



element14

EN - For pricing and availability in your local country please visit one of the below links:

DE - Informationen zu Preisen und Verfügbarkeit in Ihrem Land erhalten Sie über die unten aufgeführten Links:

FR - Pour connaître les tarifs et la disponibilité dans votre pays, cliquez sur l'un des liens suivants:

[MC0402B471J500CT](#)

[MC1206N221J501CT](#)

[MC0603B683K500CT](#)

EN

This Datasheet is presented by
the manufacturer

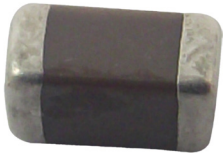
DE

Dieses Datenblatt wird vom
Hersteller bereitgestellt

FR

Cette fiche technique est
présentée par le fabricant

**RoHS
Compliant**



Description

MLCC consists of a conducting material and electrodes. To manufacture a chip-type SMT and achieve miniaturization, high density and high efficiency, ceramic condensers are used. WTC's MLCC is made by NP0, X7R and X5R dielectric material and which provides product with high electrical precision, stability and reliability.

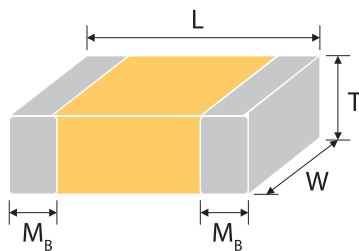
Features:

- A wide selection of sizes is available (0402 to 1210)
- High capacitance in given case size
- Capacitor with lead-free termination (pure Tin)

Applications:

- For general digital circuit
- For power supply bypass capacitors
- For consumer electronics
- For telecommunication

External Dimensions:



The outline of MLCC

Size Inch (mm)	L (mm)	W (mm)	T (mm)/Symbol		Remark	MB (mm)
0402 (1005)	1 ±0.05	0.5 ±0.05	0.5 ±0.05	N	#	0.25 +0.05/-0.1
0603 (1608)	1.6 ±0.1	0.8 ±0.1	0.8 ±0.07	S	-	0.4 ±0.15
	1.6 +0.15/-0.1	0.8 +0.15/-0.1	0.8 +0.15/-0.1	X	-	
0805 (2012)	2 ±0.15	1.25 ±0.1	0.6 ±0.1	A	-	0.5 ±0.2
			0.8 ±0.1	B	-	
			1.25 ±0.1	D	#	
	2 ±0.2	1.25 ±0.2	1.25 ±0.2	I	#	
1206 (3216)	3.2 ±0.15	1.6 ±0.15	0.8 ±0.1	B	-	0.6 ±0.2
			0.95 ±0.1	C	-	
			1.15 ±0.15	J	#	
			1.25 ±0.1	D	#	
			1.6 ±0.2	G	#	
	3.2 +0.3/-0.1	1.6 +0.3/0.1	1.6 +0.3/-0.1	P	#	
1210 (3225)	3.2 ±0.3	2.5 ±0.2	0.95 ±0.1	C	#	0.75 ±0.25
			1.25 ±0.1	D	#	
	3.2 ±0.4	2.5 ±0.3	1.6 ±0.2	G	#	
			2 ±0.2	K	#	
			2.5 ±0.3	M	#	
1812 (4532)	4.5 ±0.4	3.2 ±0.3	1.25 ±0.1	D	#	0.75 ±0.25
			2 ±0.2	K	#	

Reflow soldering only is recommended.

General Electrical Data:

Dielectric	NPO	X7R	Y5V
Size	0402, 0603, 0805, 1206, 1210, 1812		
Capacitance*	0.5pF to 0.1 μ F	100pF to 0.82 μ F	10nF to 0.68 μ F
Capacitance tolerance**	Cap \leq 5pF: B (\pm 0.1pF), C (\pm 0.25pF) 5pF<Cap<10pF: C (\pm 0.25pF), D (\pm 0.5pF) Cap \geq 10pF: F (\pm 1%), G (\pm 2%), J (\pm 5%), K (\pm 10%)	J (\pm 5%), K (\pm 10%), M (\pm 20%)	M (\pm 20%), Z (-20/+80%)
Rated voltage (WVDC)	10V, 16V, 25V, 50V, 100V	6.3V, 10V, 16V, 25V, 50V, 100V	
DF (Tan δ)*	Cap<30pF: Q \geq 400+20C Cap \geq 30pF: Q \geq 1000	Note 1	
Operating temperature	-55°C to +125°C		-55°C to +85°C
Capacitance change	\pm 30ppm	\pm 15%	
Termination	Ni/Sn (lead-free termination)		

* Measured at the condition of 30~70% related humidity.

NPO: Apply 1 \pm 0.2Vrms, 1MHz \pm 10% for Cap \leq 1,000pF and 1 \pm 0.2Vrms, 1kHz \pm 10% for Cap>1,000pF, 25°C at ambient temperature

X7R: Apply 1.0 \pm 0.2Vrms, 1.0kHz \pm 10%, at 25°C ambient temperature.

Y5V: Apply 1.0 \pm 0.2Vrms, 1.0kHz \pm 10%, at 20°C ambient temperature.

** Preconditioning for Class II MLCC : Perform a heat treatment at 150 \pm 10°C for 1 hour, then leave in ambient condition for 24 \pm 2 hours before measurement.

Note 1:

X7R/X5R

Rated vol.	D.F. \leq	Exception of D.F. \leq	
		D.F. \leq	Capacitance
\geq 50V	\leq 2.5%	\leq 3%	0201(50V); 0603 \geq 0.047 μ F; 0805 \geq 0.18 μ F; 1206 \geq 0.47 μ F
		\leq 5%	1210 \geq 4.7 μ F
		\leq 10%	0603 \geq 1 μ F; 0805 \geq 1 μ F; 1206 \geq 4.7 μ F; 1210 \geq 10 μ F
35V	\leq 3.5%	\leq 10%	0805 \geq 2.2 μ F; 1210 \geq 10 μ F
25V	\leq 3.5%	\leq 5%	0201 \geq 0.01 μ F; 0805 \geq 1 μ F; 1210 \geq 10 μ F
		\leq 7%	0603 \geq 0.33 μ F; 1206 \geq 4.7 μ F
		\leq 10%	0402 \geq 0.10 μ F; 0603 \geq 0.47 μ F; 0805 \geq 2.2 μ F; 1206 \geq 6.8 μ F; 1210 \geq 22 μ F
16V	\leq 3.5%	\leq 5%	0201 \geq 0.01 μ F; 0402 \geq 0.033 μ F; 0805 \geq 0.68 μ F; 1206 \geq 2.2 μ F; 1210 \geq 4.7 μ F
		\leq 10%	0402 \geq 0.47 μ F; 0603 \geq 0.68 μ F; 0805 \geq 2.2 μ F; 1206 \geq 4.7 μ F; 1210 \geq 22 μ F; TT series
10V	\leq 5%	\leq 10%	0402 \geq 0.33 μ F; 0603 \geq 0.33 μ F; 0805 \geq 2.2 μ F; 1206 \geq 2.2 μ F; 1210 \geq 22 μ F; TT series
		\leq 15%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F
6.3V	\leq 10%	\leq 15%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F; 0603 \geq 10 μ F; 0805 \geq 4.7 μ F; 1206 \geq 47 μ F; 1210 \geq 100 μ F
		\leq 20%	0402 \geq 2.2 μ F
4V	\leq 15%	-	-

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Y5V

Rated vol.	D.F. ≤	Exception of D.F. ≤	
≥50V	5%	7%	0603≥0.1μF; 0805≥0.47μF; 1206≥4.7μF
35V	7%	-	-
25V	5%	7%	0402≥0.047μF; 0603≥0.1μF; 0805≥0.33μF; 1206≥1μF; 1210≥4.7μF
		9%	0402≥0.068μF; 0603≥0.47μF; 1206≥4.7μF; 1210≥22μF
16V (C<1.0μF)	7%	9%	0402≥0.068μF; 0603≥0.68μF
		12.5%	0402≥0.22μF
16V (C≥1.0μF)	9%	12.5%	0603≥2.2μF; 0805≥3.3μF; 1206≥10μF; 1210≥22μF; 1812≥47μF
10V	12.5%	20%	0402≥0.47μF
6.3V	20%	-	-

Capacitance Range (NPO Dielectric)

Dielectric		NPO														
		0402					0603					0805				
Size		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Rated Voltage		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Capacitance	0.1pF (0R1)	N	N	N	N											
	0.2pF (0R2)	N	N	N	N											
	0.3pF (0R3)	N	N	N	N											
	0.4pF (0R4)	N	N	N	N											
	0.5pF (0R5)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	0.6pF (0R6)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	0.7pF (0R7)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	0.8pF (0R8)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	0.9pF (0R9)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	1.0pF (1R0)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	1.2pF (1R2)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	1.5pF (1R5)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	1.8pF (1R8)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	2.2pF (2R2)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	2.7pF (2R7)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	3.3pF (3R3)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	3.9pF (3R9)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	4.7pF (4R7)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
5.6pF (5R6)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A	
6.8pF (6R8)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A	
8.2pF (8R2)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A	
10pF (100)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A	
12pF (120)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A	



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Capacitance Range (NP0 Dielectric)

Dielectric		NP0														
Size		0402					0603					0805				
Rated Voltage		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Capacitance	15pF (150)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	18pF (180)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	22pF (220)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	27pF (270)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	33pF (330)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	39pF (390)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	47pF (470)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	56pF (560)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	68pF (680)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	82pF (820)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	100pF (101)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	120pF (121)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	150pF (151)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	180pF (181)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	220pF (221)	N	N	N	N	N	S	S	S	S	S	A	A	A	A	A
	270pF (271)	N	N	N	N		S	S	S	S	S	A	A	A	A	A
	330pF (331)	N	N	N	N		S	S	S	S	S	A	A	A	A	A
	390pF (391)	N	N	N	N		S	S	S	S	S	B	B	B	B	B
	470pF (471)	N	N	N	N		S	S	S	S	S	B	B	B	B	B
	560pF (561)	N	N	N	N		S	S	S	S	S	B	B	B	B	B
	680pF (681)	N	N	N	N		S	S	S	S	S	B	B	B	B	B
	820pF (821)	N	N	N	N		S	S	S	S	S	B	B	B	B	B
	1,000pF (102)	N	N	N	N		S	S	S	S	S	B	B	B	B	B
	1,200pF (122)						X	X	X	X		B	B	B	B	B
	1,500pF (152)						X	X	X	X		B	B	B	B	B
	1,800pF (182)						X	X	X	X		B	B	B	B	B
	2,200pF (222)						X	X	X	X		B	B	B	B	B
	2,700pF (272)						X	X	X	X		D	D	D	D	D
3,300pF (332)						X	X	X	X		D	D	D	D	D	
3,900pF (392)											D	D	D	D	D	
4,700pF (472)											D	D	D	D	D	
5,600pF (562)											D	D	D	D		
6,800pF (682)											D	D	D	D		
8,200pF (822)											D	D	D	D		



Capacitance Range (NP0 Dielectric)

Dielectric		NP0														
Size		0402					0603					0805				
Rated Voltage		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Capacitance	0.010µF (103)											D	D	D	D	
	0.012µF (123)											D^	D^			
	0.018µF (183)											D	D	D	D	D
	0.022µF (223)											D	D	D	D	D

1. The letter in cell is expressed the symbol of product thickness.
2. The letter in cell with “^” mark is expressed product with Ag/Ni/Sn terminations

Dielectric		NP0												
Size		1206					1210					1812		
Rated Voltage		10	16	25	50	100	10	16	25	50	100	16	50	100
Capacitance	1.0pF (1R0)													
	1.2pF (1R2)	B	B	B	B	B								
	1.5pF (1R5)	B	B	B	B	B								
	1.8pF (1R8)	B	B	B	B	B								
	2.2pF (2R2)	B	B	B	B	B								
	2.7pF (2R7)	B	B	B	B	B								
	3.3pF (3R3)	B	B	B	B	B								
	3.9pF (3R9)	B	B	B	B	B								
	4.7pF (4R7)	B	B	B	B	B								
	5.6pF (5R6)	B	B	B	B	B								
	6.8pF (6R8)	B	B	B	B	B								
	8.2pF (8R2)	B	B	B	B	B								
	10pF (100)	B	B	B	B	B	C	C	C	C	C	D	D	D
	12pF (120)	B	B	B	B	B	C	C	C	C	C	D	D	D
	15pF (150)	B	B	B	B	B	C	C	C	C	C	D	D	D
	18pF (180)	B	B	B	B	B	C	C	C	C	C	D	D	D
	22pF (220)	B	B	B	B	B	C	C	C	C	C	D	D	D
	27pF (270)	B	B	B	B	B	C	C	C	C	C	D	D	D
	33pF (330)	B	B	B	B	B	C	C	C	C	C	D	D	D
	39pF (390)	B	B	B	B	B	C	C	C	C	C	D	D	D
47pF (470)	B	B	B	B	B	C	C	C	C	C	D	D	D	
56pF (560)	B	B	B	B	B	C	C	C	C	C	D	D	D	
68pF (680)	B	B	B	B	B	C	C	C	C	C	D	D	D	
82pF (820)	B	B	B	B	B	C	C	C	C	C	D	D	D	
100pF (101)	B	B	B	B	B	C	C	C	C	C	D	D	D	

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Dielectric		NPO												
Size		1206					1210					1812		
Rated Voltage		10	16	25	50	100	10	16	25	50	100	16	50	100
Capacitance	120pF (121)	B	B	B	B	B	C	C	C	C	C	D	D	D
	150pF (151)	B	B	B	B	B	C	C	C	C	C	D	D	D
	180pF (181)	B	B	B	B	B	C	C	C	C	C	D	D	D
	220pF (221)	B	B	B	B	B	C	C	C	C	C	D	D	D
	270pF (271)	B	B	B	B	B	C	C	C	C	C	D	D	D
	330pF (331)	B	B	B	B	B	C	C	C	C	C	D	D	D
	390pF (391)	B	B	B	B	B	C	C	C	C	C	D	D	D
	470pF (471)	B	B	B	B	B	C	C	C	C	C	D	D	D
	560pF (561)	B	B	B	B	B	C	C	C	C	C	D	D	D
	680pF (681)	B	B	B	B	B	C	C	C	C	C	D	D	D
	820pF (821)	B	B	B	B	B	C	C	C	C	C	D	D	D
	1,000pF (102)	B	B	B	B	B	C	C	C	C	C	D	D	D
	1,200pF (122)	B	B	B	B	B	C	C	C	C	C	D	D	D
	1,500pF (152)	B	B	B	B	B	C	C	C	C	C	D	D	D
	1,800pF (182)	B	B	B	B	B	C	C	C	C	C	D	D	D
	2,200pF (222)	B	B	B	B	B	C	C	C	C	C	D	D	D
	2,700pF (272)	B	B	B	B	B	C	C	C	C	C	D	D	D
	3,300pF (332)	B	B	B	B	B	C	C	C	C	C	D	D	D
	3,900pF (392)	B	B	B	B	B	C	C	C	C	C	D	D	D
	4,700pF (472)	B	B	B	B	B	C	C	C	C	C	D	D	D
	5,600pF (562)	B	B	B	B	B	C	C	C	C	C	D	D	D
	6,800pF (682)	C	C	C	C	C	C	C	C	C	C	D	D	D
	8,200pF (822)	D	D	D	D	D	C	C	C	C	C	D	D	D
	0.010μF (103)	D	D	D	D	D	C	C	C	C	C	D	D	D
	0.012μF (123)	D^	D^				C	C	D	D	D	D	D	D
	0.015μF (153)	D^	D^				C	C	D	D	D	D	D	D
	0.018μF (183)	D^	D^									D	D	D
	0.022μF (223)	D^	D^									D	D	D
	0.027μF (273)	D^	D^									D	D	D
	0.033μF (333)	D^	D^									D	D	D
	0.039μF (393)	G^	G^	J	J									
	0.047μF (473)	J	J	J	J									
0.056μF (563)	J	J	J	J										
0.068μF (683)	G	G	G	G										
0.082μF (823)	G	G	G	G										
0.1μF (104)	G	G	G	G										



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



1. The letter in cell is expressed the symbol of product thickness.
2. The letter in cell with “^” mark is expressed product with Ag/Ni/Sn terminations.

Capacitance Range (X7R Dielectric)

Dielectric		X7R													
Size		0402				0603					0805				
Rated Voltage (V DC)		10	16	25	50	10	16	25	50	100	10	16	25	50	100
Capacitance	100pF (101)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	120pF (121)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	150pF (151)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	180pF (181)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	220pF (221)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	270pF (271)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	330pF (331)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	390pF (391)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	470pF (471)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	560pF (561)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	680pF (681)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	820pF (821)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	1,000pF (102)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	1,200pF (122)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	1,500pF (152)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	1,800pF (182)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	2,200pF (222)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	2,700pF (272)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	3,300pF (332)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	3,900pF (392)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	4,700pF (472)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	5,600pF (562)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	6,800pF (682)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
	8,200pF (822)	N	N	N	N	S	S	S	S	S	B	B	B	B	B
0.010μF (103)	N	N	N	N	S	S	S	S	S	B	B	B	B	B	
0.012μF (123)	N	N	N		S	S	S	S		B	B	B	B	B	
0.015μF (153)	N	N	N		S	S	S	S		B	B	B	B	B	
0.018μF (183)	N	N	N		S	S	S	S		B	B	B	B	B	
0.022μF (223)	N	N	N		S	S	S	S		B	B	B	B	B	
0.027μF (273)	N	N	N		S	S	S	S		B	B	B	B	D	
0.033μF (333)	N	N	N		S	S	S	X		B	B	B	B	D	



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Dielectric		X7R													
Size		0402				0603					0805				
Rated Voltage (V DC)		10	16	25	50	10	16	25	50	100	10	16	25	50	100
Capacitance	0.039µF (393)	N	N	N		S	S	S	X		B	B	B	B	D
	0.047µF (473)	N	N	N		S	S	S	X		B	B	B	B	D
	0.056µF (563)	N	N			S	S	S	X		B	B	B	B	D
	0.068µF (683)	N	N			S	S	S	X		B	B	B	B	D
	0.082µF (823)	N	N			S	S	S	X		B	B	B	B	D
	0.10µF (104)	N	N			S	S	S	X		B	B	B	B	D
	0.12µF (124)					S	S	X			B	B	B	D	
	0.15µF (154)					S	S	X			D	D	D	D	
	0.18µF (184)					S	S	X			D	D	D	D	
	0.22µF (224)					S	S	X			D	D	D	D	
	0.27µF (274)					X	X	X			D	D	D	I	
	0.33µF (334)					X	X	X			D	D	D	I	
	0.39µF (394)					X	X	X			D	D	D	I	
	0.47µF (474)					X	X	X			D	D	D	I	
	0.56µF (564)					X	X				D	D	D		
0.68µF (684)					X	X				D	D	D			
0.82µF (824)					X	X				D	D	D			

1. The letter in cell is expressed the symbol of product thickness.

Capacitance Range (X7R Dielectric)

Dielectric		X7R														
Size		1206					1210					1812				
Rated Voltage		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Capacitance	100pF (101)															
	120pF (121)															
	150pF (151)	B	B	B	B	B										
	180pF (181)	B	B	B	B	B										
	220pF (221)	B	B	B	B	B										
	270pF (271)	B	B	B	B	B										
	330pF (331)	B	B	B	B	B										
	390pF (391)	B	B	B	B	B										
	470pF (471)	B	B	B	B	B										
	560pF (561)	B	B	B	B	B										
	680pF (681)	B	B	B	B	B										
	820pF (821)	B	B	B	B	B										
	1,000pF (102)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D



Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Dielectric		X7R														
		1206					1210					1812				
Size		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Rated Voltage		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Capacitance	1,200pF (122)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	1,500pF (152)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	1,800pF (182)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	2,200pF (222)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	2,700pF (272)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	3,300pF (332)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	3,900pF (392)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	4,700pF (472)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	5,600pF (562)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	6,800pF (682)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	8,200pF (822)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.010μF (103)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.012μF (123)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.015μF (153)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.018μF (183)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.022μF (223)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.027μF (273)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.033μF (333)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.039μF (393)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.047μF (473)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.056μF (563)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.068μF (683)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.082μF (823)	B	B	B	B	D	C	C	C	C	C	D	D	D	D	D
	0.10μF (104)	B	B	B	B	D	C	C	C	C	C	D	D	D	D	D
	0.12μF (124)	B	B	B	B	D	C	C	C	C	C	D	D	D	D	D
	0.15μF (154)	C	C	C	C	G	C	C	C	C	D	D	D	D	D	D
	0.18μF (184)	C	C	C	C	G	C	C	C	C	D	D	D	D	D	D
	0.22μF (224)	C	C	C	C	G	C	C	C	C	D	D	D	D	D	D
0.27μF (274)	C	C	C	D	G	C	C	C	C	G	D	D	D	D	D	
0.33μF (334)	C	C	C	D	G	C	C	C	D	G	D	D	D	D	D	
0.39μF (394)	C	C	J	P	G	C	C	C	D	M	D	D	D	D	D	
0.47μF (474)	J	J	J	P	G	C	C	C	D	M	D	D	D	D	K	
0.56μF (564)	J	J	J	P	P	D	D	D	D	M	D	D	D	D	K	
0.68μF (684)	J	J	J	P	P	D	D	D	D	K	D	D	D	K	K	
0.82μF (824)	J	J	J	P	P	D	D	D	D	K	D	D	D	K	K	

1. The letter in cell is expressed the symbol of product thickness.



Capacitance Range (Y5V Dielectric)

Dielectric		Y5V													
Size		0402					0603				0805				
Rated Voltage		6.3	10	16	25	50	10	16	25	50	10	16	25	50	100
Capacitance	0.010µF (103)		N	N	N	N	S	S	S	S	A	A	A	A	B
	0.015µF (153)		N	N	N	N	S	S	S	S	A	A	A	A	B
	0.022µF (223)		N	N	N	N	S	S	S	S	A	A	A	A	B
	0.033µF (333)		N	N	N	N	S	S	S	S	A	A	A	A	B
	0.047µF (473)		N	N	N		S	S	S	S	A	A	A	A	B
	0.068µF (683)		N	N	N		S	S	S	S	A	A	A	A	B
	0.10µF (104)		N	N	N		S	S	S	S	A	A	A	A	B
	0.15µF (154)		N	N			S	S	S	S	A	A	A	A	
	0.22µF (224)	N	N	N	N		S	S	S	S	A	A	A	A	
	0.33µF (334)	N	N	N			S	S	S		B	B	B	B	
	0.47µF (474)	N	N	N			S	S	X	S	B	B	B	B	
0.68µF (684)	N					S	X			B	B	D	D		

Dielectric		Y5V														
Size		1206					1210					1812				
Rated Voltage		10	16	25	50	100	10	16	25	50	100	10	16	25	50	100
Capacitance	0.010µF (103)	B	B	B	B	B					C					D
	0.015µF (153)	B	B	B	B	B					C					D
	0.022µF (223)	B	B	B	B	B					C					D
	0.033µF (333)	B	B	B	B	B					C					D
	0.047µF (473)	B	B	B	B	B					C					D
	0.068µF (683)	B	B	B	B	B					C					D
	0.10µF (104)	B	B	B	B	B	C	C	C	C	C	D	D	D	D	D
	0.15µF (154)	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D
	0.22µF (224)	B	B	B	B	C	C	C	C	C	C	D	D	D	D	D
	0.33µF (334)	B	B	B	B		C	C	C	C	C	D	D	D	D	D
	0.47µF (474)	B	B	B	B		C	C	C	C		D	D	D	D	D
0.68µF (684)	B	B	B	B		C	C	C	C		D	D	D	D	D	

Packaging Dimension And Quantity:

Size	Thickness (mm)/Symbol		Paper tape		Plastic tape	
			7" reel	13" reel	7" reel	13" reel
0402 (1005)	0.5 ±0.05	N	10k	50k	-	-
0603 (1608)	0.8 ±0.07	S	4k	15k	-	-
	0.8 +0.15/-0.1	X	4k	15k	-	-
0805 (2012)	0.6 ±0.1	A	4k	15k	-	-
	0.8 ±0.1	B	4k	15k	-	-
	1.25 ±0.1	D	-	-	3k	10k
	1.25 ±0.2	I	-	-	3k	10k
1206 (3216)	0.8 ±0.1	B	4k	15k	-	-
	0.95 ±0.1	C	-	-	3k	10k
	1.15 ±0.15	J	-	-	3k	10k
	1.25 ±0.1	D	-	-	3k	10k
	1.6 ±0.2	G	-	-	2k	10k
	1.6 +0.3/-0.1	P	-	-	2k	9k
1210 (3225)	0.95 ±0.1	C	-	-	3k	10k
	1.25 ±0.1	D	-	-	3k	10k
	1.6 ±0.2	G	-	-	2k	-
	2 ±0.2	K	-	-	1k	6k
	2.5 ±0.3	M	-	-	1k	6k
1812 (4532)	1.25 ±0.1	D	-	-	1k	5k
	2 ±0.2	K	-	-	1k	-

Unit : pieces

Reliability Test Conditions and Requirements:

No	Item	Test Condition	Requirements
1	Visual and Mechanical	-	No remarkable defect. Dimensions to conform to individual specification sheet.

No	Item	Test Condition	Requirements																																														
2	Capacitance		Shall not exceed the limits given in the detailed spec. NPO: Cap \geq 30pF, Q \geq 1000; Cap $<$ 30pF, Q \geq 400+20C X7R, X5R:																																														
3	Q/ D.F. (Dissipation Factor)	Class I: NPO Cap \leq 1,000pF 1 \pm 0.2Vrms, 1MHz \pm 10% Cap $>$ 1,000pF 1 \pm 0.2Vrms, 1KHz \pm 10% Class II: X7R, X5R, Y5V Cap \leq 10 μ F, 1 \pm 0.2Vrms, 1kHz \pm 10% ** Cap $>$ 10 μ F, 0.5 \pm 0.2Vrms, 120Hz \pm 20% ** Test condition: 0.5 \pm 0.2Vrms, 1KHz \pm 10% X7R: 0603 \geq 225(10V), 0805=106(6.3V&10V) X5R: 01R5 \geq 103, 0201 \geq 224 (6.3V), 0402 \geq 475 (6.3V), 0402 \geq 225(10V), 0603=106 (6.3V) TT18X \geq 475(10V) , TT15X series	<table border="1"> <thead> <tr> <th>Rated vol.</th> <th>D.F.\leq</th> <th colspan="2">Exception of D.F. \leq</th> </tr> </thead> <tbody> <tr> <td rowspan="3">\geq50V</td> <td rowspan="3">\leq2.5%</td> <td>\leq3%</td> <td>0201(50V); 0603\geq0.047μF; 0805\geq0.18μF;1206\geq0.47μF</td> </tr> <tr> <td>\leq5%</td> <td>1210\geq4.7μF</td> </tr> <tr> <td>\leq10%</td> <td>0603\geq1μF; 0805\geq1μF;1206\geq4.7μF; 1210\geq10μF</td> </tr> <tr> <td>35V</td> <td>\leq3.5%</td> <td>\leq10%</td> <td>0805\geq2.2μF; 1210\geq10μF</td> </tr> <tr> <td rowspan="3">25V</td> <td rowspan="3">\leq3.5%</td> <td>\leq5%</td> <td>0201\geq0.01μF;0805\geq1μF; 1210\geq10μF</td> </tr> <tr> <td>\leq7%</td> <td>0603\geq0.33μF; 1206\geq4.7μF</td> </tr> <tr> <td>\leq10%</td> <td>0402\geq0.10μF;0603\geq0.47μF; 0805\geq2.2μF; 1206\geq6.8μF ; 1210\geq22μF; TT series</td> </tr> <tr> <td rowspan="2">16V</td> <td rowspan="2">\leq3.5%</td> <td>\leq5%</td> <td>0201\geq0.01μF; 0402\geq0.033μF; 0805\geq0.68μF;1206\geq2.2μF; 1210\geq4.7μF</td> </tr> <tr> <td>\leq10%</td> <td>0402\geq0.47μF; 0603\geq0.68μF; 0805\geq2.2μF; 1206\geq4.7μF; 1210\geq22μF; TT series</td> </tr> <tr> <td rowspan="2">10V</td> <td rowspan="2">\leq5%</td> <td>\leq10%</td> <td>0402\geq0.33μF; 0603\geq0.33μF; 0805\geq2.2μF; 1206\geq2.2μF; 1210\geq22μF; TT series</td> </tr> <tr> <td>\leq15%</td> <td>0201\geq0.1μF; 0402\geq1μF</td> </tr> <tr> <td rowspan="2">6.3V</td> <td rowspan="2">\leq10%</td> <td>\leq15%</td> <td>0201\geq0.1μF; 0402\geq1μF; 0603\geq10μF; 0805\geq4.7μF; 1206\geq47μF; 1210\geq100μF</td> </tr> <tr> <td>\leq20%</td> <td>0402\geq2.2μF</td> </tr> <tr> <td>4V</td> <td>\leq15%</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated vol.	D.F. \leq	Exception of D.F. \leq		\geq 50V	\leq 2.5%	\leq 3%	0201(50V); 0603 \geq 0.047 μ F; 0805 \geq 0.18 μ F;1206 \geq 0.47 μ F	\leq 5%	1210 \geq 4.7 μ F	\leq 10%	0603 \geq 1 μ F; 0805 \geq 1 μ F;1206 \geq 4.7 μ F; 1210 \geq 10 μ F	35V	\leq 3.5%	\leq 10%	0805 \geq 2.2 μ F; 1210 \geq 10 μ F	25V	\leq 3.5%	\leq 5%	0201 \geq 0.01 μ F;0805 \geq 1 μ F; 1210 \geq 10 μ F	\leq 7%	0603 \geq 0.33 μ F; 1206 \geq 4.7 μ F	\leq 10%	0402 \geq 0.10 μ F;0603 \geq 0.47 μ F; 0805 \geq 2.2 μ F; 1206 \geq 6.8 μ F ; 1210 \geq 22 μ F; TT series	16V	\leq 3.5%	\leq 5%	0201 \geq 0.01 μ F; 0402 \geq 0.033 μ F; 0805 \geq 0.68 μ F;1206 \geq 2.2 μ F; 1210 \geq 4.7 μ F	\leq 10%	0402 \geq 0.47 μ F; 0603 \geq 0.68 μ F; 0805 \geq 2.2 μ F; 1206 \geq 4.7 μ F; 1210 \geq 22 μ F; TT series	10V	\leq 5%	\leq 10%	0402 \geq 0.33 μ F; 0603 \geq 0.33 μ F; 0805 \geq 2.2 μ F; 1206 \geq 2.2 μ F; 1210 \geq 22 μ F; TT series	\leq 15%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F	6.3V	\leq 10%	\leq 15%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F; 0603 \geq 10 μ F; 0805 \geq 4.7 μ F; 1206 \geq 47 μ F; 1210 \geq 100 μ F	\leq 20%	0402 \geq 2.2 μ F	4V	\leq 15%	-	-
			Rated vol.	D.F. \leq	Exception of D.F. \leq																																												
			\geq 50V	\leq 2.5%	\leq 3%	0201(50V); 0603 \geq 0.047 μ F; 0805 \geq 0.18 μ F;1206 \geq 0.47 μ F																																											
					\leq 5%	1210 \geq 4.7 μ F																																											
					\leq 10%	0603 \geq 1 μ F; 0805 \geq 1 μ F;1206 \geq 4.7 μ F; 1210 \geq 10 μ F																																											
			35V	\leq 3.5%	\leq 10%	0805 \geq 2.2 μ F; 1210 \geq 10 μ F																																											
			25V	\leq 3.5%	\leq 5%	0201 \geq 0.01 μ F;0805 \geq 1 μ F; 1210 \geq 10 μ F																																											
					\leq 7%	0603 \geq 0.33 μ F; 1206 \geq 4.7 μ F																																											
					\leq 10%	0402 \geq 0.10 μ F;0603 \geq 0.47 μ F; 0805 \geq 2.2 μ F; 1206 \geq 6.8 μ F ; 1210 \geq 22 μ F; TT series																																											
			16V	\leq 3.5%	\leq 5%	0201 \geq 0.01 μ F; 0402 \geq 0.033 μ F; 0805 \geq 0.68 μ F;1206 \geq 2.2 μ F; 1210 \geq 4.7 μ F																																											
\leq 10%	0402 \geq 0.47 μ F; 0603 \geq 0.68 μ F; 0805 \geq 2.2 μ F; 1206 \geq 4.7 μ F; 1210 \geq 22 μ F; TT series																																																
10V	\leq 5%	\leq 10%	0402 \geq 0.33 μ F; 0603 \geq 0.33 μ F; 0805 \geq 2.2 μ F; 1206 \geq 2.2 μ F; 1210 \geq 22 μ F; TT series																																														
		\leq 15%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F																																														
6.3V	\leq 10%	\leq 15%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F; 0603 \geq 10 μ F; 0805 \geq 4.7 μ F; 1206 \geq 47 μ F; 1210 \geq 100 μ F																																														
		\leq 20%	0402 \geq 2.2 μ F																																														
4V	\leq 15%	-	-																																														

No	Item	Test Condition	Requirements																																				
3			Y5V: <table border="1"> <thead> <tr> <th>Rated Vol.</th> <th>D.F. ≤</th> <th colspan="2">Exception of D.F. ≤</th> </tr> </thead> <tbody> <tr> <td>≥50V</td> <td>5%</td> <td>7%</td> <td>0603 ≥ 0.1μF; 0805 ≥ 0.47μF; 1206 ≥ 4.7μF</td> </tr> <tr> <td>35V</td> <td>7%</td> <td>-</td> <td>-</td> </tr> <tr> <td rowspan="2">25V</td> <td rowspan="2">5%</td> <td>7%</td> <td>0402 ≥ 0.047μF; 0603 ≥ 0.1μF; 0805 ≥ 0.33μF; 1206 ≥ 1μF; 1210 ≥ 4.7μF</td> </tr> <tr> <td>9%</td> <td>0402 ≥ 0.068μF; 0603 ≥ 0.47μF; 1206 ≥ 4.7μF; 1210 ≥ 22μF</td> </tr> <tr> <td rowspan="2">16V (C < 1.0μF)</td> <td rowspan="2">7%</td> <td>9%</td> <td>0402 ≥ 0.068μF; 0603 ≥ 0.68μF</td> </tr> <tr> <td>12.5%</td> <td>0402 ≥ 0.22μF</td> </tr> <tr> <td>16V (C ≥ 1.0μF)</td> <td>9%</td> <td>12.5%</td> <td>0603 ≥ 2.2μF; 0805 ≥ 3.3μF; 1206 ≥ 10μF; 1210 ≥ 22μF; 1812 ≥ 47μF</td> </tr> <tr> <td>10V</td> <td>12.5%</td> <td>20%</td> <td>0402 ≥ 0.47μF</td> </tr> <tr> <td>6.3V</td> <td>20%</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated Vol.	D.F. ≤	Exception of D.F. ≤		≥50V	5%	7%	0603 ≥ 0.1μF; 0805 ≥ 0.47μF; 1206 ≥ 4.7μF	35V	7%	-	-	25V	5%	7%	0402 ≥ 0.047μF; 0603 ≥ 0.1μF; 0805 ≥ 0.33μF; 1206 ≥ 1μF; 1210 ≥ 4.7μF	9%	0402 ≥ 0.068μF; 0603 ≥ 0.47μF; 1206 ≥ 4.7μF; 1210 ≥ 22μF	16V (C < 1.0μF)	7%	9%	0402 ≥ 0.068μF; 0603 ≥ 0.68μF	12.5%	0402 ≥ 0.22μF	16V (C ≥ 1.0μF)	9%	12.5%	0603 ≥ 2.2μF; 0805 ≥ 3.3μF; 1206 ≥ 10μF; 1210 ≥ 22μF; 1812 ≥ 47μF	10V	12.5%	20%	0402 ≥ 0.47μF	6.3V	20%	-	-
Rated Vol.	D.F. ≤	Exception of D.F. ≤																																					
≥50V	5%	7%	0603 ≥ 0.1μF; 0805 ≥ 0.47μF; 1206 ≥ 4.7μF																																				
35V	7%	-	-																																				
25V	5%	7%	0402 ≥ 0.047μF; 0603 ≥ 0.1μF; 0805 ≥ 0.33μF; 1206 ≥ 1μF; 1210 ≥ 4.7μF																																				
		9%	0402 ≥ 0.068μF; 0603 ≥ 0.47μF; 1206 ≥ 4.7μF; 1210 ≥ 22μF																																				
16V (C < 1.0μF)	7%	9%	0402 ≥ 0.068μF; 0603 ≥ 0.68μF																																				
		12.5%	0402 ≥ 0.22μF																																				
16V (C ≥ 1.0μF)	9%	12.5%	0603 ≥ 2.2μF; 0805 ≥ 3.3μF; 1206 ≥ 10μF; 1210 ≥ 22μF; 1812 ≥ 47μF																																				
10V	12.5%	20%	0402 ≥ 0.47μF																																				
6.3V	20%	-	-																																				
4	Dielectric Strength	To apply voltage (≤100V) 250%. Duration: 1 to 5 sec. Charge and discharge current less than 50mA.	No evidence of damage or flash over during test.																																				
5	Insulation Resistance	To apply rated voltage for max. 120 sec	10G or $RxC \geq 500\text{-F}$ whichever is smaller Class II (X7R, X5R, Y5V) <table border="1"> <thead> <tr> <th>Rated voltage</th> <th>Insulation Resistance</th> </tr> </thead> <tbody> <tr> <td>100V: X7R</td> <td rowspan="7">10G or $RxC \geq 100\text{QF}$ whichever is smaller.</td> </tr> <tr> <td>50V: 0603 ≥ 1μF; 0805 ≥ 1μF; 1206 ≥ 4.7μF; 1210 ≥ 4.7μF</td> </tr> <tr> <td>35V: 0805 ≥ 2.2μF; 1210 ≥ 10μF</td> </tr> <tr> <td>25V: 0402 ≥ 1μF; 0603 ≥ 2.2μF; 0805 ≥ 2.2μF; 1206 ≥ 10μF; 1210 ≥ 10μF</td> </tr> <tr> <td>16V: 0402 ≥ 0.22μF; 0603 ≥ 1μF; 0805 ≥ 2.2μF; 1206 ≥ 10μF; 1210 ≥ 47μF</td> </tr> <tr> <td>10V: 0201 ≥ 47nF; 0402 ≥ 0.47μF; 0603 ≥ 0.47μF; 0805 ≥ 2.2μF; 1206 ≥ 4.7μF; 1210 ≥ 47μF</td> </tr> <tr> <td>6.3V; 4V</td> </tr> </tbody> </table>	Rated voltage	Insulation Resistance	100V: X7R	10G or $RxC \geq 100\text{QF}$ whichever is smaller.	50V: 0603 ≥ 1μF; 0805 ≥ 1μF; 1206 ≥ 4.7μF; 1210 ≥ 4.7μF	35V: 0805 ≥ 2.2μF; 1210 ≥ 10μF	25V: 0402 ≥ 1μF; 0603 ≥ 2.2μF; 0805 ≥ 2.2μF; 1206 ≥ 10μF; 1210 ≥ 10μF	16V: 0402 ≥ 0.22μF; 0603 ≥ 1μF; 0805 ≥ 2.2μF; 1206 ≥ 10μF; 1210 ≥ 47μF	10V: 0201 ≥ 47nF; 0402 ≥ 0.47μF; 0603 ≥ 0.47μF; 0805 ≥ 2.2μF; 1206 ≥ 4.7μF; 1210 ≥ 47μF	6.3V; 4V																										
Rated voltage	Insulation Resistance																																						
100V: X7R	10G or $RxC \geq 100\text{QF}$ whichever is smaller.																																						
50V: 0603 ≥ 1μF; 0805 ≥ 1μF; 1206 ≥ 4.7μF; 1210 ≥ 4.7μF																																							
35V: 0805 ≥ 2.2μF; 1210 ≥ 10μF																																							
25V: 0402 ≥ 1μF; 0603 ≥ 2.2μF; 0805 ≥ 2.2μF; 1206 ≥ 10μF; 1210 ≥ 10μF																																							
16V: 0402 ≥ 0.22μF; 0603 ≥ 1μF; 0805 ≥ 2.2μF; 1206 ≥ 10μF; 1210 ≥ 47μF																																							
10V: 0201 ≥ 47nF; 0402 ≥ 0.47μF; 0603 ≥ 0.47μF; 0805 ≥ 2.2μF; 1206 ≥ 4.7μF; 1210 ≥ 47μF																																							
6.3V; 4V																																							

Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



No	Item	Test Condition	Requirements																				
6	Temperature Coefficient	<p>With no electrical load.</p> <table border="1"> <thead> <tr> <th>T.C.</th> <th>Operating Temp</th> </tr> </thead> <tbody> <tr> <td>NPO</td> <td>-55~125°C at 25°C</td> </tr> <tr> <td>X7R</td> <td>-55~125°C at 25°C</td> </tr> <tr> <td>X5R</td> <td>-55~ 85°C at 25°C</td> </tr> <tr> <td>Y5V</td> <td>-25~ 85°C at 20°C</td> </tr> </tbody> </table>	T.C.	Operating Temp	NPO	-55~125°C at 25°C	X7R	-55~125°C at 25°C	X5R	-55~ 85°C at 25°C	Y5V	-25~ 85°C at 20°C	<table border="1"> <thead> <tr> <th>T.C.</th> <th>Capacitance Change</th> </tr> </thead> <tbody> <tr> <td>NPO</td> <td>Within ±30ppm/°C</td> </tr> <tr> <td>X7R</td> <td>Within ±15%</td> </tr> <tr> <td>X5R</td> <td>Within ±15%</td> </tr> <tr> <td>Y5V</td> <td>Within +30%/-80%</td> </tr> </tbody> </table>	T.C.	Capacitance Change	NPO	Within ±30ppm/°C	X7R	Within ±15%	X5R	Within ±15%	Y5V	Within +30%/-80%
T.C.	Operating Temp																						
NPO	-55~125°C at 25°C																						
X7R	-55~125°C at 25°C																						
X5R	-55~ 85°C at 25°C																						
Y5V	-25~ 85°C at 20°C																						
T.C.	Capacitance Change																						
NPO	Within ±30ppm/°C																						
X7R	Within ±15%																						
X5R	Within ±15%																						
Y5V	Within +30%/-80%																						
7	Adhesive Strength of Termination	<p>Pressurizing force: 5N (≤0603) and 10N (>0603) Test time: 10±1 sec.</p>	No remarkable damage or removal of the terminations.																				
8	Vibration Resistance	<p>Vibration frequency: 10~55 Hz/min. Total amplitude: 1.5mm Test time: 6 hrs. (Two hrs each in three mutually perpendicular directions.) Measurement to be made after keeping at room temp. for 24±2 hrs.</p>	<p>No remarkable damage. Cap change and Q/D.F.: To meet initial spec.</p>																				
9	Solderability	<p>Solder temperature : 235 ±5°C Dipping time : 2 ±0.5 sec.</p>	95% min. coverage of all metalized area.																				
10	Bending Test	<p>The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm per second until the deflection becomes 1mm and then the pressure shall be maintained for 5 ±1 sec. Measurement to be made after keeping at room temp. for 24 ±2 hrs.</p>	<p>No remarkable damage. Cap change: NP0: within ±5% or 0.5pF whichever is larger X7R, X5R: within ±12.5% Y5V: within ±30% (This capacitance change means the change of capacitance under specified flexure of substrate from the capacitance measured before the test.)</p>																				
11	Resistance to Soldering Heat	<p>Solder temperature: 260 ±5°C Dipping time: 10 ±1sec Preheating: 120 to 150°C for 1 minute before immerse the capacitor in a eutectic solder. Before initial measurement (Class II only): Perform 150+0/-10°C for 1 hr and then set for 24 ±2hrs at room temp. Measurement to be made after keeping at room temp. for 24±2 hrs.</p>	<p>No remarkable damage. Cap change: NP0: within ±2.5% or 0.25pF whichever is larger X7R, X5R: within ±7.5% Y5V: within ±20% Q/D.F., I.R. and dielectric strength: To meet initial requirements 25% max. leaching on each edge.</p>																				
12	Temperature Cycle	<p>Conduct the five cycles according to the temperatures and time.</p> <table border="1"> <thead> <tr> <th>Step</th> <th>Temp. (°C)</th> <th>Time (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Min. operating temp. +0/-3</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room temp.</td> <td>2~3</td> </tr> <tr> <td>3</td> <td>Max. operating temp. +3/-0</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room temp.</td> <td>2~3</td> </tr> </tbody> </table> <p>Before initial measurement (Class II only): Perform 150 +0/-10°C for 1 hour and then set for 24 ±2hrs at room temp. Measurement to be made after keeping at room temp. for 24±2 hrs.</p>	Step	Temp. (°C)	Time (min.)	1	Min. operating temp. +0/-3	30±3	2	Room temp.	2~3	3	Max. operating temp. +3/-0	30±3	4	Room temp.	2~3	<p>No remarkable damage. Cap change: NP0: within ±2.5% or 0.25pF whichever is larger X7R, X5R: within ±7.5% Y5V: within ±20% Q/D.F., I.R. and dielectric strength: To meet initial requirements.</p>					
Step	Temp. (°C)	Time (min.)																					
1	Min. operating temp. +0/-3	30±3																					
2	Room temp.	2~3																					
3	Max. operating temp. +3/-0	30±3																					
4	Room temp.	2~3																					



No	Item	Test Condition	Requirements																																														
13	Humidity (Damp Heat) Steady State	Test temp.: 40±2°C Humidity: 90~95% RH Test time: 500+24/-0hrs. Before initial measurement (Class II only): Perform 150+0/-10°C for 1 hour and then set for 24 ±2 hrs at room temp. Measurement to be made after keeping at room temp. for 24 ±2 hrs.	No remarkable damage. Cap change: NP0 : within ±5% or 0.5pF whichever is larger X7R, X5R : ≥10V**, within ±12.5%; 6.3V within ±25%; Y5V: ≥10V, within ±30%; 6.3V, within +30/-40% Q/D.F. value: NP0: More than 30pF Q≥350, 10pF≤C≤30pF, Q≥275+2.5C. Less than 10pF Q≥200+10C X7R, X5R:																																														
			<table border="1"> <thead> <tr> <th>Rated vol.</th> <th>D.F.≤</th> <th colspan="2">Exception of D.F. ≤</th> </tr> </thead> <tbody> <tr> <td rowspan="3">≥50V</td> <td rowspan="3">≤2.5%</td> <td>≤3%</td> <td>0201(50V); 0603≥0.047μF; 0805≥0.18μF; 1206≥0.47μF</td> </tr> <tr> <td>≤5%</td> <td>1210≥4.7μF</td> </tr> <tr> <td>≤10%</td> <td>0603≥1μF; 0805≥1μF; 1206≥4.7μF; 1210≥10μF</td> </tr> <tr> <td>35V</td> <td>≤3.5%</td> <td>≤10%</td> <td>0805≥2.2μF; 1210≥10μF</td> </tr> <tr> <td rowspan="3">25V</td> <td rowspan="3">≤3.5%</td> <td>≤5%</td> <td>0201≥0.01μF; 0805≥1μF; 1210≥10μF</td> </tr> <tr> <td>≤7%</td> <td>0603≥0.33μF; 1206≥4.7μF</td> </tr> <tr> <td>≤10%</td> <td>0402≥0.10μF; 0603≥0.47μF; 0805≥2.2μF; 1206≥6.8μF ; 1210≥22μF</td> </tr> <tr> <td rowspan="2">16V</td> <td rowspan="2">≤3.5%</td> <td>≤5%</td> <td>0201≥0.01μF; 0402≥0.033μF; 0805≥0.68μF; 1206≥2.2μF ; 1210≥4.7μF</td> </tr> <tr> <td>≤10%</td> <td>0402≥0.47μF; 0603≥0.68μF; 0805≥2.2μF; 1206≥4.7μF; 1210≥22μF; TT series</td> </tr> <tr> <td rowspan="2">10V</td> <td rowspan="2">≤5%</td> <td>≤10%</td> <td>0402≥0.33μF; 0603≥0.33μF; 0805≥2.2μF; 1206≥2.2μF; 1210≥22μF; TT series</td> </tr> <tr> <td>≤15%</td> <td>0201≥0.1μF; 0402≥1μF</td> </tr> <tr> <td rowspan="2">6.3V</td> <td rowspan="2">≤10%</td> <td>≤15%</td> <td>0201≥0.1μF; 0402≥1μF; 0603≥10μF; 0805≥4.7μF; 1206≥47μF; 1210≥100μF</td> </tr> <tr> <td>≤20%</td> <td>0402≥2.2μF</td> </tr> <tr> <td>4V</td> <td>≤15%</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated vol.	D.F.≤	Exception of D.F. ≤		≥50V	≤2.5%	≤3%	0201(50V); 0603≥0.047μF; 0805≥0.18μF; 1206≥0.47μF	≤5%	1210≥4.7μF	≤10%	0603≥1μF; 0805≥1μF; 1206≥4.7μF; 1210≥10μF	35V	≤3.5%	≤10%	0805≥2.2μF; 1210≥10μF	25V	≤3.5%	≤5%	0201≥0.01μF; 0805≥1μF; 1210≥10μF	≤7%	0603≥0.33μF; 1206≥4.7μF	≤10%	0402≥0.10μF; 0603≥0.47μF; 0805≥2.2μF; 1206≥6.8μF ; 1210≥22μF	16V	≤3.5%	≤5%	0201≥0.01μF; 0402≥0.033μF; 0805≥0.68μF; 1206≥2.2μF ; 1210≥4.7μF	≤10%	0402≥0.47μF; 0603≥0.68μF; 0805≥2.2μF; 1206≥4.7μF; 1210≥22μF; TT series	10V	≤5%	≤10%	0402≥0.33μF; 0603≥0.33μF; 0805≥2.2μF; 1206≥2.2μF; 1210≥22μF; TT series	≤15%	0201≥0.1μF; 0402≥1μF	6.3V	≤10%	≤15%	0201≥0.1μF; 0402≥1μF; 0603≥10μF; 0805≥4.7μF; 1206≥47μF; 1210≥100μF	≤20%	0402≥2.2μF	4V	≤15%	-	-
			Rated vol.	D.F.≤	Exception of D.F. ≤																																												
			≥50V	≤2.5%	≤3%	0201(50V); 0603≥0.047μF; 0805≥0.18μF; 1206≥0.47μF																																											
					≤5%	1210≥4.7μF																																											
					≤10%	0603≥1μF; 0805≥1μF; 1206≥4.7μF; 1210≥10μF																																											
			35V	≤3.5%	≤10%	0805≥2.2μF; 1210≥10μF																																											
			25V	≤3.5%	≤5%	0201≥0.01μF; 0805≥1μF; 1210≥10μF																																											
					≤7%	0603≥0.33μF; 1206≥4.7μF																																											
					≤10%	0402≥0.10μF; 0603≥0.47μF; 0805≥2.2μF; 1206≥6.8μF ; 1210≥22μF																																											
			16V	≤3.5%	≤5%	0201≥0.01μF; 0402≥0.033μF; 0805≥0.68μF; 1206≥2.2μF ; 1210≥4.7μF																																											
					≤10%	0402≥0.47μF; 0603≥0.68μF; 0805≥2.2μF; 1206≥4.7μF; 1210≥22μF; TT series																																											
			10V	≤5%	≤10%	0402≥0.33μF; 0603≥0.33μF; 0805≥2.2μF; 1206≥2.2μF; 1210≥22μF; TT series																																											
					≤15%	0201≥0.1μF; 0402≥1μF																																											
			6.3V	≤10%	≤15%	0201≥0.1μF; 0402≥1μF; 0603≥10μF; 0805≥4.7μF; 1206≥47μF; 1210≥100μF																																											
≤20%	0402≥2.2μF																																																
4V	≤15%	-	-																																														
Y5V:																																																	
<table border="1"> <thead> <tr> <th>Rated vol.</th> <th>D.F.≤</th> <th colspan="2">Exception of D.F. ≤</th> </tr> </thead> <tbody> <tr> <td>≥50V</td> <td>5%</td> <td>7%</td> <td>0603≥0.1μF; 0805≥0.47μF; 1206≥4.7μF</td> </tr> <tr> <td>35V</td> <td>7%</td> <td>-</td> <td>-</td> </tr> <tr> <td rowspan="2">25V</td> <td rowspan="2">5%</td> <td>7%</td> <td>0402≥0.047μF; 0603≥0.1μF; 0805≥0.33μF; 1206≥1μF; 1210≥4.7μF</td> </tr> <tr> <td>9%</td> <td>0402≥0.068μF; 0603≥0.47μF; 1206≥4.7μF; 1210≥22μF</td> </tr> <tr> <td rowspan="2">16V (C<1.0μF)</td> <td rowspan="2">7%</td> <td>9%</td> <td>0402≥0.068μF; 0603≥0.68μF</td> </tr> <tr> <td>12.5%</td> <td>0402≥0.22μF</td> </tr> <tr> <td>16V (C≥1.0μF)</td> <td>9%</td> <td>12.5%</td> <td>0603≥2.2μF; 0805≥3.3μF; 1206≥10μF; 1210≥22μF; 1812≥47μF</td> </tr> <tr> <td>10V</td> <td>12.5%</td> <td>20%</td> <td>0402≥0.47μF</td> </tr> <tr> <td>6.3V</td> <td>20%</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated vol.	D.F.≤	Exception of D.F. ≤		≥50V	5%	7%	0603≥0.1μF; 0805≥0.47μF; 1206≥4.7μF	35V	7%	-	-	25V	5%	7%	0402≥0.047μF; 0603≥0.1μF; 0805≥0.33μF; 1206≥1μF; 1210≥4.7μF	9%	0402≥0.068μF; 0603≥0.47μF; 1206≥4.7μF; 1210≥22μF	16V (C<1.0μF)	7%	9%	0402≥0.068μF; 0603≥0.68μF	12.5%	0402≥0.22μF	16V (C≥1.0μF)	9%	12.5%	0603≥2.2μF; 0805≥3.3μF; 1206≥10μF; 1210≥22μF; 1812≥47μF	10V	12.5%	20%	0402≥0.47μF	6.3V	20%	-	-													
Rated vol.	D.F.≤	Exception of D.F. ≤																																															
≥50V	5%	7%	0603≥0.1μF; 0805≥0.47μF; 1206≥4.7μF																																														
35V	7%	-	-																																														
25V	5%	7%	0402≥0.047μF; 0603≥0.1μF; 0805≥0.33μF; 1206≥1μF; 1210≥4.7μF																																														
		9%	0402≥0.068μF; 0603≥0.47μF; 1206≥4.7μF; 1210≥22μF																																														
16V (C<1.0μF)	7%	9%	0402≥0.068μF; 0603≥0.68μF																																														
		12.5%	0402≥0.22μF																																														
16V (C≥1.0μF)	9%	12.5%	0603≥2.2μF; 0805≥3.3μF; 1206≥10μF; 1210≥22μF; 1812≥47μF																																														
10V	12.5%	20%	0402≥0.47μF																																														
6.3V	20%	-	-																																														

No	Item	Test Condition	Requirements																																														
13	Humidity (Damp Heat) Steady State		*I.R.: $\geq 10V$, $1G\Omega$ or $50\Omega\cdot F$ whichever is smaller. Class II (X7R, X5R, Y5V)																																														
			<table border="1"> <thead> <tr> <th>Rated voltage</th> <th>Insulation Resistance</th> </tr> </thead> <tbody> <tr> <td>100V: X7R</td> <td rowspan="7">1GΩ or RxC\geq 10$\Omega\cdot F$ whichever is smaller.</td> </tr> <tr> <td>50V:0603$\geq 1\mu F$;0805$\geq 1\mu F$;1206$\geq 4.7\mu F$; 1210$\geq 4.7\mu F$</td> </tr> <tr> <td>35V:0805$\geq 2.2\mu F$;1210$\geq 10\mu F$</td> </tr> <tr> <td>25V:0402$\geq 1\mu F$;0603$\geq 2.2\mu F$;0805$\geq 2.2\mu F$; 1206$\geq 10\mu F$;1210$\geq 10\mu F$</td> </tr> <tr> <td>16V:0402$\geq 0.22\mu F$;0603$\geq 1\mu F$;0805$\geq 2.2\mu F$; 1206$\geq 10\mu F$;1210$\geq 47\mu F$</td> </tr> <tr> <td>10V:0201$\geq 47nF$;0402$\geq 0.47\mu F$;0603$\geq 0.47\mu F$; 0805$\geq 2.2\mu F$; 1206$\geq 4.7\mu F$;1210$\geq 47\mu F$</td> </tr> <tr> <td>6.3V ; 4V</td> </tr> </tbody> </table>	Rated voltage	Insulation Resistance	100V: X7R	1G Ω or RxC \geq 10 $\Omega\cdot F$ whichever is smaller.	50V:0603 $\geq 1\mu F$;0805 $\geq 1\mu F$;1206 $\geq 4.7\mu F$; 1210 $\geq 4.7\mu F$	35V:0805 $\geq 2.2\mu F$;1210 $\geq 10\mu F$	25V:0402 $\geq 1\mu F$;0603 $\geq 2.2\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 10\mu F$;1210 $\geq 10\mu F$	16V:0402 $\geq 0.22\mu F$;0603 $\geq 1\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 10\mu F$;1210 $\geq 47\mu F$	10V:0201 $\geq 47nF$;0402 $\geq 0.47\mu F$;0603 $\geq 0.47\mu F$; 0805 $\geq 2.2\mu F$; 1206 $\geq 4.7\mu F$;1210 $\geq 47\mu F$	6.3V ; 4V																																				
			Rated voltage	Insulation Resistance																																													
			100V: X7R	1G Ω or RxC \geq 10 $\Omega\cdot F$ whichever is smaller.																																													
			50V:0603 $\geq 1\mu F$;0805 $\geq 1\mu F$;1206 $\geq 4.7\mu F$; 1210 $\geq 4.7\mu F$																																														
			35V:0805 $\geq 2.2\mu F$;1210 $\geq 10\mu F$																																														
			25V:0402 $\geq 1\mu F$;0603 $\geq 2.2\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 10\mu F$;1210 $\geq 10\mu F$																																														
			16V:0402 $\geq 0.22\mu F$;0603 $\geq 1\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 10\mu F$;1210 $\geq 47\mu F$																																														
10V:0201 $\geq 47nF$;0402 $\geq 0.47\mu F$;0603 $\geq 0.47\mu F$; 0805 $\geq 2.2\mu F$; 1206 $\geq 4.7\mu F$;1210 $\geq 47\mu F$																																																	
6.3V ; 4V																																																	
14	Humidity (Damp Heat) Load	Test temp.: $40\pm 2^{\circ}C$ Humidity: 90~95%RH Test time: 500+24/-0 hrs. To apply voltage : rated voltage. Before initial measurement (Class II only): To apply test voltage for 1hr at $40^{\circ}C$ and then set for 24 ± 2 hrs at room temp. Measurement to be made after keeping at room temp. for 24 ± 2 hrs.	No remarkable damage. Cap change: NP0 : within $\pm 7.5\%$ or 0.75pF whichever is larger X7R, X5R : $\geq 10V^{**}$, within $\pm 12.5\%$; 6.3V within $\pm 25\%$; Y5V: $\geq 10V$, within $\pm 30\%$; 6.3V, within +30/-40% Q/D.F. value: NP0: C $\geq 30pF$, Q ≥ 200 ; C $< 30pF$, Q $\geq 100+10/3C$ X7R, X5R:																																														
			<table border="1"> <thead> <tr> <th>Rated vol.</th> <th>D.F. \leq</th> <th colspan="2">Exception of D.F. \leq</th> </tr> </thead> <tbody> <tr> <td rowspan="3">$\geq 50V$</td> <td rowspan="3">$\leq 2.5\%$</td> <td>$\leq 3\%$</td> <td>0201(50V); 0603$\geq 0.047\mu F$; 0805$\geq 0.18\mu F$;1206$\geq 0.47\mu F$</td> </tr> <tr> <td>$\leq 5\%$</td> <td>1210$\geq 4.7\mu F$</td> </tr> <tr> <td>$\leq 10\%$</td> <td>0603$\geq 1\mu F$; 0805$\geq 1\mu F$;1206$\geq 4.7\mu F$; 1210$\geq 10\mu F$</td> </tr> <tr> <td>35V</td> <td>$\leq 3.5\%$</td> <td>$\leq 10\%$</td> <td>0805$\geq 2.2\mu F$; 1210$\geq 10\mu F$</td> </tr> <tr> <td rowspan="3">25V</td> <td rowspan="3">$\leq 3.5\%$</td> <td>$\leq 5\%$</td> <td>0201$\geq 0.01\mu F$;0805$\geq 1\mu F$; 1210$\geq 10\mu F$</td> </tr> <tr> <td>$\leq 7\%$</td> <td>0603$\geq 0.33\mu F$; 1206$\geq 4.7\mu F$</td> </tr> <tr> <td>$\leq 10\%$</td> <td>0402$\geq 0.10\mu F$;0603$\geq 0.47\mu F$; 0805$\geq 2.2\mu F$; 1206$\geq 6.8\mu F$; 1210$\geq 22\mu F$</td> </tr> <tr> <td rowspan="2">16V</td> <td rowspan="2">$\leq 3.5\%$</td> <td>$\leq 5\%$</td> <td>0201$\geq 0.01\mu F$; 0402$\geq 0.033\mu F$; 0805$\geq 0.68\mu F$;1206$\geq 2.2\mu F$; 1210$\geq 4.7\mu F$</td> </tr> <tr> <td>$\leq 10\%$</td> <td>0402$\geq 0.47\mu F$; 0603$\geq 0.68\mu F$;0805$\geq 2.2\mu F$; 1206$\geq 4.7\mu F$; 1210$\geq 22\mu F$; TT series</td> </tr> <tr> <td rowspan="2">10V</td> <td rowspan="2">$\leq 5\%$</td> <td>$\leq 10\%$</td> <td>0402$\geq 0.33\mu F$; 0603$\geq 0.33\mu F$; 0805$\geq 2.2\mu F$; 1206$\geq 2.2\mu F$; 1210$\geq 22\mu F$; TT series</td> </tr> <tr> <td>$\leq 15\%$</td> <td>0201$\geq 0.1\mu F$; 0402$\geq 1\mu F$</td> </tr> <tr> <td rowspan="2">6.3V</td> <td rowspan="2">$\leq 10\%$</td> <td>$\leq 15\%$</td> <td>0201$\geq 0.1\mu F$; 0402$\geq 1\mu F$; 0603$\geq 10\mu F$; 0805$\geq 4.7\mu F$; 1206$\geq 47\mu F$; 1210$\geq 100\mu F$</td> </tr> <tr> <td>$\leq 20\%$</td> <td>0402$\geq 2.2\mu F$</td> </tr> <tr> <td>4V</td> <td>$\leq 15\%$</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated vol.	D.F. \leq	Exception of D.F. \leq		$\geq 50V$	$\leq 2.5\%$	$\leq 3\%$	0201(50V); 0603 $\geq 0.047\mu F$; 0805 $\geq 0.18\mu F$;1206 $\geq 0.47\mu F$	$\leq 5\%$	1210 $\geq 4.7\mu F$	$\leq 10\%$	0603 $\geq 1\mu F$; 0805 $\geq 1\mu F$;1206 $\geq 4.7\mu F$; 1210 $\geq 10\mu F$	35V	$\leq 3.5\%$	$\leq 10\%$	0805 $\geq 2.2\mu F$; 1210 $\geq 10\mu F$	25V	$\leq 3.5\%$	$\leq 5\%$	0201 $\geq 0.01\mu F$;0805 $\geq 1\mu F$; 1210 $\geq 10\mu F$	$\leq 7\%$	0603 $\geq 0.33\mu F$; 1206 $\geq 4.7\mu F$	$\leq 10\%$	0402 $\geq 0.10\mu F$;0603 $\geq 0.47\mu F$; 0805 $\geq 2.2\mu F$; 1206 $\geq 6.8\mu F$; 1210 $\geq 22\mu F$	16V	$\leq 3.5\%$	$\leq 5\%$	0201 $\geq 0.01\mu F$; 0402 $\geq 0.033\mu F$; 0805 $\geq 0.68\mu F$;1206 $\geq 2.2\mu F$; 1210 $\geq 4.7\mu F$	$\leq 10\%$	0402 $\geq 0.47\mu F$; 0603 $\geq 0.68\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 4.7\mu F$; 1210 $\geq 22\mu F$; TT series	10V	$\leq 5\%$	$\leq 10\%$	0402 $\geq 0.33\mu F$; 0603 $\geq 0.33\mu F$; 0805 $\geq 2.2\mu F$; 1206 $\geq 2.2\mu F$; 1210 $\geq 22\mu F$; TT series	$\leq 15\%$	0201 $\geq 0.1\mu F$; 0402 $\geq 1\mu F$	6.3V	$\leq 10\%$	$\leq 15\%$	0201 $\geq 0.1\mu F$; 0402 $\geq 1\mu F$; 0603 $\geq 10\mu F$; 0805 $\geq 4.7\mu F$; 1206 $\geq 47\mu F$; 1210 $\geq 100\mu F$	$\leq 20\%$	0402 $\geq 2.2\mu F$	4V	$\leq 15\%$	-	-
			Rated vol.	D.F. \leq	Exception of D.F. \leq																																												
			$\geq 50V$	$\leq 2.5\%$	$\leq 3\%$	0201(50V); 0603 $\geq 0.047\mu F$; 0805 $\geq 0.18\mu F$;1206 $\geq 0.47\mu F$																																											
					$\leq 5\%$	1210 $\geq 4.7\mu F$																																											
					$\leq 10\%$	0603 $\geq 1\mu F$; 0805 $\geq 1\mu F$;1206 $\geq 4.7\mu F$; 1210 $\geq 10\mu F$																																											
			35V	$\leq 3.5\%$	$\leq 10\%$	0805 $\geq 2.2\mu F$; 1210 $\geq 10\mu F$																																											
			25V	$\leq 3.5\%$	$\leq 5\%$	0201 $\geq 0.01\mu F$;0805 $\geq 1\mu F$; 1210 $\geq 10\mu F$																																											
					$\leq 7\%$	0603 $\geq 0.33\mu F$; 1206 $\geq 4.7\mu F$																																											
					$\leq 10\%$	0402 $\geq 0.10\mu F$;0603 $\geq 0.47\mu F$; 0805 $\geq 2.2\mu F$; 1206 $\geq 6.8\mu F$; 1210 $\geq 22\mu F$																																											
			16V	$\leq 3.5\%$	$\leq 5\%$	0201 $\geq 0.01\mu F$; 0402 $\geq 0.033\mu F$; 0805 $\geq 0.68\mu F$;1206 $\geq 2.2\mu F$; 1210 $\geq 4.7\mu F$																																											
					$\leq 10\%$	0402 $\geq 0.47\mu F$; 0603 $\geq 0.68\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 4.7\mu F$; 1210 $\geq 22\mu F$; TT series																																											
10V	$\leq 5\%$	$\leq 10\%$	0402 $\geq 0.33\mu F$; 0603 $\geq 0.33\mu F$; 0805 $\geq 2.2\mu F$; 1206 $\geq 2.2\mu F$; 1210 $\geq 22\mu F$; TT series																																														
		$\leq 15\%$	0201 $\geq 0.1\mu F$; 0402 $\geq 1\mu F$																																														
6.3V	$\leq 10\%$	$\leq 15\%$	0201 $\geq 0.1\mu F$; 0402 $\geq 1\mu F$; 0603 $\geq 10\mu F$; 0805 $\geq 4.7\mu F$; 1206 $\geq 47\mu F$; 1210 $\geq 100\mu F$																																														
		$\leq 20\%$	0402 $\geq 2.2\mu F$																																														
4V	$\leq 15\%$	-	-																																														

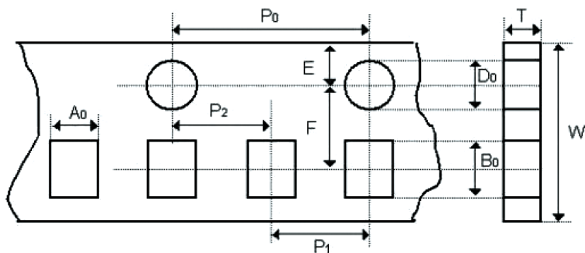
No	Item	Test Condition	Requirements																																				
14	Humidity (Damp Heat) Load		Y5V:																																				
			<table border="1"> <thead> <tr> <th>Rated vol.</th> <th>D.F. ≤</th> <th colspan="2">Exception of D.F. ≤</th> </tr> </thead> <tbody> <tr> <td>≥50V</td> <td>5%</td> <td>7%</td> <td>0603≥0.1μF; 0805≥0.47μF; 1206≥4.7μF</td> </tr> <tr> <td>35V</td> <td>7%</td> <td>-</td> <td>-</td> </tr> <tr> <td rowspan="2">25V</td> <td rowspan="2">5%</td> <td>7%</td> <td>0402≥0.047μF; 0603≥0.1μF; 0805≥0.33μF; 1206≥1μF; 1210≥4.7μF</td> </tr> <tr> <td>9%</td> <td>0402≥0.068μF; 0603≥0.47μF; 1206≥4.7μF; 1210≥22μF</td> </tr> <tr> <td rowspan="2">16V (C<1.0μF)</td> <td rowspan="2">7%</td> <td>9%</td> <td>0402≥0.068μF; 0603≥0.68μF</td> </tr> <tr> <td>12.5%</td> <td>0402≥0.22μF</td> </tr> <tr> <td>16V (C≥1.0μF)</td> <td>9%</td> <td>12.5%</td> <td>0603≥2.2μF; 0805≥3.3μF; 1206≥10μF; 1210≥22μF; 1812≥47μF</td> </tr> <tr> <td>10V</td> <td>12.5%</td> <td>20%</td> <td>0402≥0.47μF</td> </tr> <tr> <td>6.3V</td> <td>20%</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated vol.	D.F. ≤	Exception of D.F. ≤		≥50V	5%	7%	0603≥0.1μF; 0805≥0.47μF; 1206≥4.7μF	35V	7%	-	-	25V	5%	7%	0402≥0.047μF; 0603≥0.1μF; 0805≥0.33μF; 1206≥1μF; 1210≥4.7μF	9%	0402≥0.068μF; 0603≥0.47μF; 1206≥4.7μF; 1210≥22μF	16V (C<1.0μF)	7%	9%	0402≥0.068μF; 0603≥0.68μF	12.5%	0402≥0.22μF	16V (C≥1.0μF)	9%	12.5%	0603≥2.2μF; 0805≥3.3μF; 1206≥10μF; 1210≥22μF; 1812≥47μF	10V	12.5%	20%	0402≥0.47μF	6.3V	20%	-	-
			Rated vol.	D.F. ≤	Exception of D.F. ≤																																		
			≥50V	5%	7%	0603≥0.1μF; 0805≥0.47μF; 1206≥4.7μF																																	
			35V	7%	-	-																																	
			25V	5%	7%	0402≥0.047μF; 0603≥0.1μF; 0805≥0.33μF; 1206≥1μF; 1210≥4.7μF																																	
					9%	0402≥0.068μF; 0603≥0.47μF; 1206≥4.7μF; 1210≥22μF																																	
			16V (C<1.0μF)	7%	9%	0402≥0.068μF; 0603≥0.68μF																																	
					12.5%	0402≥0.22μF																																	
			16V (C≥1.0μF)	9%	12.5%	0603≥2.2μF; 0805≥3.3μF; 1206≥10μF; 1210≥22μF; 1812≥47μF																																	
			10V	12.5%	20%	0402≥0.47μF																																	
			6.3V	20%	-	-																																	
			I.R.: ≥10V, 500MΩ or 25Ω-F whichever is smaller.																																				
			Class II (X7R, X5R, Y5V)																																				
<table border="1"> <thead> <tr> <th>Rated voltage</th> <th>Insulation Resistance</th> </tr> </thead> <tbody> <tr> <td>100V: X7R</td> <td rowspan="7">500MΩ or Rx C ≥ 5Ω-F whichever is smaller.</td> </tr> <tr> <td>50V:0603≥1μF;0805≥1μF;1206≥4.7μF; 1210≥4.7μF</td> </tr> <tr> <td>35V:0805≥2.2μF;1210≥10μF</td> </tr> <tr> <td>25V:0402≥1μF;0603≥2.2μF;0805≥2.2μF; 1206≥10μF;1210≥10μF</td> </tr> <tr> <td>16V:0402≥0.22μF;0603≥1μF;0805≥2.2μF; 1206≥10μF;1210≥47μF</td> </tr> <tr> <td>10V:0201≥47nF;0402≥0.47μF;0603≥0.47μF; 0805≥2.2μF; 1206≥4.7μF;1210≥47μF</td> </tr> <tr> <td>6.3V ; 4V</td> </tr> </tbody> </table>			Rated voltage	Insulation Resistance	100V: X7R	500MΩ or Rx C ≥ 5Ω-F whichever is smaller.	50V:0603≥1μF;0805≥1μF;1206≥4.7μF; 1210≥4.7μF	35V:0805≥2.2μF;1210≥10μF	25V:0402≥1μF;0603≥2.2μF;0805≥2.2μF; 1206≥10μF;1210≥10μF	16V:0402≥0.22μF;0603≥1μF;0805≥2.2μF; 1206≥10μF;1210≥47μF	10V:0201≥47nF;0402≥0.47μF;0603≥0.47μF; 0805≥2.2μF; 1206≥4.7μF;1210≥47μF	6.3V ; 4V																											
Rated voltage	Insulation Resistance																																						
100V: X7R	500MΩ or Rx C ≥ 5Ω-F whichever is smaller.																																						
50V:0603≥1μF;0805≥1μF;1206≥4.7μF; 1210≥4.7μF																																							
35V:0805≥2.2μF;1210≥10μF																																							
25V:0402≥1μF;0603≥2.2μF;0805≥2.2μF; 1206≥10μF;1210≥10μF																																							
16V:0402≥0.22μF;0603≥1μF;0805≥2.2μF; 1206≥10μF;1210≥47μF																																							
10V:0201≥47nF;0402≥0.47μF;0603≥0.47μF; 0805≥2.2μF; 1206≥4.7μF;1210≥47μF																																							
6.3V ; 4V																																							
15	High Temperature Load (Endurance)	Test temp.: NPO, X7R : 125 ±3°C X5R Y5V: 85 ±3°C Test time: 1000+24/-0 hrs. To apply voltage (1) 6.3V or C ≥ 10μF or TT series: 150% of rated voltage. (2) 10V ≤ Ur < 500V: 200% of rated voltage. (3) 500V: 150% of rated voltage. (4) Ur ≥ 630V: 120% of rated voltage.	No remarkable damage. Cap change: NPO : ±3.0% or ±0.3pF whichever is larger X7R, X5R : ≥10V**, within ±12.5%; 6.3V within ±25%; Y5V: ≥10V, within ±30%; 6.3V, within +30/-40% Q/D.F. value: NPO: More than 30pF, Q≥350; 10pF ≤ C < 30pF, Q≥275+2.5C; Less than 10pF, Q≥200+10C																																				

No	Item	Test Condition	Requirements																																																																																																																																				
15	High Temperature Load (Endurance)	<p>(5) 100% of rated voltage for below range.</p> <table border="1"> <thead> <tr> <th>Size</th> <th>Dielectric</th> <th>Rated voltage</th> <th>Capacitance range</th> </tr> </thead> <tbody> <tr> <td>0201</td> <td>X5R/X7R</td> <td>6.3V,10V</td> <td>C\geq0.1μF</td> </tr> <tr> <td>0402</td> <td>X5R/X7R</td> <td>6.3V,10V</td> <td>C\geq1.0μF</td> </tr> <tr> <td>0603</td> <td>X5R/X7R</td> <td>6.3V,10V</td> <td>C\geq4.7μF</td> </tr> <tr> <td>0805</td> <td>X5R/X7R</td> <td>6.3V</td> <td>C\geq22μF</td> </tr> <tr> <td rowspan="2">1206</td> <td>X5R/X7R</td> <td>6.3V</td> <td>C\geq47μF</td> </tr> <tr> <td>NPO</td> <td>3000V</td> <td>C\geq1.5pF</td> </tr> </tbody> </table> <p>(6) 150% of rated voltage for below range.</p> <table border="1"> <thead> <tr> <th>Size</th> <th>Dielectric</th> <th>Rated voltage</th> <th>Capacitance range</th> </tr> </thead> <tbody> <tr> <td rowspan="2">0402</td> <td>X5R/X7R</td> <td>10V,16V, 25V</td> <td>C\geq0.22μF</td> </tr> <tr> <td>Y5V</td> <td>16V</td> <td>C\geq0.47μF</td> </tr> <tr> <td rowspan="2">0603</td> <td>X5R/X7R</td> <td>10V,16V</td> <td>C\geq1μF</td> </tr> <tr> <td>Y5V</td> <td>16V</td> <td>C\geq2.2μF</td> </tr> <tr> <td rowspan="2">1206</td> <td>X5R/X7R</td> <td>10V</td> <td>C\geq4.7μF</td> </tr> <tr> <td>Y5V</td> <td>16V</td> <td>C\geq4.7pF</td> </tr> </tbody> </table> <p>Before initial measurement (Class II only): To apply test voltage for 1hr at test temp. and then set for 24 \pm2 hrs at room temp</p> <p>Measurement to be made after keeping at room temp. for 24 \pm2hrs</p>	Size	Dielectric	Rated voltage	Capacitance range	0201	X5R/X7R	6.3V,10V	C \geq 0.1 μ F	0402	X5R/X7R	6.3V,10V	C \geq 1.0 μ F	0603	X5R/X7R	6.3V,10V	C \geq 4.7 μ F	0805	X5R/X7R	6.3V	C \geq 22 μ F	1206	X5R/X7R	6.3V	C \geq 47 μ F	NPO	3000V	C \geq 1.5pF	Size	Dielectric	Rated voltage	Capacitance range	0402	X5R/X7R	10V,16V, 25V	C \geq 0.22 μ F	Y5V	16V	C \geq 0.47 μ F	0603	X5R/X7R	10V,16V	C \geq 1 μ F	Y5V	16V	C \geq 2.2 μ F	1206	X5R/X7R	10V	C \geq 4.7 μ F	Y5V	16V	C \geq 4.7pF	<p>X7R, X5R:</p> <table border="1"> <thead> <tr> <th>Rated vol.</th> <th>D.F.\leq</th> <th colspan="2">Exception of D.F. \leq</th> </tr> </thead> <tbody> <tr> <td rowspan="3">\geq50V</td> <td rowspan="3">\leq3%</td> <td>\leq6%</td> <td>0201(50V); 0603\geq0.047μF; 0805\geq0.18μF;1206\geq0.47μF</td> </tr> <tr> <td>\leq10%</td> <td>1210\geq4.7μF</td> </tr> <tr> <td>\leq20%</td> <td>0603\geq1μF; 0805\geq1μF;1206\geq4.7μF; 1210\geq10μF</td> </tr> <tr> <td>35V</td> <td>\leq5%</td> <td>\leq20%</td> <td>0805\geq2.2μF; 1210\geq10μF</td> </tr> <tr> <td rowspan="3">25V</td> <td rowspan="3">\leq5%</td> <td>\leq10%</td> <td>0201\geq0.01μF;0805\geq1μF; 1210\geq10μF</td> </tr> <tr> <td>\leq14%</td> <td>0603\geq0.33μF; 1206\geq4.7μF</td> </tr> <tr> <td>\leq15%</td> <td>0402\geq0.10μF;0603\geq0.47μF; 0805\geq2.2μF;1206\geq6.8μF; 1210\geq22μF</td> </tr> <tr> <td rowspan="2">16V</td> <td rowspan="2">\leq5%</td> <td>\leq10%</td> <td>0603\geq0.15μF;0805\geq0.68μF; 1206\geq2.2μF;1210\geq4.7μF</td> </tr> <tr> <td>\leq15%</td> <td>0201\geq0.01μF;0402\geq0.033μF; 0603\geq0.68μF;0805\geq2.2μF; 1206\geq4.7μF; 1210\geq22μF</td> </tr> <tr> <td rowspan="2">10V</td> <td rowspan="2">\leq75%</td> <td>\leq15%</td> <td>0201\geq0.012μF;0402\geq0.33μF; 0603\geq0.33μF; 0805\geq2.2μF; 1206\geq2.2μF; 1210\geq22μF</td> </tr> <tr> <td>\leq20%</td> <td>0201\geq0.1μF; 0402\geq1μF</td> </tr> <tr> <td>6.3V</td> <td>\leq15%</td> <td>\leq30%</td> <td>0201\geq0.1μF; 0402\geq1μF; 0603\geq10μF; 0805\geq4.7μF; 1206\geq47μF; 1210\geq100μF</td> </tr> <tr> <td>4V</td> <td>\leq20%</td> <td>-</td> <td>-</td> </tr> </tbody> </table> <p>Y5V:</p> <table border="1"> <thead> <tr> <th>Rated vol.</th> <th>D.F.\leq</th> <th colspan="2">Exception of D.F. \leq</th> </tr> </thead> <tbody> <tr> <td>\geq50V</td> <td>5%</td> <td>7%</td> <td>0603\geq0.1μF; 0805\geq0.47μF; 1206\geq4.7μF</td> </tr> <tr> <td>35V</td> <td>7%</td> <td>-</td> <td>-</td> </tr> <tr> <td rowspan="2">25V</td> <td rowspan="2">5%</td> <td>7%</td> <td>0402\geq0.047μF; 0603\geq0.1μF; 0805\geq0.33μF; 1206\geq1μF; 1210\geq4.7μF</td> </tr> <tr> <td>9%</td> <td>0402\geq0.068μF; 0603\geq0.47μF; 1206\geq4.7μF; 1210\geq22μF</td> </tr> <tr> <td rowspan="2">16V (C<1.0μF)</td> <td rowspan="2">7%</td> <td>9%</td> <td>0402\geq0.068μF; 0603\geq0.68μF</td> </tr> <tr> <td>12.5%</td> <td>0402\geq0.22μF</td> </tr> <tr> <td>16V (C\geq1.0μF)</td> <td>9%</td> <td>12.5%</td> <td>0603\geq2.2μF; 0805\geq3.3μF; 1206\geq10μF; 1210\geq22μF; 1812\geq47μF</td> </tr> <tr> <td>10V</td> <td>12.5%</td> <td>20%</td> <td>0402\geq0.47μF</td> </tr> <tr> <td>6.3V</td> <td>20%</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Rated vol.	D.F. \leq	Exception of D.F. \leq		\geq 50V	\leq 3%	\leq 6%	0201(50V); 0603 \geq 0.047 μ F; 0805 \geq 0.18 μ F;1206 \geq 0.47 μ F	\leq 10%	1210 \geq 4.7 μ F	\leq 20%	0603 \geq 1 μ F; 0805 \geq 1 μ F;1206 \geq 4.7 μ F; 1210 \geq 10 μ F	35V	\leq 5%	\leq 20%	0805 \geq 2.2 μ F; 1210 \geq 10 μ F	25V	\leq 5%	\leq 10%	0201 \geq 0.01 μ F;0805 \geq 1 μ F; 1210 \geq 10 μ F	\leq 14%	0603 \geq 0.33 μ F; 1206 \geq 4.7 μ F	\leq 15%	0402 \geq 0.10 μ F;0603 \geq 0.47 μ F; 0805 \geq 2.2 μ F;1206 \geq 6.8 μ F; 1210 \geq 22 μ F	16V	\leq 5%	\leq 10%	0603 \geq 0.15 μ F;0805 \geq 0.68 μ F; 1206 \geq 2.2 μ F;1210 \geq 4.7 μ F	\leq 15%	0201 \geq 0.01 μ F;0402 \geq 0.033 μ F; 0603 \geq 0.68 μ F;0805 \geq 2.2 μ F; 1206 \geq 4.7 μ F; 1210 \geq 22 μ F	10V	\leq 75%	\leq 15%	0201 \geq 0.012 μ F;0402 \geq 0.33 μ F; 0603 \geq 0.33 μ F; 0805 \geq 2.2 μ F; 1206 \geq 2.2 μ F; 1210 \geq 22 μ F	\leq 20%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F	6.3V	\leq 15%	\leq 30%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F; 0603 \geq 10 μ F; 0805 \geq 4.7 μ F; 1206 \geq 47 μ F; 1210 \geq 100 μ F	4V	\leq 20%	-	-	Rated vol.	D.F. \leq	Exception of D.F. \leq		\geq 50V	5%	7%	0603 \geq 0.1 μ F; 0805 \geq 0.47 μ F; 1206 \geq 4.7 μ F	35V	7%	-	-	25V	5%	7%	0402 \geq 0.047 μ F; 0603 \geq 0.1 μ F; 0805 \geq 0.33 μ F; 1206 \geq 1 μ F; 1210 \geq 4.7 μ F	9%	0402 \geq 0.068 μ F; 0603 \geq 0.47 μ F; 1206 \geq 4.7 μ F; 1210 \geq 22 μ F	16V (C<1.0 μ F)	7%	9%	0402 \geq 0.068 μ F; 0603 \geq 0.68 μ F	12.5%	0402 \geq 0.22 μ F	16V (C \geq 1.0 μ F)	9%	12.5%	0603 \geq 2.2 μ F; 0805 \geq 3.3 μ F; 1206 \geq 10 μ F; 1210 \geq 22 μ F; 1812 \geq 47 μ F	10V	12.5%	20%	0402 \geq 0.47 μ F	6.3V	20%	-	-
			Size	Dielectric	Rated voltage	Capacitance range																																																																																																																																	
			0201	X5R/X7R	6.3V,10V	C \geq 0.1 μ F																																																																																																																																	
			0402	X5R/X7R	6.3V,10V	C \geq 1.0 μ F																																																																																																																																	
			0603	X5R/X7R	6.3V,10V	C \geq 4.7 μ F																																																																																																																																	
			0805	X5R/X7R	6.3V	C \geq 22 μ F																																																																																																																																	
			1206	X5R/X7R	6.3V	C \geq 47 μ F																																																																																																																																	
				NPO	3000V	C \geq 1.5pF																																																																																																																																	
			Size	Dielectric	Rated voltage	Capacitance range																																																																																																																																	
			0402	X5R/X7R	10V,16V, 25V	C \geq 0.22 μ F																																																																																																																																	
				Y5V	16V	C \geq 0.47 μ F																																																																																																																																	
			0603	X5R/X7R	10V,16V	C \geq 1 μ F																																																																																																																																	
				Y5V	16V	C \geq 2.2 μ F																																																																																																																																	
			1206	X5R/X7R	10V	C \geq 4.7 μ F																																																																																																																																	
				Y5V	16V	C \geq 4.7pF																																																																																																																																	
Rated vol.	D.F. \leq	Exception of D.F. \leq																																																																																																																																					
\geq 50V	\leq 3%	\leq 6%	0201(50V); 0603 \geq 0.047 μ F; 0805 \geq 0.18 μ F;1206 \geq 0.47 μ F																																																																																																																																				
		\leq 10%	1210 \geq 4.7 μ F																																																																																																																																				
		\leq 20%	0603 \geq 1 μ F; 0805 \geq 1 μ F;1206 \geq 4.7 μ F; 1210 \geq 10 μ F																																																																																																																																				
35V	\leq 5%	\leq 20%	0805 \geq 2.2 μ F; 1210 \geq 10 μ F																																																																																																																																				
25V	\leq 5%	\leq 10%	0201 \geq 0.01 μ F;0805 \geq 1 μ F; 1210 \geq 10 μ F																																																																																																																																				
		\leq 14%	0603 \geq 0.33 μ F; 1206 \geq 4.7 μ F																																																																																																																																				
		\leq 15%	0402 \geq 0.10 μ F;0603 \geq 0.47 μ F; 0805 \geq 2.2 μ F;1206 \geq 6.8 μ F; 1210 \geq 22 μ F																																																																																																																																				
16V	\leq 5%	\leq 10%	0603 \geq 0.15 μ F;0805 \geq 0.68 μ F; 1206 \geq 2.2 μ F;1210 \geq 4.7 μ F																																																																																																																																				
		\leq 15%	0201 \geq 0.01 μ F;0402 \geq 0.033 μ F; 0603 \geq 0.68 μ F;0805 \geq 2.2 μ F; 1206 \geq 4.7 μ F; 1210 \geq 22 μ F																																																																																																																																				
10V	\leq 75%	\leq 15%	0201 \geq 0.012 μ F;0402 \geq 0.33 μ F; 0603 \geq 0.33 μ F; 0805 \geq 2.2 μ F; 1206 \geq 2.2 μ F; 1210 \geq 22 μ F																																																																																																																																				
		\leq 20%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F																																																																																																																																				
6.3V	\leq 15%	\leq 30%	0201 \geq 0.1 μ F; 0402 \geq 1 μ F; 0603 \geq 10 μ F; 0805 \geq 4.7 μ F; 1206 \geq 47 μ F; 1210 \geq 100 μ F																																																																																																																																				
4V	\leq 20%	-	-																																																																																																																																				
Rated vol.	D.F. \leq	Exception of D.F. \leq																																																																																																																																					
\geq 50V	5%	7%	0603 \geq 0.1 μ F; 0805 \geq 0.47 μ F; 1206 \geq 4.7 μ F																																																																																																																																				
35V	7%	-	-																																																																																																																																				
25V	5%	7%	0402 \geq 0.047 μ F; 0603 \geq 0.1 μ F; 0805 \geq 0.33 μ F; 1206 \geq 1 μ F; 1210 \geq 4.7 μ F																																																																																																																																				
		9%	0402 \geq 0.068 μ F; 0603 \geq 0.47 μ F; 1206 \geq 4.7 μ F; 1210 \geq 22 μ F																																																																																																																																				
16V (C<1.0 μ F)	7%	9%	0402 \geq 0.068 μ F; 0603 \geq 0.68 μ F																																																																																																																																				
		12.5%	0402 \geq 0.22 μ F																																																																																																																																				
16V (C \geq 1.0 μ F)	9%	12.5%	0603 \geq 2.2 μ F; 0805 \geq 3.3 μ F; 1206 \geq 10 μ F; 1210 \geq 22 μ F; 1812 \geq 47 μ F																																																																																																																																				
10V	12.5%	20%	0402 \geq 0.47 μ F																																																																																																																																				
6.3V	20%	-	-																																																																																																																																				

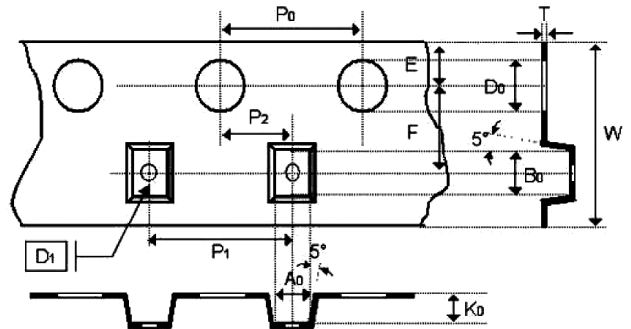
No	Item	Test Condition	Requirements	
15	High Temperature Load (Endurance)		I.R.: $\geq 10V$, $1G\Omega$ or 50Ω -F whichever is smaller Class II (X7R, X5R, Y5V)	
			Rated voltage	Insulation Resistance
			100V: X7R	1G Ω or RxC $\geq 10G\Omega$ whichever is smaller.
			50V:0603 $\geq 1\mu F$;0805 $\geq 1\mu F$;1206 $\geq 4.7\mu F$; 1210 $\geq 4.7\mu F$	
			35V:0805 $\geq 2.2\mu F$;1210 $\geq 10\mu F$	
			25V:0402 $\geq 1\mu F$;0603 $\geq 2.2\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 10\mu F$;1210 $\geq 10\mu F$	
			16V:0402 $\geq 0.22\mu F$;0603 $\geq 1\mu F$;0805 $\geq 2.2\mu F$; 1206 $\geq 10\mu F$;1210 $\geq 47\mu F$	
10V:0201 $\geq 47nF$;0402 $\geq 0.47\mu F$;0603 $\geq 0.47\mu F$; 0805 $\geq 2.2\mu F$; 1206 $\geq 4.7\mu F$;1210 $\geq 47\mu F$				
6.3V ; 4V				

Appendixes

Tape & Reel Dimensions

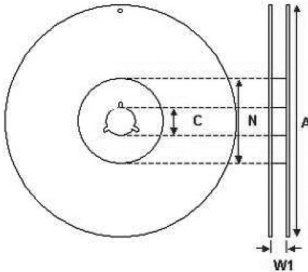


The dimension of paper tape



The dimension of plastic tape

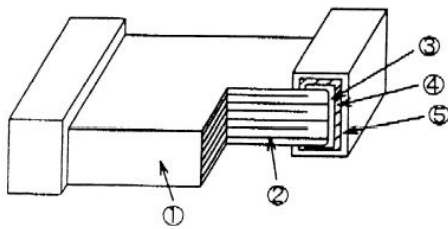
Size	0402	0603	0805			1206			1210		1812
Thickness	N	S, X	A	B	C, D, I	B	C, J, D	G	C, D, G	M	D, K
A ₀	0.62±0.05	1.02±0.05	1.5±0.10	1.5±0.1	<1.57	2±0.1	<1.85	<1.95	<2.97	<2.97	<3.81
B ₀	1.12±0.05	1.80±0.05	2.3±0.10	2.3±0.1	<2.40	3.5±0.1	<3.46	<3.67	<3.73	<3.73	<5.30
T	0.60±0.05	0.95±0.05	0.75±0.05	0.95±0.05	0.23±0.05	0.95±0.05	0.23±0.05	0.23±0.05	0.23±0.05	0.23±0.05	0.25±0.05
K ₀	-	-	-	-	<2.50	-	<2.5	<2.5	<2.5	<3	<2.50
W	8±0.1	8±0.1	8±0.1	8±0.10	8±0.1	8±0.1	8±0.1	8±0.1	8±0.1	8±0.1	12±0.2
P ₀	4±0.1	4±0.1	4±0.1	4±0.10	4±0.1	4±0.1	4±0.1	4±0.1	4±0.1	4±0.1	4±0.1
10xP ₀	40±0.1	40±0.1	40±0.1	40±0.10	40±0.1	40±0.1	40±0.1	40±0.1	40±0.1	40±0.1	40±0.1
P ₁	2±0.05	4±0.1	4±0.1	4±0.10	4±0.1	4±0.1	4±0.1	4±0.1	4±0.1	4±0.1	8±0.1
P ₂	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05	2±0.05
D ₀	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05	1.5±0.05	1.5±0.05	1.5±0.05	1.5±0.05	1.5±0.05	1.5±0.05	1.5±0.05
D ₁	-	-	-	-	1±0.1	-	1±0.1	1±0.1	1±0.1	1±0.1	1.5±0.1
E	1.75±0.05	1.75±0.05	1.75±0.05	1.75±0.05	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1
F	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	3.5±0.05	5.5±0.05



The dimension of reel

Size	0402, 0603, 0805, 1206, 1210			1812
Reel size	7"	10"	13"	7"
C	13 +0.5/-0.2	13 +0.5/-0.2	13 +0.5/-0.2	13 +0.5/-0.2
W ₁	8.4 +1.5/-0	8.4 +1.5/-0	8.4 +1.5/-0	12.4 +2.0/-0
A	178 ±0.10	250 ±1	330 ±1	178 ±0.10
N	60 +1/-0	100 ±1	100 ±1	60 +1.0/-0

Constructions:



No.	Name	NPO*	NPO
1	Ceramic material	BaTiO ₃ based	
2	Inner electrode	AgPd alloy	Ni
3	Inner layer	Ag	Cu
4	Middle layer	Ni	
5	Outer layer	Sn	

* Partial NPO items are with Ag/Ni/Sn terminations, please ref to product range of NPO dielectric for detail.

Storage and handling conditions

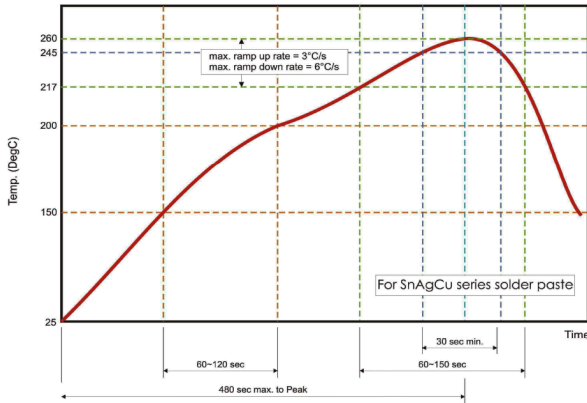
- (1) To store products at 5°C to 40°C ambient temperature and 20 to 70% related humidity conditions.
- (2) The product is recommended to be used within one year after shipment. Check solderability in case of shelf life extension is needed.

Cautions:

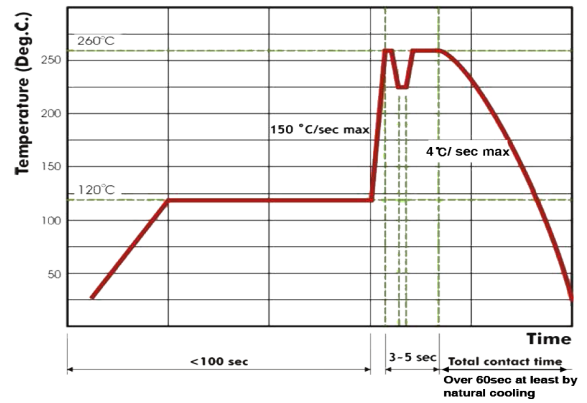
- a. The corrosive gas reacts on the terminal electrodes of capacitors, and results in the poor solderability. Do not store the capacitors in the ambience of corrosive gas (e.g., hydrogen sulfide, sulfur dioxide, chlorine, ammonia gas etc.)
- b. In corrosive atmosphere, solderability might be degraded, and silver migration might occur to cause low reliability.
- c. Due to the dewing by rapid humidity change, or the photochemical change of the terminal electrode by direct sunlight, the solderability and electrical performance may deteriorate. Do not store capacitors under direct sunlight or dewing condition. To store products on the shelf and avoid exposure to moisture.

Recommended Soldering Conditions:

The lead-free termination MLCCs are not only to be used on SMT against lead-free solder paste, but also suitable against lead-containing solder paste. If the optimized solder joint is requested, increasing soldering time, temperature and concentration of N₂ within oven are recommended.



Recommended reflow soldering profile for SMT process with SnAgCu series solder paste.



Recommended wave soldering profile for SMT process with SnAgCu series solder.

Part Number Table

Description	Part Number
MLCC, 0603, NP0, 50V, 82pF	MCCA000203
MLCC, 0603, NP0, 50V, 220pF	MCCA000209
MLCC, 0603, X7R, 50V, 560pF	MCCA000218
MLCC, 0603, X7R, 50V, 3.3nF	MCCA000231
MLCC, 0603, X7R, 50V, 47nF	MCCA000249
CAP, Ceramic, 0.1µF, 50V, X7R, 0603	MCCA000255
CAP, Ceramic, 0.1µF, 50V, Y5V, 0603	MCCA000256
CAP, Ceramic, 0.1µF, 16V, X7R, 0805	MCCA000274
CAP, Ceramic, 0.1µF, 25V, X7R, 0805	MCCA000295
CAP, Ceramic, 0.1µF, 25V, Y5V, 0805	MCCA000296
MLCC, 0805, Y5V, 25V, 330nF	MCCA000303
CAP, Ceramic, 10pF, 50V, C0G/NP0, 0805	MCCA000318
CAP, Ceramic, 12pF, 50V, C0G/NP0, 0805	MCCA000319
CAP, Ceramic, 15pF, 50V, C0G/NP0, 0805	MCCA000320
CAP, Ceramic, 18pF, 50V, C0G/NP0, 0805	MCCA000321
CAP, Ceramic, 22pF, 50V, C0G/NP0, 0805	MCCA000322
CAP, Ceramic, 33pF, 50V, C0G/NP0, 0805	MCCA000324
MLCC, 0805, NP0, 50V, 56pF	MCCA000327
CAP, Ceramic, 100pF, 50V, C0G/NP0, 0805	MCCA000330

Description	Part Number
CAP, Ceramic, 470pF, 50V, X7R, 0805	MCCA000342
CAP, Ceramic, 1000pF, 50V, X7R, 0805	MCCA000350
MLCC, 0603, X7R, 50V, 100nF	MCCA000255
CAP, Ceramic, 10µF, 16V, Y5V, 1206	MCCA000564
MLCC, 1206, X7R, 25V, 1µF	MCCA000565
CAP, Ceramic, 10µF, 25V, Y5V, 1206	MCCA000570
CAP, Ceramic, 1µF, 50V, X7R, 1206	MCCA000571
CAP, Ceramic, 100µF, 6.3V, X5R, 1210	MCCA000574
CAP, Ceramic, 4700pF, 50V, X7R, 0805	MCCA000364
MLCC, 0805, X7R, 50V, 8.2nF	MCCA000367
CAP, Ceramic, 0.01µF, 50V, X7R, 0805	MCCA000368
CAP, Ceramic, 0.01µF, 50V, Y5V, 0805	MCCA000369
CAP, Ceramic, 0.022µF, 50V, X7R, 0805	MCCA000374
CAP, Ceramic, 0.1µF, 50V, X7R, 0805	MCCA000386
MLCC, 0805, Y5V, 50V, 220nF	MCCA000389
CAP, Ceramic, 0.1µF, 16V, X7R, 1206	MCCA000416
CAP, Ceramic, 0.1µF, 25V, X7R, 1206	MCCA000434
CAP, Ceramic, 1000pF, 50V, X7R, 1206	MCCA000457
CAP, Ceramic, 0.01µF, 50V, X7R, 1206	MCCA000469

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
CAP, Ceramic, 0.1µF, 50V, X7R, 1206	MCCA000478	Capacitor, 1206, NP0, 200V, 4.7pF	MCCA000679
CAP, Ceramic, 0.22µF, 50V, X7R, 1206	MCCA000479	Capacitor, 1206, NP0, 200V, 6.8pF	MCCA000680
CAP, Ceramic, 0.1µF, 100V, X7R, 1206	MCCA000490	Capacitor, 1206, NP0, 200V, 10pF	MCCA000681
CAP, Ceramic, 1µF, 6.3V, X5R, 0402	MCCA000500	Capacitor, 1206, NP0, 200V, 15pF	MCCA000682
MLCC, 0402, X5R, 10V, 0.1µF	MCCA000505	Capacitor, 1206, NP0, 200V, 22pF	MCCA000683
CAP, Ceramic, 0.1µF, 16V, X5R, 0402	MCCA000512	Capacitor, 1206, NP0, 200V, 33pF	MCCA000684
CAP, Ceramic, 10µF, 6.3V, X5R, 0603	MCCA000517	Capacitor, 1206, NP0, 200V, 47pF	MCCA000685
CAP, Ceramic, 1µF, 10V, X5R, 0603	MCCA000522	Capacitor, 1206, NP0, 200V, 68pF	MCCA000686
MLCC, 0603, Y5V, 10V, 2.2µF	MCCA000523	Capacitor, 1206, NP0, 200V, 100pF	MCCA000687
CAP, Ceramic, 1µF, 16V, X5R, 0603	MCCA000529	Capacitor, 1206, NP0, 200V, 150pF	MCCA000688
CAP, Ceramic, 1µF, 16V, Y5V, 0603	MCCA000530	Capacitor, 1206, NP0, 200V, 220pF	MCCA000689
CAP, Ceramic, 1µF, 25V, X5R, 0603	MCCA000531	Capacitor, 1206, NP0, 200V, 330pF	MCCA000690
CAP, Ceramic, 22µF, 6.3V, X5R, 0805	MCCA000536	Capacitor, 1206, NP0, 200V, 470pF	MCCA000691
CAP, Ceramic, 10µF, 10V, Y5V, 0805	MCCA000542	Capacitor, 1206, NP0, 200V, 680pF	MCCA000692
CAP, Ceramic, 1µF, 16V, Y5V, 0805	MCCA000543	Capacitor, 1206, NP0, 200V, 1.5nF	MCCA000693
CAP, Ceramic, 4.7µF, 16V, Y5V, 0805	MCCA000547	Capacitor, 1206, NP0, 200V, 2.2nF	MCCA000694
MLCC, 0805, X5R, 16V, 4.7µF	MCCA000548	Capacitor, 1206, NP0, 630V, 1.5pF	MCCA000695
CAP, Ceramic, 1µF, 25V, Y5V, 0805	MCCA000549	Capacitor, 1206, NP0, 630V, 2.2pF	MCCA000696
CAP, Ceramic, 4.7µF, 25V, X5R, 0805	MCCA000551	Capacitor, 1206, NP0, 630V, 3.3pF	MCCA000697
CAP, Ceramic, 1µF, 50V, Y5V, 0805	MCCA000552	MLCC, 0603, Y5V, 16V, 330nF	MCCA000163
CAP, Ceramic, 10µF, 10V, Y5V, 1206	MCCA000554	CAP, MLCC, 270pF, 50V, NP0, 0603, Reel	MC000460
CAP, Ceramic, 22µF, 10V, Y5V, 1206	MCCA000555	MLCC, 0603, Y5V, 16V, 470nF	MCCA000164
MLCC, 1206, X7R, 16V, 1µF	MCCA000556	CAP, Ceramic, 0.01µF, 25V, X7R, 0603	MCCA000165
CAP, Ceramic, 0.22µF, 25V, X7R, 0603	MCCA001172	MLCC, 0603, Y5V, 16V, 470nF	MCCA000164
CAP, Ceramic, 10µF, 6.3V, X5R, 0805	MCCA000593	MLCC, 0603, X7R, 25V, 12nF	MCCA000166
MLCC, 0805, X5R, 16V, 1µF	MCCA000596	MLCC, 0603, X7R, 25V, 15nF	MCCA000167
Capacitor, 0805, NP0, 500V, 22pF	MCCA000664	MLCC, 0603, X7R, 25V, 18nF	MCCA000168
CAP, MLCC, 150pF, 50V, NP0, 0402, Reel	MC000375	MLCC, 0603, X7R, 25V, 10nF	MCCA000165
Capacitor, 0805, NP0, 500V, 33pF	MCCA000665	MLCC, 0603, X7R, 25V, 12nF	MCCA000166
Capacitor, 0805, NP0, 500V, 47pF	MCCA000666	MLCC, 0603, X7R, 25V, 15nF	MCCA000167
Capacitor, 0805, NP0, 500V, 68pF	MCCA000667	MLCC, 0603, X7R, 25V, 18nF	MCCA000168
Capacitor, 0805, NP0, 500V, 100pF	MCCA000668	MLCC, 0603, X7R, 25V, 22nF	MCCA000169
Capacitor, 0805, NP0, 500V, 150pF	MCCA000669	MLCC, 0603, X7R, 25V, 27nF	MCCA000170
Capacitor, 0805, NP0, 500V, 220pF	MCCA000670	MLCC, 0603, X7R, 25V, 33nF	MCCA000171
Capacitor, 0805, NP0, 500V, 330pF	MCCA000671	MLCC, 0603, X7R, 25V, 39nF	MCCA000172
Capacitor, 0805, X7R, 200V, 100pF	MCCA000672	MLCC, 0603, X7R, 25V, 47nF	MCCA000173
Capacitor, 0805, X7R, 200V, 150pF	MCCA000673	MLCC, 0603, X7R, 25V, 56nF	MCCA000174
Capacitor, 0805, X7R, 200V, 15nF	MCCA000674	MLCC, 0603, X7R, 25V, 68nF	MCCA000175
Capacitor, 0805, X7R, 200V, 22nF	MCCA000675	MLCC, 0603, X7R, 25V, 22nF	MCCA000169
Capacitor, 1206, NP0, 200V, 1.5pF	MCCA000676	MLCC, 0603, X7R, 25V, 27nF	MCCA000170
Capacitor, 1206, NP0, 200V, 2.2pF	MCCA000677	MLCC, 0603, X7R, 25V, 33nF	MCCA000171
Capacitor, 1206, NP0, 200V, 3.3pF	MCCA000678	MLCC, 0603, X7R, 25V, 39nF	MCCA000172

www.element14.com
www.farnell.com
www.newark.com



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0603, X7R, 25V, 47nF	MCCA000173	Capacitor, 1206, NP0, 2000V, 1.5pF	MCCA000728
MLCC, 0603, X7R, 25V, 56nF	MCCA000174	Capacitor, 1206, NP0, 2000V, 2.2pF	MCCA000729
MLCC, 0603, Y5V, 25V, 68nF	MCCA000176	Capacitor, 1206, NP0, 2000V, 3.3pF	MCCA000730
MLCC, 0603, X7R, 25V, 82nF	MCCA000177	Capacitor, 1206, NP0, 2000V, 4.7pF	MCCA000731
CAP, Ceramic, 0.1µF, 25V, X7R, 0603	MCCA000178	Capacitor, 1206, NP0, 2000V, 6.8pF	MCCA000732
CAP, Ceramic, 0.1µF, 25V, Y5V, 0603	MCCA000179	Capacitor, 1206, NP0, 2000V, 10pF	MCCA000733
MLCC, 0603, Y5V, 25V, 1µF	MCCA000180	MLCC, 0603, NP0, 50V, 4pF	MCCA000186
MLCC, 0603, NP0, 50V, 0.5pF	MCCA000181	MLCC, 0603, X7R, 25V, 68nF	MCCA000175
MLCC, 0603, NP0, 50V, 1pF	MCCA000182	MLCC, 0603, Y5V, 25V, 68nF	MCCA000176
MLCC, 0603, NP0, 50V, 1.5pF	MCCA000183	MLCC, 0603, X7R, 25V, 82nF	MCCA000177
MLCC, 0603, NP0, 50V, 2pF	MCCA000184	MLCC, 0603, X7R, 25V, 100nF	MCCA000178
MLCC, 0603, NP0, 50V, 3pF	MCCA000185	MLCC, 0603, Y5V, 25V, 100nF	MCCA000179
Capacitor, 1206, NP0, 630V, 4.7pF	MCCA000698	MLCC, 0603, Y5V, 25V, 1µF	MCCA000180
Capacitor, 1206, NP0, 630V, 6.8pF	MCCA000699	MLCC, 0603, NP0, 50V, 0.5pF	MCCA000181
Capacitor, 1206, NP0, 630V, 10pF	MCCA000700	MLCC, 0603, NP0, 50V, 1pF	MCCA000182
Capacitor, 1206, NP0, 630V, 15pF	MCCA000701	MLCC, 0603, NP0, 50V, 1.5pF	MCCA000183
Capacitor, 1206, NP0, 630V, 22pF	MCCA000702	MLCC, 0603, NP0, 50V, 2pF	MCCA000184
Capacitor, 1206, NP0, 630V, 33pF	MCCA000703	MLCC, 0603, NP0, 50V, 3pF	MCCA000185
Capacitor, 1206, NP0, 630V, 47pF	MCCA000704	MLCC, 0603, NP0, 50V, 4pF	MCCA000186
Capacitor, 1206, NP0, 630V, 68pF	MCCA000705	MLCC, 0603, NP0, 50V, 5pF	MCCA000187
Capacitor, 1206, NP0, 630V, 150pF	MCCA000706	MLCC, 0603, NP0, 50V, 6pF	MCCA000188
Capacitor, 1206, NP0, 630V, 220pF	MCCA000707	MLCC, 0603, NP0, 50V, 7pF	MCCA000189
Capacitor, 1206, NP0, 630V, 330pF	MCCA000708	MLCC, 0603, NP0, 50V, 8pF	MCCA000190
Capacitor, 1206, NP0, 630V, 470pF	MCCA000709	MLCC, 0603, NP0, 50V, 9pF	MCCA000191
Capacitor, 1206, NP0, 630V, 680pF	MCCA000710	CAP, Ceramic, 10pF, 50V, C0G / NP0, 0603	MCCA000192
Capacitor, 1206, NP0, 630V, 1nF	MCCA000711	CAP, Ceramic, 12pF, 50V, C0G / NP0, 0603	MCCA000193
Capacitor, 1206, NP0, 1000V, 1.5pF	MCCA000712	CAP, Ceramic, 15pF, 50V, C0G / NP0, 0603	MCCA000194
Capacitor, 1206, NP0, 1000V, 2.2pF	MCCA000713	CAP, Ceramic, 18pF, 50V, C0G / NP0, 0603	MCCA000195
Capacitor, 1206, NP0, 1000V, 3.3pF	MCCA000714	CAP, Ceramic, 22pF, 50V, C0G / NP0, 0603	MCCA000196
Capacitor, 1206, NP0, 1000V, 4.7pF	MCCA000715	CAP, Ceramic, 27pF, 50V, C0G / NP0, 0603	MCCA000197
Capacitor, 1206, NP0, 1000V, 6.8pF	MCCA000716	CAP, Ceramic, 33pF, 50V, C0G / NP0, 0603	MCCA000198
Capacitor, 1206, NP0, 1000V, 10pF	MCCA000717	MLCC, 0603, NP0, 50V, 39pF	MCCA000199
Capacitor, 1206, NP0, 1000V, 15pF	MCCA000718	CAP, Ceramic, 47pF, 50V, C0G / NP0, 0603	MCCA000200
Capacitor, 1206, NP0, 1000V, 22pF	MCCA000719	MLCC, 0603, NP0, 50V, 56pF	MCCA000201
Capacitor, 1206, NP0, 1000V, 33pF	MCCA000720	MLCC, 0603, NP0, 50V, 68pF	MCCA000202
Capacitor, 1206, NP0, 1000V, 47pF	MCCA000721	CAP, Ceramic, 100pF, 50V, C0G/NP0, 0603	MCCA000204
Capacitor, 1206, NP0, 1000V, 68pF	MCCA000722	MLCC, 0603, NP0, 50V, 120pF	MCCA000205
Capacitor, 1206, NP0, 1000V, 100pF	MCCA000723	MLCC, 0603, NP0, 50V, 150pF	MCCA000206
Capacitor, 1206, NP0, 1000V, 150pF	MCCA000724	MLCC, 0603, NP0, 50V, 180pF	MCCA000207
Capacitor, 1206, NP0, 1000V, 220pF	MCCA000725	MLCC, 0603, NP0, 50V, 5pF	MCCA000187
Capacitor, 1206, NP0, 1000V, 330pF	MCCA000726	MLCC, 0603, NP0, 50V, 6pF	MCCA000188
Capacitor, 1206, NP0, 1000V, 470pF	MCCA000727	Capacitor, 1206, NP0, 2000V, 15pF	MCCA000734

www.element14.com
www.farnell.com
www.newark.com



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
Capacitor, 1206, NP0, 2000V, 22pF	MCCA000735	MLCC, 0603, NP0, 50V, 27pF	MCCA000197
Capacitor, 1206, NP0, 2000V, 33pF	MCCA000736	MLCC, 0603, NP0, 50V, 33pF	MCCA000198
Capacitor, 1206, NP0, 2000V, 47pF	MCCA000737	MLCC, 0603, NP0, 50V, 39pF	MCCA000199
Capacitor, 1206, NP0, 2000V, 68pF	MCCA000738	MLCC, 0603, NP0, 50V, 47pF	MCCA000200
Capacitor, 1206, NP0, 2000V, 100pF	MCCA000739	MLCC, 0603, NP0, 50V, 56pF	MCCA000201
Capacitor, 1206, NP0, 2000V, 150pF	MCCA000740	MLCC, 0603, NP0, 50V, 68pF	MCCA000202
Capacitor, 1206, NP0, 2000V, 220pF	MCCA000741	MLCC, 0603, NP0, 50V, 82pF	MCCA000203
Capacitor, 1206, X7R, 200V, 150pF	MCCA000742	MLCC, 0603, NP0, 50V, 100pF	MCCA000204
Capacitor, 1206, X7R, 200V, 220pF	MCCA000743	MLCC, 0603, NP0, 50V, 120pF	MCCA000205
Capacitor, 1206, X7R, 200V, 330pF	MCCA000744	MLCC, 0603, NP0, 50V, 150pF	MCCA000206
Capacitor, 1206, X7R, 200V, 470pF	MCCA000745	MLCC, 0603, NP0, 50V, 180pF	MCCA000207
Capacitor, 1206, X7R, 200V, 680pF	MCCA000746	MLCC, 0603, X7R, 50V, 220pF	MCCA000208
Capacitor, 1206, X7R, 200V, 1nF	MCCA000747	CAP, Ceramic, 220pF, 50V, X7R, 0603	MCCA000208
Capacitor, 1206, X7R, 200V, 1.5nF	MCCA000748	MLCC, 0603, X7R, 50V, 270pF	MCCA000210
Capacitor, 1206, X7R, 200V, 2.2nF	MCCA000749	MLCC, 0603, NP0, 50V, 270pF	MCCA000211
Capacitor, 1206, X7R, 200V, 3.3nF	MCCA000750	MLCC, 0603, X7R, 50V, 330pF	MCCA000212
Capacitor, 1206, X7R, 200V, 4.7nF	MCCA000751	MLCC, 0603, NP0, 50V, 330pF	MCCA000213
Capacitor, 1206, X7R, 200V, 6.8nF	MCCA000752	MLCC, 0603, X7R, 50V, 390pF	MCCA000214
Capacitor, 1206, X7R, 200V, 10nF	MCCA000753	MLCC, 0603, NP0, 50V, 390pF	MCCA000215
Capacitor, 1206, X7R, 200V, 33nF	MCCA000754	CAP, Ceramic, 470pF, 50V, X7R, 0603	MCCA000216
Capacitor, 1206, X7R, 200V, 47nF	MCCA000755	MLCC, 0603, NP0, 50V, 470pF	MCCA000217
Capacitor, 1206, X7R, 200V, 68nF	MCCA000756	MLCC, 0603, NP0, 50V, 560pF	MCCA000219
Capacitor, 1206, X7R, 200V, 100nF	MCCA000757	MLCC, 0603, X7R, 50V, 680pF	MCCA000220
Capacitor, 1206, X7R, 630V, 150pF	MCCA000758	MLCC, 0603, NP0, 50V, 680pF	MCCA000221
Capacitor, 1206, X7R, 630V, 220pF	MCCA000759	MLCC, 0603, X7R, 50V, 820pF	MCCA000222
Capacitor, 1206, X7R, 630V, 330pF	MCCA000760	MLCC, 0603, NP0, 50V, 820pF	MCCA000223
Capacitor, 1206, X7R, 630V, 470pF	MCCA000761	CAP, Ceramic, 1000pF, 50V, X7R, 0603	MCCA000224
Capacitor, 1206, X7R, 630V, 680pF	MCCA000762	MLCC, 0603, NP0, 50V, 1nF	MCCA000225
Capacitor, 1206, X7R, 630V, 1.5nF	MCCA000763	MLCC, 0603, X7R, 50V, 1.2nF	MCCA000226
Capacitor, 1206, X7R, 630V, 3.3nF	MCCA000764	CAP, Ceramic, 1500pF, 50V, X7R, 0603	MCCA000227
Capacitor, 1206, X7R, 630V, 6.8nF	MCCA000765	MLCC, 0603, X7R, 50V, 1.8nF	MCCA000228
Capacitor, 1206, X7R, 630V, 15nF	MCCA000766	CAP, Ceramic, 2200pF, 50V, X7R, 0603	MCCA000229
Capacitor, 1206, X7R, 630V, 22nF	MCCA000767	MLCC, 0603, X7R, 50V, 2.7nF	MCCA000230
Capacitor, 1206, X7R, 630V, 33nF	MCCA000768	MLCC, 0603, X7R, 50V, 3.9nF	MCCA000232
MLCC, 0603, NP0, 50V, 7pF	MCCA000189	CAP, Ceramic, 4700pF, 50V, X7R, 0603	MCCA000233
MLCC, 0603, NP0, 50V, 8pF	MCCA000190	MLCC, 0603, X7R, 50V, 5.6nF	MCCA000234
MLCC, 0603, NP0, 50V, 9pF	MCCA000191	MLCC, 0603, X7R, 50V, 6.8nF	MCCA000235
MLCC, 0603, NP0, 50V, 10pF	MCCA000192	MLCC, 0603, X7R, 50V, 8.2nF	MCCA000236
MLCC, 0603, NP0, 50V, 12pF	MCCA000193	CAP, Ceramic, 0.01µF, 50V, X7R, 0603	MCCA000237
MLCC, 0603, NP0, 50V, 15pF	MCCA000194	CAP, Ceramic, 0.01µF, 50V, Y5V, 0603	MCCA000238
MLCC, 0603, NP0, 50V, 18pF	MCCA000195	MLCC, 0603, X7R, 50V, 12nF	MCCA000239
MLCC, 0603, NP0, 50V, 22pF	MCCA000196	MLCC, 0603, X7R, 50V, 15nF	MCCA000240

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0603, Y5V, 50V, 15nF	MCCA000241	Capacitor, 1210, NP0, 1000V, 330pF	MCCA000796
MLCC, 0603, X7R, 50V, 18nF	MCCA000242	Capacitor, 1210, NP0, 1000V, 470pF	MCCA000797
CAP, Ceramic, 0.022µF, 50V, X7R, 0603	MCCA000243	Capacitor, 1210, NP0, 2000V, 10pF	MCCA000798
MLCC, 0603, Y5V, 50V, 22nF	MCCA000244	Capacitor, 1210, NP0, 2000V, 15pF	MCCA000799
MLCC, 0603, X7R, 50V, 27nF	MCCA000245	Capacitor, 1210, NP0, 2000V, 22pF	MCCA000800
MLCC, 0603, X7R, 50V, 33nF	MCCA000246	Capacitor, 1210, NP0, 2000V, 33pF	MCCA000801
MLCC, 0603, Y5V, 50V, 33nF	MCCA000247	Capacitor, 1210, NP0, 2000V, 47pF	MCCA000802
MLCC, 0603, X7R, 50V, 39nF	MCCA000248	Capacitor, 1210, NP0, 2000V, 68pF	MCCA000803
MLCC, 0603, Y5V, 50V, 47nF	MCCA000250	MLCC, 0603, NP0, 50V, 270pF	MCCA000211
MLCC, 0603, X7R, 50V, 56nF	MCCA000251	MLCC, 0603, X7R, 50V, 330pF	MCCA000212
MLCC, 0603, X7R, 50V, 68nF	MCCA000252	MLCC, 0603, NP0, 50V, 330pF	MCCA000213
MLCC, 0603, Y5V, 50V, 68nF	MCCA000253	MLCC, 0603, X7R, 50V, 390pF	MCCA000214
MLCC, 0603, X7R, 50V, 82nF	MCCA000254	MLCC, 0603, NP0, 50V, 390pF	MCCA000215
MLCC, 0603, NP0, 50V, 220pF	MCCA000209	MLCC, 0603, X7R, 50V, 470pF	MCCA000216
MLCC, 0603, X7R, 50V, 270pF	MCCA000210	MLCC, 0603, NP0, 50V, 470pF	MCCA000217
Capacitor, 1206, X7R, 1000V, 150pF	MCCA000769	MLCC, 0603, X7R, 50V, 560pF	MCCA000218
Capacitor, 1206, X7R, 1000V, 220pF	MCCA000770	MLCC, 0603, NP0, 50V, 560pF	MCCA000219
Capacitor, 1206, X7R, 1000V, 330pF	MCCA000771	MLCC, 0603, X7R, 50V, 680pF	MCCA000220
Capacitor, 1206, X7R, 1000V, 470pF	MCCA000772	MLCC, 0603, NP0, 50V, 680pF	MCCA000221
Capacitor, 1206, X7R, 1000V, 680pF	MCCA000773	MLCC, 0603, X7R, 50V, 820pF	MCCA000222
Capacitor, 1206, X7R, 1000V, 1nF	MCCA000774	MLCC, 0603, NP0, 50V, 820pF	MCCA000223
Capacitor, 1206, X7R, 1000V, 1.5nF	MCCA000775	MLCC, 0603, X7R, 50V, 1nF	MCCA000224
Capacitor, 1206, X7R, 1000V, 2.2nF	MCCA000776	MLCC, 0603, NP0, 50V, 1nF	MCCA000225
Capacitor, 1206, X7R, 1000V, 3.3nF	MCCA000777	MLCC, 0603, X7R, 50V, 1.2nF	MCCA000226
Capacitor, 1206, X7R, 1000V, 4.7nF	MCCA000778	MLCC, 0603, X7R, 50V, 1.5nF	MCCA000227
Capacitor, 1206, X7R, 1000V, 6.8nF	MCCA000779	MLCC, 0603, X7R, 50V, 1.8nF	MCCA000228
Capacitor, 1206, X7R, 1000V, 10nF	MCCA000780	MLCC, 0603, X7R, 50V, 2.2nF	MCCA000229
Capacitor, 1206, X7R, 2000V, 150pF	MCCA000781	MLCC, 0603, X7R, 50V, 2.7nF	MCCA000230
Capacitor, 1206, X7R, 2000V, 220pF	MCCA000782	MLCC, 0603, X7R, 50V, 3.3nF	MCCA000231
Capacitor, 1206, X7R, 2000V, 330pF	MCCA000783	MLCC, 0603, X7R, 50V, 3.9nF	MCCA000232
Capacitor, 1206, X7R, 2000V, 470pF	MCCA000784	MLCC, 0603, X7R, 50V, 4.7nF	MCCA000233
Capacitor, 1206, X7R, 2000V, 680pF	MCCA000785	MLCC, 0603, X7R, 50V, 5.6nF	MCCA000234
Capacitor, 1206, X7R, 2000V, 1nF	MCCA000786	MLCC, 0603, X7R, 50V, 6.8nF	MCCA000235
Capacitor, 1210, NP0, 1000V, 10pF	MCCA000787	MLCC, 0603, X7R, 50V, 8.2nF	MCCA000236
Capacitor, 1210, NP0, 1000V, 15pF	MCCA000788	MLCC, 0603, X7R, 50V, 10nF	MCCA000237
Capacitor, 1210, NP0, 1000V, 22pF	MCCA000789	MLCC, 0603, Y5V, 50V, 10nF	MCCA000238
Capacitor, 1210, NP0, 1000V, 33pF	MCCA000790	MLCC, 0603, X7R, 50V, 12nF	MCCA000239
Capacitor, 1210, NP0, 1000V, 47pF	MCCA000791	MLCC, 0603, X7R, 50V, 15nF	MCCA000240
Capacitor, 1210, NP0, 1000V, 68pF	MCCA000792	MLCC, 0603, Y5V, 50V, 15nF	MCCA000241
Capacitor, 1210, NP0, 1000V, 100pF	MCCA000793	MLCC, 0603, X7R, 50V, 18nF	MCCA000242
Capacitor, 1210, NP0, 1000V, 150pF	MCCA000794	MLCC, 0603, X7R, 50V, 22nF	MCCA000243
Capacitor, 1210, NP0, 1000V, 220pF	MCCA000795	MLCC, 0603, Y5V, 50V, 22nF	MCCA000244

www.element14.com
www.farnell.com
www.newark.com



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0603, X7R, 50V, 27nF	MCCA000245	MLCC, 0603, X7R, 50V, 47nF	MCCA000249
MLCC, 0402, Y5V, 6.3V, 1µF	MCCA000035	MLCC, 0603, Y5V, 50V, 47nF	MCCA000250
MLCC, 0402, Y5V, 6.3V, 1µF	MCCA000035	MLCC, 0603, X7R, 50V, 56nF	MCCA000251
Capacitor, 1210, NP0, 2000V, 100pF	MCCA000804	MLCC, 0603, X7R, 50V, 68nF	MCCA000252
Capacitor, 1210, NP0, 2000V, 150pF	MCCA000805	MLCC, 0603, Y5V, 50V, 68nF	MCCA000253
Capacitor, 1210, NP0, 2000V, 220pF	MCCA000806	MLCC, 0603, X7R, 50V, 82nF	MCCA000254
Capacitor, 1210, X7R, 200V, 1nF	MCCA000807	MLCC, 0603, NP0, 100V, 15pF	MCCA000257
Capacitor, 1210, X7R, 200V, 1.5nF	MCCA000808	MLCC, 0603, NP0, 100V, 22pF	MCCA000258
Capacitor, 1210, X7R, 200V, 2.2nF	MCCA000809	MLCC, 0603, NP0, 100V, 33pF	MCCA000259
Capacitor, 1210, X7R, 200V, 3.3nF	MCCA000810	MLCC, 0603, NP0, 100V, 47pF	MCCA000260
Capacitor, 1210, X7R, 200V, 4.7nF	MCCA000811	MLCC, 0603, NP0, 100V, 68pF	MCCA000261
Capacitor, 1210, X7R, 200V, 6.8nF	MCCA000812	MLCC, 0603, NP0, 100V, 100pF	MCCA000262
Capacitor, 1210, X7R, 200V, 10nF	MCCA000813	MLCC, 0603, X7R, 100V, 220pF	MCCA000263
Capacitor, 1210, X7R, 200V, 15nF	MCCA000814	MLCC, 0603, X7R, 100V, 330pF	MCCA000264
Capacitor, 1210, X7R, 200V, 22nF	MCCA000815	MLCC, 0603, X7R, 100V, 470pF	MCCA000265
Capacitor, 1210, X7R, 200V, 33nF	MCCA000816	MLCC, 0603, X7R, 100V, 680pF	MCCA000266
Capacitor, 1210, X7R, 200V, 47nF	MCCA000817	MLCC, 0603, X7R, 100V, 100pF	MCCA000267
Capacitor, 1210, X7R, 200V, 68nF	MCCA000818	MLCC, 0805, Y5V, 6.3V, 10µF	MCCA000268
Capacitor, 1210, X7R, 200V, 100nF	MCCA000819	MLCC, 0805, X7R, 16V, 47nF	MCCA000270
Capacitor, 1210, X7R, 200V, 150nF	MCCA000820	MLCC, 0805, X7R, 16V, 56nF	MCCA000271
Capacitor, 1210, X7R, 200V, 220nF	MCCA000821	MLCC, 0805, X7R, 16V, 68nF	MCCA000272
Capacitor, 1210, X7R, 200V, 330nF	MCCA000822	MLCC, 0805, X7R, 16V, 82nF	MCCA000273
Capacitor, 1210, X7R, 200V, 470nF	MCCA000823	MLCC, 0805, Y5V, 16V, 100nF	MCCA000275
Capacitor, 1210, X7R, 630V, 1nF	MCCA000824	MLCC, 0805, X7R, 16V, 120nF	MCCA000276
Capacitor, 1210, X7R, 630V, 1.5nF	MCCA000825	MLCC, 0805, X7R, 16V, 150nF	MCCA000277
Capacitor, 1210, X7R, 630V, 2.2nF	MCCA000826	MLCC, 0805, Y5V, 16V, 150nF	MCCA000278
Capacitor, 1210, X7R, 630V, 3.3nF	MCCA000827	MLCC, 0805, X7R, 16V, 180nF	MCCA000279
Capacitor, 1210, X7R, 630V, 4.7nF	MCCA000828	MLCC, 0805, X7R, 16V, 220nF	MCCA000280
Capacitor, 1210, X7R, 630V, 6.8nF	MCCA000829	MLCC, 0805, Y5V, 16V, 220nF	MCCA000281
Capacitor, 1210, X7R, 630V, 10nF	MCCA000830	MLCC, 0805, X7R, 16V, 270nF	MCCA000282
Capacitor, 1210, X7R, 630V, 15nF	MCCA000831	CAP, MLCC, 4.7µF, 25V, X5R, 0805, Reel	MC0805X475K250CT
Capacitor, 1210, X7R, 630V, 22nF	MCCA000832	CAP, MLCC, 4.7µF, 6.3V, X5R, 0805, Reel	MC0805X475K6R3CT
Capacitor, 1210, X7R, 630V, 33nF	MCCA000833	CAP, MLCC, 4.7µF, 16V, X5R, 0805, Reel	MC0805X475K160CT
Capacitor, 1210, X7R, 630V, 47nF	MCCA000834	CAP, MLCC, 680pF, 50V, X7R, 0603, Reel	MC000494
Capacitor, 1210, X7R, 1000V, 1nF	MCCA000835	CAP, MLCC, 10µF, 25V, X5R, 0805, Reel	MC0805X106K250CT
Capacitor, 1210, X7R, 1000V, 1.5nF	MCCA000836	CAP, MLCC, 1µF, 50V, X5R, 0805, Reel	MC0805X105K500CT
Capacitor, 1210, X7R, 1000V, 2.2nF	MCCA000837	CAP, MLCC, 470pF, 50V, X7R, 0603, Reel	MC000490
Capacitor, 1210, X7R, 1000V, 3.3nF	MCCA000838	MLCC, 0402, Y5V, 10V, 220nF	MCCA000036
Capacitor, 1210, X7R, 1000V, 4.7nF	MCCA000839	MLCC, 0402, X7R, 16V, 5.6nF	MCCA000037
MLCC, 0603, X7R, 50V, 33nF	MCCA000246	MLCC, 0402, X7R, 16V, 6.8nF	MCCA000038
MLCC, 0603, Y5V, 50V, 33nF	MCCA000247	MLCC, 0402, X7R, 16V, 8.2nF	MCCA000039
MLCC, 0603, X7R, 50V, 39nF	MCCA000248	MLCC, 0402, X7R, 16V, 10nF	MCCA000040

Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0402, X7R, 16V, 12nF	MCCA000041	MLCC, 0805, NP0, 50V, 7pF	MCCA000315
MLCC, 0402, X7R, 16V, 15nF	MCCA000042	MLCC, 0805, NP0, 50V, 8pF	MCCA000316
MLCC, 0402, Y5V, 16V, 15nF	MCCA000043	MLCC, 0805, NP0, 50V, 9pF	MCCA000317
MLCC, 0402, X7R, 16V, 18nF	MCCA000044	Capacitor, 1210, X7R, 1000V, 6.8nF	MCCA000840
MLCC, 0402, X7R, 16V, 22nF	MCCA000045	Capacitor, 1210, X7R, 1000V, 10nF	MCCA000841
MLCC, 0402, Y5V, 16V, 22nF	MCCA000046	Capacitor, 1812, NP0, 1000V, 15pF	MCCA000842
MLCC, 0402, Y5V, 16V, 33nF	MCCA000047	Capacitor, 1812, NP0, 1000V, 22pF	MCCA000843
MLCC, 0402, Y5V, 16V, 47nF	MCCA000048	Capacitor, 1812, NP0, 1000V, 33pF	MCCA000844
MLCC, 0402, Y5V, 16V, 68nF	MCCA000049	Capacitor, 1812, NP0, 1000V, 47pF	MCCA000845
CAP, Ceramic, 0.1µF, 16V, X7R, 0402	MCCA000050	Capacitor, 1812, NP0, 1000V, 68pF	MCCA000846
MLCC, 0402, Y5V, 16V, 100nF	MCCA000051	Capacitor, 1812, NP0, 1000V, 100pF	MCCA000847
MLCC, 0402, X7R, 25V, 100pF	MCCA000052	Capacitor, 1812, NP0, 1000V, 150pF	MCCA000848
MLCC, 0402, X7R, 25V, 120pF	MCCA000053	Capacitor, 1812, NP0, 1000V, 220pF	MCCA000849
MLCC, 0402, X7R, 25V, 150pF	MCCA000054	Capacitor, 1812, NP0, 1000V, 330pF	MCCA000850
MLCC, 0805, X7R, 16V, 330nF	MCCA000283	Capacitor, 1812, NP0, 1000V, 470pF	MCCA000851
MLCC, 0805, Y5V, 16V, 330nF	MCCA000284	Capacitor, 1812, NP0, 1000V, 680pF	MCCA000852
MLCC, 0805, X7R, 16V, 390nF	MCCA000285	Capacitor, 1812, NP0, 1000V, 1nF	MCCA000853
MLCC, 0805, X7R, 16V, 470nF	MCCA000286	Capacitor, 1812, NP0, 1000V, 1.5nF	MCCA000854
MLCC, 0805, Y5V, 16V, 470nF	MCCA000287	Capacitor, 1812, NP0, 3000V, 10pF	MCCA000855
MLCC, 0805, Y5V, 16V, 680nF	MCCA000288	Capacitor, 1812, NP0, 3000V, 15pF	MCCA000856
MLCC, 0805, X7R, 25V, 39nF	MCCA000289	Capacitor, 1812, NP0, 3000V, 22pF	MCCA000857
MLCC, 0805, X7R, 25V, 47nF	MCCA000290	Capacitor, 1812, NP0, 3000V, 33pF	MCCA000858
MLCC, 0805, X7R, 25V, 56nF	MCCA000291	Capacitor, 1812, NP0, 3000V, 47pF	MCCA000859
MLCC, 0805, X7R, 25V, 68nF	MCCA000292	Capacitor, 1812, NP0, 3000V, 68pF	MCCA000860
MLCC, 0805, Y5V, 25V, 68nF	MCCA000293	Capacitor, 1812, NP0, 3000V, 100pF	MCCA000861
MLCC, 0805, X7R, 25V, 82nF	MCCA000294	Capacitor, 1812, NP0, 3000V, 150pF	MCCA000862
MLCC, 0805, X7R, 25V, 120nF	MCCA000297	Capacitor, 1812, NP0, 3000V, 220pF	MCCA000863
MLCC, 0805, X7R, 25V, 150nF	MCCA000298	Capacitor, 1812, NP0, 3000V, 330pF	MCCA000864
MLCC, 0805, Y5V, 25V, 150nF	MCCA000299	Capacitor, 1812, NP0, 3000V, 470pF	MCCA000865
MLCC, 0805, X7R, 25V, 180nF	MCCA000300	Capacitor, 1812, X7R, 630V, 1nF	MCCA000866
MLCC, 0805, X7R, 25V, 220nF	MCCA000301	Capacitor, 1812, X7R, 630V, 1.5nF	MCCA000867
MLCC, 0805, Y5V, 25V, 220nF	MCCA000302	Capacitor, 1812, X7R, 630V, 2.2nF	MCCA000868
MLCC, 0805, Y5V, 25V, 470nF	MCCA000304	Capacitor, 1812, X7R, 630V, 3.3nF	MCCA000869
MLCC, 0805, Y5V, 25V, 2.2µF	MCCA000306	Capacitor, 1812, X7R, 630V, 4.7nF	MCCA000870
MLCC, 0805, NP0, 50V, 0.5pF	MCCA000307	Capacitor, 1812, X7R, 630V, 6.8nF	MCCA000871
MLCC, 0805, NP0, 50V, 1pF	MCCA000308	Capacitor, 1812, X7R, 630V, 10nF	MCCA000872
MLCC, 0805, NP0, 50V, 1.5pF	MCCA000309	Capacitor, 1812, X7R, 630V, 15nF	MCCA000873
MLCC, 0805, NP0, 50V, 2pF	MCCA000310	Capacitor, 1812, X7R, 630V, 22nF	MCCA000874
MLCC, 0805, NP0, 50V, 3pF	MCCA000311	Capacitor, 1812, X7R, 630V, 33nF	MCCA000875
MLCC, 0805, NP0, 50V, 4pF	MCCA000312	MLCC, 0402, X7R, 25V, 180pF	MCCA000055
MLCC, 0805, NP0, 50V, 5pF	MCCA000313	MLCC, 0402, X7R, 25V, 220pF	MCCA000056
MLCC, 0805, NP0, 50V, 6pF	MCCA000314	MLCC, 0402, X7R, 25V, 270pF	MCCA000057

Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0402, X7R, 25V, 330pF	MCCA000058	MLCC, 0805, X7R, 50V, 270pF	MCCA000336
MLCC, 0402, X7R, 25V, 390pF	MCCA000059	MLCC, 0805, NP0, 50V, 270pF	MCCA000337
MLCC, 0402, X7R, 25V, 470pF	MCCA000060	MLCC, 0805, X7R, 50V, 330pF	MCCA000338
MLCC, 0402, X7R, 25V, 560pF	MCCA000061	MLCC, 0805, NP0, 50V, 330pF	MCCA000339
MLCC, 0402, X7R, 25V, 680pF	MCCA000062	MLCC, 0805, X7R, 50V, 390pF	MCCA000340
MLCC, 0402, X7R, 25V, 820pF	MCCA000063	MLCC, 0805, NP0, 50V, 390pF	MCCA000341
MLCC, 0402, X7R, 25V, 1nF	MCCA000064	MLCC, 0805, NP0, 50V, 470pF	MCCA000343
MLCC, 0402, X7R, 25V, 1.2nF	MCCA000065	MLCC, 0805, X7R, 50V, 560pF	MCCA000344
MLCC, 0402, X7R, 25V, 1.5nF	MCCA000066	MLCC, 0805, NP0, 50V, 560pF	MCCA000345
MLCC, 0402, X7R, 25V, 1.8nF	MCCA000067	MLCC, 0805, X7R, 50V, 680pF	MCCA000346
MLCC, 0402, X7R, 25V, 2.2nF	MCCA000068	MLCC, 0805, NP0, 50V, 680pF	MCCA000347
MLCC, 0402, X7R, 25V, 2.7nF	MCCA000069	MLCC, 0805, X7R, 50V, 820pF	MCCA000348
MLCC, 0402, X7R, 25V, 3.3nF	MCCA000070	MLCC, 0805, NP0, 50V, 820pF	MCCA000349
MLCC, 0402, X7R, 25V, 3.9nF	MCCA000071	MLCC, 0805, NP0, 50V, 1nF	MCCA000351
MLCC, 0402, X7R, 25V, 4.7nF	MCCA000072	MLCC, 0805, X7R, 50V, 1.2nF	MCCA000352
MLCC, 0402, X7R, 25V, 5.6nF	MCCA000073	MLCC, 0805, NP0, 50V, 1.2nF	MCCA000353
MLCC, 0402, X7R, 25V, 6.8nF	MCCA000074	MLCC, 0402, NP0, 50V, 9pF	MCCA000090
MLCC, 0402, X7R, 25V, 8.2nF	MCCA000075	MLCC, 0402, NP0, 50V, 10pF	MCCA000091
CAP, Ceramic, 0.01µF, 25V, X7R, 0402	MCCA000076	MLCC, 0402, Y5V, 10V, 220nF	MCCA000036
MLCC, 0402, Y5V, 25V, 10nF	MCCA000077	MLCC, 0402, X7R, 16V, 5.6nF	MCCA000037
MLCC, 0402, Y5V, 25V, 15nF	MCCA000078	MLCC, 0402, X7R, 16V, 6.8nF	MCCA000038
MLCC, 0402, Y5V, 25V, 22nF	MCCA000079	MLCC, 0402, X7R, 16V, 8.2nF	MCCA000039
MLCC, 0402, NP0, 50V, 0.5pF	MCCA000080	MLCC, 0402, X7R, 16V, 10nF	MCCA000040
MLCC, 0402, NP0, 50V, 1pF	MCCA000081	MLCC, 0402, X7R, 16V, 12nF	MCCA000041
MLCC, 0402, NP0, 50V, 1.5pF	MCCA000082	MLCC, 0402, X7R, 16V, 15nF	MCCA000042
MLCC, 0402, NP0, 50V, 2pF	MCCA000083	MLCC, 0402, Y5V, 16V, 15nF	MCCA000043
MLCC, 0402, NP0, 50V, 3pF	MCCA000084	MLCC, 0402, X7R, 16V, 18nF	MCCA000044
MLCC, 0402, NP0, 50V, 4pF	MCCA000085	MLCC, 0402, X7R, 16V, 22nF	MCCA000045
MLCC, 0402, NP0, 50V, 5pF	MCCA000086	MLCC, 0402, Y5V, 16V, 22nF	MCCA000046
MLCC, 0402, NP0, 50V, 6pF	MCCA000087	MLCC, 0402, Y5V, 16V, 33nF	MCCA000047
MLCC, 0402, NP0, 50V, 7pF	MCCA000088	MLCC, 0402, Y5V, 16V, 47nF	MCCA000048
MLCC, 0402, NP0, 50V, 8pF	MCCA000089	MLCC, 0402, Y5V, 16V, 68nF	MCCA000049
MLCC, 0805, NP0, 50V, 27pF	MCCA000323	MLCC, 0402, X7R, 16V, 100nF	MCCA000050
MLCC, 0805, NP0, 50V, 39pF	MCCA000325	MLCC, 0402, Y5V, 16V, 100nF	MCCA000051
MLCC, 0805, NP0, 50V, 47pF	MCCA000326	MLCC, 0402, X7R, 25V, 100pF	MCCA000052
MLCC, 0805, NP0, 50V, 68pF	MCCA000328	MLCC, 0402, X7R, 25V, 120pF	MCCA000053
MLCC, 0805, NP0, 50V, 82pF	MCCA000329	MLCC, 0402, X7R, 25V, 150pF	MCCA000054
MLCC, 0805, NP0, 50V, 120pF	MCCA000331	MLCC, 0402, X7R, 25V, 180pF	MCCA000055
MLCC, 0805, NP0, 50V, 150pF	MCCA000332	MLCC, 0402, X7R, 25V, 220pF	MCCA000056
MLCC, 0805, NP0, 50V, 180pF	MCCA000333	MLCC, 0402, X7R, 25V, 270pF	MCCA000057
MLCC, 0805, X7R, 50V, 220pF	MCCA000334	MLCC, 0402, X7R, 25V, 330pF	MCCA000058
MLCC, 0805, NP0, 50V, 220pF	MCCA000335	MLCC, 0402, X7R, 25V, 390pF	MCCA000059

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0402, X7R, 25V, 470pF	MCCA000060	Capacitor, 1812, X7R, 630V, 47nF	MCCA0000876
MLCC, 0402, X7R, 25V, 560pF	MCCA000061	Capacitor, 1812, X7R, 630V, 68nF	MCCA0000877
MLCC, 0402, X7R, 25V, 680pF	MCCA000062	Capacitor, 1812, X7R, 630V, 100nF	MCCA0000878
MLCC, 0402, X7R, 25V, 820pF	MCCA000063	Capacitor, 1812, X7R, 1000V, 330pF	MCCA0000879
MLCC, 0402, X7R, 25V, 1nF	MCCA000064	Capacitor, 1812, X7R, 1000V, 470pF	MCCA0000880
MLCC, 0402, X7R, 25V, 1.2nF	MCCA000065	Capacitor, 1812, X7R, 1000V, 680pF	MCCA0000881
MLCC, 0402, X7R, 25V, 1.5nF	MCCA000066	Capacitor, 1812, X7R, 1000V, 1nF	MCCA0000882
MLCC, 0402, X7R, 25V, 1.8nF	MCCA000067	Capacitor, 1812, X7R, 1000V, 1.5nF	MCCA0000883
MLCC, 0402, X7R, 25V, 2.2nF	MCCA000068	Capacitor, 1812, X7R, 1000V, 2.2nF	MCCA0000884
MLCC, 0805, NP0, 50V, 1.5nF	MCCA000354	Capacitor, 1812, X7R, 1000V, 3.3nF	MCCA0000885
MLCC, 0805, X7R, 50V, 1.5nF	MCCA000355	Capacitor, 1812, X7R, 1000V, 4.7nF	MCCA0000886
MLCC, 0603, Y5V, 50V, 100nF	MCCA000256	Capacitor, 1812, X7R, 1000V, 6.8nF	MCCA0000887
MLCC, 0603, NP0, 100V, 15pF	MCCA000257	Capacitor, 1812, X7R, 1000V, 10nF	MCCA0000888
MLCC, 0603, NP0, 100V, 22pF	MCCA000258	Capacitor, 1812, X7R, 1000V, 15nF	MCCA0000889
MLCC, 0603, NP0, 100V, 33pF	MCCA000259	Capacitor, 1812, X7R, 3000V, 680pF	MCCA0000890
MLCC, 0603, NP0, 100V, 47pF	MCCA000260	Capacitor, 1812, X7R, 3000V, 1nF	MCCA0000891
MLCC, 0603, NP0, 100V, 68pF	MCCA000261	CAP, MLCC, 10µF, 6.3V, X5R, 0805, Reel	MC0805X106K6R3CT
MLCC, 0603, NP0, 100V, 100pF	MCCA000262	CAP, MLCC, 10µF, 16V, X5R, 0805, Reel	MC0805X106K160CT
MLCC, 0603, X7R, 100V, 220pF	MCCA000263	CAP, MLCC, 10µF, 10V, X5R, 0805, Reel	MC0805X106K100CT
MLCC, 0603, X7R, 100V, 330pF	MCCA000264	CAP, MLCC, 2.2µF, 10V, X5R, 0805, Reel	MC0805X225K100CT
MLCC, 0603, X7R, 100V, 470pF	MCCA000265	CAP, MLCC, 10pF, 100V, NP0, 1206, Reel	MC1206N100J101CT
MLCC, 0603, X7R, 100V, 680pF	MCCA000266	CAP, MLCC, 1µF, 100V, X7R, 1206, Reel	MC1206B105K101CT
MLCC, 0603, X7R, 100V, 1000pF	MCCA000267	CAP, MLCC, 2.2µF, 25V, X7R, 1206, Reel	MC1206B225K250CT
MLCC, 0805, Y5V, 6.3V, 10µF	MCCA000268	CAP, MLCC, 4.7µF, 25V, X7R, 1206, Reel	MC1206B475K250CT
MLCC, 0805, X7R, 16V, 47nF	MCCA000270	CAP, MLCC, 1µF, 50V, X7R, 1206, Reel	MC1206B105J500CT
MLCC, 0805, X7R, 16V, 56nF	MCCA000271	CAP, MLCC, 1µF, 50V, X7R, 1206, Reel	MC1206B105K500CT
MLCC, 0805, X7R, 16V, 68nF	MCCA000272	CAP, MLCC, 4.7µF, 50V, X7R, 1206, Reel	MC1206B475K500CT
MLCC, 0805, X7R, 16V, 82nF	MCCA000273	CAP, MLCC, 2.2µF, 16V, X7R, 1206, Reel	MC1206B225K160CT
MLCC, 0805, X7R, 16V, 100nF	MCCA000274	CAP, MLCC, 2.2µF, 10V, X7R, 1206, Reel	MC1206B225K100CT
MLCC, 0805, Y5V, 16V, 100nF	MCCA000275	CAP, MLCC, 1nF, 200V, X7R, 1206, Reel	MC1206B102K201CT
MLCC, 0805, X7R, 16V, 120nF	MCCA000276	CAP, MLCC, 100nF, 200V, X7R, 1206, Reel	MC1206B104K201CT
MLCC, 0805, X7R, 16V, 150nF	MCCA000277	CAP, MLCC, 100pF, 500V, NP0, 1206, Reel	MC1206N101J501CT
MLCC, 0805, Y5V, 16V, 150nF	MCCA000278	CAP, MLCC, 220pF, 500V, NP0, 1206, Reel	MC1206N221J501CT
MLCC, 0805, X7R, 16V, 180nF	MCCA000279	CAP, MLCC, 330pF, 500V, NP0, 1206, Reel	MC1206N331J501CT
MLCC, 0805, X7R, 16V, 220nF	MCCA000280	CAP, MLCC, 470pF, 500V, NP0, 1206, Reel	MC1206N471J501CT
MLCC, 0805, Y5V, 16V, 220nF	MCCA000281	CAP, MLCC, 1nF, 500V, X7R, 1206, Reel	MC1206B102K501CT
MLCC, 0805, X7R, 16V, 270nF	MCCA000282	MLCC, 0402, X7R, 25V, 2.7nF	MCCA000069
MLCC, 0805, X7R, 16V, 330nF	MCCA000283	MLCC, 0402, X7R, 25V, 3.3nF	MCCA000070
MLCC, 0805, Y5V, 16V, 330nF	MCCA000284	MLCC, 0402, X7R, 25V, 3.9nF	MCCA000071
MLCC, 0805, X7R, 16V, 390nF	MCCA000285	MLCC, 0402, X7R, 25V, 4.7nF	MCCA000072
MLCC, 0805, X7R, 16V, 470nF	MCCA000286	MLCC, 0402, X7R, 25V, 5.6nF	MCCA000073
MLCC, 0805, Y5V, 16V, 470nF	MCCA000287	MLCC, 0402, X7R, 25V, 6.8nF	MCCA000074

www.element14.com
www.farnell.com
www.newark.com



Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0402, X7R, 25V, 8.2nF	MCCA000075	MLCC, 0805, X7R, 25V, 220nF	MCCA000301
MLCC, 0402, X7R, 25V, 10nF	MCCA000076	MLCC, 0805, Y5V, 25V, 220nF	MCCA000302
MLCC, 0402, Y5V, 25V, 10nF	MCCA000077	MLCC, 0805, Y5V, 25V, 330nF	MCCA000303
MLCC, 0402, Y5V, 25V, 15nF	MCCA000078	MLCC, 0805, Y5V, 25V, 470nF	MCCA000304
MLCC, 0402, Y5V, 25V, 22nF	MCCA000079	MLCC, 0805, Y5V, 25V, 2.2µF	MCCA000306
MLCC, 0402, NP0, 50V, 0.5pF	MCCA000080	MLCC, 0805, NP0, 50V, 0.5pF	MCCA000307
MLCC, 0402, NP0, 50V, 1pF	MCCA000081	MLCC, 0805, NP0, 50V, 1pF	MCCA000308
MLCC, 0402, NP0, 50V, 1.5pF	MCCA000082	MLCC, 0805, NP0, 50V, 1.5pF	MCCA000309
MLCC, 0402, NP0, 50V, 2pF	MCCA000083	MLCC, 0805, NP0, 50V, 2pF	MCCA000310
MLCC, 0402, NP0, 50V, 3pF	MCCA000084	MLCC, 0805, NP0, 50V, 3pF	MCCA000311
MLCC, 0402, NP0, 50V, 4pF	MCCA000085	MLCC, 0805, NP0, 50V, 4pF	MCCA000312
MLCC, 0402, NP0, 50V, 5pF	MCCA000086	MLCC, 0805, NP0, 50V, 5pF	MCCA000313
MLCC, 0402, NP0, 50V, 6pF	MCCA000087	MLCC, 0805, NP0, 50V, 6pF	MCCA000314
MLCC, 0402, NP0, 50V, 7pF	MCCA000088	MLCC, 0805, NP0, 50V, 8pF	MCCA000316
MLCC, 0402, NP0, 50V, 8pF	MCCA000089	MLCC, 0805, NP0, 50V, 9pF	MCCA000317
MLCC, 0402, NP0, 50V, 9pF	MCCA000090	MLCC, 0805, NP0, 50V, 10pF	MCCA000318
MLCC, 0402, NP0, 50V, 11pF	MCCA000092	MLCC, 0805, NP0, 50V, 12pF	MCCA000319
MLCC, 0402, NP0, 50V, 12pF	MCCA000093	MLCC, 0805, NP0, 50V, 15pF	MCCA000320
MLCC, 0402, NP0, 50V, 13pF	MCCA000094	MLCC, 0805, NP0, 50V, 18pF	MCCA000321
MLCC, 0402, NP0, 50V, 15pF	MCCA000095	MLCC, 0805, NP0, 50V, 22pF	MCCA000322
MLCC, 0402, NP0, 50V, 16pF	MCCA000096	MLCC, 0805, NP0, 50V, 27pF	MCCA000323
MLCC, 0402, NP0, 50V, 18pF	MCCA000097	MLCC, 1206, Y5V, 16V, 1µF	MCCA000557
MLCC, 0402, NP0, 50V, 20pF	MCCA000098	MLCC, 1206, X7R, 16V, 1.5µF	MCCA000558
MLCC, 0402, NP0, 50V, 22pF	MCCA000099	MLCC, 1206, Y5V, 16V, 1.5µF	MCCA000559
MLCC, 0402, NP0, 50V, 24pF	MCCA000100	MLCC, 1206, X7R, 16V, 2.2µF	MCCA000560
MLCC, 0402, NP0, 50V, 27pF	MCCA000101	MLCC, 1206, Y5V, 16V, 2.2µF	MCCA000561
MLCC, 0402, NP0, 50V, 30pF	MCCA000102	MLCC, 1206, Y5V, 16V, 3.3µF	MCCA000562
MLCC, 0402, NP0, 50V, 33pF	MCCA000103	MLCC, 1206, Y5V, 16V, 4.7µF	MCCA000563
MLCC, 0402, NP0, 50V, 36pF	MCCA000104	MLCC, 1206, Y5V, 25V, 1µF	MCCA000566
MLCC, 0805, Y5V, 16V, 680nF	MCCA000288	MLCC, 1206, Y5V, 25V, 1.5µF	MCCA000567
MLCC, 0805, X7R, 25V, 39nF	MCCA000289	MLCC, 1206, Y5V, 25V, 2.2µF	MCCA000568
MLCC, 0805, X7R, 25V, 47nF	MCCA000290	MLCC, 1206, Y5V, 25V, 4.7µF	MCCA000569
MLCC, 0805, X7R, 25V, 56nF	MCCA000291	MLCC, 1206, Y5V, 50V, 1µF	MCCA000572
MLCC, 0805, X7R, 25V, 68nF	MCCA000292	MLCC, 1210, X5R, 6.3V, 22µF	MCCA000573
MLCC, 0805, Y5V, 25V, 68nF	MCCA000293	MLCC, 1210, X5R, 10V, 10µF	MCCA000575
MLCC, 0805, X7R, 25V, 82nF	MCCA000294	MLCC, 1210, Y5V, 10V, 22µF	MCCA000576
MLCC, 0805, X7R, 25V, 100nF	MCCA000295	MLCC, 1210, X5R, 10V, 22µF	MCCA000577
MLCC, 0805, Y5V, 25V, 100nF	MCCA000296	MLCC, 1210, X5R, 10V, 47µF	MCCA000578
MLCC, 0805, X7R, 25V, 120nF	MCCA000297	MLCC, 1210, X5R, 16V, 4.7µF	MCCA000579
MLCC, 0805, X7R, 25V, 150nF	MCCA000298	MLCC, 1210, Y5V, 16V, 10µF	MCCA000580
MLCC, 0805, Y5V, 25V, 150nF	MCCA000299	MLCC, 1210, X5R, 16V, 10µF	MCCA000581
MLCC, 0805, X7R, 25V, 180nF	MCCA000300	MLCC, 1210, Y5V, 16V, 22µF	MCCA000582



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 1210, X5R, 16V, 22µF	MCCA000583	CAP, MLCC, 1nF, 100V, NP0, 1206, Reel	MC1206N102J101CT
MLCC, 1210, X5R, 25V, 4.7µF	MCCA000584	CAP, MLCC, 22pF, 100V, NP0, 1206, Reel	MC1206N220J101CT
MLCC, 1210, Y5V, 25V, 10µF	MCCA000585	CAP, MLCC, 220pF, 100V, NP0, 1206, Reel	MC1206N221J101CT
MLCC, 0402, NP0, 50V, 39pF	MCCA000105	CAP, MLCC, 2.2nF, 100V, NP0, 1206, Reel	MC1206N222J101CT
MLCC, 0402, NP0, 50V, 43pF	MCCA000106	CAP, MLCC, 33pF, 100V, NP0, 1206, Reel	MC1206N330J101CT
MLCC, 0402, NP0, 50V, 47pF	MCCA000107	CAP, MLCC, 330pF, 100V, NP0, 1206, Reel	MC1206N331J101CT
MLCC, 0402, NP0, 50V, 51pF	MCCA000108	CAP, MLCC, 47pF, 100V, NP0, 1206, Reel	MC1206N470J101CT
MLCC, 0402, NP0, 50V, 56pF	MCCA000109	CAP, MLCC, 470pF, 100V, NP0, 1206, Reel	MC1206N471J101CT
MLCC, 0402, NP0, 50V, 62pF	MCCA000110	CAP, MLCC, 1nF, 100V, X7R, 1206, Reel	MC1206B102K101CT
MLCC, 0402, NP0, 50V, 68pF	MCCA000111	CAP, MLCC, 10nF, 100V, X7R, 1206, Reel	MC1206B103J101CT
MLCC, 0402, NP0, 50V, 75pF	MCCA000112	CAP, MLCC, 10nF, 100V, X7R, 1206, Reel	MC1206B103K101CT
MLCC, 0402, NP0, 50V, 82pF	MCCA000113	CAP, MLCC, 100nF, 100V, X7R, 1206, Reel	MC1206B104J101CT
MLCC, 0402, NP0, 50V, 91pF	MCCA000114	CAP, MLCC, 2.2nF, 100V, X7R, 1206, Reel	MC1206B222K101CT
MLCC, 0402, X7R, 50V, 100pF	MCCA000115	CAP, MLCC, 220nF, 100V, X7R, 1206, Reel	MC1206B224K101CT
MLCC, 0402, NP0, 50V, 100pF	MCCA000116	CAP, MLCC, 3.3nF, 100V, X7R, 1206, Reel	MC1206B332K101CT
MLCC, 0402, NP0, 50V, 110pF	MCCA000117	CAP, MLCC, 4.7nF, 100V, X7R, 1206, Reel	MC1206B472K101CT
MLCC, 0402, X7R, 50V, 120pF	MCCA000118	CAP, MLCC, 47nF, 100V, X7R, 1206, Reel	MC1206B473K101CT
MLCC, 0402, NP0, 50V, 120pF	MCCA000119	CAP, MLCC, 470nF, 100V, X7R, 1206, Reel	MC1206B474K101CT
MLCC, 0402, NP0, 50V, 130pF	MCCA000120	CAP, MLCC, 68nF, 100V, X7R, 1206, Reel	MC1206B683K101CT
MLCC, 0402, X7R, 50V, 150pF	MCCA000121	CAP, MLCC, 10nF, 25V, NP0, 1206, Reel	MC1206N103J250CT
MLCC, 0402, NP0, 50V, 150pF	MCCA000122	CAP, MLCC, 680nF, 25V, X7R, 1206, Reel	MC1206B684K250CT
MLCC, 0402, NP0, 50V, 160pF	MCCA000123	CAP, MLCC, 10µF, 25V, X5R, 1206, Reel	MC1206X106K250CT
MLCC, 0402, X7R, 50V, 180pF	MCCA000124	CAP, MLCC, 10pF, 50V, NP0, 1206, Reel	MC1206N100J500CT
MLCC, 0402, NP0, 50V, 180pF	MCCA000125	CAP, MLCC, 100pF, 50V, NP0, 1206, Reel	MC1206N101J500CT
MLCC, 0402, NP0, 50V, 200pF	MCCA000126	CAP, MLCC, 1nF, 50V, NP0, 1206, Reel	MC1206N102J500CT
MLCC, 0402, X7R, 50V, 220pF	MCCA000127	CAP, MLCC, 22pF, 50V, NP0, 1206, Reel	MC1206N220J500CT
MLCC, 0402, NP0, 50V, 220pF	MCCA000128	CAP, MLCC, 220pF, 50V, NP0, 1206, Reel	MC1206N221J500CT
MLCC, 0402, NP0, 50V, 10pF	MCCA000091	CAP, MLCC, 2.2nF, 50V, NP0, 1206, Reel	MC1206N222J500CT
MLCC, 0402, NP0, 50V, 11pF	MCCA000092	CAP, MLCC, 33pF, 50V, NP0, 1206, Reel	MC1206N330J500CT
MLCC, 0402, NP0, 50V, 12pF	MCCA000093	CAP, MLCC, 330pF, 50V, NP0, 1206, Reel	MC1206N331J500CT
MLCC, 0402, NP0, 50V, 13pF	MCCA000094	CAP, MLCC, 3.3nF, 50V, NP0, 1206, Reel	MC1206N332J500CT
MLCC, 0402, NP0, 50V, 15pF	MCCA000095	CAP, MLCC, 47pF, 50V, NP0, 1206, Reel	MC1206N470J500CT
MLCC, 0402, NP0, 50V, 16pF	MCCA000096	MLCC, 0402, NP0, 50V, 30pF	MCCA000102
MLCC, 0402, NP0, 50V, 18pF	MCCA000097	MLCC, 0402, NP0, 50V, 33pF	MCCA000103
MLCC, 0402, NP0, 50V, 20pF	MCCA000098	MLCC, 0402, NP0, 50V, 36pF	MCCA000104
MLCC, 0402, NP0, 50V, 22pF	MCCA000099	MLCC, 0402, NP0, 50V, 39pF	MCCA000105
MLCC, 0402, NP0, 50V, 24pF	MCCA000100	MLCC, 0402, NP0, 50V, 43pF	MCCA000106
MLCC, 0402, NP0, 50V, 27pF	MCCA000101	MLCC, 0402, NP0, 50V, 47pF	MCCA000107
CAP, MLCC, 10nF, 500V, X7R, 1206, Reel	MC1206B103K501CT	MLCC, 0402, NP0, 50V, 51pF	MCCA000108
CAP, MLCC, 4.7nF, 500V, X7R, 1206, Reel	MC1206B472K501CT	MLCC, 0402, NP0, 50V, 56pF	MCCA000109
CAP, MLCC, 47pF, 1KV, NP0, 1206, Reel	MC1206N470K102CT	MLCC, 0402, NP0, 50V, 62pF	MCCA000110
CAP, MLCC, 100pF, 100V, NP0, 1206, Reel	MC1206N101J101CT	MLCC, 0402, NP0, 50V, 68pF	MCCA000111

www.element14.com
www.farnell.com
www.newark.com



Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0402, NP0, 50V, 75pF	MCCA000112	MLCC, 0805, X7R, 50V, 820pF	MCCA000348
MLCC, 0402, NP0, 50V, 82pF	MCCA000113	MLCC, 0805, NP0, 50V, 820pF	MCCA000349
MLCC, 0402, NP0, 50V, 91pF	MCCA000114	MLCC, 0805, X7R, 50V, 1nF	MCCA000350
MLCC, 0402, X7R, 50V, 100pF	MCCA000115	MLCC, 0805, NP0, 50V, 1nF	MCCA000351
MLCC, 0402, NP0, 50V, 100pF	MCCA000116	MLCC, 0805, X7R, 50V, 1.2nF	MCCA000352
MLCC, 0402, NP0, 50V, 110pF	MCCA000117	MLCC, 0805, NP0, 50V, 1.2nF	MCCA000353
MLCC, 0402, X7R, 50V, 120pF	MCCA000118	MLCC, 0805, NP0, 50V, 1.5nF	MCCA000354
MLCC, 0402, NP0, 50V, 120pF	MCCA000119	MLCC, 0805, X7R, 50V, 1.5nF	MCCA000355
MLCC, 0402, NP0, 50V, 130pF	MCCA000120	MLCC, 0805, X7R, 50V, 1.8nF	MCCA000356
MLCC, 0402, X7R, 50V, 150pF	MCCA000121	MLCC, 1206, X7R, 16V, 1µF	MCCA000556
MLCC, 0402, NP0, 50V, 150pF	MCCA000122	MLCC, 1206, Y5V, 16V, 1µF	MCCA000557
MLCC, 0402, NP0, 50V, 160pF	MCCA000123	MLCC, 1206, X7R, 16V, 1.5µF	MCCA000558
MLCC, 0402, X7R, 50V, 180pF	MCCA000124	MLCC, 1206, Y5V, 16V, 1.5µF	MCCA000559
MLCC, 0402, NP0, 50V, 180pF	MCCA000125	MLCC, 1206, X7R, 16V, 2.2µF	MCCA000560
MLCC, 0402, NP0, 50V, 200pF	MCCA000126	MLCC, 1206, Y5V, 16V, 2.2µF	MCCA000561
MLCC, 0402, X7R, 50V, 220pF	MCCA000127	MLCC, 1206, Y5V, 16V, 3.3µF	MCCA000562
MLCC, 0402, NP0, 50V, 220pF	MCCA000128	MLCC, 1206, Y5V, 16V, 4.7µF	MCCA000563
MLCC, 0402, X7R, 50V, 270pF	MCCA000129	MLCC, 1206, Y5V, 16V, 10µF	MCCA000564
MLCC, 0805, NP0, 50V, 33pF	MCCA000324	MLCC, 1206, X7R, 25V, 1µF	MCCA000565
MLCC, 0805, NP0, 50V, 39pF	MCCA000325	MLCC, 1206, Y5V, 25V, 1µF	MCCA000566
MLCC, 0805, NP0, 50V, 47pF	MCCA000326	MLCC, 1206, Y5V, 25V, 1.5µF	MCCA000567
MLCC, 0805, NP0, 50V, 56pF	MCCA000327	MLCC, 1206, Y5V, 25V, 2.2µF	MCCA000568
MLCC, 0805, NP0, 50V, 68pF	MCCA000328	MLCC, 1206, Y5V, 25V, 4.7µF	MCCA000569
MLCC, 0805, NP0, 50V, 82pF	MCCA000329	MLCC, 1206, Y5V, 25V, 10µF	MCCA000570
MLCC, 0805, NP0, 50V, 100pF	MCCA000330	MLCC, 1206, X7R, 50V, 1µF	MCCA000571
MLCC, 0805, NP0, 50V, 120pF	MCCA000331	MLCC, 1206, Y5V, 50V, 1µF	MCCA000572
MLCC, 0805, NP0, 50V, 150pF	MCCA000332	MLCC, 1210, X5R, 6.3V, 22µF	MCCA000573
MLCC, 0805, NP0, 50V, 180pF	MCCA000333	MLCC, 1210, X5R, 6.3V, 100µF	MCCA000574
MLCC, 0805, X7R, 50V, 220pF	MCCA000334	MLCC, 1210, X5R, 10V, 10µF	MCCA000575
MLCC, 0805, NP0, 50V, 220pF	MCCA000335	MLCC, 1210, Y5V, 10V, 22µF	MCCA000576
MLCC, 0805, X7R, 50V, 270pF	MCCA000336	MLCC, 1210, X5R, 10V, 22µF	MCCA000577
MLCC, 0805, NP0, 50V, 270pF	MCCA000337	MLCC, 1210, X5R, 10V, 47µF	MCCA000578
MLCC, 0805, X7R, 50V, 330pF	MCCA000338	MLCC, 1210, X5R, 16V, 4.7µF	MCCA000579
MLCC, 0805, NP0, 50V, 330pF	MCCA000339	MLCC, 1210, Y5V, 16V, 10µF	MCCA000580
MLCC, 0805, X7R, 50V, 390pF	MCCA000340	MLCC, 1210, X5R, 16V, 10µF	MCCA000581
MLCC, 0805, NP0, 50V, 390pF	MCCA000341	MLCC, 1210, Y5V, 16V, 22µF	MCCA000582
MLCC, 0805, X7R, 50V, 470pF	MCCA000342	MLCC, 1210, X5R, 16V, 22µF	MCCA000583
MLCC, 0805, NP0, 50V, 470pF	MCCA000343	MLCC, 1210, X5R, 25V, 4.7µF	MCCA000584
MLCC, 0805, X7R, 50V, 560pF	MCCA000344	MLCC, 1210, Y5V, 25V, 10µF	MCCA000585
MLCC, 0805, NP0, 50V, 560pF	MCCA000345	CAP, MLCC, 470pF, 50V, NP0, 1206, Reel	MC1206N471J500CT
MLCC, 0805, X7R, 50V, 680pF	MCCA000346	CAP, MLCC, 680pF, 50V, NP0, 1206, Reel	MC1206N681J500CT
MLCC, 0805, NP0, 50V, 680pF	MCCA000347	CAP, MLCC, 1nF, 50V, X7R, 1206, Reel	MC1206B102K500CT



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
CAP, MLCC, 10nF, 50V, X7R, 1206, Reel	MC1206B103K500CT	MLCC, 0805, NP0, 100V, 22pF	MCCA000392
CAP, MLCC, 100nF, 50V, X7R, 1206, Reel	MC1206B104J500CT	MLCC, 0805, NP0, 100V, 33pF	MCCA000393
CAP, MLCC, 100nF, 50V, X7R, 1206, Reel	MC1206B104K500CT	MLCC, 0805, NP0, 100V, 47pF	MCCA000394
CAP, MLCC, 2.2nF, 50V, X7R, 1206, Reel	MC1206B222K500CT	MLCC, 0805, NP0, 100V, 68pF	MCCA000395
CAP, MLCC, 220nF, 50V, X7R, 1206, Reel	MC1206B224J500CT	MLCC, 0805, NP0, 100V, 100pF	MCCA000396
CAP, MLCC, 3.3nF, 50V, X7R, 1206, Reel	MC1206B332K500CT	MLCC, 0805, NP0, 100V, 150pF	MCCA000397
CAP, MLCC, 330nF, 50V, X7R, 1206, Reel	MC1206B334K500CT	MLCC, 0805, X7R, 100V, 220pF	MCCA000398
CAP, MLCC, 4.7nF, 50V, X7R, 1206, Reel	MC1206B472K500CT	MLCC, 0805, NP0, 100V, 220pF	MCCA000399
CAP, MLCC, 47nF, 50V, X7R, 1206, Reel	MC1206B473K500CT	MLCC, 0805, X7R, 100V, 330pF	MCCA000400
CAP, MLCC, 470nF, 50V, X7R, 1206, Reel	MC1206B474J500CT	MLCC, 0805, NP0, 100V, 330pF	MCCA000401
CAP, MLCC, 470nF, 50V, X7R, 1206, Reel	MC1206B474K500CT	MLCC, 0805, X7R, 100V, 470pF	MCCA000402
CAP, MLCC, 68nF, 50V, X7R, 1206, Reel	MC1206B683K500CT	MLCC, 0805, NP0, 100V, 470pF	MCCA000403
CAP, MLCC, 10µF, 16V, X7R, 1206, Reel	MC1206B106K160CT	MLCC, 0805, X7R, 100V, 680pF	MCCA000404
CAP, MLCC, 10µF, 16V, X5R, 1206, Reel	MC1206X106K160CT	MLCC, 0805, NP0, 100V, 680pF	MCCA000405
CAP, MLCC, 10µF, 10V, X5R, 1206, Reel	MC1206X106K100CT	MLCC, 0805, X7R, 100V, 1nF	MCCA000406
MLCC, 0805, NP0, 50V, 1.8nF	MCCA000357	MLCC, 0805, NP0, 100V, 1nF	MCCA000407
MLCC, 0805, X7R, 50V, 2.2nF	MCCA000358	MLCC, 0805, X7R, 100V, 1.5nF	MCCA000408
MLCC, 0805, NP0, 50V, 2.2nF	MCCA000359	MLCC, 0805, X7R, 100V, 2.2nF	MCCA000409
MLCC, 0805, X7R, 50V, 2.7nF	MCCA000360	MLCC, 0805, X7R, 100V, 3.3nF	MCCA000410
MLCC, 0805, NP0, 50V, 2.7nF	MCCA000361	MLCC, 0805, X7R, 100V, 4.7nF	MCCA000411
MLCC, 0805, X7R, 50V, 3.3nF	MCCA000362	MLCC, 0805, X7R, 100V, 6.8nF	MCCA000412
MLCC, 0805, X7R, 50V, 3.9nF	MCCA000363	MLCC, 0805, X7R, 100V, 10nF	MCCA000413
MLCC, 0805, X7R, 50V, 5.6nF	MCCA000365	MLCC, 0805, X7R, 100V, 15nF	MCCA000414
MLCC, 0805, X7R, 50V, 6.8nF	MCCA000366	MLCC, 1206, X7R, 16V, 120nF	MCCA000417
MLCC, 0805, X7R, 50V, 12nF	MCCA000370	MLCC, 1206, X7R, 16V, 150nF	MCCA000418
MLCC, 0805, X7R, 50V, 15nF	MCCA000371	MLCC, 1206, X7R, 16V, 180nF	MCCA000419
MLCC, 0805, Y5V, 50V, 15nF	MCCA000372	MLCC, 1206, X7R, 16V, 220nF	MCCA000420
MLCC, 0805, X7R, 50V, 18nF	MCCA000373	MLCC, 1206, X7R, 16V, 270nF	MCCA000421
MLCC, 0805, Y5V, 50V, 22nF	MCCA000375	MLCC, 1206, X7R, 16V, 330nF	MCCA000422
MLCC, 0805, X7R, 50V, 27nF	MCCA000376	MLCC, 1206, X7R, 16V, 390nF	MCCA000423
MLCC, 0805, Y5V, 50V, 33nF	MCCA000377	MLCC, 1206, X7R, 16V, 470nF	MCCA000424
MLCC, 0805, X7R, 50V, 33nF	MCCA000378	MLCC, 1206, X7R, 16V, 560nF	MCCA000425
MLCC, 0805, X7R, 50V, 39nF	MCCA000379	MLCC, 1206, X7R, 16V, 680nF	MCCA000426
MLCC, 0805, Y5V, 50V, 47nF	MCCA000380	MLCC, 1206, Y5V, 16V, 680nF	MCCA000427
MLCC, 0805, X7R, 50V, 47nF	MCCA000381	MLCC, 1206, X7R, 16V, 820nF	MCCA000428
MLCC, 0805, X7R, 50V, 56nF	MCCA000382	MLCC, 1206, X7R, 25V, 120nF	MCCA000435
MLCC, 0805, X7R, 50V, 68nF	MCCA000383	MLCC, 1206, X7R, 25V, 150nF	MCCA000436
MLCC, 0805, Y5V, 50V, 68nF	MCCA000384	MLCC, 1206, X7R, 25V, 180nF	MCCA000437
MLCC, 0805, X7R, 50V, 82nF	MCCA000385	MLCC, 1206, X7R, 25V, 220nF	MCCA000438
MLCC, 0805, Y5V, 50V, 100nF	MCCA000387	MLCC, 1206, X7R, 25V, 270nF	MCCA000439
MLCC, 0805, Y5V, 50V, 150nF	MCCA000388	MLCC, 1206, X7R, 25V, 330nF	MCCA000440
MLCC, 0805, NP0, 100V, 15pF	MCCA000391	MLCC, 1206, X7R, 25V, 390nF	MCCA000441

Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 1206, X7R, 25V, 470nF	MCCA000442	MLCC, 0805, Y5V, 50V, 10nF	MCCA000369
MLCC, 1206, Y5V, 25V, 470nF	MCCA000443	MLCC, 0805, X7R, 50V, 12nF	MCCA000370
MLCC, 1206, X7R, 25V, 560nF	MCCA000444	MLCC, 0805, X7R, 50V, 15nF	MCCA000371
MLCC, 1206, X7R, 25V, 680nF	MCCA000445	MLCC, 0805, Y5V, 50V, 15nF	MCCA000372
MLCC, 1206, Y5V, 25V, 680nF	MCCA000446	MLCC, 0805, X7R, 50V, 18nF	MCCA000373
MLCC, 1206, X7R, 25V, 820nF	MCCA000447	MLCC, 0805, X7R, 50V, 22nF	MCCA000374
MLCC, 1206, NP0, 50V, 100pF	MCCA000448	MLCC, 0805, Y5V, 50V, 22nF	MCCA000375
MLCC, 1206, X7R, 50V, 220pF	MCCA000449	MLCC, 0805, X7R, 50V, 27nF	MCCA000376
MLCC, 1206, X7R, 50V, 270pF	MCCA000450	MLCC, 0805, Y5V, 50V, 33nF	MCCA000377
MLCC, 1206, X7R, 50V, 330pF	MCCA000451	MLCC, 0805, X7R, 50V, 33nF	MCCA000378
MLCC, 1206, X7R, 50V, 390pF	MCCA000452	MLCC, 0805, X7R, 50V, 39nF	MCCA000379
MLCC, 1206, X7R, 50V, 470pF	MCCA000453	MLCC, 0805, Y5V, 50V, 47nF	MCCA000380
MLCC, 1206, X7R, 50V, 560pF	MCCA000454	MLCC, 0805, X7R, 50V, 47nF	MCCA000381
MLCC, 1206, X7R, 50V, 680pF	MCCA000455	MLCC, 0805, X7R, 50V, 56nF	MCCA000382
MLCC, 1206, X7R, 50V, 820pF	MCCA000456	MLCC, 0805, X7R, 50V, 68nF	MCCA000383
MLCC, 1206, X7R, 50V, 1.2nF	MCCA000458	MLCC, 0805, Y5V, 50V, 68nF	MCCA000384
MLCC, 1206, X7R, 50V, 1.5nF	MCCA000459	MLCC, 0805, X7R, 50V, 82nF	MCCA000385
MLCC, 1206, X7R, 50V, 1.8nF	MCCA000460	MLCC, 0805, X7R, 50V, 100nF	MCCA000386
MLCC, 1206, X7R, 50V, 2.2nF	MCCA000461	MLCC, 0805, Y5V, 50V, 100nF	MCCA000387
MLCC, 1206, X7R, 50V, 2.7nF	MCCA000462	MLCC, 0805, Y5V, 50V, 150nF	MCCA000388
MLCC, 1206, X7R, 50V, 3.3nF	MCCA000463	MLCC, 0402, X7R, 50V, 270pF	MCCA000129
MLCC, 1206, X7R, 50V, 3.9nF	MCCA000464	MLCC, 0402, X7R, 50V, 330pF	MCCA000130
MLCC, 1206, X7R, 50V, 4.7nF	MCCA000465	MLCC, 0402, X7R, 50V, 390pF	MCCA000131
MLCC, 1206, X7R, 50V, 5.6nF	MCCA000466	MLCC, 0402, X7R, 50V, 470pF	MCCA000132
MLCC, 1206, X7R, 50V, 6.8nF	MCCA000467	MLCC, 0402, X7R, 50V, 560pF	MCCA000133
MLCC, 1206, X7R, 50V, 8.2nF	MCCA000468	MLCC, 0402, X7R, 50V, 680pF	MCCA000134
MLCC, 1206, X7R, 50V, 12nF	MCCA000470	MLCC, 0402, X7R, 50V, 820pF	MCCA000135
MLCC, 1206, X7R, 50V, 15nF	MCCA000471	CAP, Ceramic, 1000pF, 50V, X7R, 0402	MCCA000136
MLCC, 1206, X7R, 50V, 18nF	MCCA000472	MLCC, 0402, X7R, 50V, 1.2nF	MCCA000137
MLCC, 0805, X7R, 50V, 1.8nF	MCCA000356	MLCC, 0402, X7R, 50V, 1.5nF	MCCA000138
MLCC, 0805, NP0, 50V, 1.8nF	MCCA000357	MLCC, 0402, X7R, 50V, 1.8nF	MCCA000139
MLCC, 0805, X7R, 50V, 2.2nF	MCCA000358	MLCC, 0402, X7R, 50V, 2.2nF	MCCA000140
MLCC, 0805, NP0, 50V, 2.2nF	MCCA000359	MLCC, 0402, X7R, 50V, 2.7nF	MCCA000141
MLCC, 0805, X7R, 50V, 2.7nF	MCCA000360	MLCC, 0402, X7R, 50V, 3.3nF	MCCA000142
MLCC, 0805, NP0, 50V, 2.7nF	MCCA000361	MLCC, 0402, X7R, 50V, 3.9nF	MCCA000143
MLCC, 0805, X7R, 50V, 3.3nF	MCCA000362	MLCC, 0805, Y5V, 50V, 220nF	MCCA000389
MLCC, 0805, X7R, 50V, 3.9nF	MCCA000363	MLCC, 0805, NP0, 100V, 15pF	MCCA000391
MLCC, 0805, X7R, 50V, 4.7nF	MCCA000364	MLCC, 0805, NP0, 100V, 22pF	MCCA000392
MLCC, 0805, X7R, 50V, 5.6nF	MCCA000365	MLCC, 0805, NP0, 100V, 33pF	MCCA000393
MLCC, 0805, X7R, 50V, 6.8nF	MCCA000366	MLCC, 0805, NP0, 100V, 47pF	MCCA000394
MLCC, 0805, X7R, 50V, 8.2nF	MCCA000367	MLCC, 0805, NP0, 100V, 100pF	MCCA000396
MLCC, 0805, X7R, 50V, 10nF	MCCA000368	MLCC, 0805, NP0, 100V, 150pF	MCCA000397

www.element14.com
www.farnell.com
www.newark.com



Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0805, X7R, 100V, 220pF	MCCA000398	MLCC, 0603, Y5V, 16V, 100nF	MCCA000160
MLCC, 0805, NP0, 100V, 220pF	MCCA000399	MLCC, 0603, Y5V, 16V, 150nF	MCCA000161
MLCC, 0805, X7R, 100V, 330pF	MCCA000400	MLCC, 0603, Y5V, 16V, 220nF	MCCA000162
MLCC, 0805, NP0, 100V, 330pF	MCCA000401	MLCC, 0402, X7R, 50V, 330pF	MCCA000130
MLCC, 0805, X7R, 100V, 470pF	MCCA000402	MLCC, 0402, X7R, 50V, 390pF	MCCA000131
MLCC, 0805, NP0, 100V, 470pF	MCCA000403	MLCC, 0402, X7R, 50V, 470pF	MCCA000132
MLCC, 0805, X7R, 100V, 680pF	MCCA000404	MLCC, 0402, X7R, 50V, 560pF	MCCA000133
MLCC, 0805, NP0, 100V, 680pF	MCCA000405	MLCC, 0402, X7R, 50V, 680pF	MCCA000134
MLCC, 0805, X7R, 100V, 1nF	MCCA000406	MLCC, 1206, X7R, 16V, 680nF	MCCA000426
MLCC, 0805, NP0, 100V, 1nF	MCCA000407	MLCC, 1206, Y5V, 16V, 680nF	MCCA000427
MLCC, 0805, X7R, 100V, 1.5nF	MCCA000408	MLCC, 1206, X7R, 16V, 820nF	MCCA000428
MLCC, 0805, X7R, 100V, 2.2nF	MCCA000409	MLCC, 1206, X7R, 25V, 100nF	MCCA000434
MLCC, 0805, X7R, 100V, 3.3nF	MCCA000410	MLCC, 1206, X7R, 25V, 120nF	MCCA000435
MLCC, 0805, X7R, 100V, 4.7nF	MCCA000411	MLCC, 1206, X7R, 25V, 150nF	MCCA000436
MLCC, 0805, X7R, 100V, 6.8nF	MCCA000412	MLCC, 1206, X7R, 25V, 180nF	MCCA000437
MLCC, 0805, X7R, 100V, 10nF	MCCA000413	MLCC, 1206, X7R, 25V, 220nF	MCCA000438
MLCC, 0805, X7R, 100V, 15nF	MCCA000414	MLCC, 1206, X7R, 25V, 270nF	MCCA000439
MLCC, 1206, X7R, 16V, 100nF	MCCA000416	MLCC, 1206, X7R, 25V, 330nF	MCCA000440
MLCC, 1206, X7R, 16V, 120nF	MCCA000417	MLCC, 1206, X7R, 25V, 390nF	MCCA000441
MLCC, 1206, X7R, 16V, 150nF	MCCA000418	MLCC, 1206, X7R, 25V, 470nF	MCCA000442
MLCC, 1206, X7R, 16V, 180nF	MCCA000419	MLCC, 1206, Y5V, 25V, 470nF	MCCA000443
MLCC, 1206, X7R, 16V, 220nF	MCCA000420	MLCC, 1206, X7R, 25V, 560nF	MCCA000444
MLCC, 1206, X7R, 16V, 270nF	MCCA000421	MLCC, 1206, X7R, 25V, 680nF	MCCA000445
MLCC, 1206, X7R, 16V, 330nF	MCCA000422	MLCC, 1206, Y5V, 25V, 680nF	MCCA000446
MLCC, 1206, X7R, 16V, 390nF	MCCA000423	MLCC, 1206, X7R, 25V, 820nF	MCCA000447
MLCC, 1206, X7R, 16V, 470nF	MCCA000424	MLCC, 1206, NP0, 50V, 100pF	MCCA000448
MLCC, 1206, X7R, 16V, 560nF	MCCA000425	MLCC, 1206, X7R, 50V, 220pF	MCCA000449
MLCC, 0402, Y5V, 50V, 10nF	MCCA000144	MLCC, 1206, X7R, 50V, 270pF	MCCA000450
MLCC, 0603, Y5V, 10V, 680nF	MCCA000146	MLCC, 1206, X7R, 50V, 330pF	MCCA000451
CAP, Ceramic, 0.01µF, 16V, X7R, 0603	MCCA000147	MLCC, 1206, X7R, 50V, 390pF	MCCA000452
MLCC, 0603, X7R, 16V, 12nF	MCCA000148	MLCC, 1206, X7R, 50V, 470pF	MCCA000453
MLCC, 0603, X7R, 16V, 15nF	MCCA000149	MLCC, 1206, X7R, 50V, 560pF	MCCA000454
MLCC, 0603, X7R, 16V, 18nF	MCCA000150	MLCC, 1206, X7R, 50V, 680pF	MCCA000455
MLCC, 0603, X7R, 16V, 22nF	MCCA000151	MLCC, 1206, X7R, 50V, 820pF	MCCA000456
MLCC, 0603, X7R, 16V, 27nF	MCCA000152	MLCC, 1206, X7R, 50V, 1nF	MCCA000457
MLCC, 0603, X7R, 16V, 33nF	MCCA000153	MLCC, 1206, X7R, 50V, 1.2nF	MCCA000458
MLCC, 0603, X7R, 16V, 39nF	MCCA000154	MLCC, 1206, X7R, 50V, 1.5nF	MCCA000459
MLCC, 0603, X7R, 16V, 47nF	MCCA000155	MLCC, 1206, X7R, 50V, 1.8nF	MCCA000460
MLCC, 0603, X7R, 16V, 56nF	MCCA000156	MLCC, 1206, X7R, 50V, 2.2nF	MCCA000461
MLCC, 0603, X7R, 16V, 68nF	MCCA000157	CAP, MLCC, 3.3µF, 10V, X5R, 0805, Reel	MC000622
MLCC, 0603, X7R, 16V, 82nF	MCCA000158	MLCC, 0402, X7R, 50V, 820pF	MCCA000135
CAP, Ceramic, 0.1µF, 16V, X7R, 0603	MCCA000159	MLCC, 0402, X7R, 50V, 1nF	MCCA000136

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0402, X7R, 50V, 1.2nF	MCCA000137	MLCC, 1206, X7R, 100V, 33nF	MCCA000488
MLCC, 0402, X7R, 50V, 1.5nF	MCCA000138	MLCC, 1206, X7R, 100V, 47nF	MCCA000489
MLCC, 0402, X7R, 50V, 1.8nF	MCCA000139	MLCC, 1210, Y5V, 6.3V, 47µF	MCCA000491
MLCC, 0402, X7R, 50V, 2.2nF	MCCA000140	MLCC, 1210, Y5V, 50V, 10µF	MCCA000492
MLCC, 0402, X7R, 50V, 2.7nF	MCCA000141	MLCC, 1210, X7R, 100V, 220nF	MCCA000493
MLCC, 0402, X7R, 50V, 3.3nF	MCCA000142	MLCC, 1210, X7R, 100V, 470nF	MCCA000494
MLCC, 0402, X7R, 50V, 3.9nF	MCCA000143	MLCC, 1210, X7R, 100V, 680nF	MCCA000495
MLCC, 0402, Y5V, 50V, 10nF	MCCA000144	MLCC, 0402, X5R, 6.3V, 0.22µF	MCCA000498
MLCC, 0603, Y5V, 10V, 680nF	MCCA000146	MLCC, 0402, X5R, 6.3V, 0.47µF	MCCA000499
MLCC, 0603, X7R, 16V, 10nF	MCCA000147	MLCC, 0402, X5R, 6.3V, 2.2µF	MCCA000501
MLCC, 0603, X7R, 16V, 12nF	MCCA000148	MLCC, 0402, X5R, 10V, 0.056µF	MCCA000502
MLCC, 0603, X7R, 16V, 15nF	MCCA000149	MLCC, 0402, X5R, 10V, 0.068µF	MCCA000503
MLCC, 0603, X7R, 16V, 18nF	MCCA000150	MLCC, 0402, X5R, 10V, 0.082µF	MCCA000504
MLCC, 0603, X7R, 16V, 22nF	MCCA000151	MLCC, 1206, X7R, 50V, 2.7nF	MCCA000462
MLCC, 0603, X7R, 16V, 27nF	MCCA000152	MLCC, 1206, X7R, 50V, 3.3nF	MCCA000463
MLCC, 0603, X7R, 16V, 33nF	MCCA000153	MLCC, 1206, X7R, 50V, 3.9nF	MCCA000464
MLCC, 0603, X7R, 16V, 39nF	MCCA000154	MLCC, 1206, X7R, 50V, 4.7nF	MCCA000465
MLCC, 0603, X7R, 16V, 47nF	MCCA000155	MLCC, 1206, X7R, 50V, 5.6nF	MCCA000466
MLCC, 0603, X7R, 16V, 56nF	MCCA000156	MLCC, 1206, X7R, 50V, 6.8nF	MCCA000467
MLCC, 0603, X7R, 16V, 68nF	MCCA000157	MLCC, 1206, X7R, 50V, 8.2nF	MCCA000468
MLCC, 0603, X7R, 16V, 82nF	MCCA000158	MLCC, 1206, X7R, 50V, 10nF	MCCA000469
MLCC, 0603, X7R, 16V, 100nF	MCCA000159	MLCC, 1206, X7R, 50V, 12nF	MCCA000470
MLCC, 0603, Y5V, 16V, 100nF	MCCA000160	MLCC, 1206, X7R, 50V, 15nF	MCCA000471
MLCC, 0603, Y5V, 16V, 150nF	MCCA000161	MLCC, 1206, X7R, 50V, 18nF	MCCA000472
MLCC, 0603, Y5V, 16V, 220nF	MCCA000162	CAP, MLCC, 2.2µF, 6.3V, X5R, 0402, Reel	MC0402X225M6R3CT
MLCC, 0603, Y5V, 16V, 330nF	MCCA000163	CAP, MLCC, 2.2µF, 6.3V, X7R, 0603, Reel	MC0603B225K6R3CT
CAP, MLCC, 1µF, 25V, X7R, 1206, Reel	MC000656	CAP, MLCC, 2.2µF, 6.3V, X5R, 0603, Reel	MC0603X225K6R3CT
CAP, MLCC, 4.7µF, 25V, X5R, 1206, Reel	MC1206X475K250CT	CAP, MLCC, 4.7µF, 6.3V, X5R, 0603, Reel	MC0603X475K6R3CT
CAP, MLCC, 22µF, 6.3V, X5R, 1206, Reel	MC1206X226K6R3CT	CAP, MLCC, 1µF, 16V, X7R, 0603, Reel	MC0603B105K160CT
CAP, MLCC, 22µF, 16V, X5R, 1206, Reel	MC1206X226K160CT	CAP, MLCC, 2.2µF, 10V, X5R, 0603, Reel	MC0603X225K100CT
CAP, MLCC, 1µF, 100V, X7R, 1210, Reel	MC1210B105K101CT	CAP, MLCC, 4.7µF, 10V, X5R, 0603, Reel	MC0603X475K100CT
CAP, MLCC, 2.2µF, 100V, X7R, 1210, Reel	MC1210B225K101CT	CAP, MLCC, 1µF, 25V, X7R, 0805, Reel	MC0805B105K250CT
CAP, MLCC, 1µF, 25V, X7R, 1210, Reel	MC1210B105K250CT	CAP, MLCC, 2.2µF, 25V, X7R, 0805, Reel	MC0805B225K250CT
CAP, MLCC, 2.2µF, 25V, X7R, 1210, Reel	MC1210B225K250CT	CAP, MLCC, 1µF, 16V, X7R, 0805, Reel	MC0805B105K160CT
CAP, MLCC, 22µF, 25V, X5R, 1210, Reel	MC1210X226K250CT	CAP, MLCC, 4.7µF, 16V, X7R, 0805, Reel	MC0805B475K160CT
CAP, MLCC, 4.7µF, 25V, X5R, 1210, Reel	MC1210X475K250CT	CAP, MLCC, 1µF, 10V, X7R, 0805, Reel	MC0805B105K100CT
MLCC, 1206, X7R, 50V, 22nF	MCCA000473	MLCC, 0402, X5R, 10V, 1µF	MCCA000506
MLCC, 1206, X7R, 50V, 27nF	MCCA000474	MLCC, 0402, X5R, 16V, 0.027µF	MCCA000507
MLCC, 1206, X7R, 50V, 33nF	MCCA000475	MLCC, 0402, X5R, 16V, 0.033µF	MCCA000508
MLCC, 1206, X7R, 50V, 39nF	MCCA000476	MLCC, 0402, X5R, 16V, 0.039µF	MCCA000509
MLCC, 1206, X7R, 50V, 47nF	MCCA000477	MLCC, 0402, X5R, 16V, 0.047µF	MCCA000510
MLCC, 1206, X7R, 100V, 22nF	MCCA000487	MLCC, 0402, X5R, 16V, 0.068µF	MCCA000511

Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0402, X5R, 16V, 0.22µF	MCCA000513	CAP, MLCC, 100pF, 50V, NP0, 0402, Reel	MC0402N101K500CT
MLCC, 0603, X5R, 6.3V, 0.82µF	MCCA000514	CAP, MLCC, 12pF, 50V, NP0, 0402, Reel	MC0402N120J500CT
MLCC, 0603, X5R, 6.3V, 1µF	MCCA000515	CAP, MLCC, 15pF, 50V, NP0, 0402, Reel	MC0402N150J500CT
MLCC, 0603, X5R, 6.3V, 2.2µF	MCCA000516	CAP, MLCC, 18pF, 50V, NP0, 0402, Reel	MC000376
MLCC, 0603, X5R, 10V, 0.33µF	MCCA000518	CAP, MLCC, 20pF, 50V, NP0, 0402, Reel	MC0402N200J500CT
MLCC, 0603, X5R, 10V, 0.47µF	MCCA000519	CAP, MLCC, 22pF, 50V, NP0, 0402, Reel	MC000378
MLCC, 0603, X5R, 10V, 0.68µF	MCCA000520	CAP, MLCC, 220pF, 50V, NP0, 0402, Reel	MC0402N221J500CT
MLCC, 0603, Y5V, 10V, 1µF	MCCA000521	CAP, MLCC, 27pF, 50V, NP0, 0402, Reel	MC000380
MLCC, 0603, X5R, 10V, 2.2µF	MCCA000524	CAP, MLCC, 33pF, 50V, NP0, 0402, Reel	MC000381
MLCC, 0603, X5R, 16V, 0.22µF	MCCA000525	CAP, MLCC, 330pF, 50V, NP0, 0402, Reel	MC0402N331J500CT
MLCC, 0603, X5R, 16V, 0.33µF	MCCA000526	CAP, MLCC, 47pF, 50V, NP0, 0402, Reel	MC0402N470J500CT
MLCC, 0603, X5R, 16V, 0.47µF	MCCA000527	CAP, MLCC, 470pF, 50V, NP0, 0402, Reel	MC0402N471J500CT
MLCC, 0603, X5R, 16V, 0.68µF	MCCA000528	CAP, MLCC, 56pF, 50V, NP0, 0402, Reel	MC000385
MLCC, 0805, X5R, 6.3V, 1.5µF	MCCA000532	CAP, MLCC, 68pF, 50V, NP0, 0402, Reel	MC000386
MLCC, 0805, X5R, 6.3V, 2.2µF	MCCA000533	CAP, MLCC, 1nF, 50V, X7R, 0402, Reel	MC0402B102J500CT
MLCC, 0805, X5R, 6.3V, 3.3µF	MCCA000534	CAP, MLCC, 1µF, 50V, X7R, 1210, Reel	MC1210B105K500CT
MLCC, 0805, X5R, 6.3V, 4.7µF	MCCA000535	CAP, MLCC, 4.7µF, 50V, X7R, 1210, Reel	MC1210B475K500CT
MLCC, 0805, X5R, 10V, 2.2µF	MCCA000537	CAP, MLCC, 22µF, 6.3V, X5R, 1210, Reel	MC1210X226K6R3CT
MLCC, 0805, Y5V, 10V, 3.3µF	MCCA000538	CAP, MLCC, 47µF, 6.3V, X5R, 1210, Reel	MC1210X476K6R3CT
MLCC, 0805, X5R, 10V, 3.3µF	MCCA000539	CAP, MLCC, 22µF, 16V, X7R, 1210, Reel	MC1210B226M160CT
MLCC, 0805, Y5V, 10V, 4.7µF	MCCA000540	CAP, MLCC, 4.7µF, 16V, X7R, 1210, Reel	MC1210B475K160CT
CAP, MLCC, 4.7µF, 10V, X7R, 0805, Reel	MC0805B475K100CT	CAP, MLCC, 22µF, 16V, X5R, 1210, Reel	MC1210X226K160CT
CAP, MLCC, 4.7µF, 10V, X5R, 0805, Reel	MC000623	CAP, MLCC, 22µF, 10V, X7R, 1210, Reel	MC1210B226K100CT
CAP, MLCC, 1µF, 16V, X7R, 1206, Reel	MC000708	CAP, MLCC, 22µF, 10V, X5R, 1210, Reel	MC1210X226K100CT
CAP, MLCC, 1nF, 200V, X7R, 0603, Reel	MC0603B102K201CT	CAP, MLCC, 100nF, 200V, X7R, 1210, Reel	MC1210B104K201CT
CAP, MLCC, 100pF, 200V, NP0, 0805, Reel	MC000542	CAP, MLCC, 10nF, 500V, X7R, 1210, Reel	MC1210B103K501CT
CAP, MLCC, 1nF, 200V, X7R, 0805, Reel	MC0805B102K201CT	CAP, MLCC, 33nF, 500V, X7R, 1210, Reel	MC1210B223K501CT
CAP, MLCC, 10nF, 200V, X7R, 0805, Reel	MC000544	CAP, MLCC, 220nF, 25V, X7R, 1206, Reel	MC000657
CAP, MLCC, 22nF, 200V, X7R, 0805, Reel	MC0805B223K201CT	CAP, MLCC, 330nF, 25V, X7R, 1206, Reel	MC000659
CAP, MLCC, 3.3nF, 200V, X7R, 0805, Reel	MC0805B332K201CT	CAP, MLCC, 10µF, 6.3V, X5R, 1206, Reel	MC1206X106K6R3CT
CAP, MLCC, 10nF, 200V, X7R, 1206, Reel	MC000650	CAP, MLCC, 470nF, 16V, X7R, 1206, Reel	MC000711
CAP, MLCC, 2.2nF, 200V, X7R, 1206, Reel	MC000652	CAP, MLCC, 100nF, 100V, X7R, 1210, Reel	MC1210B104K101CT
CAP, MLCC, 22nF, 200V, X7R, 1206, Reel	MC000653	CAP, MLCC, 470nF, 100V, X7R, 1210, Reel	MC000720
CAP, MLCC, 47nF, 200V, X7R, 1206, Reel	MC000654	CAP, MLCC, 10µF, 25V, X7R, 1210, Reel	MC1210B106K250CT
CAP, MLCC, 1nF, 1KV, X7R, 1206, Reel	MC000706	CAP, MLCC, 470nF, 25V, X7R, 1210, Reel	MC1210B474K250CT
CAP, MLCC, 1nF, 2KV, X7R, 1206, Reel	MC000707	CAP, MLCC, 10µF, 25V, X5R, 1210, Reel	MC1210X106K250CT
CAP, MLCC, 100pF, 25V, NP0, 0402, Reel	MC0402N101J250CT	CAP, MLCC, 100nF, 50V, X7R, 1210, Reel	MC1210B104K500CT
CAP, MLCC, 100nF, 25V, X7R, 0402, Reel	MC0402B104K250CT	CAP, MLCC, 220nF, 50V, X7R, 1210, Reel	MC1210B224K500CT
CAP, MLCC, 4.7nF, 25V, X7R, 0402, Reel	MC0402B472K250CT	CAP, MLCC, 330nF, 50V, X7R, 1210, Reel	MC1210B334K500CT
CAP, MLCC, 10nF, 25V, X7R, 0402, Reel	MC0402B103K250CT	CAP, MLCC, 470nF, 50V, X7R, 1210, Reel	MC1210B474K500CT
CAP, MLCC, 100nF, 25V, X5R, 0402, Reel	MC0402X104K250CT	CAP, MLCC, 10µF, 16V, X5R, 1210, Reel	MC1210X106K160CT
CAP, MLCC, 10pF, 50V, NP0, 0402, Reel	MC0402N100J500CT	CAP, MLCC, 10µF, 10V, X5R, 1210, Reel	MC000744

www.element14.com
www.farnell.com
www.newark.com



Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0805, X5R, 10V, 4.7µF	MCCA000541	CAP, MLCC, 220pF, 100V, NP0, 0603, Reel	MC0603N221J101CT
MLCC, 0805, Y5V, 16V, 1.5µF	MCCA000544	CAP, MLCC, 27pF, 100V, NP0, 0603, Reel	MC0603N270J101CT
MLCC, 0805, Y5V, 16V, 2.2µF	MCCA000545	CAP, MLCC, 33pF, 100V, NP0, 0603, Reel	MC0603N330J101CT
MLCC, 0805, X5R, 16V, 2.2µF	MCCA000546	CAP, MLCC, 330pF, 100V, NP0, 0603, Reel	MC0603N331J101CT
MLCC, 0805, X5R, 25V, 2.2µF	MCCA000550	CAP, MLCC, 47pF, 100V, NP0, 0603, Reel	MC0603N470J101CT
MLCC, 1206, X7R, 10V, 1.5µF	MCCA000553	CAP, MLCC, 68pF, 100V, NP0, 0603, Reel	MC000424
MLCC, 1210, X5R, 25V, 10µF	MCCA000586	CAP, MLCC, 1nF, 100V, X7R, 0603, Reel	MC0603B102J101CT
MLCC, 1210, Y5V, 50V, 4.7µF	MCCA000587	CAP, MLCC, 1nF, 100V, X7R, 0603, Reel	MC000426
MLCC, 1812, X7R, 100V, 1µF	MCCA000589	CAP, MLCC, 10nF, 100V, X7R, 0603, Reel	MC0603B103J101CT
MLCC, 0805, NP0, 200V, 15pF	MCCA000606	CAP, MLCC, 10nF, 100V, X7R, 0603, Reel	MC0603B103K101CT
MLCC, 0805, NP0, 200V, 22pF	MCCA000607	CAP, MLCC, 1.5nF, 100V, X7R, 0603, Reel	MC0603B152J101CT
MLCC, 0805, NP0, 200V, 33pF	MCCA000608	CAP, MLCC, 2.2nF, 100V, X7R, 0603, Reel	MC0603B222K101CT
CAP, MLCC, 1nF, 50V, X7R, 0402, Reel	MC000388	CAP, MLCC, 330pF, 100V, X7R, 0603, Reel	MC0603B331K101CT
CAP, MLCC, 1.5nF, 50V, X7R, 0402, Reel	MC0402B152J500CT	CAP, MLCC, 470pF, 100V, X7R, 0603, Reel	MC0603B471J101CT
CAP, MLCC, 1.5nF, 50V, X7R, 0402, Reel	MC000390	CAP, MLCC, 470pF, 100V, X7R, 0603, Reel	MC000433
CAP, MLCC, 220pF, 50V, X7R, 0402, Reel	MC000391	CAP, MLCC, 4.7nF, 100V, X7R, 0603, Reel	MC0603B472J101CT
CAP, MLCC, 2.2nF, 50V, X7R, 0402, Reel	MC0402B222J500CT	CAP, MLCC, 4.7nF, 100V, X7R, 0603, Reel	MC0603B472K101CT
CAP, MLCC, 2.2nF, 50V, X7R, 0402, Reel	MC000393	CAP, MLCC, 10nF, 25V, X7R, 0603, Reel	MC000437
CAP, MLCC, 330pF, 50V, X7R, 0402, Reel	MC0402B331J500CT	CAP, MLCC, 100nF, 25V, X7R, 0603, Reel	MC0603B104J250CT
CAP, MLCC, 330pF, 50V, X7R, 0402, Reel	MC0402B331K500CT	CAP, MLCC, 100nF, 25V, X7R, 0603, Reel	MC0603B104K250CT
CAP, MLCC, 3.3nF, 50V, X7R, 0402, Reel	MC000396	CAP, MLCC, 22nF, 25V, X7R, 0603, Reel	MC0603B223K250CT
CAP, MLCC, 470pF, 50V, X7R, 0402, Reel	MC0402B471J500CT	CAP, MLCC, 220nF, 25V, X7R, 0603, Reel	MC0603B224K250CT
CAP, MLCC, 470pF, 50V, X7R, 0402, Reel	MC000398	CAP, MLCC, 33nF, 25V, X7R, 0603, Reel	MC000442
CAP, MLCC, 4.7nF, 50V, X7R, 0402, Reel	MC0402B472K500CT	CAP, MLCC, 47nF, 25V, X7R, 0603, Reel	MC0603B473J250CT
CAP, MLCC, 560pF, 50V, X7R, 0402, Reel	MC000400	CAP, MLCC, 47nF, 25V, X7R, 0603, Reel	MC000444
CAP, MLCC, 100nF, 6.3V, X5R, 0402, Reel	MC0402X104K6R3CT	CAP, MLCC, 470nF, 25V, X7R, 0603, Reel	MC0603B474K250CT
CAP, MLCC, 1µF, 6.3V, X5R, 0402, Reel	MC000402	CAP, MLCC, 1µF, 25V, X5R, 0603, Reel	MC000446
CAP, MLCC, 220nF, 6.3V, X5R, 0402, Reel	MC000403	CAP, MLCC, 220nF, 25V, X5R, 0603, Reel	MC0603X224K250CT
CAP, MLCC, 470nF, 6.3V, X5R, 0402, Reel	MC0402X474K6R3CT	CAP, MLCC, 10pF, 50V, NP0, 0603, Reel	MC0603N100J500CT
CAP, MLCC, 1nF, 16V, X7R, 0402, Reel	MC0402B102K160CT	CAP, MLCC, 100pF, 50V, NP0, 0603, Reel	MC0603N101J500CT
CAP, MLCC, 10nF, 16V, X7R, 0402, Reel	MC0402B103J160CT	CAP, MLCC, 1nF, 50V, NP0, 0603, Reel	MC000450
CAP, MLCC, 100nF, 16V, X7R, 0402, Reel	MC000408	CAP, MLCC, 12pF, 50V, NP0, 0603, Reel	MC0603N120J500CT
CAP, MLCC, 22nF, 16V, X7R, 0402, Reel	MC0402B223K160CT	CAP, MLCC, 120pF, 50V, NP0, 0603, Reel	MC000452
CAP, MLCC, 100nF, 16V, X5R, 0402, Reel	MC000410	CAP, MLCC, 15pF, 50V, NP0, 0603, Reel	MC0603N150J500CT
CAP, MLCC, 100nF, 10V, X5R, 0402, Reel	MC0402X104K100CT	CAP, MLCC, 150pF, 50V, NP0, 0603, Reel	MC000454
CAP, MLCC, 1µF, 10V, X5R, 0402, Reel	MC0402X105K100CT	CAP, MLCC, 18pF, 50V, NP0, 0603, Reel	MC0603N180J500CT
CAP, MLCC, 10pF, 100V, NP0, 0603, Reel	MC0603N100J101CT	CAP, MLCC, 180pF, 50V, NP0, 0603, Reel	MC000456
CAP, MLCC, 100pF, 100V, NP0, 0603, Reel	MC0603N101J101CT	CAP, MLCC, 22pF, 50V, NP0, 0603, Reel	MC0603N220J500CT
CAP, MLCC, 12pF, 100V, NP0, 0603, Reel	MC0603N120J101CT	CAP, MLCC, 220pF, 50V, NP0, 0603, Reel	MC0603N221J500CT
CAP, MLCC, 15pF, 100V, NP0, 0603, Reel	MC000416	CAP, MLCC, 27pF, 50V, NP0, 0603, Reel	MC000459
CAP, MLCC, 18pF, 100V, NP0, 0603, Reel	MC0603N180J101CT	CAP, MLCC, 33pF, 50V, NP0, 0603, Reel	MC0603N330J500CT
CAP, MLCC, 22pF, 100V, NP0, 0603, Reel	MC000418	CAP, MLCC, 330pF, 50V, NP0, 0603, Reel	MC000462

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
CAP, MLCC, 39pF, 50V, NP0, 0603, Reel	MC000463	CAP, MLCC, 220nF, 10V, X7R, 0603, Reel	MC0603B224K100CT
CAP, MLCC, 47pF, 50V, NP0, 0603, Reel	MC0603N470J500CT	CAP, MLCC, 1µF, 10V, X5R, 0603, Reel	MC0603X105K100CT
CAP, MLCC, 470pF, 50V, NP0, 0603, Reel	MC000465	CAP, MLCC, 470nF, 10V, X5R, 0603, Reel	MC000514
CAP, MLCC, 56pF, 50V, NP0, 0603, Reel	MC0603N560J500CT	CAP, MLCC, 10pF, 100V, NP0, 0805, Reel	MC0805N100J101CT
CAP, MLCC, 560pF, 50V, NP0, 0603, Reel	MC000467	CAP, MLCC, 100pF, 100V, NP0, 0805, Reel	MC000517
CAP, MLCC, 68pF, 50V, NP0, 0603, Reel	MC000468	CAP, MLCC, 1nF, 100V, NP0, 0805, Reel	MC000518
CAP, MLCC, 680pF, 50V, NP0, 0603, Reel	MC000469	CAP, MLCC, 15pF, 100V, NP0, 0805, Reel	MC000519
CAP, MLCC, 82pF, 50V, NP0, 0603, Reel	MC000470	CAP, MLCC, 150pF, 100V, NP0, 0805, Reel	MC000520
CAP, MLCC, 820pF, 50V, NP0, 0603, Reel	MC000471	CAP, MLCC, 18pF, 100V, NP0, 0805, Reel	MC0805N180J101CT
CAP, MLCC, 1nF, 50V, X7R, 0603, Reel	MC0603B102J500CT	CAP, MLCC, 22pF, 100V, NP0, 0805, Reel	MC0805N220J101CT
CAP, MLCC, 1nF, 50V, X7R, 0603, Reel	MC0603B102K500CT	CAP, MLCC, 220pF, 100V, NP0, 0805, Reel	MC000523
CAP, MLCC, 10nF, 50V, X7R, 0603, Reel	MC0603B103J500CT	CAP, MLCC, 33pF, 100V, NP0, 0805, Reel	MC000524
CAP, MLCC, 10nF, 50V, X7R, 0603, Reel	MC0603B103K500CT	CAP, MLCC, 330pF, 100V, NP0, 0805, Reel	MC0805N331J101CT
CAP, MLCC, 100nF, 50V, X7R, 0603, Reel	MC0603B104J500CT	CAP, MLCC, 47pF, 100V, NP0, 0805, Reel	MC0805N470J101CT
CAP, MLCC, 100nF, 50V, X7R, 0603, Reel	MC0603B104K500CT	CAP, MLCC, 470pF, 100V, NP0, 0805, Reel	MC0805N471J101CT
CAP, MLCC, 1.5nF, 50V, X7R, 0603, Reel	MC0603B152J500CT	CAP, MLCC, 680pF, 100V, NP0, 0805, Reel	MC000528
CAP, MLCC, 1.5nF, 50V, X7R, 0603, Reel	MC000479	CAP, MLCC, 1nF, 100V, X7R, 0805, Reel	MC000529
CAP, MLCC, 15nF, 50V, X7R, 0603, Reel	MC0603B153J500CT	CAP, MLCC, 10nF, 100V, X7R, 0805, Reel	MC0805B103K101CT
CAP, MLCC, 15nF, 50V, X7R, 0603, Reel	MC0603B153K500CT	CAP, MLCC, 100nF, 100V, X7R, 0805, Reel	MC0805B104K101CT
CAP, MLCC, 220pF, 50V, X7R, 0603, Reel	MC0603B221K500CT	CAP, MLCC, 1.5nF, 100V, X7R, 0805, Reel	MC0805B152K101CT
CAP, MLCC, 2.2nF, 50V, X7R, 0603, Reel	MC0603B222J500CT	CAP, MLCC, 2.2nF, 100V, X7R, 0805, Reel	MC0805B222J101CT
CAP, MLCC, 2.2nF, 50V, X7R, 0603, Reel	MC0603B222K500CT	CAP, MLCC, 2.2nF, 100V, X7R, 0805, Reel	MC0805B222K101CT
CAP, MLCC, 22nF, 50V, X7R, 0603, Reel	MC0603B223K500CT	CAP, MLCC, 22nF, 100V, X7R, 0805, Reel	MC0805B223K101CT
CAP, MLCC, 3.3nF, 50V, X7R, 0603, Reel	MC0603B332J500CT	CAP, MLCC, 3.3nF, 100V, X7R, 0805, Reel	MC0805B332K101CT
CAP, MLCC, 3.3nF, 50V, X7R, 0603, Reel	MC000487	CAP, MLCC, 33nF, 100V, X7R, 0805, Reel	MC0805B333K101CT
CAP, MLCC, 33nF, 50V, X7R, 0603, Reel	MC0603B333J500CT	CAP, MLCC, 470pF, 100V, X7R, 0805, Reel	MC0805B471K101CT
CAP, MLCC, 33nF, 50V, X7R, 0603, Reel	MC0603B333K500CT	CAP, MLCC, 4.7nF, 100V, X7R, 0805, Reel	MC0805B472K101CT
CAP, MLCC, 4.7nF, 50V, X7R, 0603, Reel	MC0603B472J500CT	CAP, MLCC, 47nF, 100V, X7R, 0805, Reel	MC0805B473K101CT
CAP, MLCC, 4.7nF, 50V, X7R, 0603, Reel	MC000492	CAP, MLCC, 6.8nF, 100V, X7R, 0805, Reel	MC0805B682K101CT
CAP, MLCC, 47nF, 50V, X7R, 0603, Reel	MC000493	CAP, MLCC, 100nF, 25V, X7R, 0805, Reel	MC0805B104K250CT
CAP, MLCC, 6.8nF, 50V, X7R, 0603, Reel	MC0603B682K500CT	MLCC, 0805, NP0, 200V, 47pF	MCCA000609
CAP, MLCC, 68nF, 50V, X7R, 0603, Reel	MC0603B683K500CT	MLCC, 0805, NP0, 200V, 68pF	MCCA000610
CAP, MLCC, 1µF, 6.3V, X5R, 0603, Reel	MC000498	MLCC, 0805, NP0, 200V, 100pF	MCCA000611
CAP, MLCC, 10nF, 16V, X7R, 0603, Reel	MC0603B103K160CT	MLCC, 0805, NP0, 200V, 150pF	MCCA000612
CAP, MLCC, 100nF, 16V, X7R, 0603, Reel	MC0603B104J160CT	MLCC, 0805, X7R, 200V, 220pF	MCCA000613
CAP, MLCC, 100nF, 16V, X7R, 0603, Reel	MC000503	MLCC, 0805, NP0, 200V, 220pF	MCCA000614
CAP, MLCC, 47nF, 16V, X7R, 0603, Reel	MC000505	MLCC, 0805, X7R, 200V, 330pF	MCCA000615
CAP, MLCC, 1µF, 16V, X5R, 0603, Reel	MC000506	MLCC, 0805, NP0, 200V, 330pF	MCCA000616
CAP, MLCC, 220nF, 16V, X5R, 0603, Reel	MC0603X224K160CT	MLCC, 0805, X7R, 200V, 470pF	MCCA000617
CAP, MLCC, 330nF, 16V, X5R, 0603, Reel	MC0603X334K160CT	MLCC, 0805, X7R, 200V, 680pF	MCCA000618
CAP, MLCC, 470nF, 16V, X5R, 0603, Reel	MC0603X474K160CT	MLCC, 0805, X7R, 200V, 1nF	MCCA000619
CAP, MLCC, 150nF, 10V, X7R, 0603, Reel	MC0603B154K100CT	MLCC, 0805, X7R, 200V, 1.5nF	MCCA000620

Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0805, X7R, 200V, 2.2nF	MCCA000621	CAP, MLCC, 510pF, 50V, NP0, 0805, Reel	MC0805N511J500CT
MLCC, 0805, X7R, 200V, 3.3nF	MCCA000622	CAP, MLCC, 560pF, 50V, NP0, 0805, Reel	MC000575
MLCC, 0805, X7R, 200V, 4.7nF	MCCA000623	CAP, MLCC, 68pF, 50V, NP0, 0805, Reel	MC0805N680J500CT
MLCC, 0805, X7R, 200V, 6.8nF	MCCA000624	CAP, MLCC, 680pF, 50V, NP0, 0805, Reel	MC000577
MLCC, 0805, X7R, 200V, 10nF	MCCA000625	CAP, MLCC, 82pF, 50V, NP0, 0805, Reel	MC000578
MLCC, 1206, NP0, 200V, 1nF	MCCA000626	CAP, MLCC, 820pF, 50V, NP0, 0805, Reel	MC000579
MLCC, 1206, X7R, 200V, 15nF	MCCA000627	CAP, MLCC, 1nF, 50V, X7R, 0805, Reel	MC0805B102J500CT
MLCC, 1206, X7R, 200V, 22nF	MCCA000628	CAP, MLCC, 1nF, 50V, X7R, 0805, Reel	MC000581
MLCC, 1206, NP0, 630V, 100pF	MCCA000629	CAP, MLCC, 10nF, 50V, X7R, 0805, Reel	MC0805B103J500CT
MLCC, 1206, X7R, 630V, 1nF	MCCA000630	CAP, MLCC, 10nF, 50V, X7R, 0805, Reel	MC0805B103K500CT
MLCC, 1206, X7R, 630V, 2.2nF	MCCA000631	CAP, MLCC, 100nF, 50V, X7R, 0805, Reel	MC0805B104J500CT
MLCC, 1206, X7R, 630V, 4.7nF	MCCA000632	CAP, MLCC, 100nF, 50V, X7R, 0805, Reel	MC000585
MLCC, 1206, X7R, 630V, 10nF	MCCA000633	CAP, MLCC, 1.5nF, 50V, X7R, 0805, Reel	MC0805B152K500CT
MLCC, 1206, X7R, 50V, 22nF	MCCA000473	CAP, MLCC, 15nF, 50V, X7R, 0805, Reel	MC000587
MLCC, 1206, X7R, 50V, 27nF	MCCA000474	CAP, MLCC, 2.2nF, 50V, X7R, 0805, Reel	MC0805B222J500CT
MLCC, 1206, X7R, 50V, 33nF	MCCA000475	CAP, MLCC, 2.2nF, 50V, X7R, 0805, Reel	MC000589
MLCC, 1206, X7R, 50V, 39nF	MCCA000476	CAP, MLCC, 22nF, 50V, X7R, 0805, Reel	MC0805B223J500CT
MLCC, 1206, X7R, 50V, 47nF	MCCA000477	CAP, MLCC, 22nF, 50V, X7R, 0805, Reel	MC0805B223K500CT
MLCC, 1206, X7R, 50V, 100nF	MCCA000478	CAP, MLCC, 220nF, 50V, X7R, 0805, Reel	MC0805B224K500CT
MLCC, 1206, X7R, 50V, 220nF	MCCA000479	CAP, MLCC, 3.3nF, 50V, X7R, 0805, Reel	MC000593
CAP, MLCC, 220nF, 25V, X7R, 0805, Reel	MC0805B224J250CT	CAP, MLCC, 33nF, 50V, X7R, 0805, Reel	MC0805B333J500CT
CAP, MLCC, 220nF, 25V, X7R, 0805, Reel	MC0805B224K250CT	CAP, MLCC, 33nF, 50V, X7R, 0805, Reel	MC0805B333K500CT
CAP, MLCC, 330nF, 25V, X7R, 0805, Reel	MC0805B334K250CT	CAP, MLCC, 330nF, 50V, X7R, 0805, Reel	MC0805B334K500CT
CAP, MLCC, 470nF, 25V, X7R, 0805, Reel	MC0805B474K250CT	CAP, MLCC, 39nF, 50V, X7R, 0805, Reel	MC000597
CAP, MLCC, 1µF, 25V, X5R, 0805, Reel	MC0805X105K250CT	CAP, MLCC, 470pF, 50V, X7R, 0805, Reel	MC000598
CAP, MLCC, 10pF, 50V, NP0, 0805, Reel	MC0805N100J500CT	CAP, MLCC, 4.7nF, 50V, X7R, 0805, Reel	MC0805B472J500CT
CAP, MLCC, 100pF, 50V, NP0, 0805, Reel	MC0805N101J500CT	CAP, MLCC, 4.7nF, 50V, X7R, 0805, Reel	MC000600
CAP, MLCC, 1nF, 50V, NP0, 0805, Reel	MC000559	CAP, MLCC, 47nF, 50V, X7R, 0805, Reel	MC0805B473J500CT
CAP, MLCC, 12pF, 50V, NP0, 0805, Reel	MC0805N120J500CT	CAP, MLCC, 47nF, 50V, X7R, 0805, Reel	MC000602
CAP, MLCC, 15pF, 50V, NP0, 0805, Reel	MC000561	CAP, MLCC, 470nF, 50V, X7R, 0805, Reel	MC0805B474K500CT
CAP, MLCC, 150pF, 50V, NP0, 0805, Reel	MC000562	CAP, MLCC, 6.8nF, 50V, X7R, 0805, Reel	MC000604
CAP, MLCC, 1.5nF, 50V, NP0, 0805, Reel	MC000563	CAP, MLCC, 68nF, 50V, X7R, 0805, Reel	MC000605
CAP, MLCC, 18pF, 50V, NP0, 0805, Reel	MC000564	CAP, MLCC, 10µF, 6.3V, X7R, 0805, Reel	MC0805B106K6R3CT
CAP, MLCC, 22pF, 50V, NP0, 0805, Reel	MC0805N220J500CT	CAP, MLCC, 220nF, 16V, X7R, 0805, Reel	MC000611
CAP, MLCC, 220pF, 50V, NP0, 0805, Reel	MC000566	CAP, MLCC, 330nF, 16V, X7R, 0805, Reel	MC0805B334K160CT
CAP, MLCC, 2.2nF, 50V, NP0, 0805, Reel	MC000567	CAP, MLCC, 470nF, 16V, X7R, 0805, Reel	MC0805B474K160CT
CAP, MLCC, 27pF, 50V, NP0, 0805, Reel	MC000568	CAP, MLCC, 1µF, 16V, X5R, 0805, Reel	MC0805X105K160CT
CAP, MLCC, 270pF, 50V, NP0, 0805, Reel	MC0805N271J500CT	CAP, MLCC, 33nF, 100V, X7R, 1206, Reel	MC000644
CAP, MLCC, 33pF, 50V, NP0, 0805, Reel	MC000570	CAP, MLCC, 470nF, 25V, X7R, 1206, Reel	MC000660
CAP, MLCC, 330pF, 50V, NP0, 0805, Reel	MC0805N331J500CT	CAP, MLCC, 22nF, 50V, X7R, 1206, Reel	MC000684
CAP, MLCC, 47pF, 50V, NP0, 0805, Reel	MC0805N470J500CT	CAP, MLCC, 220nF, 50V, X7R, 1206, Reel	MC000686
CAP, MLCC, 470pF, 50V, NP0, 0805, Reel	MC0805N471J500CT	CAP, MLCC, 33nF, 50V, X7R, 1206, Reel	MC000688

Multilayer SMD Ceramic Capacitors

General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
CAP, MLCC, 220nF, 100V, X7R, 1210, Reel	MC000718	MLCC, 0603, Y5V, 16V, 1µF	MCCA000530
MLCC, 1206, X7R, 100V, 22nF	MCCA000487	MLCC, 0603, X5R, 25V, 1µF	MCCA000531
MLCC, 1206, X7R, 100V, 33nF	MCCA000488	MLCC, 0805, X5R, 6.3V, 1.5µF	MCCA000532
MLCC, 1206, X7R, 100V, 47nF	MCCA000489	MLCC, 0805, X5R, 6.3V, 2.2µF	MCCA000533
MLCC, 1206, X7R, 100V, 100nF	MCCA000490	MLCC, 0805, X5R, 6.3V, 3.3µF	MCCA000534
MLCC, 1210, Y5V, 6.3V, 47µF	MCCA000491	MLCC, 0805, X5R, 6.3V, 4.7µF	MCCA000535
MLCC, 1210, Y5V, 50V, 10µF	MCCA000492	MLCC, 0805, X5R, 6.3V, 22µF	MCCA000536
MLCC, 1210, X7R, 100V, 220nF	MCCA000493	MLCC, 0805, X5R, 10V, 2.2µF	MCCA000537
MLCC, 1210, X7R, 100V, 470nF	MCCA000494	MLCC, 0805, Y5V, 10V, 3.3µF	MCCA000538
MLCC, 1210, X7R, 100V, 680nF	MCCA000495	MLCC, 0805, X5R, 10V, 3.3µF	MCCA000539
MLCC, 0402, X5R, 6.3V, 0.22µF	MCCA000498	MLCC, 0805, Y5V, 10V, 4.7µF	MCCA000540
MLCC, 0402, X5R, 6.3V, 0.47µF	MCCA000499	MLCC, 0805, X5R, 10V, 4.7µF	MCCA000541
MLCC, 0402, X5R, 6.3V, 1µF	MCCA000500	MLCC, 0805, Y5V, 10V, 10µF	MCCA000542
MLCC, 0402, X5R, 6.3V, 2.2µF	MCCA000501	MLCC, 0805, Y5V, 16V, 1µF	MCCA000543
MLCC, 0402, X5R, 10V, 0.056µF	MCCA000502	MLCC, 0805, Y5V, 16V, 1.5µF	MCCA000544
MLCC, 0402, X5R, 10V, 0.068µF	MCCA000503	MLCC, 0805, Y5V, 16V, 2.2µF	MCCA000545
MLCC, 0402, X5R, 10V, 0.082µF	MCCA000504	MLCC, 0805, X5R, 16V, 2.2µF	MCCA000546
MLCC, 0402, X5R, 10V, 0.1µF	MCCA000505	MLCC, 0805, Y5V, 16V, 4.7µF	MCCA000547
MLCC, 0402, X5R, 10V, 1µF	MCCA000506	MLCC, 0805, X5R, 16V, 4.7µF	MCCA000548
MLCC, 0402, X5R, 16V, 0.027µF	MCCA000507	MLCC, 0805, Y5V, 25V, 1µF	MCCA000549
MLCC, 0402, X5R, 16V, 0.033µF	MCCA000508	MLCC, 0805, X5R, 25V, 2.2µF	MCCA000550
MLCC, 0402, X5R, 16V, 0.039µF	MCCA000509	MLCC, 0805, X5R, 25V, 4.7µF	MCCA000551
MLCC, 0402, X5R, 16V, 0.047µF	MCCA000510	MLCC, 0805, Y5V, 50V, 1µF	MCCA000552
MLCC, 0402, X5R, 16V, 0.068µF	MCCA000511	MLCC, 1206, X7R, 10V, 1.5µF	MCCA000553
MLCC, 0402, X5R, 16V, 0.1µF	MCCA000512	MLCC, 1206, Y5V, 10V, 10µF	MCCA000554
MLCC, 0402, X5R, 16V, 0.22µF	MCCA000513	MLCC, 1206, Y5V, 10V, 22µF	MCCA000555
MLCC, 0603, X5R, 6.3V, 0.82µF	MCCA000514	CAP, MLCC, 22nF, 100V, X7R, 1206, Reel	MC000641
MLCC, 0603, X5R, 6.3V, 1µF	MCCA000515	MLCC, 1210, Y5V, 50V, 4.7µF	MCCA000587
MLCC, 0603, X5R, 6.3V, 2.2µF	MCCA000516	MLCC, 1812, X7R, 100V, 1µF	MCCA000589
MLCC, 0603, X5R, 6.3V, 10µF	MCCA000517	MLCC, 0805, NP0, 200V, 15pF	MCCA000606
MLCC, 0603, X5R, 10V, 0.33µF	MCCA000518	MLCC, 0805, NP0, 200V, 22pF	MCCA000607
MLCC, 0603, X5R, 10V, 0.47µF	MCCA000519	MLCC, 0805, NP0, 200V, 33pF	MCCA000608
MLCC, 0603, X5R, 10V, 0.68µF	MCCA000520	MLCC, 0805, NP0, 200V, 47pF	MCCA000609
MLCC, 0603, Y5V, 10V, 1µF	MCCA000521	MLCC, 0805, NP0, 200V, 68pF	MCCA000610
MLCC, 0603, X5R, 10V, 1µF	MCCA000522	MLCC, 0805, NP0, 200V, 100pF	MCCA000611
MLCC, 0603, Y5V, 10V, 2.2µF	MCCA000523	MLCC, 0805, NP0, 200V, 150pF	MCCA000612
MLCC, 0603, X5R, 10V, 2.2µF	MCCA000524	MLCC, 0805, X7R, 200V, 220pF	MCCA000613
MLCC, 0603, X5R, 16V, 0.22µF	MCCA000525	MLCC, 0805, NP0, 200V, 220pF	MCCA000614
MLCC, 0603, X5R, 16V, 0.33µF	MCCA000526	MLCC, 0805, X7R, 200V, 330pF	MCCA000615
MLCC, 0603, X5R, 16V, 0.47µF	MCCA000527	MLCC, 0805, NP0, 200V, 330pF	MCCA000616
MLCC, 0603, X5R, 16V, 0.68µF	MCCA000528	MLCC, 0805, X7R, 200V, 470pF	MCCA000617
MLCC, 0603, X5R, 16V, 1µF	MCCA000529	MLCC, 0805, X7R, 200V, 680pF	MCCA000618

Multilayer SMD Ceramic Capacitors
General Purpose Series (10 to 100V) NPO, X7R & Y5V Dielectrics



Description	Part Number	Description	Part Number
MLCC, 0805, X7R, 200V, 1nF	MCCA000619	Capacitor, 0603, NP0, 200V, 33pF	MCCA000643
MLCC, 0805, X7R, 200V, 1.5nF	MCCA000620	Capacitor, 0603, NP0, 200V, 47pF	MCCA000644
MLCC, 0805, X7R, 200V, 2.2nF	MCCA000621	Capacitor, 0603, NP0, 200V, 68pF	MCCA000645
MLCC, 0805, X7R, 200V, 3.3nF	MCCA000622	Capacitor, 0603, NP0, 200V, 100pF	MCCA000646
MLCC, 0805, X7R, 200V, 4.7nF	MCCA000623	Capacitor, 0603, NP0, 200V, 150pF	MCCA000647
MLCC, 0805, X7R, 200V, 6.8nF	MCCA000624	Capacitor, 0603, NP0, 200V, 220pF	MCCA000648
MLCC, 0805, X7R, 200V, 10nF	MCCA000625	Capacitor, 0805, NP0, 200V, 1.0pF	MCCA000649
MLCC, 1206, NP0, 200V, 1nF	MCCA000626	Capacitor, 0805, NP0, 200V, 1.5pF	MCCA000650
MLCC, 1206, X7R, 200V, 15nF	MCCA000627	Capacitor, 0805, NP0, 200V, 2.2pF	MCCA000651
MLCC, 1206, X7R, 200V, 22nF	MCCA000628	Capacitor, 0805, NP0, 200V, 3.3pF	MCCA000652
MLCC, 1206, X7R, 630V, 1nF	MCCA000630	Capacitor, 0805, NP0, 200V, 4.7pF	MCCA000653
MLCC, 1206, X7R, 630V, 2.2nF	MCCA000631	Capacitor, 0805, NP0, 200V, 6.8pF	MCCA000654
MLCC, 1206, X7R, 630V, 4.7nF	MCCA000632	Capacitor, 0805, NP0, 200V, 10pF	MCCA000655
MLCC, 1206, X7R, 630V, 10nF	MCCA000633	Capacitor, 0805, NP0, 500V, 1.0pF	MCCA000656
Capacitor, 0603, NP0, 200V, 1.0pF	MCCA000634	Capacitor, 0805, NP0, 500V, 1.5pF	MCCA000657
Capacitor, 0603, NP0, 200V, 1.5pF	MCCA000635	Capacitor, 0805, NP0, 500V, 2.2pF	MCCA000658
Capacitor, 0603, NP0, 200V, 2.2pF	MCCA000636	Capacitor, 0805, NP0, 500V, 3.3pF	MCCA000659
Capacitor, 0603, NP0, 200V, 3.3pF	MCCA000637	Capacitor, 0805, NP0, 500V, 4.7pF	MCCA000660
Capacitor, 0603, NP0, 200V, 4.7pF	MCCA000638	Capacitor, 0805, NP0, 500V, 6.8pF	MCCA000661
Capacitor, 0603, NP0, 200V, 6.8pF	MCCA000639	Capacitor, 0805, NP0, 500V, 10pF	MCCA000662
Capacitor, 0603, NP0, 200V, 10pF	MCCA000640	Capacitor, 0805, NP0, 500V, 15pF	MCCA000663
Capacitor, 0603, NP0, 200V, 15pF	MCCA000641	CAP, MLCC, 100pF, 50V, NP0, 0402, Reel	MC000371
Capacitor, 0603, NP0, 200V, 22pF	MCCA000642	CAP, MLCC, 100nF, 100V, X7R, 1206, Reel	MC000638

Important Notice : This data sheet and its contents (the "InFormation") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for inFormation purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The InFormation is subject to change without notice and replaces all data sheets previously supplied. The InFormation supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the InFormation and the suitability of the products for their purpose and not make any assumptions based on inFormation included or omitted. Liability for loss or damage resulting from any reliance on the InFormation or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.





element14

EN - For pricing and availability in your local country please visit one of the below links:

DE - Informationen zu Preisen und Verfügbarkeit in Ihrem Land erhalten Sie über die unten aufgeführten Links:

FR - Pour connaître les tarifs et la disponibilité dans votre pays, cliquez sur l'un des liens suivants:

[MC0402B471J500CT](#)

[MC1206N221J501CT](#)

[MC0603B683K500CT](#)

EN

This Datasheet is presented by
the manufacturer

DE

Dieses Datenblatt wird vom
Hersteller bereitgestellt

FR

Cette fiche technique est
présentée par le fabricant