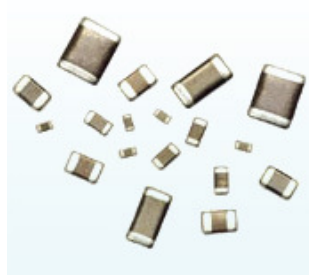
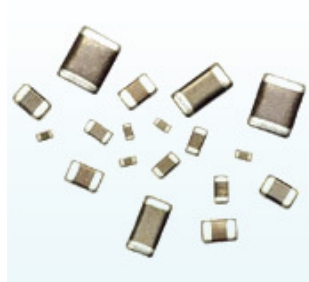
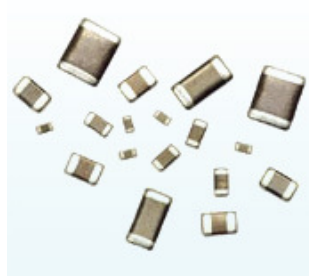


Industrial Series:

High Voltage over 1000V



0805 (CC2012)

1206 (CC3216)

1210 (CC3225)

1808 (CC4520)

1812 (CC4532)

1825 (CC4563)

2220 (CC5750)

2225 (CC5763)

LS1808 X2/Y3

LS1812 X2/Y3

ES1808 X1/Y2

ES2211 X1/Y2

ES2215 X1/Y2



MLCC Ceramic Capacitors



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Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 0805, X7R

Capacitance Range

0805 (CC2012)

Cap pF	Size	Tol	X7R	X7R	X7R
			1000V	600V	500V
220	0805	10%			
470	0805	10%			
1000	0805	10%			
1500	0805	10%			
2200	0805	10%			
2700	0805	10%			
4700	0805	10%			
10nF	0805	10%			
12nF	0805	10%			

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 1206, X7R

Capacitance Range

1206 (CC3216)

Cap pF	Size	Tol	X7R	X7R	X7R
			2000V	1500V	1000V
100	1206	10%			
220	1206	10%			
470	1206	10%			
1000	1206	10%			
1500	1206	10%			
2200	1206	10%			
4700	1206	10%			
6800	1206	10%			

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 1210, X7R

Capacitance Range

1210 (CC3225)

Cap pF	Size	Tol	X7R	X7R	X7R
			2000V	1500V	1000V
220	1210	10%			
1000	1210	10%			
1500	1210	10%			
2200	1210	10%			
2700	1210	10%	ud		
4700	1210	10%	ud		
6800	1210	10%			
10nF	1210	10%			
15nF	1210	10%			



MLCC Ceramic Capacitors



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ELECTRONICS

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 0805, X7R

Capacitance Range

0805 (CC2012)

Cap pF	Size	Tol	X7R 1000Vdc	X7R 600Vdc	X7R 500Vdc
220	0805	10%	0805B221K102NT		
470	0805	10%	0805B471K102NT	0805B471K601NT	
1000	0805	10%	0805B102K102NT	0805B102K601NT	
1500	0805	10%	0805B152K102NT	0805B152K601NT	
2200	0805	10%	0805B222K102NT	0805B222K601NT	
2700	0805	10%	0805B272K102NT	0805B272K601NT	0805B272K501NT
4700	0805	10%	0805B221K102NT	0805B472K601NT	0805B472K501NT
10nF	0805	10%	0805B221K102NT		0805B103K501NT
12nF	0805	10%	0805B221K102NT		0805B123K501NT

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 1206, X7R

Capacitance Range

1206 (CC3216)

Cap pF	Size	Tol	X7R 2000Vdc	X7R 1500Vdc	X7R 1000Vdc
100	1206	10%	1206B101K202NT		
220	1206	10%	1206B221K202NT		1206B221K102NT
330	1206	10%	1206B331K202NT		1206B331K102NT
470	1206	10%	1206B471K202NT	1206B471K152NT	1206B471K102NT
1000	1206	10%	1206B102K202NT	1206B102K152NT	1206B102K102NT
1500	1206	10%		1206B152K152NT	0805B152K501NT
2200	1206	10%		1206B222K152NT	0805B222K501NT
4700	1206	10%			0805B472K501NT
6800	1206	10%			0805B682K501NT

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 1210, X7R

Capacitance Range

1210 (CC3225)

Cap pF	Size	Tol	X7R 2000Vdc	X7R 1500Vdc	X7R 1000Vdc
1000	1206	10%	1210B102K202NT		1210B102K102NT
1500	1206	10%	1210B152K202NT		1210B152K102NT
2200	1206	10%	1210B222K202NT	1210B222K152NT	1210B222K102NT
2700	1206	10%	ud	1210B272K152NT	1210B272K102NT
4700	1206	10%	ud	1210B472K152NT	1210B472K102NT
6800	1206	10%			1210B682K102NT
10nF	1206	10%			1210B103K102NT
15nF	1206	10%			1210B153K102NT



MLCC Ceramic Capacitors



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Class 1 COG (TCC +/-30ppm); Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: **1808**

Capacitance Range

1808 (CC4520)

.Value. pF	Size	Tol	COG	COG	X7R	X7R	X7R
			3000V	2000V	2000V	1500V	1000V
10	1808	5%					
12	1808	5%					
15	1808	5%					
18	1808	5%					
22	1808	5%					
33	1808	5%					
39	1808	5%					
100	1808	5%					
150	1808	5%					
220	1808	5%					
470	1808	5%					
1000	1808	10%					
1500	1808	10%					
2200	1808	10%					
2700	1808	10%					
4700	1808	10%			ud		
10nF	1808	10%					
22nF	1808	10%					

Class 1 COG (TCC +/-30ppm); Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: **1812**

Capacitance Range

1812 (CC4532)

.Value. pF	Size	Tol	COG	COG	X7R	X7R	X7R
			3000V	2000V	3000V	2000V	1000V
100	1812	10%					
120	1812	10%					
150	1812	10%					
220	1812	10%					
470	1812	10%					
1000	1812	10%					
1500	1812	10%					
2200	1812	10%					
2700	1812	10%					
4700	1812	10%			ud		
10nF	1812	10%			ud		
15nF	1812	10%				ud	
22nF	1812	10%				ud	
47nF	1812	10%					
56nF	1812	10%					



MLCC Ceramic Capacitors



Class 1 COG (TCC +/- 30ppm) RoHS COMPLIANT

Selection Chart: 1808, 1812, COG

Capacitance Range

1808 (CC4520) 1812 (CC4532)

Cap pF	COG (NP0) 3000Vdc / 1808	COG (NP0) 3000Vdc / 1812	COG (NP0) 2000Vdc / 1808	COG (NP0) 2000Vdc / 1812
10	1808N100J302NT			
12	1808N120J302NT			
15	1808N150J302NT			
18	1808N180J302NT			
22	1808N220J302NT			
33	1808N330J302NT			
39	1808N390J302NT			
100	1808N101J302NT	1812N101K302NT	1808N101K202NT	1812N101K202NT
150	1808B151K302NT	1812N151K302NT	1808N151K202NT	1812N151K202NT
220	1808B221K302NT	1812N221K302NT	1808N221K202NT	1812N221K202NT
470	1808B471K302NT	1812N471K302NT	1808N471K202NT	1812N471K202NT
1000		1812N102K302NT	1808N102K202NT	1812N102K202NT
1500				1812N152K202NT
2200				1812N222K202NT
2700				1812N272K202NT

Class 2 X7R (TCC +/- 15%) RoHS COMPLIANT

Selection Chart: 1808, 1812, X7R

Capacitance Range

1808 (CC4520) 1812 (CC4532)

Cap pF	X7R 3000Vdc / 1812	X7R 2000Vdc / 1812	X7R 2000Vdc / 1808	X7R 1000Vdc / 1812	X7R 1000Vdc / 1808
150	1812B151K302NT				
220	1812B221K302NT	1812B221K202NT	1808B221K202NT		
470	1812B471K302NT	1812B151K202NT	1808B471K202NT		
1000	1812B102K302NT	1812B102K202NT	1808B102K202NT		1808B102K102NT
1500	1812B152K302NT	1812B152K202NT	1808B152K202NT		1808B152K102NT
2200	1812B222K302NXT	1812B222K202NT	1808B222K202NT		1808B222K102NT
2700	1812B272K302NXT	1812B272K202NT	1808B272K202NT		1808B272K102NT
4700	ud	1812B472K202NT			1808B472K102NT
10nF	ud	1812B103K202NXT		1812B103K102NXT	1808B103K102NT
15nF		1812BB153K202NT		1812BB153K102NT	1808B153K102NT
22nF		1812BB223K202NT		1812B223K102NXT	1808B223K102NXT
47nF				1812B473K102NXT	
56nF				1812BB563K102NXT	



MLCC Ceramic Capacitors



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Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 1825, X7R

Capacitance Range

1825 (CC4563)

Cap nF	Size	Tol	X7R	X7R	X7R	X7R
			3000Vdc	2000Vdc	1500Vdc	1000Vdc
10nF	1825	10%				
12nF	1825	10%				
15nF	1825	10%				
22nF	1825	10%				
33nF	1825	10%				
56nF	1825	10%				
100nF	1825	10%				
150nF	1825	10%				

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 2220, X7R

Capacitance Range

2220 (CC5750)

Cap nF	Size	Tol	X7R	X7R	X7R	X7R
			3000Vdc	2000Vdc	1500Vdc	1000Vdc
1000	2220	10%				
2200	2220	10%				
4700	2220	10%				
10nF	2220	10%				
22nF	2220	10%		ud		
27nF	2220	10%				
56nF	2220	10%				
100nF	2220	10%				

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 2225, X7R

Capacitance Range

2225 (CC5763)

Cap nF	Size	Tol	X7R	X7R	X7R	X7R
			3000Vdc	2000Vdc	1500Vdc	1000Vdc
1.0nF	2225	10%				
2.2nF	2225	10%				
4.7nF	2225	10%				
10nF	2225	10%				
12nF	2225	10%				
15nF	2225	10%				
22nF	2225	10%				
33nF	2225	10%				
47nF	2225	10%		ud		
68nF	2225	10%				
100nF	2225	10%				
220nF	2225	10%				



MLCC Ceramic Capacitors



Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 1825 X7R

Capacitance Range

1825 (CC4563)

Cap nF	X7R	X7R	X7R	X7R
	3000Vdc / 1825	2000Vdc / 1825	1500Vdc / 1825	1000Vdc / 1825
10nF	1825B103K302NXT	1825B103K202NT	1825B103K152NT	
12nF		1825B123K202NXT	1825B123K152NT	
15nF		1825B153K202NXT	1825B153K152NT	
22nF		1825B223K202NXT	1825B223K152NT	1825B223K102NT
33nF		1825B333K202NXT	1825B333K152NXT	1825B333K102NT
56nF			1825B563K152NXT	1825B563K102NT
100nF				1825B104K102NXT
150nF				1825B154K102NXT

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 2220 X7R

Capacitance Range

2220 (CC5750)

Cap nF	X7R	X7R	X7R	X7R
	3000Vdc / 2220	2000Vdc / 2220	1500Vdc / 2220	1000Vdc / 2220
1.0nF	2220B102K302NT			
2.2nF	2220B222K302NT	2220B222K202NT		
4.7nF	2220B472K302NT	2220B472K202NT		
10nF		2220B103K202NT	2220B103K152NT	
22nF		ud	2220B223K152NT	2220B223K102NT
27nF		ud	2220B273K152NT	2220B273K102NT
56nF		ud		2220B563K102NT
100nF				2220B104K102NT

Class 2 X7R (TCC +/- 15%) **RoHS COMPLIANT**

Selection Chart: 2225 X7R

Capacitance Range

2225 (CC5763)

Cap nF	X7R	X7R	X7R	X7R
	3000Vdc / 2225	2000Vdc / 2225	1500Vdc / 2225	1000Vdc / 2225
1.0nF	2225B102K302NT	2225B102K202NT		
2.2nF	2225B222K302NT	2225B222K202NT		
4.7nF	2225B472K302NT	2225B472K202NT		
10nF	2225B103K302NT	2225B103K202NT	2225B103K152NT	
12nF	2225B123K302NT	2225B123K202NT	2225B103K152NT	
15nF		2225B153K202NT	2225B153K152NT	
22nF		2225B223K202NT	2225B223K152NT	
33nF		2225B333K202NT	2225B333K152NT	
39nF		ud	2225B393K152NT	
47nF		ud	2225B473K152NT	2225B473K102NT
68nF			2225B683K152NT	2225B683K102NT
100nF				2225B104K102NT
150nF				2225B154K102NT
220nF				2225B224K102NT



MLCC Ceramic Capacitors



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Class 1 COG (TCC +/-30ppm); Class 2 X7R (TCC +/- 15%)

Safety X2/Y3

Selection Chart: **LS1808** **RoHS COMPLIANT**

Capacitance Range

LS1808 (CC4520)

.Value. pF	Size	Tol	LS1808	
			COG	X7R
			250Vac/3000V	250Vac/3000V
10	LS1808	5%		
22	LS1808	5%		
47	LS1808	5%		
100	LS1808	10%		
150	LS1808	10%		
220	LS1808	10%		
470	LS1808	10%		
680	LS1808	10%		
1000	LS1808	10%		
1200	LS1808	10%		
1500	LS1808	10%		

Serie LS1808

Klassifizierung X2/Y3

EN60950

EN132400

IEC60384-14

EN61000-4-5

Class 1 COG (TCC +/-30ppm)

Safety X2/Y3

Selection Chart: **LS1812** **RoHS COMPLIANT**

Capacitance Range

LS1812 (CC4532)

.Value. pF	Size	Tol	LS1812
			COG
			250Vac/3000V
1000	LS1812	10%	
1500	LS1812	10%	
2200	LS1812	10%	

Serie LS1812

Klassifizierung X2/Y3

EN60950

EN132400, IEC60384-14

Class 1 COG (TCC +/-30ppm); Class 2 X7R (TCC +/- 15%)

Safety X1/Y2

Selection Chart: **ES2211, ES1808, ES2215** **RoHS COMPLIANT**

Capacitance Range

ES2211 (CC5728), ES1808, ES2215

.Value. pF	Size	Tol	ES2211	ES1808	ES1808	ES2215
			COG	COG	X7R	COG
			250Vac/5000V	250Vac/5000V	250Vac/5000V	250Vac/5000V
10		10%				
100		10%				
150		10%				
220		10%				
470		10%				
680		10%				
1000		10%				



MLCC Ceramic Capacitors



Class 1 COG (TCC +/-30ppm); Class 2 X7R (TCC +/- 15%)

Safety X2/Y3

Selection Chart: **LS Serie** **RoHS COMPLIANT**

Capacitance Range

LS1808 (CC4520) 1812 (4532)

Cap pF	LS1808 COG 250Vac/3000V	LS1808 X7R 250Vac/3000V	LS1812 COG 250Vac/3000V
10pF	LS1808N100K302NTM		
22pF	LS1808N220K302NTM		
47pF	LS1808N470K302NTM		
100pF	LS1808N101K302NTM		
150pF	LS1808N151K302NTM	LS1808B151K302NTM	
220pF	LS1808N221K302NTM	LS1808B221K302NTM	
470pF	LS1808N471K302NTM	LS1808B471K302NTM	
680pF	LS1808N681K302NTM	LS1808B681K302NTM	
1000pF	LS1808N102K302NTM	LS1808B102K302NTM	LS1812N102K302NTM
1200pF		LS1808B122K302NTM	LS1812N122K302NTM
1500pF		LS1808B152K302NTM	LS1812N152K302NTM
2200pF			LS1812N222K302NXTM

Class 1 COG (TCC +/-30ppm); Class 2 X7R (TCC +/- 15%)

Safety X1/Y2

Selection Chart: **ES Serie** **RoHS COMPLIANT**

Capacitance Range

ES1808 (CC4520) ES2211 (5728)

Cap pF	ES2211 COG 250Vac/5000V	ES1808 COG 250Vac/5000V	ES1808 X7R 250Vac/5000V	ES2215 COG 250Vac/5000V
10pF	ES2211N100K502NTM	ES1808N100K502NTM		
22pF	ES2211N220K502NTM	ES1808N220K502NTM		
33pF	ES2211N330K502NTM	ES1808N330K502NTM		
100pF	ES2211N101K502NTM	ES1808N101K502NTM		
150pF	ES2211N151K502NTM	ES1808N151K502NTM	ES1808B151K502NTM	
220pF	ES2211N221K502NTM	ES1808N221K502NTM	ES1808B221K502NTM	
470pF	ES2211N471K502NTM		ES1808B471K502NTM	
680pF	ES2211N681K502NTM		ES1808B681K502NTM	
1000pF			ES1808B102K502NTM	ES2215N102K502NTM



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