.3	0R3	B: $\pm 0.10\text{pF}$			7.5	7R5	E: $\pm 0.20\text{pF}$		
0.4	0R4	C: $\pm 0.25\text{pF}$			8.2	8R2	C: $\pm 0.25\text{pF}$		
0.5	0R5	D: $\pm 0.50\text{pF}$			9.1	9R1	D: $\pm 0.50\text{pF}$		
0.6	0R6				10	100	G: $\pm 2\%$		
0.7	0R7				11	110	J: $\pm 5\%$		
0.75	R75				12	120			
0.8	0R8				13	130			
0.9	0R9				15	150			
1	010				16	160			
1.1	1R1				18	180			
1.2	1R2				20	200			
1.3	1R3				22	220			
1.5	1R5				24	240			
1.6	1R6				27	270			
1.8	1R8				30	300			
2	020				33	330			
2.2	2R2				36	360			
2.4	2R4				39	390			
2.7	2R7				43	430			
3	030				47	470			
3.3	3R3				51	510			
3.6	3R6				56	560			
3.9	3R9				62	620			
4.3	4R3				68	680			
4.7	4R7				75	750			
5.1	5R1				82	820			
5.6	5R6				91	910			
6.2	6R2				100	101			

Standard Thickness
 0.30 mm

• Standard capacitance is shown. Please refer to Capacitance Range Table for additional capacitance values.



Capacitance Range Chart

C0603 [EIA CC0201]

Capacitance Range Chart

Temperature Characteristics: X7R ($\pm 15\%$), X5R ($\pm 15\%$)
 Rated Voltage: 50V (1H), 25V (1E), 16V (1C), 10V (1A), 6.3V (0J)

Capacitance (pF)	Cap Code	Tolerance	X7R					X5R					
			1H (50V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	1H (50V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	
100	101	K: $\pm 10\%$ M: $\pm 20\%$	█	█	█			█	█				
150	151												
220	221												
330	331												
470	471		█					█					
680	681			█	█				█				
1,000	102												
1,500	152												
2,200	222			█	█					█			
3,300	332												
4,700	472				█					█			
6,800	682												
10,000	103						█	█					
15,000	153												
22,000	223												
33,000	333												
47,000	473												
68,000	683												
100,000	104									█	█		
150,000	154												█
220,000	224												█

• Standard capacitance is shown. Please refer to Capacitance Range Table for additional capacitance values.

Standard Thickness
 0.30 mm



Capacitance Range Table

C0603 [EIA CC0201]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603C0G1H0R5B	C0G	50V	0.5	± 0.10pF	0.30 ± 0.03
C0603C0G1H0R5C	C0G	50V	0.5	± 0.25pF	0.30 ± 0.03
C0603C0G1H010B	C0G	50V	1.0	± 0.10pF	0.30 ± 0.03
C0603C0G1H010C	C0G	50V	1.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H1R2C	C0G	50V	1.2	± 0.25pF	0.30 ± 0.03
C0603C0G1H1R5B	C0G	50V	1.5	± 0.10pF	0.30 ± 0.03
C0603C0G1H1R5C	C0G	50V	1.5	± 0.25pF	0.30 ± 0.03
C0603C0G1H1R8C	C0G	50V	1.8	± 0.25pF	0.30 ± 0.03
C0603C0G1H020B	C0G	50V	2.0	± 0.10pF	0.30 ± 0.03
C0603C0G1H020C	C0G	50V	2.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H2R2B	C0G	50V	2.2	± 0.10pF	0.30 ± 0.03
C0603C0G1H2R2C	C0G	50V	2.2	± 0.25pF	0.30 ± 0.03
C0603C0G1H2R7C	C0G	50V	2.7	± 0.25pF	0.30 ± 0.03
C0603C0G1H030B	C0G	50V	3.0	± 0.10pF	0.30 ± 0.03
C0603C0G1H030C	C0G	50V	3.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H3R3B	C0G	50V	3.3	± 0.10pF	0.30 ± 0.03
C0603C0G1H3R3C	C0G	50V	3.3	± 0.25pF	0.30 ± 0.03
C0603C0G1H3R9C	C0G	50V	3.9	± 0.25pF	0.30 ± 0.03
C0603C0G1H040B	C0G	50V	4.0	± 0.10pF	0.30 ± 0.03
C0603C0G1H040C	C0G	50V	4.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H4R7B	C0G	50V	4.7	± 0.10pF	0.30 ± 0.03
C0603C0G1H4R7C	C0G	50V	4.7	± 0.25pF	0.30 ± 0.03
C0603C0G1H050B	C0G	50V	5.0	± 0.10pF	0.30 ± 0.03
C0603C0G1H050C	C0G	50V	5.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H5R6C	C0G	50V	5.6	± 0.25pF	0.30 ± 0.03
C0603C0G1H060C	C0G	50V	6.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H060D	C0G	50V	6.0	± 0.50pF	0.30 ± 0.03
C0603C0G1H6R8C	C0G	50V	6.8	± 0.25pF	0.30 ± 0.03
C0603C0G1H6R8D	C0G	50V	6.8	± 0.50pF	0.30 ± 0.03
C0603C0G1H070C	C0G	50V	7.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H070D	C0G	50V	7.0	± 0.50pF	0.30 ± 0.03
C0603C0G1H080C	C0G	50V	8.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H080D	C0G	50V	8.0	± 0.50pF	0.30 ± 0.03
C0603C0G1H8R2C	C0G	50V	8.2	± 0.25pF	0.30 ± 0.03
C0603C0G1H090C	C0G	50V	9.0	± 0.25pF	0.30 ± 0.03
C0603C0G1H090D	C0G	50V	9.0	± 0.50pF	0.30 ± 0.03
C0603C0G1H100C	C0G	50V	10	± 0.25pF	0.30 ± 0.03
C0603C0G1H100D	C0G	50V	10	± 0.50pF	0.30 ± 0.03
C0603C0G1H110J	C0G	50V	11	± 5%	0.30 ± 0.03
C0603C0G1H120J	C0G	50V	12	± 5%	0.30 ± 0.03
C0603C0G1H130J	C0G	50V	13	± 5%	0.30 ± 0.03
C0603C0G1H150J	C0G	50V	15	± 5%	0.30 ± 0.03
C0603C0G1H160J	C0G	50V	16	± 5%	0.30 ± 0.03
C0603C0G1H180J	C0G	50V	18	± 5%	0.30 ± 0.03



Capacitance Range Table

C0603 [EIA CC0201]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603C0G1H200J	C0G	50V	20	± 5%	0.30 ± 0.03
C0603C0G1H220J	C0G	50V	22	± 5%	0.30 ± 0.03
C0603C0G1H240J	C0G	50V	24	± 5%	0.30 ± 0.03
C0603C0G1H270J	C0G	50V	27	± 5%	0.30 ± 0.03
C0603C0G1H300J	C0G	50V	30	± 5%	0.30 ± 0.03
C0603C0G1H330J	C0G	50V	33	± 5%	0.30 ± 0.03
C0603C0G1H360J	C0G	50V	36	± 5%	0.30 ± 0.03
C0603C0G1H390J	C0G	50V	39	± 5%	0.30 ± 0.03
C0603C0G1H430J	C0G	50V	43	± 5%	0.30 ± 0.03
C0603C0G1H470J	C0G	50V	47	± 5%	0.30 ± 0.03
C0603C0G1H510J	C0G	50V	51	± 5%	0.30 ± 0.03
C0603C0G1H560J	C0G	50V	56	± 5%	0.30 ± 0.03
C0603C0G1H620J	C0G	50V	62	± 5%	0.30 ± 0.03
C0603C0G1H680J	C0G	50V	68	± 5%	0.30 ± 0.03
C0603C0G1H750J	C0G	50V	75	± 5%	0.30 ± 0.03
C0603C0G1H820J	C0G	50V	82	± 5%	0.30 ± 0.03
C0603C0G1H910J	C0G	50V	91	± 5%	0.30 ± 0.03
C0603C0G1H101J	C0G	50V	100	± 5%	0.30 ± 0.03
C0603C0G1E0R2W	C0G	25V	0.2	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R2B	C0G	25V	0.2	± 0.10pF	0.30 ± 0.03
C0603C0G1E0R3W	C0G	25V	0.3	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R3B	C0G	25V	0.3	± 0.10pF	0.30 ± 0.03
C0603C0G1E0R4W	C0G	25V	0.4	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R4B	C0G	25V	0.4	± 0.10pF	0.30 ± 0.03
C0603C0G1E0R5W	C0G	25V	0.5	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R5C	C0G	25V	0.5	± 0.25pF	0.30 ± 0.03
C0603C0G1E0R5B	C0G	25V	0.5	± 0.10pF	0.30 ± 0.03
C0603C0G1E0R6W	C0G	25V	0.6	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R6B	C0G	25V	0.6	± 0.10pF	0.30 ± 0.03
C0603C0G1E0R7W	C0G	25V	0.7	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R7B	C0G	25V	0.7	± 0.10pF	0.30 ± 0.03
C0603C0G1ER75B	C0G	25V	0.75	± 0.10pF	0.30 ± 0.03
C0603C0G1ER75C	C0G	25V	0.75	± 0.25pF	0.30 ± 0.03
C0603C0G1E0R8W	C0G	25V	0.8	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R8B	C0G	25V	0.8	± 0.10pF	0.30 ± 0.03
C0603C0G1E0R9W	C0G	25V	0.9	± 0.05pF	0.30 ± 0.03
C0603C0G1E0R9B	C0G	25V	0.9	± 0.10pF	0.30 ± 0.03
C0603C0G1E010B	C0G	25V	1.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E010C	C0G	25V	1.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E1R1B	C0G	25V	1.1	± 0.10pF	0.30 ± 0.03
C0603C0G1E1R1C	C0G	25V	1.1	± 0.25pF	0.30 ± 0.03
C0603C0G1E1R2B	C0G	25V	1.2	± 0.10pF	0.30 ± 0.03
C0603C0G1E1R2C	C0G	25V	1.2	± 0.25pF	0.30 ± 0.03
C0603C0G1E1R3B	C0G	25V	1.3	± 0.10pF	0.30 ± 0.03



Capacitance Range Table

C0603 [EIA CC0201]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603C0G1E1R3C	C0G	25V	1.3	± 0.25pF	0.30 ± 0.03
C0603C0G1E1R5B	C0G	25V	1.5	± 0.10pF	0.30 ± 0.03
C0603C0G1E1R5C	C0G	25V	1.5	± 0.25pF	0.30 ± 0.03
C0603C0G1E1R6B	C0G	25V	1.6	± 0.10pF	0.30 ± 0.03
C0603C0G1E1R6C	C0G	25V	1.6	± 0.25pF	0.30 ± 0.03
C0603C0G1E1R8B	C0G	25V	1.8	± 0.10pF	0.30 ± 0.03
C0603C0G1E1R8C	C0G	25V	1.8	± 0.25pF	0.30 ± 0.03
C0603C0G1E020B	C0G	25V	2.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E020C	C0G	25V	2.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E2R2B	C0G	25V	2.2	± 0.10pF	0.30 ± 0.03
C0603C0G1E2R2C	C0G	25V	2.2	± 0.25pF	0.30 ± 0.03
C0603C0G1E2R4B	C0G	25V	2.4	± 0.10pF	0.30 ± 0.03
C0603C0G1E2R4C	C0G	25V	2.4	± 0.25pF	0.30 ± 0.03
C0603C0G1E2R7B	C0G	25V	2.7	± 0.10pF	0.30 ± 0.03
C0603C0G1E2R7C	C0G	25V	2.7	± 0.25pF	0.30 ± 0.03
C0603C0G1E030B	C0G	25V	3.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E030C	C0G	25V	3.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E3R3B	C0G	25V	3.3	± 0.10pF	0.30 ± 0.03
C0603C0G1E3R3C	C0G	25V	3.3	± 0.25pF	0.30 ± 0.03
C0603C0G1E3R6B	C0G	25V	3.6	± 0.10pF	0.30 ± 0.03
C0603C0G1E3R6C	C0G	25V	3.6	± 0.25pF	0.30 ± 0.03
C0603C0G1E3R9B	C0G	25V	3.9	± 0.10pF	0.30 ± 0.03
C0603C0G1E3R9C	C0G	25V	3.9	± 0.25pF	0.30 ± 0.03
C0603C0G1E040B	C0G	25V	4.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E040C	C0G	25V	4.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E4R3B	C0G	25V	4.3	± 0.10pF	0.30 ± 0.03
C0603C0G1E4R3C	C0G	25V	4.3	± 0.25pF	0.30 ± 0.03
C0603C0G1E4R7B	C0G	25V	4.7	± 0.10pF	0.30 ± 0.03
C0603C0G1E4R7C	C0G	25V	4.7	± 0.25pF	0.30 ± 0.03
C0603C0G1E050B	C0G	25V	5.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E050C	C0G	25V	5.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E5R1B	C0G	25V	5.1	± 0.10pF	0.30 ± 0.03
C0603C0G1E5R1C	C0G	25V	5.1	± 0.25pF	0.30 ± 0.03
C0603C0G1E5R1D	C0G	25V	5.1	± 0.50pF	0.30 ± 0.03
C0603C0G1E5R6B	C0G	25V	5.6	± 0.10pF	0.30 ± 0.03
C0603C0G1E5R6C	C0G	25V	5.6	± 0.25pF	0.30 ± 0.03
C0603C0G1E5R6D	C0G	25V	5.6	± 0.50pF	0.30 ± 0.03
C0603C0G1E060B	C0G	25V	6.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E060C	C0G	25V	6.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E060D	C0G	25V	6.0	± 0.50pF	0.30 ± 0.03
C0603C0G1E6R2B	C0G	25V	6.2	± 0.10pF	0.30 ± 0.03
C0603C0G1E6R2C	C0G	25V	6.2	± 0.25pF	0.30 ± 0.03
C0603C0G1E6R2D	C0G	25V	6.2	± 0.50pF	0.30 ± 0.03
C0603C0G1E6R8B	C0G	25V	6.8	± 0.10pF	0.30 ± 0.03



Capacitance Range Table

C0603 [EIA CC0201]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603C0G1E6R8C	C0G	25V	6.8	± 0.25pF	0.30 ± 0.03
C0603C0G1E6R8D	C0G	25V	6.8	± 0.50pF	0.30 ± 0.03
C0603C0G1E070B	C0G	25V	7.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E070C	C0G	25V	7.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E070D	C0G	25V	7.0	± 0.50pF	0.30 ± 0.03
C0603C0G1E7R5B	C0G	25V	7.5	± 0.10pF	0.30 ± 0.03
C0603C0G1E7R5C	C0G	25V	7.5	± 0.25pF	0.30 ± 0.03
C0603C0G1E7R5D	C0G	25V	7.5	± 0.50pF	0.30 ± 0.03
C0603C0G1E080B	C0G	25V	8.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E080C	C0G	25V	8.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E080D	C0G	25V	8.0	± 0.50pF	0.30 ± 0.03
C0603C0G1E8R2B	C0G	25V	8.2	± 0.10pF	0.30 ± 0.03
C0603C0G1E8R2C	C0G	25V	8.2	± 0.25pF	0.30 ± 0.03
C0603C0G1E8R2D	C0G	25V	8.2	± 0.50pF	0.30 ± 0.03
C0603C0G1E090B	C0G	25V	9.0	± 0.10pF	0.30 ± 0.03
C0603C0G1E090C	C0G	25V	9.0	± 0.25pF	0.30 ± 0.03
C0603C0G1E090D	C0G	25V	9.0	± 0.50pF	0.30 ± 0.03
C0603C0G1E9R1B	C0G	25V	9.1	± 0.10pF	0.30 ± 0.03
C0603C0G1E9R1C	C0G	25V	9.1	± 0.25pF	0.30 ± 0.03
C0603C0G1E9R1D	C0G	25V	9.1	± 0.50pF	0.30 ± 0.03
C0603C0G1E100E	C0G	25V	10	± 0.20pF	0.30 ± 0.03
C0603C0G1E100C	C0G	25V	10	± 0.25pF	0.30 ± 0.03
C0603C0G1E100D	C0G	25V	10	± 0.50pF	0.30 ± 0.03
C0603C0G1E110G	C0G	25V	11	± 2%	0.30 ± 0.03
C0603C0G1E110J	C0G	25V	11	± 5%	0.30 ± 0.03
C0603C0G1E120G	C0G	25V	12	± 2%	0.30 ± 0.03
C0603C0G1E120J	C0G	25V	12	± 5%	0.30 ± 0.03
C0603C0G1E130G	C0G	25V	13	± 2%	0.30 ± 0.03
C0603C0G1E130J	C0G	25V	13	± 5%	0.30 ± 0.03
C0603C0G1E150G	C0G	25V	15	± 2%	0.30 ± 0.03
C0603C0G1E150J	C0G	25V	15	± 5%	0.30 ± 0.03
C0603C0G1E160G	C0G	25V	16	± 2%	0.30 ± 0.03
C0603C0G1E160J	C0G	25V	16	± 5%	0.30 ± 0.03
C0603C0G1E180G	C0G	25V	18	± 2%	0.30 ± 0.03
C0603C0G1E180J	C0G	25V	18	± 5%	0.30 ± 0.03
C0603C0G1E200G	C0G	25V	20	± 2%	0.30 ± 0.03
C0603C0G1E200J	C0G	25V	20	± 5%	0.30 ± 0.03
C0603C0G1E220G	C0G	25V	22	± 2%	0.30 ± 0.03
C0603C0G1E220J	C0G	25V	22	± 5%	0.30 ± 0.03
C0603C0G1E240G	C0G	25V	24	± 2%	0.30 ± 0.03
C0603C0G1E240J	C0G	25V	24	± 5%	0.30 ± 0.03
C0603C0G1E270G	C0G	25V	27	± 2%	0.30 ± 0.03
C0603C0G1E270J	C0G	25V	27	± 5%	0.30 ± 0.03
C0603C0G1E300G	C0G	25V	30	± 2%	0.30 ± 0.03



Capacitance Range Table

C0603 [EIA CC0201]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603C0G1E300J	C0G	25V	30	± 5%	0.30 ± 0.03
C0603C0G1E330G	C0G	25V	33	± 2%	0.30 ± 0.03
C0603C0G1E330J	C0G	25V	33	± 5%	0.30 ± 0.03
C0603C0G1E360G	C0G	25V	36	± 2%	0.30 ± 0.03
C0603C0G1E360J	C0G	25V	36	± 5%	0.30 ± 0.03
C0603C0G1E390G	C0G	25V	39	± 2%	0.30 ± 0.03
C0603C0G1E390J	C0G	25V	39	± 5%	0.30 ± 0.03
C0603C0G1E430G	C0G	25V	43	± 2%	0.30 ± 0.03
C0603C0G1E430J	C0G	25V	43	± 5%	0.30 ± 0.03
C0603C0G1E470G	C0G	25V	47	± 2%	0.30 ± 0.03
C0603C0G1E470J	C0G	25V	47	± 5%	0.30 ± 0.03
C0603C0G1E510G	C0G	25V	51	± 2%	0.30 ± 0.03
C0603C0G1E510J	C0G	25V	51	± 5%	0.30 ± 0.03
C0603C0G1E560G	C0G	25V	56	± 2%	0.30 ± 0.03
C0603C0G1E560J	C0G	25V	56	± 5%	0.30 ± 0.03
C0603C0G1E620G	C0G	25V	62	± 2%	0.30 ± 0.03
C0603C0G1E620J	C0G	25V	62	± 5%	0.30 ± 0.03
C0603C0G1E680G	C0G	25V	68	± 2%	0.30 ± 0.03
C0603C0G1E680J	C0G	25V	68	± 5%	0.30 ± 0.03
C0603C0G1E750G	C0G	25V	75	± 2%	0.30 ± 0.03
C0603C0G1E750J	C0G	25V	75	± 5%	0.30 ± 0.03
C0603C0G1E820G	C0G	25V	82	± 2%	0.30 ± 0.03
C0603C0G1E820J	C0G	25V	82	± 5%	0.30 ± 0.03
C0603C0G1E910G	C0G	25V	91	± 2%	0.30 ± 0.03
C0603C0G1E910J	C0G	25V	91	± 5%	0.30 ± 0.03
C0603C0G1E101G	C0G	25V	100	± 2%	0.30 ± 0.03
C0603C0G1E101J	C0G	25V	100	± 5%	0.30 ± 0.03

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603X7R1H101K	X7R	50V	100	± 10%	0.30 ± 0.03
C0603X7R1H101M	X7R	50V	100	± 20%	0.30 ± 0.03
C0603X7R1H151K	X7R	50V	150	± 10%	0.30 ± 0.03
C0603X7R1H151M	X7R	50V	150	± 20%	0.30 ± 0.03
C0603X7R1H221K	X7R	50V	220	± 10%	0.30 ± 0.03
C0603X7R1H221M	X7R	50V	220	± 20%	0.30 ± 0.03
C0603X7R1H331K	X7R	50V	330	± 10%	0.30 ± 0.03
C0603X7R1H331M	X7R	50V	330	± 20%	0.30 ± 0.03
C0603X7R1H471K	X7R	50V	470	± 10%	0.30 ± 0.03
C0603X7R1H471M	X7R	50V	470	± 20%	0.30 ± 0.03
C0603X7R1E101K	X7R	25V	100	± 10%	0.30 ± 0.03
C0603X7R1E101M	X7R	25V	100	± 20%	0.30 ± 0.03



Capacitance Range Table

C0603 [EIA CC0201]

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603X7R1E151K	X7R	25V	150	± 10%	0.30 ± 0.03
C0603X7R1E151M	X7R	25V	150	± 20%	0.30 ± 0.03
C0603X7R1E221K	X7R	25V	220	± 10%	0.30 ± 0.03
C0603X7R1E221M	X7R	25V	220	± 20%	0.30 ± 0.03
C0603X7R1E331K	X7R	25V	330	± 10%	0.30 ± 0.03
C0603X7R1E331M	X7R	25V	330	± 20%	0.30 ± 0.03
C0603X7R1E471K	X7R	25V	470	± 10%	0.30 ± 0.03
C0603X7R1E471M	X7R	25V	470	± 20%	0.30 ± 0.03
C0603X7R1E681K	X7R	25V	680	± 10%	0.30 ± 0.03
C0603X7R1E681M	X7R	25V	680	± 20%	0.30 ± 0.03
C0603X7R1E102K	X7R	25V	1,000	± 10%	0.30 ± 0.03
C0603X7R1E102M	X7R	25V	1,000	± 20%	0.30 ± 0.03
C0603X7R1E152K	X7R	25V	1,500	± 10%	0.30 ± 0.03
C0603X7R1E152M	X7R	25V	1,500	± 20%	0.30 ± 0.03
C0603X7R1E222K	X7R	25V	2,200	± 10%	0.30 ± 0.03
C0603X7R1E222M	X7R	25V	2,200	± 20%	0.30 ± 0.03
C0603X7R1E332K	X7R	25V	3,300	± 10%	0.30 ± 0.03
C0603X7R1E332M	X7R	25V	3,300	± 20%	0.30 ± 0.03
C0603X7R1C101K	X7R	16V	100	± 10%	0.30 ± 0.03
C0603X7R1C101M	X7R	16V	100	± 20%	0.30 ± 0.03
C0603X7R1C151K	X7R	16V	150	± 10%	0.30 ± 0.03
C0603X7R1C151M	X7R	16V	150	± 20%	0.30 ± 0.03
C0603X7R1C221K	X7R	16V	220	± 10%	0.30 ± 0.03
C0603X7R1C221M	X7R	16V	220	± 20%	0.30 ± 0.03
C0603X7R1C331K	X7R	16V	330	± 10%	0.30 ± 0.03
C0603X7R1C331M	X7R	16V	330	± 20%	0.30 ± 0.03
C0603X7R1C471K	X7R	16V	470	± 10%	0.30 ± 0.03
C0603X7R1C471M	X7R	16V	470	± 20%	0.30 ± 0.03
C0603X7R1C681K	X7R	16V	680	± 10%	0.30 ± 0.03
C0603X7R1C681M	X7R	16V	680	± 20%	0.30 ± 0.03
C0603X7R1C102K	X7R	16V	1,000	± 10%	0.30 ± 0.03
C0603X7R1C102M	X7R	16V	1,000	± 20%	0.30 ± 0.03
C0603X7R1C152K	X7R	16V	1,500	± 10%	0.30 ± 0.03
C0603X7R1C152M	X7R	16V	1,500	± 20%	0.30 ± 0.03
C0603X7R1C222K	X7R	16V	2,200	± 10%	0.30 ± 0.03
C0603X7R1C222M	X7R	16V	2,200	± 20%	0.30 ± 0.03
C0603X7R1C332K	X7R	16V	3,300	± 10%	0.30 ± 0.03
C0603X7R1C332M	X7R	16V	3,300	± 20%	0.30 ± 0.03
C0603X7R1C472K	X7R	16V	4,700	± 10%	0.30 ± 0.03
C0603X7R1C472M	X7R	16V	4,700	± 20%	0.30 ± 0.03
C0603X7R1A682K	X7R	10V	6,800	± 10%	0.30 ± 0.03
C0603X7R1A682M	X7R	10V	6,800	± 20%	0.30 ± 0.03
C0603X7R1A103K	X7R	10V	10,000	± 10%	0.30 ± 0.03
C0603X7R1A103M	X7R	10V	10,000	± 20%	0.30 ± 0.03



Capacitance Range Table

C0603 [EIA CC0201]

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%), X6S (-55 to 105°C, ±22%), X5R (-55 to +85°C, ±15%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603X7R0J103K	X7R	6.3V	10,000	± 10%	0.30 ± 0.03
C0603X7R0J103M	X7R	6.3V	10,000	± 20%	0.30 ± 0.03
C0603X6S0G104K	X6S	4V	100,000	± 10%	0.30 ± 0.03
C0603X6S0G104M	X6S	4V	100,000	± 20%	0.30 ± 0.03
C0603X5R1H101K	X5R	50V	100	± 10%	0.30 ± 0.03
C0603X5R1H101M	X5R	50V	100	± 20%	0.30 ± 0.03
C0603X5R1H151K	X5R	50V	150	± 10%	0.30 ± 0.03
C0603X5R1H151M	X5R	50V	150	± 20%	0.30 ± 0.03
C0603X5R1H221K	X5R	50V	220	± 10%	0.30 ± 0.03
C0603X5R1H221M	X5R	50V	220	± 20%	0.30 ± 0.03
C0603X5R1H331K	X5R	50V	330	± 10%	0.30 ± 0.03
C0603X5R1H331M	X5R	50V	330	± 20%	0.30 ± 0.03
C0603X5R1H471K	X5R	50V	470	± 10%	0.30 ± 0.03
C0603X5R1H471M	X5R	50V	470	± 20%	0.30 ± 0.03
C0603X5R1E101K	X5R	25V	100	± 10%	0.30 ± 0.03
C0603X5R1E101M	X5R	25V	100	± 20%	0.30 ± 0.03
C0603X5R1E151K	X5R	25V	150	± 10%	0.30 ± 0.03
C0603X5R1E151M	X5R	25V	150	± 20%	0.30 ± 0.03
C0603X5R1E221K	X5R	25V	220	± 10%	0.30 ± 0.03
C0603X5R1E221M	X5R	25V	220	± 20%	0.30 ± 0.03
C0603X5R1E331K	X5R	25V	330	± 10%	0.30 ± 0.03
C0603X5R1E331M	X5R	25V	330	± 20%	0.30 ± 0.03
C0603X5R1E471K	X5R	25V	470	± 10%	0.30 ± 0.03
C0603X5R1E471M	X5R	25V	470	± 20%	0.30 ± 0.03
C0603X5R1E681K	X5R	25V	680	± 10%	0.30 ± 0.03
C0603X5R1E681M	X5R	25V	680	± 20%	0.30 ± 0.03
C0603X5R1E102K	X5R	25V	1,000	± 10%	0.30 ± 0.03
C0603X5R1E102M	X5R	25V	1,000	± 20%	0.30 ± 0.03
C0603X5R1E152K	X5R	25V	1,500	± 10%	0.30 ± 0.03
C0603X5R1E152M	X5R	25V	1,500	± 20%	0.30 ± 0.03
C0603X5R1E222K	X5R	25V	2,200	± 10%	0.30 ± 0.03
C0603X5R1E222M	X5R	25V	2,200	± 20%	0.30 ± 0.03
C0603X5R1E332K	X5R	25V	3,300	± 10%	0.30 ± 0.03
C0603X5R1E332M	X5R	25V	3,300	± 20%	0.30 ± 0.03
C0603X5R1C222K	X5R	16V	2,200	± 10%	0.30 ± 0.03
C0603X5R1C222M	X5R	16V	2,200	± 20%	0.30 ± 0.03
C0603X5R1C332K	X5R	16V	3,300	± 10%	0.30 ± 0.03
C0603X5R1C332M	X5R	16V	3,300	± 20%	0.30 ± 0.03
C0603X5R1C472K	X5R	16V	4,700	± 10%	0.30 ± 0.03
C0603X5R1C472M	X5R	16V	4,700	± 20%	0.30 ± 0.03
C0603X5R1C104K	X5R	16V	100,000	± 10%	0.30 ± 0.03
C0603X5R1C154K	X5R	16V	150,000	± 10%	0.30 ± 0.03
C0603X5R1C224K	X5R	16V	220,000	± 10%	0.30 ± 0.03
C0603X5R1C224M	X5R	16V	220,000	± 20%	0.30 ± 0.03



Capacitance Range Table

C0603 [EIA CC0201]

Class 2 (Temperature Stable)

Temperature Characteristics: X5R (-55 to +85°C, ±15%), Y5V(-30 to +85°C, +22/-82%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C0603X5R1A682K	X5R	10V	6,800	± 10%	0.30 ± 0.03
C0603X5R1A682M	X5R	10V	6,800	± 20%	0.30 ± 0.03
C0603X5R1A103K	X5R	10V	10,000	± 10%	0.30 ± 0.03
C0603X5R1A103M	X5R	10V	10,000	± 20%	0.30 ± 0.03
C0603X5R1A104K	X5R	10V	100,000	± 10%	0.30 ± 0.03
C0603X5R1A154K	X5R	10V	150,000	± 10%	0.30 ± 0.03
C0603X5R1A224K	X5R	10V	220,000	± 10%	0.30 ± 0.03
C0603X5R1A224M	X5R	10V	220,000	± 20%	0.30 ± 0.03
C0603X5R0J103K	X5R	6.3V	10,000	± 10%	0.30 ± 0.03
C0603X5R0J103M	X5R	6.3V	10,000	± 20%	0.30 ± 0.03
C0603X5R0J153K	X5R	6.3V	15,000	± 10%	0.30 ± 0.03
C0603X5R0J153M	X5R	6.3V	15,000	± 20%	0.30 ± 0.03
C0603X5R0J223K	X5R	6.3V	22,000	± 10%	0.30 ± 0.03
C0603X5R0J223M	X5R	6.3V	22,000	± 20%	0.30 ± 0.03
C0603X5R0J333K	X5R	6.3V	33,000	± 10%	0.30 ± 0.03
C0603X5R0J333M	X5R	6.3V	33,000	± 20%	0.30 ± 0.03
C0603X5R0J473K	X5R	6.3V	47,000	± 10%	0.30 ± 0.03
C0603X5R0J473M	X5R	6.3V	47,000	± 20%	0.30 ± 0.03
C0603X5R0J683K	X5R	6.3V	68,000	± 10%	0.30 ± 0.03
C0603X5R0J683M	X5R	6.3V	68,000	± 20%	0.30 ± 0.03
C0603X5R0J104K	X5R	6.3V	100,000	± 10%	0.30 ± 0.03
C0603X5R0J104M	X5R	6.3V	100,000	± 20%	0.30 ± 0.03
C0603X5R0J154K	X5R	6.3V	150,000	± 10%	0.30 ± 0.03
C0603X5R0J154M	X5R	6.3V	150,000	± 20%	0.30 ± 0.03
C0603X5R0J224K	X5R	6.3V	220,000	± 10%	0.30 ± 0.03
C0603X5R0J224M	X5R	6.3V	220,000	± 20%	0.30 ± 0.03
C0603Y5V1C103Z	Y5V	16V	10,000	+80/-20%	0.30 ± 0.03



Capacitance Range Chart

C1005 [EIA CC0402]

Capacitance Range Chart

Temperature Characteristics: C0G ($0 \pm 30\text{ppm}/^\circ\text{C}$)
 Rated Voltage: 50V (1H), 25V (1E)

Capacitance (pF)	Cap Code	Tolerance	C0G		Capacitance (pF)	Cap Code	Tolerance	C0G			
			1H (50V)	1E (25V)				1H (50V)	1E (25V)		
0.1	0R1	B: $\pm 0.10\text{pF}$ C: $\pm 0.25\text{pF}$ D: $\pm 0.50\text{pF}$			30	300	J: $\pm 5\%$				
0.5	0R5					33			330		
0.75	R75					36			360		
1	010					39			390		
1.2	1R2					43			430		
1.5	1R5					47			470		
1.8	1R8					51			510		
2.2	2R2					56			560		
2.7	2R7					62			620		
3.3	3R3					68			680		
3.9	3R9			75	750						
4.7	4R7			82	820						
5.6	5R6	C: $\pm 0.25\text{pF}$ D: $\pm 0.50\text{pF}$			91	910					
6.8	6R8					100	101				
8.2	8R2					120	121				
10	100	J: $\pm 5\%$			150	151					
11	110					180	181				
12	120					220	221				
13	130					270	271				
15	150					330	331				
16	160					390	391				
18	180					470	471				
20	200					560	561				
22	220					680	681				
24	240					820	821				
27	270			1,000	102						

• Standard capacitance is shown. Please refer to Capacitance Range Table for additional capacitance values.

Capacitance Range Chart

Temperature Characteristics: X7R ($\pm 15\%$)
 Rated Voltage: 50V (1H), 35V (1V), 25V (1E), 16V(1C), 10V (1A)

Capacitance (pF)	Cap Code	Tolerance	X7R					
			1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	
220	221	K: $\pm 10\%$ M: $\pm 20\%$						
330	331							
470	471							
680	681							
1,000	102							
1,500	152							
2,200	222							
3,300	332							
4,700	472							
6,800	682							
10,000	103							
15,000	153							
22,000	223							
33,000	333							
47,000	473							
68,000	683							
100,000	104							
150,000	154							
220,000	224							

Standard Thickness

0.50 mm



Capacitance Range Chart

C1005 [EIA CC0402]

Capacitance Range Chart

Temperature Characteristics: X5R ($\pm 15\%$), X6S ($\pm 22\%$), Y5V (+22/-82%)

Rated Voltage: 50V (1H), 35V (1V), 25V (1E), 16V (1C), 10V (1A), 6.3V (0J), 4V (0G)

Capacitance (pF)	Cap Code	Tolerance	X6S							
			1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	0G (4V)	
10,000	103	K: $\pm 10\%$ M: $\pm 20\%$								
22,000	223									
47,000	473									
100,000	104									
220,000	224									
470,000	474									
1,000,000	105									
2,200,000	225									

Capacitance (pF)	Cap Code	Tolerance	X5R							
			1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	0G (4V)	
220	221	K: $\pm 10\%$ M: $\pm 20\%$								
330	331									
470	471									
680	681									
1,000	102									
1,500	152									
2,200	222									
3,300	332									
4,700	472									
6,800	682									
10,000	103									
15,000	153									
22,000	223									
33,000	333									
47,000	473									
68,000	683									
100,000	104									
220,000	224									
330,000	334									
470,000	474									
1,000,000	105									
1,500,000	155									
2,200,000	225									
3,300,000	335									
4,700,000	475									

Capacitance (pF)	Cap Code	Tolerance	Y5V				
			1H (50V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)
10,000	103	Z: +80/-20%					
100,000	104						
220,000	224						
470,000	474						
1,000,000	105						

Standard Thickness

0.50 mm



Capacitance Range Table

C1005 [EIA CC0402]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C1005C0G1H0R5B	C0G	50V	0.5	± 0.10pF	0.50 ± 0.05
C1005C0G1H0R5C	C0G	50V	0.5	± 0.25pF	0.50 ± 0.05
C1005C0G1HR75C	C0G	50V	0.75	± 0.25pF	0.50 ± 0.05
C1005C0G1H010B	C0G	50V	1.0	± 0.10pF	0.50 ± 0.05
C1005C0G1H010C	C0G	50V	1.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H1R2B	C0G	50V	1.2	± 0.10pF	0.50 ± 0.05
C1005C0G1H1R2C	C0G	50V	1.2	± 0.25pF	0.50 ± 0.05
C1005C0G1H1R5B	C0G	50V	1.5	± 0.10pF	0.50 ± 0.05
C1005C0G1H1R5C	C0G	50V	1.5	± 0.25pF	0.50 ± 0.05
C1005C0G1H1R8B	C0G	50V	1.8	± 0.10pF	0.50 ± 0.05
C1005C0G1H1R8C	C0G	50V	1.8	± 0.25pF	0.50 ± 0.05
C1005C0G1H020B	C0G	50V	2.0	± 0.10pF	0.50 ± 0.05
C1005C0G1H020C	C0G	50V	2.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H2R2B	C0G	50V	2.2	± 0.10pF	0.50 ± 0.05
C1005C0G1H2R2C	C0G	50V	2.2	± 0.25pF	0.50 ± 0.05
C1005C0G1H2R5C	C0G	50V	2.5	± 0.25pF	0.50 ± 0.05
C1005C0G1H2R7B	C0G	50V	2.7	± 0.10pF	0.50 ± 0.05
C1005C0G1H2R7C	C0G	50V	2.7	± 0.25pF	0.50 ± 0.05
C1005C0G1H030B	C0G	50V	3.0	± 0.10pF	0.50 ± 0.05
C1005C0G1H030C	C0G	50V	3.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H3R3B	C0G	50V	3.3	± 0.10pF	0.50 ± 0.05
C1005C0G1H3R3C	C0G	50V	3.3	± 0.25pF	0.50 ± 0.05
C1005C0G1H3R5C	C0G	50V	3.5	± 0.25pF	0.50 ± 0.05
C1005C0G1H3R9B	C0G	50V	3.9	± 0.10pF	0.50 ± 0.05
C1005C0G1H3R9C	C0G	50V	3.9	± 0.25pF	0.50 ± 0.05
C1005C0G1H040B	C0G	50V	4.0	± 0.10pF	0.50 ± 0.05
C1005C0G1H040C	C0G	50V	4.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H4R7B	C0G	50V	4.7	± 0.10pF	0.50 ± 0.05
C1005C0G1H4R7C	C0G	50V	4.7	± 0.25pF	0.50 ± 0.05
C1005C0G1H050B	C0G	50V	5.0	± 0.10pF	0.50 ± 0.05
C1005C0G1H050C	C0G	50V	5.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H5R6C	C0G	50V	5.6	± 0.25pF	0.50 ± 0.05
C1005C0G1H5R6D	C0G	50V	5.6	± 0.50pF	0.50 ± 0.05
C1005C0G1H060C	C0G	50V	6.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H060D	C0G	50V	6.0	± 0.50pF	0.50 ± 0.05
C1005C0G1H6R8C	C0G	50V	6.8	± 0.25pF	0.50 ± 0.05
C1005C0G1H6R8D	C0G	50V	6.8	± 0.50pF	0.50 ± 0.05
C1005C0G1H070C	C0G	50V	7.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H070D	C0G	50V	7.0	± 0.50pF	0.50 ± 0.05
C1005C0G1H080C	C0G	50V	8.0	± 0.25pF	0.50 ± 0.05
C1005C0G1H080D	C0G	50V	8.0	± 0.50pF	0.50 ± 0.05
C1005C0G1H8R2C	C0G	50V	8.2	± 0.25pF	0.50 ± 0.05
C1005C0G1H8R2D	C0G	50V	8.2	± 0.50pF	0.50 ± 0.05
C1005C0G1H090C	C0G	50V	9.0	± 0.25pF	0.50 ± 0.05



Capacitance Range Table

C1005 [EIA CC0402]

Class 1 (Temperature Compensating)

Temperature Characteristics: C0G (-55 to 125°C, 0±30 ppm/°C)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C1005C0G1H090D	C0G	50V	9.0	± 0.50pF	0.50 ± 0.05
C1005C0G1H100C	C0G	50V	10	± 0.25pF	0.50 ± 0.05
C1005C0G1H100D	C0G	50V	10	± 0.50pF	0.50 ± 0.05
C1005C0G1H110J	C0G	50V	11	± 5%	0.50 ± 0.05
C1005C0G1H120J	C0G	50V	12	± 5%	0.50 ± 0.05
C1005C0G1H130J	C0G	50V	13	± 5%	0.50 ± 0.05
C1005C0G1H150J	C0G	50V	15	± 5%	0.50 ± 0.05
C1005C0G1H160J	C0G	50V	16	± 5%	0.50 ± 0.05
C1005C0G1H180J	C0G	50V	18	± 5%	0.50 ± 0.05
C1005C0G1H200J	C0G	50V	20	± 5%	0.50 ± 0.05
C1005C0G1H220J	C0G	50V	22	± 5%	0.50 ± 0.05
C1005C0G1H240J	C0G	50V	24	± 5%	0.50 ± 0.05
C1005C0G1H270J	C0G	50V	27	± 5%	0.50 ± 0.05
C1005C0G1H300J	C0G	50V	30	± 5%	0.50 ± 0.05
C1005C0G1H330J	C0G	50V	33	± 5%	0.50 ± 0.05
C1005C0G1H360J	C0G	50V	36	± 5%	0.50 ± 0.05
C1005C0G1H390J	C0G	50V	39	± 5%	0.50 ± 0.05
C1005C0G1H430J	C0G	50V	43	± 5%	0.50 ± 0.05
C1005C0G1H470J	C0G	50V	47	± 5%	0.50 ± 0.05
C1005C0G1H510J	C0G	50V	51	± 5%	0.50 ± 0.05
C1005C0G1H560J	C0G	50V	56	± 5%	0.50 ± 0.05
C1005C0G1H620J	C0G	50V	62	± 5%	0.50 ± 0.05
C1005C0G1H680J	C0G	50V	68	± 5%	0.50 ± 0.05
C1005C0G1H750J	C0G	50V	75	± 5%	0.50 ± 0.05
C1005C0G1H820J	C0G	50V	82	± 5%	0.50 ± 0.05
C1005C0G1H910J	C0G	50V	91	± 5%	0.50 ± 0.05
C1005C0G1H101J	C0G	50V	100	± 5%	0.50 ± 0.05
C1005C0G1H121J	C0G	50V	120	± 5%	0.50 ± 0.05
C1005C0G1H151J	C0G	50V	150	± 5%	0.50 ± 0.05
C1005C0G1H181J	C0G	50V	180	± 5%	0.50 ± 0.05
C1005C0G1H221J	C0G	50V	220	± 5%	0.50 ± 0.05
C1005C0G1H271J	C0G	50V	270	± 5%	0.50 ± 0.05
C1005C0G1H331J	C0G	50V	330	± 5%	0.50 ± 0.05
C1005C0G1H391J	C0G	50V	390	± 5%	0.50 ± 0.05
C1005C0G1H471J	C0G	50V	470	± 5%	0.50 ± 0.05
C1005C0G1H561J	C0G	50V	560	± 5%	0.50 ± 0.05
C1005C0G1H681J	C0G	50V	680	± 5%	0.50 ± 0.05
C1005C0G1H821J	C0G	50V	820	± 5%	0.50 ± 0.05
C1005C0G1H102J	C0G	50V	1,000	± 5%	0.50 ± 0.05
C1005C0G1E561J	C0G	25V	560	± 5%	0.50 ± 0.05
C1005C0G1E681J	C0G	25V	680	± 5%	0.50 ± 0.05
C1005C0G1E821J	C0G	25V	820	± 5%	0.50 ± 0.05
C1005C0G1E102J	C0G	25V	1,000	± 5%	0.50 ± 0.05



Capacitance Range Table

C1005 [EIA CC0402]

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C1005X7R1H221K	X7R	50V	220	± 10%	0.50 ± 0.05
C1005X7R1H221M	X7R	50V	220	± 20%	0.50 ± 0.05
C1005X7R1H331K	X7R	50V	330	± 10%	0.50 ± 0.05
C1005X7R1H331M	X7R	50V	330	± 20%	0.50 ± 0.05
C1005X7R1H471K	X7R	50V	470	± 10%	0.50 ± 0.05
C1005X7R1H471M	X7R	50V	470	± 20%	0.50 ± 0.05
C1005X7R1H681K	X7R	50V	680	± 10%	0.50 ± 0.05
C1005X7R1H681M	X7R	50V	680	± 20%	0.50 ± 0.05
C1005X7R1H102K	X7R	50V	1,000	± 10%	0.50 ± 0.05
C1005X7R1H102M	X7R	50V	1,000	± 20%	0.50 ± 0.05
C1005X7R1H152K	X7R	50V	1,500	± 10%	0.50 ± 0.05
C1005X7R1H152M	X7R	50V	1,500	± 20%	0.50 ± 0.05
C1005X7R1H222K	X7R	50V	2,200	± 10%	0.50 ± 0.05
C1005X7R1H222M	X7R	50V	2,200	± 20%	0.50 ± 0.05
C1005X7R1H332K	X7R	50V	3,300	± 10%	0.50 ± 0.05
C1005X7R1H332M	X7R	50V	3,300	± 20%	0.50 ± 0.05
C1005X7R1H472K	X7R	50V	4,700	± 10%	0.50 ± 0.05
C1005X7R1H472M	X7R	50V	4,700	± 20%	0.50 ± 0.05
C1005X7R1H682K	X7R	50V	6,800	± 10%	0.50 ± 0.05
C1005X7R1H682M	X7R	50V	6,800	± 20%	0.50 ± 0.05
C1005X7R1H103K	X7R	50V	10,000	± 10%	0.50 ± 0.05
C1005X7R1H103M	X7R	50V	10,000	± 20%	0.50 ± 0.05
C1005X7R1H153K	X7R	50V	15,000	± 10%	0.50 ± 0.05
C1005X7R1H153M	X7R	50V	15,000	± 20%	0.50 ± 0.05
C1005X7R1H223K	X7R	50V	22,000	± 10%	0.50 ± 0.05
C1005X7R1H223M	X7R	50V	22,000	± 20%	0.50 ± 0.05
C1005X7R1H333K	X7R	50V	33,000	± 10%	0.50 ± 0.05
C1005X7R1H333M	X7R	50V	33,000	± 20%	0.50 ± 0.05
C1005X7R1H473K	X7R	50V	47,000	± 10%	0.50 ± 0.05
C1005X7R1H473M	X7R	50V	47,000	± 20%	0.50 ± 0.05
C1005X7R1H683K	X7R	50V	68,000	± 10%	0.50 ± 0.05
C1005X7R1H683M	X7R	50V	68,000	± 20%	0.50 ± 0.05
C1005X7R1H104K	X7R	50V	100,000	± 10%	0.50 ± 0.05
C1005X7R1H104M	X7R	50V	100,000	± 20%	0.50 ± 0.05
C1005X7R1V103K	X7R	35V	10,000	± 10%	0.50 ± 0.05
C1005X7R1V103M	X7R	35V	10,000	± 20%	0.50 ± 0.05
C1005X7R1V223K	X7R	35V	22,000	± 10%	0.50 ± 0.05
C1005X7R1V223M	X7R	35V	22,000	± 20%	0.50 ± 0.05
C1005X7R1V473K	X7R	35V	47,000	± 10%	0.50 ± 0.05
C1005X7R1V473M	X7R	35V	47,000	± 20%	0.50 ± 0.05
C1005X7R1V104K	X7R	35V	100,000	± 10%	0.50 ± 0.05
C1005X7R1V104M	X7R	35V	100,000	± 20%	0.50 ± 0.05
C1005X7R1E102K	X7R	25V	1,000	± 10%	0.50 ± 0.05
C1005X7R1E102M	X7R	25V	1,000	± 20%	0.50 ± 0.05



Capacitance Range Table

C1005 [EIA CC0402]

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C1005X7R1E152K	X7R	25V	1,500	± 10%	0.50 ± 0.05
C1005X7R1E152M	X7R	25V	1,500	± 20%	0.50 ± 0.05
C1005X7R1E222K	X7R	25V	2,200	± 10%	0.50 ± 0.05
C1005X7R1E222M	X7R	25V	2,200	± 20%	0.50 ± 0.05
C1005X7R1E332K	X7R	25V	3,300	± 10%	0.50 ± 0.05
C1005X7R1E332M	X7R	25V	3,300	± 20%	0.50 ± 0.05
C1005X7R1E472K	X7R	25V	4,700	± 10%	0.50 ± 0.05
C1005X7R1E472M	X7R	25V	4,700	± 20%	0.50 ± 0.05
C1005X7R1E682K	X7R	25V	6,800	± 10%	0.50 ± 0.05
C1005X7R1E682M	X7R	25V	6,800	± 20%	0.50 ± 0.05
C1005X7R1E103J	X7R	25V	10,000	± 5%	0.50 ± 0.05
C1005X7R1E103K	X7R	25V	10,000	± 10%	0.50 ± 0.05
C1005X7R1E103M	X7R	25V	10,000	± 20%	0.50 ± 0.05
C1005X7R1E153K	X7R	25V	15,000	± 10%	0.50 ± 0.05
C1005X7R1E153M	X7R	25V	15,000	± 20%	0.50 ± 0.05
C1005X7R1E223K	X7R	25V	22,000	± 10%	0.50 ± 0.05
C1005X7R1E223M	X7R	25V	22,000	± 20%	0.50 ± 0.05
C1005X7R1E333K	X7R	25V	33,000	± 10%	0.50 ± 0.05
C1005X7R1E333M	X7R	25V	33,000	± 20%	0.50 ± 0.05
C1005X7R1E473K	X7R	25V	47,000	± 10%	0.50 ± 0.05
C1005X7R1E473M	X7R	25V	47,000	± 20%	0.50 ± 0.05
C1005X7R1E683K	X7R	25V	68,000	± 10%	0.50 ± 0.05
C1005X7R1E683M	X7R	25V	68,000	± 20%	0.50 ± 0.05
C1005X7R1E104K	X7R	25V	100,000	± 10%	0.50 ± 0.05
C1005X7R1E104M	X7R	25V	100,000	± 20%	0.50 ± 0.05
C1005X7R1C103K	X7R	16V	10,000	± 10%	0.50 ± 0.05
C1005X7R1C103M	X7R	16V	10,000	± 20%	0.50 ± 0.05
C1005X7R1C153K	X7R	16V	15,000	± 10%	0.50 ± 0.05
C1005X7R1C153M	X7R	16V	15,000	± 20%	0.50 ± 0.05
C1005X7R1C223K	X7R	16V	22,000	± 10%	0.50 ± 0.05
C1005X7R1C223M	X7R	16V	22,000	± 20%	0.50 ± 0.05
C1005X7R1C333K	X7R	16V	33,000	± 10%	0.50 ± 0.05
C1005X7R1C333M	X7R	16V	33,000	± 20%	0.50 ± 0.05
C1005X7R1C473K	X7R	16V	47,000	± 10%	0.50 ± 0.05
C1005X7R1C473M	X7R	16V	47,000	± 20%	0.50 ± 0.05
C1005X7R1C683K	X7R	16V	68,000	± 10%	0.50 ± 0.05
C1005X7R1C683M	X7R	16V	68,000	± 20%	0.50 ± 0.05
C1005X7R1C104K	X7R	16V	100,000	± 10%	0.50 ± 0.05
C1005X7R1C104M	X7R	16V	100,000	± 20%	0.50 ± 0.05
C1005X7R1C154K	X7R	16V	150,000	± 10%	0.50 ± 0.05
C1005X7R1C154M	X7R	16V	150,000	± 20%	0.50 ± 0.05
C1005X7R1C224K	X7R	16V	220,000	± 10%	0.50 ± 0.05
C1005X7R1C224M	X7R	16V	220,000	± 20%	0.50 ± 0.05
C1005X7R1A473K	X7R	10V	47,000	± 10%	0.50 ± 0.05



Capacitance Range Table

C1005 [EIA CC0402]

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, ±15%), X6S(-55 to 105°C, ±22%), X5R (-55 to +85°C, ±15%)

TDK Part Number (Ordering Code)	Temperature Characteristics	Rated Voltage	Capacitance (pF)	Capacitance Tolerance	Thickness (mm)
C1005X7R1A473M	X7R	10V	47,000	± 20%	0.50 ± 0.05
C1005X7R1A683K	X7R	10V	68,000	± 10%	0.50 ± 0.05
C1005X7R1A683M	X7R	10V	68,000	± 20%	0.50 ± 0.05
C1005X7R1A104K	X7R	10V	100,000	± 10%	0.50 ± 0.05
C1005X7R1A104M	X7R	10V	100,000	± 20%	0.50 ± 0.05
C1005X7R1A224K	X7R	10V	220,000	± 10%	0.50 ± 0.05
C1005X7R1A224M	X7R	10V	220,000	± 20%	0.50 ± 0.05
C1005X6S1H103K	X6S	50V	10,000	± 10%	0.50 ± 0.05
C1005X6S1H103M	X6S	50V	10,000	± 20%	0.50 ± 0.05
C1005X6S1H223K	X6S	50V	22,000	± 10%	0.50 ± 0.05
C1005X6S1H223M	X6S	50V	22,000	± 20%	0.50 ± 0.05
C1005X6S1H473K	X6S	50V	47,000	± 10%	0.50 ± 0.05
C1005X6S1H473M	X6S	50V	47,000	± 20%	0.50 ± 0.05
C1005X6S1H104K	X6S	50V	100,000	± 10%	0.50 ± 0.05
C1005X6S1H104M	X6S	50V	100,000	± 20%	0.50 ± 0.05
C1005X6S1V104K	X6S	35V	100,000	± 10%	0.50 ± 0.05
C1005X6S1V104M	X6S	35V	100,000	± 20%	0.50 ± 0.05
C1005X6S1E104K	X6S	25V	100,000	± 10%	0.50 ± 0.05
C1005X6S1E104M	X6S	25V	100,000	± 20%	0.50 ± 0.05
C1005X6S1E224K	X6S	25V	220,000	± 10%	0.50 ± 0.05
C1005X6S1E224M	X6S	25V	220,000	± 20%	0.50 ± 0.05
C1005X6S1C224K	X6S	16V	220,000	± 10%	0.50 ± 0.05
C1005X6S1C224M	X6S	16V	220,000	± 20%	0.50 ± 0.05
C1005X6S1A474K	X6S	10V	470,000	± 10%	0.50 ± 0.05
C1005X6S1A474M	X6S	10V	470,000	± 20%	0.50 ± 0.05
C1005X6S1A105K	X6S	10V	1,000,000	± 10%	0.50 ± 0.05
C1005X6S1A105M	X6S	10V	1,000,000	± 20%	0.50 ± 0.05
C1005X6S0J474K	X6S	6.3V	470,000	± 10%	0.50 ± 0.05
C1005X6S0J474M	X6S	6.3V	470,000	± 20%	0.50 ± 0.05
C1005X6S0J105K	X6S	6.3V	1,000,000	± 10%	0.50 ± 0.05
C1005X6S0J105M	X6S	6.3V	1,000,000	± 20%	0.50 ± 0.05
C1005X6S0G105K	X6S	4V	1,000,000	± 10%	0.50 ± 0.05
C1005X6S0G105M	X6S	4V	1,000,000	± 20%	0.50 ± 0.05
C1005X6S0G225M	X6S	4V	2,200,000	± 20%	0.50 ± 0.05
C1005X5R1H221K	X5R	50V	220	± 10%	0.50 ± 0.05
C1005X5R1H331K	X5R	50V	330	± 10%	0.50 ± 0.05
C1005X5R1H471K	X5R	50V	470	± 10%	0.50 ± 0.05
C1005X5R1H681K	X5R	50V	680	± 10%	0.50 ± 0.05
C1005X5R1H102K	X5R	50V	1,000	± 10%	0.50 ± 0.05
C1005X5R1H152K	X5R	50V	1,500	± 10%	0.50 ± 0.05
C1005X5R1H222K	X5R	50V	2,200	± 10%	0.50 ± 0.05
C1005X5R1H332K	X5R	50V	3,300	± 10%	0.50 ± 0.05
C1005X5R1H472K	X5R	50V	4,700	± 10%	0.50 ± 0.05
C1005X5R1H682K	X5R	50V	6,800	± 10%	0.50 ± 0.05