



CERAMIC CAPACITOR

FEATURES

Capacitance:0.5pF~1.0μF
 Voltage:25V~50V
 Operating temperature:-55℃~+125℃
 Performance equivalent to MIL-PRF-123



APPLICATIONS

Typical applications include critical timing, tuning, decoupling, bypass, filtering, transient voltage suppression.

ORDERING INFORMATION

CCS41	2225	BP	50V	103	J	Z	T
Series	Case Size	Dielectric	Rated Voltage	Capacitance Code(pf)	Capacitance Tolerance	Termination Finish	Packaging
CCS41: Class I CTS41: Class II	0604 0805 1206 1207 1210 1812 2225	BP(Class I) BX(Class II)	25V 50V	First two digits represent significant figures, Third digit specifies number of zeros. Example: 103=10000pF	C=±0.25pF D=±0.5pF F=±1% G=±2% J=±5% K=±10% M=±20%	G=Gold Z= Tin /Lead solder plated (4% Pb minimum)	T=Bulk E=7" Reel

DIMENSIONS

Unit: mm

Appearance	Case Size	0604	0805	1206	1207	1210	1812	2225
	L	1.60 ± 0.15	2.01 ± 0.20	3.20 ± 0.20	3.20 ^{+0.10} _{-0.30}	3.20 ± 0.20	4.50 ± 0.30	5.72 ± 0.25
	W	1.00 ± 0.10	1.25 ± 0.20	1.60 ± 0.20	1.80 ^{+0.30} _{-0.10}	2.50 ± 0.20	3.20 ± 0.20	6.35 ± 0.25
	Tmax	1.10	1.40	1.80	2.00	2.70	3.50	5.10
	t	0.40 ± 0.20	0.50 ± 0.25	0.50 ± 0.25	0.50 ± 0.25	0.50 ± 0.25	0.61 ± 0.36	0.64 ± 0.39

ELECTRICAL CHARACTERISTICS

Item	Specification Limits	Measuring Conditions																				
Operating Temperature Range	-55℃ to +125℃	—																				
Capacitance	Within specified tolerance	<table><tr><th>Dielectric</th><th>Item</th><th>Frequency</th><th>Voltage</th></tr><tr><td rowspan="2">BP</td><td>C_R≤1000pF</td><td>1,0 MHz ± 10%</td><td rowspan="2">1,0Vrms ± 0,2V</td></tr><tr><td>C_R>1000 pF</td><td>1,0 kHz ± 10%</td></tr><tr><td rowspan="2">BX</td><td>C_R≤10 μ F</td><td>1,0kHz ± 10%</td><td rowspan="2">1,0Vrms ± 0,2V</td></tr><tr><td>C_R> 10 μ F</td><td>120Hz ± 10%</td><td>0,5Vrms ± 0,2V</td></tr></table>				Dielectric	Item	Frequency	Voltage	BP	C _R ≤1000pF	1,0 MHz ± 10%	1,0Vrms ± 0,2V	C _R >1000 pF	1,0 kHz ± 10%	BX	C _R ≤10 μ F	1,0kHz ± 10%	1,0Vrms ± 0,2V	C _R > 10 μ F	120Hz ± 10%	0,5Vrms ± 0,2V
Dielectric	Item					Frequency	Voltage															
BP	C _R ≤1000pF					1,0 MHz ± 10%	1,0Vrms ± 0,2V															
	C _R >1000 pF					1,0 kHz ± 10%																
BX	C _R ≤10 μ F	1,0kHz ± 10%	1,0Vrms ± 0,2V																			
	C _R > 10 μ F	120Hz ± 10%		0,5Vrms ± 0,2V																		
Dissipation Factor	BP : C _R < 10pF tg δ ≤0.25%; C _R ≥10pF tg δ ≤0.15%; BX : tg δ ≤2.5%;																					
Insulation Resistance	100000MΩ or 1000MΩ · μF whichever is less	Rated voltage applied for 2 minutes,charge and discharge current limited to 50mA (max).																				
Dielectric Strength	No breakdown or visual defects	300% of DC rated voltage for 5 seconds, charge and discharge current limited to 50mA (max).																				
Temperature Characteristics	Dielectric	0 Vdc Applied	Rated Voltage Applied		Capacitance change with reference to +25℃																	
	BP	(0 ± 30)ppm/℃	(0 ± 30)ppm/℃																			
	BX	± 15%	-25%~+15%																			

CAPACITANCE AND RATED VOLTAGE RANGE

CCS41

Case Size	0805	1206	1207	1210	1812	2225
Rated Voltage(v)	50	50	50	50	50	50
0R5 1R0						
1R1 1R2						
1R3 1R5						
1R6 1R8						
2R0 2R2						
2R4 2R7						
3R0 3R3						
3R6 3R9						
4R3 4R7						
5R1 5R6						
6R2 6R8						
7R5 8R2						
9R1 100						
110 120						
130 150						
160 180						
200 220						
240 270						
300 330						
360 390						
430 470						
510 560						
620 680						
750 820						
910 101						
111 121						
131 151						
161 181						
201 221						
241 271						
301 331						
361 391						
431 471						
511 561						
621 681						
751 821						
911 102						
112 122						
132 152						
162 182						
202 222						
242 272						
302 332						
362 392						
432 472						
512 562						
622 682						
752 822						
912 103						
113 123						
133 153						
163 183						
203 223						
243 273						
303 333						
363 393						
433 473						
513 563						
623 683						
753 823						
913 104						

BP

CTS41

Case Size	0604	0805	1206	1207	1210	1812	2225
Rated Voltage(v)	25	50	50	50	50	50	50
101							
121							
151							
181							
221							
271							
331							
391							
471							
561							
681							
821							
102							
122							
152							
182							
222							
272							
332							
392							
472							
562							
682							
822							
103							
123							
153							
183							
223							
273							
333							
393							
473							
563							
683							
823							
104							
124							
154							
184							
224							
274							
334							
394							
474							
564							
684							
824							
105							

BX

FEATURES

Capacitance: 0.5pF~1.0μF

Operating temperature: -55°C~+125°C

Epoxy molded, high physical strength

APPLICATIONS

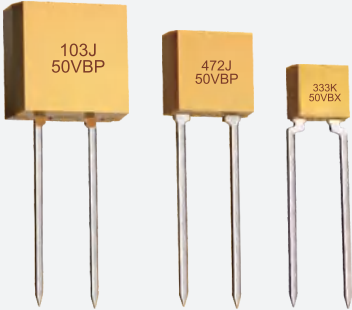
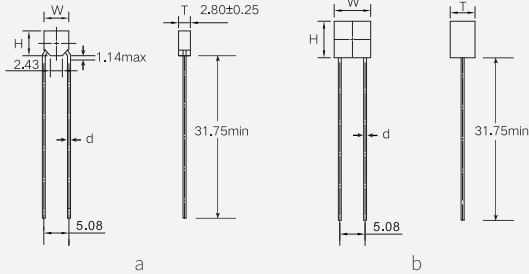
Typical applications include critical timing, tuning, decoupling, bypass, filtering, transient voltage suppression .

ORDERING INFORMATION

CCS4	07	BP	50V	103	J	Z	T
Series	Size Code	Dielectric	Rated Voltage	Capacitance Code(pf)	Capacitance Tolerance	Termination Finish	Packaging
CCS4: Class I CTS4: Class II	05 06 07	BP(Class I) BX(Class II)	50V	First two digits represent significant figures, Third digit specifies number of zeros. Example: 103=10000pF	C=±0.25pF D=±0.5pF F=±1% G=±2% J=±5% K=±10% M=±20%	Z=Tin /Lead solder plated (4%Pb minimum)	T=Bulk

DIMENSIONS

Unit: mm

Appearance	Size Code	05	06	07
	W	4.83±0.25	7.37±0.25	10.16±0.25
	H	4.83±0.25	7.37±0.25	10.16±0.25
	T	2.80±0.25	3.81±0.25	5.60±0.25
	d	0.60±0.05	0.60±0.05	0.60±0.05
	Wire Form			

ELECTRICAL CHARACTERISTICS

Item	Specification Limits	Measuring Conditions			
Operating Temperature Range	-55℃ to +125℃	—			
Capacitance	Within specified tolerance	Dielectric	Item	Frequency	Voltage
Dissipation Factor	BP: C _R < 30pF tg δ ≤0.25%; C _R ≥30pF tg δ ≤0.15%; BX: tg δ ≤2.5%;	BP	C _R ≤1000pF	1.0 MHz ± 10%	1.0Vrms ± 0.2V
			C _R >1000 pF	1.0 kHz ± 10%	
		BX	C _R ≤10 μ F	1.0kHz ± 10%	1.0Vrms ± 0.2V
			C _R > 10 μ F	120Hz ± 10%	
Insulation Resistance	100000MΩ or 1000MΩ · μ F whichever is less	Rated voltage applied for 2 minutes,charge and discharge current limited to 50mA (max).			
Dielectric Strength	No breakdown or visual defects	300% of DC rated voltage for 5 seconds, charge and discharge current limited to 50mA (max).			
Temperature Characteristics	Dielectric	0 Vdc Applied	Rated Voltage Applied		
	BP	(0 ± 30)ppm/℃	(0 ± 30)ppm/℃		
	BX	± 15%	-25%~+15%		
		Capacitance change with reference to +25℃			

CAPACITANCE AND RATED VOLTAGE RANGE

CCS4

Size Code	05	06	07
Rated Voltage(v)	50	50	50
0R5 1R0			
1R1 1R2			
1R3 1R5			
1R6 1R8			
2R0 2R2			
2R4 2R7			
3R0 3R3			
3R6 3R9			
4R3 4R7			
5R1 5R6			
6R2 6R8			
7R5 8R2			
9R1 100			
110 120			
130 150			
160 180			
200 220			
240 270			
300 330			
360 390			
430 470			
510 560			
620 680			
750 820			
910 101			
111 121			
131 151			
161 181			
201 221			
241 271			
301 331			
361 391			
431 471			
511 561			
621 681			
751 821			
911 102			
112 122			
132 152			
162 182			
202 222			
242 272			
302 332			
362 392			
432 472			
512 562			
622 682			
752 822			
912 103			
113 123			
133 153			
163 183			
203 223			
243 273			
303 333			
363 393			
433 473			
513 563			
623 683			
753 823			
913 104			

BP

CTS4

Size Code	05	06	07
Rated Voltage(v)	50	50	50
101			
121			
151			
181			
221			
271			
331			
391			
471			
561			
681			
821			
102			
122			
152			
182			
222			
272			
332			
392			
472			
562			
682			
822			
103			
123			
153			
183			
223			
273			
333			
393			
473			
563			
683			
823			
104			
124			
154			
184			
224			
274			
334			
394			
474			
564			
684			
824			
105			

BX

FEATURES

Capacitance: 0.5pF~27μF

Voltage: 16V~300V

Operating temperature: -55°C~+125°C

Performance equivalent to MIL-PRF-55681



APPLICATIONS

Typical applications include critical timing, tuning, decoupling, bypass, filtering, transient voltage suppression.

ORDERING INFORMATION

CCK41	2225	BC	50V	103	J	Z	M	T
Series	Case Size	Dielectric	Rated Voltage	Capacitance Code(pf)	Capacitance Tolerance	Termination Finish	Failure Rate Level	Packaging
CCK41: Class I	0603 0604 0805	BC (Class I) BX (Class II) BR (Class II)	16V 25V 50V	First two digits represent significant figures, Third digit specifies number of zeros. Example: 103=10000pF	C=±0.25pF D=±0.5pF F=±1% G=±2% J=±5% K=±10% M=±20%	N=Gold Z=Tin /Lead solder plated (4%Pb minimum)	M=1.0% P=0.1%	T=Bulk E=7" Reel
CTK41: Class II	1206 1207 1210 1812 2220 2225 3035 4045 5868 6575	BY (Class II)	100V 200V 300V					

DIMENSIONS

Unit: mm

Appearance	Case Size	0603	0604	0805	1206	1207	1210	1812
	L	1.60±0.15	1.60±0.15	2.01±0.20	3.20±0.20	3.20 ^{+0.10} _{-0.30}	3.20±0.20	4.50±0.30
	W	0.80±0.10	1.00±0.10	1.25±0.20	1.60±0.20	1.80 ^{+0.30} _{-0.10}	2.50±0.20	3.20±0.20
	Tmax	0.90	1.10	1.40	1.80	2.00	2.70	3.50
	t	0.40±0.20	0.40±0.20	0.50±0.25	0.50±0.25	0.50±0.25	0.50±0.25	0.61±0.36
Appearance	Case Size	2220	2225	3035	4045	5868	6575	
	L	5.72±0.30	5.72±0.30	7.60±0.40	10.20±0.40	14.70±0.50	16.50±0.50	
	W	5.10±0.30	6.35±0.30	8.90±0.40	11.40±0.40	17.30±0.50	19.10±0.50	
	Tmax	5.40	6.00	5.10	5.10	5.10	5.10	
	t	0.64±0.39	0.64±0.39	1.00±0.60	1.00±0.60	1.00±0.60	1.00±0.60	

ELECTRICAL CHARACTERISTICS

Item	Specification Limits	Measuring Conditions			
Operating Temperature Range	-55℃ to +125℃	—			
Capacitance	Within specified tolerance	Dielectric	Item	Frequency	Voltage
Dissipation Factor	BC: tg δ ≤0.15%; BX,BR: tg δ ≤2.5%; BY: U _R ≤50V tg δ ≤3.0%; U _R > 50V tg δ ≤2.5%;	BP	C _R ≤1000pF	1.0 MHz ± 10%	1.0Vrms ± 0.2V
			C _R >1000 pF	1.0 kHz ± 10%	
		BX,BR,BY	C _R ≤10 μ F	1.0kHz ± 10%	1.0Vrms ± 0.2V
			C _R > 10 μ F	120Hz ± 10%	0.5Vrms ± 0.2V
Insulation Resistance	100000MΩ or 1000MΩ · μF whichever is less	Rated voltage applied for 2 minutes,charge and discharge current limited to 50mA (max).			
Dielectric Strength	No breakdown or visual defects	250% of DC rated voltage for 5 seconds, charge and discharge current limited to 50mA (max).			
Temperature Characteristics	Dielectric	0 Vdc Applied	Rated Voltage Applied		
	BC	(0 ± 30)ppm/℃	(0 ± 30)ppm/℃		
	BX	± 15%	-25%~+15%		
	BR	± 15%	-40%~+15%		
	BY	± 15%	N/A		
Capacitance change with reference to +25℃					

CAPACITANCE AND RATED VOLTAGE RANGE

CCK41

Case Size	0603				0604				0805		1206		1207		1210		1812		2225	
Rated Voltage(v)	16	25	50	100	16	25	50	100	50	100	50	100	50	100	50	100	50	100	50	100
0R5 1R0																				
1R1 1R2																				
1R3 1R5																				
1R6 1R8																				
2R0 2R2																				
2R4 2R7																				
3R0 3R3																				
3R6 3R9																				
4R3 4R7																				
5R1 5R6																				
6R2 6R8																				
7R5 8R2																				
9R1 100																				
110 120																				
130 150																				
160 180																				
200 220																				
240 270																				
300 330																				
360 390																				
430 470																				
510 560																				
620 680																				
750 820																				
910 101																				
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113 123																				
133 153																				
163 183																				
203 223																				
243 273																				
303 333																				
363 393																				
433 473																				
513 563																				
623 683																				
753 823																				
913 104																				

BC

CAPACITANCE AND RATED VOLTAGE RANGE

CTK41

Case Size	0603				0604				0805				1206				1207				1210				1812				2220					2225					3035					4045					5868					6575				
Rated Voltage(V)	16	25	50	100	16	25	50	100	25	50	100	25	50	100	25	50	100	25	50	100	25	50	100	200	25	50	100	200	300	25	50	100	300	25	50	100	25	50	100	25	50	100	25	50	100	25	50	100	25	50	100							
101 121																																																										
151 181																																																										
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823																																																										
104																																																										
124																																																										
154																																																										
184																																																										
224																																																										
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FEATURES

Capacitance:0.5pF~1.0μF
Voltage:50V~100V
Operating temperature:-55℃~+125℃
Epoxy molded, high physical strength

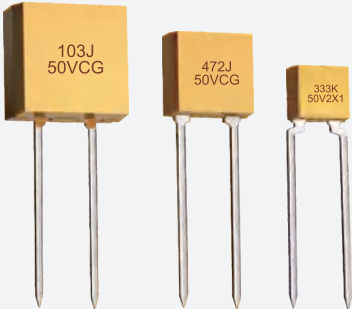
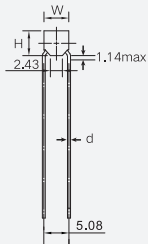
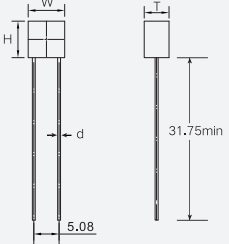
APPLICATIONS

Typical applications include critical timing, tuning, decoupling, bypass,filtering, transient voltage suppression.

ORDERING INFORMATION

CCK4	07	CG	50V	103	J	Z	M	T
Series	Size Code	Dielectric	Rated Voltage	Capacitance Code(pf)	Capacitance Tolerance	Termination Finish	Failure Rate Level	Packaging
CCK4: Class I	05 06 07	CG BX	50V 100V	First two digits represent significant figures, Third digit specifies number of zeros. Example: 103=10000pF	C=±0.25pF D=±0.5pF F=±1% G=±2% J=±5% K=±10% M=±20%	Z=Tin /Lead solder plated (4%Pb minimum)	M=1.0% P=0.1%	T=Bulk
CTK4: Class II								

DIMENSIONS

Appearance		Size Code	05	06	07
		W	4.83±0.25	7.37±0.25	10.16±0.25
		H	4.83±0.25	7.37±0.25	10.16±0.25
		T	2.80±0.25	3.81±0.25	5.60±0.25
		d	0.60±0.05	0.60±0.05	0.60±0.05
			a	b	b
Wire Form					

ELECTRICAL CHARACTERISTICS

Item	Specification Limits	Measuring Conditions			
Operating Temperature Range	-55℃ to +125℃	—			
Capacitance	Within specified tolerance	Dielectric	Item	Frequency	Voltage
Dissipation Factor	CG: tg δ ≤0.15%; BX: tg δ ≤2.5%;	CG	C _R ≤1000pF	1.0 MHz ± 10%	1.0Vrms ± 0.2V
			C _R >1000 pF	1.0 kHz ± 10%	
		BX	C _R ≤10 μ F	1.0kHz ± 10%	1.0Vrms ± 0.2V
			C _R > 10 μ F	120Hz ± 10%	0.5Vrms ± 0.2V
Insulation Resistance	100000MΩ or 1000MΩ · μ F whichever is less	Rated voltage applied for 2 minutes,charge and discharge current limited to 50mA (max).			
Dielectric Strength	No breakdown or visual defects	300% of DC rated voltage for 5 seconds, charge and discharge current limited to 50mA (max).			
Temperature Characteristics	Dielectric	0 Vdc Applied	Rated Voltage Applied		
	CG	(0 ± 30)ppm/℃	(0 ± 30)ppm/℃		
	BX	± 15%	-25%~+15%		
		Capacitance change with reference to +25℃			

CAPACITANCE AND RATED VOLTAGE RANGE

CCK4

Size Code	05		06		07	
Rated Voltage(v)	50	100	50	100	50	100
0R5 1R0						
1R1 1R2						
1R3 1R5						
1R6 1R8						
2R0 2R2						
2R4 2R7						
3R0 3R3						
3R6 3R9						
4R3 4R7						
5R1 5R6						
6R2 6R8						
7R5 8R2						
9R1 100						
110 120						
130 150						
160 180						
200 220						
240 270						
300 330						
360 390						
430 470						
510 560						
620 680						
750 820						
910 101						
111 121						
131 151						
161 181						
201 221						
241 271						
301 331						
361 391						
431 471						
511 561						
621 681						
751 821						
911 102						
112 122						
132 152						
162 182						
202 222						
242 272						
302 332						
362 392						
432 472						
512 562						
622 682						
752 822						
912 103						
113 123						
133 153						
163 183						
203 223						
243 273						
303 333						
363 393						
433 473						
513 563						
623 683						
753 823						
913 104						

CG

CTK4

Size Code	05		06		07	
Rated Voltage(v)	50	100	50	100	50	100
101						
121						
151						
181						
221						
271						
331						
391						
471						
561						
681						
821						
102						
122						
152						
182						
222						
272						
332						
392						
472						
562						
682						
822						
103						
123						
153						
183						
223						
273						
333						
393						
473						
563						
683						
823						
104						
124						
154						
184						
224						
274						
334						
394						
474						
564						
684						
824						
105						

BX

FEATURES

Capacitance:0.01pF~10μF

Voltage:50V

Operating temperature:-55°C~+125°C

Base Metal Electrode (BME)



APPLICATIONS

Typical applications include decoupling, bypass, and filtering.

ORDERING INFORMATION

CTK41N	2225	BY	50V	106	K	Z	M	T
Series	Case Size	Dielectric	Rated Voltage	Capacitance Code(pf)	Capacitance Tolerance	Termination Finish	Failure Rate Level	Packaging
CTK41N	0603 0805 1206 1210 1812 2225	BY	50V	First two digits represent significant figures, Third digit specifies number of zeros. Example: 106=10000000 pF	K=±10% M=±20%	N=Gold Z=Tin /Lead solder plated (4%Pb minimum)	M=1.0%	T=Bulk E=7" Reel

DIMENSIONS

Unit: mm

Appearance	Case Size	0603	0805	1206	1210	1812	2225
	L	1.60±0.15	2.01±0.20	3.20±0.20	3.20±0.20	4.50±0.30	5.72±0.30
	W	0.80±0.10	1.25±0.20	1.60±0.20	2.50±0.20	3.20±0.20	6.35±0.30
	Tmax	1.00	1.40	1.80	2.70	3.40	5.10
	t	0.40±0.20	0.50±0.25	0.50±0.25	0.50±0.25	0.61±0.36	0.64±0.39

ELECTRICAL CHARACTERISTICS

Item	Specification Limits			Measuring Conditions			
Operating Temperature Range	-55℃ to +125℃			—			
Capacitance	Within specified tolerance				Item	Frequency	Voltage
Dissipation Factor	tg δ ≤2.5%;				C _n ≤10 μ F	1.0kHz ± 10%	1.0Vrms ± 0.2V
					C _n > 10 μ F	120Hz ± 10%	0.5Vrms ± 0.2V
Insulation Resistance	100000MΩ or 1000MΩ · μ F whichever is less			Rated voltage applied for 2 minutes,charge and discharge current limited to 50mA (max).			
Dielectric Strength	No breakdown or visual defects			250% of DC rated voltage for 5 seconds, charge and discharge current limited to 50mA (max).			
Temperature Characteristics	Dielectric	0 Vdc Applied	Rated Voltage Applied	Capacitance change with reference to +25℃			
	BY	± 15%	N/A				

CAPACITANCE AND RATED VOLTAGE RANGE

Case Size	0603	0805	1206	1210	1812	2225
Rated Voltage(v)	50	50	50	50	50	50
103						
123						
153						
183						
223						
273						
333						
393						
473						
563						
683						
823						
104						
124						
154						
184						
224						
274						
334						
394						
474						
564						
684						
824						
105						
125						
155						
185						
225						
275						
335						
395						
475						
565						
685						
825						
106						
126						
156						

BY

FEATURES

Capacitance: 0.5pF~100μF
 Voltage: 6.3V~2KV
 Tin/Lead solder plated (4% Pb minimum)
 100% temperature cycling
 100% accelerated steady state aging



APPLICATIONS

This series is designed for the COTS requirements, it's conditioned with MIL-PRF-55681 Group A testing, typical applications include critical timing, tuning, decoupling, bypass, filtering, transient voltage suppression.

ORDERING INFORMATION

(G)	CC41	-1206	-CG	-50V	-0.01μF	-J	(N)
Quality Grade	Series	Case Size	Dielectric	Rated Voltage	Capacitance	Capacitance Tolerance	Termination Finish
(G) : (G) LEVEL	CC41: Class I	0201	CG (Class I)	6.3V	Refer to Capacitance	C=±0.25pF D=±0.5pF J=±5% K=±10% M=±20%	G=Gold N=Tin /Lead solder plated (4%Pb minimum)
“S” : “S” LEVEL		0402	X7R (Class II)	10V			
“J” : “J” LEVEL	CT41G: Class II	0603	X5R (Class II)	16V			
		0805	X7S (Class II)	25V			
		1206	2C1 (Class II)	50V			
		1210		100V			
		1812		250V			
		2220		500V			
		2225		630V			
				1KV			
				2KV			

DIMENSIONS

Unit: mm

Appearance	Case Size	0201	0402	0603	0805	1206	1210	1812	2220	2225
	L	0.60±0.05	1.00±0.20	1.60±0.20	2.00±0.20	3.20±0.30	3.20±0.30	4.50±0.40	5.70±0.50	5.70±0.50
	W	0.30±0.05	0.50±0.20	0.80±0.20	1.25±0.20	1.60±0.30	2.50±0.30	3.20±0.30	5.00±0.50	6.50±0.60
	Tmax	0.35	0.70	1.00	1.45	1.9	2.80	3.50	3.50	3.50
	t	0.15±0.05	0.25±0.10	0.35±0.25	0.50±0.25	0.50±0.35	0.60±0.30	0.90±0.60	0.90±0.60	0.90±0.60

ELECTRICAL CHARACTERISTICS

Item	Specification Limits			Measuring Conditions																			
Operating Temperature Range	CG,X7R,X7S,2C1:-55℃ to +125℃ X5R:-55℃ to +85℃			—																			
Capacitance	Within specified tolerance			<table><tr><th>Dielectric</th><th>Item</th><th>Frequency</th><th>Voltage</th></tr><tr><td rowspan="2">CG</td><td>C_R≤1000pF</td><td>1.0 MHz ± 10%</td><td rowspan="2">1.0Vrms ± 0.2V</td></tr><tr><td>C_R>1000 pF</td><td>1.0 kHz ± 10%</td></tr><tr><td rowspan="2">X7R, X5R X7S, 2C1</td><td>C_R≤10μ F</td><td>1.0kHz ± 10%</td><td rowspan="2">1.0Vrms ± 0.2V 0.5Vrms ± 0.2V</td></tr><tr><td>C_R>10μ F</td><td>120Hz ± 10%</td></tr></table>				Dielectric	Item	Frequency	Voltage	CG	C _R ≤1000pF	1.0 MHz ± 10%	1.0Vrms ± 0.2V	C _R >1000 pF	1.0 kHz ± 10%	X7R, X5R X7S, 2C1	C _R ≤10μ F	1.0kHz ± 10%	1.0Vrms ± 0.2V 0.5Vrms ± 0.2V	C _R >10μ F	120Hz ± 10%
Dielectric	Item	Frequency	Voltage																				
CG	C _R ≤1000pF	1.0 MHz ± 10%	1.0Vrms ± 0.2V																				
	C _R >1000 pF	1.0 kHz ± 10%																					
X7R, X5R X7S, 2C1	C _R ≤10μ F	1.0kHz ± 10%	1.0Vrms ± 0.2V 0.5Vrms ± 0.2V																				
	C _R >10μ F	120Hz ± 10%																					
Q or Dissipation Factor	CG	C _R ≤30pF Q≥400+20xC _R C _R >30pF Q≥1000																					
	X7S 2C1 X7R X5R	U _R ≤10V tg δ ≤10%; U _R =16V tg δ ≤5.0%; 25V≤U _R ≤50V tg δ ≤3.5%; U _R >50V tg δ ≤2.5%;																					
		※ Note: ① C _R ≥1 μ F tg δ ≤10%; ② Size 0201,0402,0603 tg δ ≤10%;																					
Insulation Resistance	CG	10000MΩ or 100MΩ · μ F whichever is less		Rated voltage applied for 2 minutes,charge and discharge current limited to 50mA (max).																			
	X7R X5R X7S 2C1	4000MΩ or 100MΩ · μ F whichever is less																					
Dielectric Strength	No breakdown or visual defects			Voltage shall be applied with follow conditions for 5 seconds: U _R ≤200V 2.5U _R U _R =250V 2.0U _R U _R =500V or 630V 1.5U _R U _R ≥1000V 1.2U _R Charging and discharging current shall be 50mA or less.																			
Temperature Characteristics	Dielectric	0 Vdc Applied	Rated Voltage Applied	Capacitance change with reference to +25℃																			
	CG	(0 ± 30)ppm/℃	N/A																				
	X7R	± 15%	N/A																				
	X5R	± 15%	N/A																				
	X7S	± 22%	N/A																				
	2C1	± 20%	N/A																				

TEST LEVEL

“J” LEVEL(Level A)	“S” LEVEL(Level B)	(G) LEVEL(Level C)
Temperature cycling	Temperature cycling	Temperature cycling
Accelerated steady state aging @48h	Accelerated steady state aging @96h	Accelerated steady state aging @96h
Solderability	Solderability	Resistance to moisture
		Terminal strength
		Solderability
		Resistance to soldering heat
		Steeping
		Bending strength

CC41

[illegible]

CG

CT41G

[illegible]

	X7R
	X5R
	X7S
	2C1

CAPACITANCE AND RATED VOLTAGE RANGE

CT41G

Case Size		1210									1812										2220										2225					
Rated Voltage(V)		6.3	10	16	25	50	100	250	500	1k	6.3	10	16	25	50	100	250	500	1k	2k	10	16	25	50	100	250	500	1k	2k	50	100	250	500	1k	2k	
cap (pF)	100 120																																			
	150 180																																			
	220 270																																			
	330 390																																			
	470 560																																			
	680 820																																			
	1000 1200																																			
	1500 1800																																			
	2200 2700																																			
	3300 3900																																			
4700 5600																																				
6800 8200																																				
cap (μF)	.010																																			
	.012																																			
	.015																																			
	.018																																			
	.022																																			
	.027																																			
	.033																																			
	.039																																			
	.047																																			
	.056																																			
	.068																																			
	.082																																			
	.10																																			
	.12																																			
	.15																																			
	.18																																			
	.22								*																											
	.27																																			
	.33																																			
	.39																																			
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	.68																																			
	.82																																			
	1.0																										*									
	1.5																																			
2.2																																				
3.3																																				
4.7							*									*																				
6.8																											*									
10.0			M	M	M	M*	*						M	M	M											M	M*									
22.0			M	M	M								M	M	M										M											
33.0			M										M	M	M																					
47.0		M*	M*	M	M*	M#*																				M	M*									
100.0		M	M*	M	M*	M#*							M	M*										M												
220.0		M#*																																		

- X7R
- X5R
- X7S
- 2C1

M(±20%)Tolerance is recommended for this specification
#Case size: 0402 1.00±0.20(L)×0.50±0.20(W)×0.70(Tmax)mm
1206 3.20±0.30(L)×1.60±0.30(W)×1.90(Tmax)mm