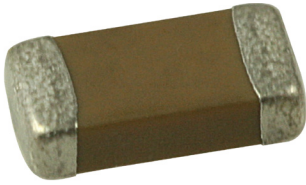


General Purpose Ceramic Capacitors (C Series)



Features:

- RoHS Compliant and Halogen Free
- Capacitance range: 0.1pF to 220uF
- Voltage range: 4V to 100V
- Terminations: 100% matte Tin (Sn), Palladium (Pd-Ag), Gold (Au) and Lead (Pb)
- Very low ESR in X7R/X5R (<10mΩ typical)
- Ceramic monolithic structure provides excellent reliability
- High-speed automated placement capabilities

Part Number Structure

C	0805	COG	500	—	101	J	N	P	□□
Series	Size	Temperature Characteristic (Dielectric)	Rated Voltage		Capacitance (picofarads)	Tolerance	Termination	Packaging	Optional Thickness Identifier
01005			1st two digits are significant		1st two digits are significant,	* B = ± 0.1pF	N = 100% matte Tin (Sn) over Nickel	D = Paper Tape (10" Reel)	Leave blank for standard thickness. Designate "-" for Min. "E" for Max. followed by Thickness Code e.g.: -E (min. thickness of .026") *E (max. thickness of .026")
0201			followed by	number of zeroes.	* C = ± 0.25pF	* P = Palladium Silver	E = Embossed Tape (7" Reel)		
0402	COG		4R0 = 4.0 VDCW	101 = 100pF	* D = ± 0.5pF	* G = Gold over Nickel	P = Paper Tape (7" Reel)		
0504	X7R		6R3 = 6.3 VDCW	R denotes decimal	F = ± 1%	Pb = 90% Tin (Sn)/10% Lead (Pb)	R = Paper Tape (13" Reel)		
0603	X5R		100 = 10 VDCW	6R8 = 6.8pF	G = ± 2%	* Pd/Ag & Gold terminations have limited values & sizes available.	U = Embossed Tape (13" Reel)		
0805	Y5V		160 = 16 VDCW		J = ± 5%				
1206	Z5U		250 = 25 VDCW		K = ± 10%				
1210			500 = 50 VDCW		M = ± 20%				
1812			630 = 63 VDCW		N = ± 30%				
2220			101 = 100 VDCW		Z = +80 - 20%				
2221					* For values below 10pF only.				

Example P/N: C0805COG500-101JNP

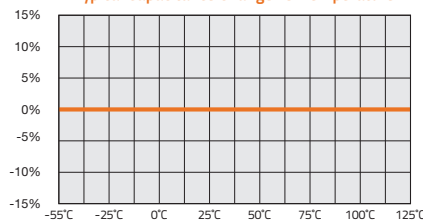
Optional Thickness Identifier Codes:

CODE:	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	6
DIMENSION:	.015	.020	.026	.030	.035	.040	.045	.050	.055	.060	.065	.070	.075	.080	.085	.090	.095	.100	.105	.110	.023

Electrical Specifications

NPO/COG

Typical Capacitance Change vs. Temperature



Operating Temperature Range:
-55°C to +125°C

Temperature Coefficient:
0 ±30PPM/°C

Temperature Voltage Coefficient:
0 ±30PPM/°C

Insulation Resistance:
>1000 Ω-F or 100 GΩ, for values ≤ 0.047uF (whichever is less at 25°C, VDCW).
For Capacitance values > 0.047uF, the 500 Ω-F rule applies. (The IR at 125°C is 10% of the value at 25°C)

Ageing:
None

Withstanding Voltage:
>2.5 times VDCW

Capacitance Tolerance:
B,C,D,F,G,J,K

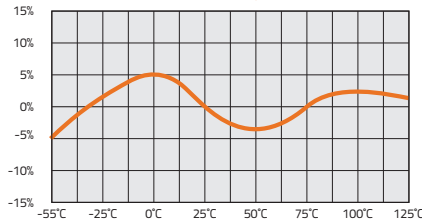
Dissipation Factor:
0.1% max

General Purpose Ceramic Capacitors (C Series)

Electrical Specifications

X7R

Typical Capacitance Change vs. Temperature



Operating Temperature Range:
-55°C to +125°C

Temperature Coefficient:
0 ±15%Δ°C MAX.

Temperature Voltage Coefficient:
X7R not applicable

Insulation Resistance:
>100 Ω-F or 10 GΩ, whichever is less at 25°C, VDCW. (The IR at 125°C is 10% of the value at 25°C)

Ageing:
2.5% per decade hour, typical

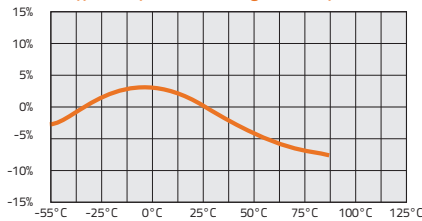
Withstanding Voltage:
>2.5 times VDCW

Capacitance Tolerance:
J,K,M

Rated Voltage	D.F.	Exception of D.F.	
≥50V	≤2.5%	≤3%	0201 (50V); 0603≥0.047uF 0805≥0.22uF; 1206≥0.47uF
		≤5%	0603≥1uF; 0805≥1uF; 1206≥4.7uF; 1210≥4.7uF
25V	≤2.5%	≤5%	0201≥0.01uF; 0805≥1uF; 1210≥4.7uF
		≤10%	0402≥0.10uF; 0603≥0.33uF; 0805≥2.2uF 1206≥4.7uF; 1210≥22uF
16V	≤3.5%	≤5%	0201≥0.01uF; 0402≥0.033uF; 0805≥0.68uF; 1206≥2.2uF; 1210≥4.7uF
		≤10%	0402≥0.47uF; 0603≥0.68uF; 0805≥2.2uF; 1206≥4.7uF; 1210≥22uF
10V	≤5%	≤10%	0402≥0.33uF; 0603≥0.33uF; 0805≥2.2uF; 1206≥2.2uF; 1210≥22uF
6.3V	≤10%		0201≥0.1uF; 0402≥1uF; 0603≥10uF; 0805≥4.7uF; 1206≥47uF; 1210≥100uF

X5R

Typical Capacitance Change vs. Temperature



Operating Temperature Range:
-55°C to +85°C

Temperature Coefficient:
0 ±15%Δ°C MAX.

Temperature Voltage Coefficient:
X5R not applicable

Insulation Resistance:
>100 Ω-F or 10 GΩ, whichever is less at 25°C, VDCW. (The IR at 125°C is 10% of the value at 25°C)

Ageing:
2.5% per decade hour, typical

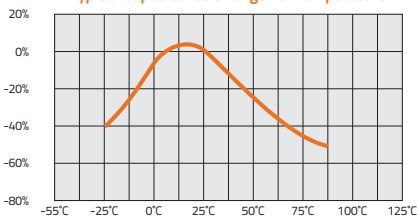
Withstanding Voltage:
>2.5 times VDCW

Capacitance Tolerance:
K,M

Rated Voltage	D.F.	Exception of D.F.	
≥50V	≤2.5%	≤3%	0201 (50V); 0603≥0.047uF 0805≥0.22uF; 1206≥0.47uF
		≤5%	0603≥1uF; 0805≥1uF; 1206≥4.7uF; 1210≥4.7uF
25V	≤2.5%	≤5%	0201≥0.01uF; 0805≥1uF; 1210≥4.7uF
		≤10%	0402≥0.10uF; 0603≥0.33uF; 0805≥2.2uF 1206≥4.7uF; 1210≥22uF
16V	≤3.5%	≤5%	0201≥0.01uF; 0402≥0.033uF; 0805≥0.68uF; 1206≥2.2uF; 1210≥4.7uF
		≤10%	0402≥0.47uF; 0603≥0.68uF; 0805≥2.2uF; 1206≥4.7uF; 1210≥22uF
10V	≤5%	≤10%	0402≥0.33uF; 0603≥0.33uF; 0805≥2.2uF; 1206≥2.2uF; 1210≥22uF
6.3V	≤10%		0201≥0.1uF; 0402≥1uF; 0603≥10uF; 0805≥4.7uF; 1206≥47uF; 1210≥100uF

Z5U

Typical Capacitance Change vs. Temperature



Operating Temperature Range:
+10°C to +85°C

Temperature Coefficient:
+22% - 56%Δ°C MAX.

Insulation Resistance:
>100 Ω-F or 10 GΩ, whichever is less at 25°C, WDCV. (The IR at 125°C is 10% of the value at 25°C)

Ageing:
5% per decade hour, typical

Withstanding Voltage:
>2.5 times VDCW

Capacitance Tolerance:
M,Z

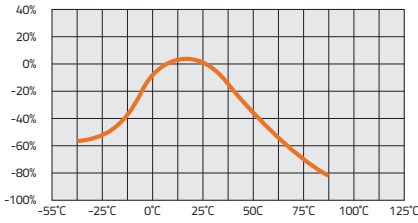
Rated Voltage	D.F.	Exception of D.F.	
≥50V	≤5%	≤9%	0603≥0.1uF; 0805≥0.47uF; 1206≥4.7uF;
25V	≤5%	≤9%	0402≥0.047uF; 0603≥0.1uF; 0805≥0.33uF; 1206≥1uF; 1210≥4.7uF
		≤12.5%	0603≥2.2uF; 0805≥3.3uF; 1206≥10uF; 1210≥22uF; 1812≥47uF
10V	≤12.5%	≤16%	0603≥2.2uF; 0805≥3.3uF; 1206≥4.7uF; 1210≥10uF; 1812≥47uF
6.3V	≤16%		

General Purpose Ceramic Capacitors (C Series)

Electrical Specifications

Y5V

Typical Capacitance Change vs. Temperature



Operating Temperature Range:
-30°C to +85°C
Temperature Coefficient:
+22% - 82%Δ°C MAX.
Insulation Resistance:
>100 Ω-F or 10 GΩ, whichever is less at 25°C, WDCV. (The IR at 125°C is 10% of the value at 25°C)
Ageing:
7% per decade hour, typical
Withstanding Voltage:
>2.5 times VDCW
Capacitance Tolerance:
M,Z

Rated Voltage	D.F.		Exception of D.F.
	≤5%	≤9%	
≥50V	≤5%	≤9%	0603≥0.1uF; 0805≥0.47uF; 1206≥4.7uF;
25V	≤5%	≤9%	0402≥0.047uF; 0603≥0.1uF; 0805≥0.33uF; 1206≥1uF; 1210≥4.7uF
16V	≤9%	≤12.5%	0603≥2.2uF; 0805≥3.3uF; 1206≥10uF; 1210≥22uF; 1812≥47uF
10V	≤12.5%	≤16%	0603≥2.2uF; 0805≥3.3uF; 1206≥4.7uF; 1210≥10uF; 1812≥47uF
6.3V	≤16%		

Test Parameters

Test parameters for Multilayer Ceramic Capacitors - X7R, X5R and Y5V:

1KHz ± 100Hz at 1.0 ± 0.2 Vrms < 10uF (10 V min.)
 1KHz ± 100Hz at 0.5 ± 0.1 Vrms < 10uF (6.3V max.)
 120Hz ± 24Hz at 1.0 ± 0.1 Vrms ≥ 10uF

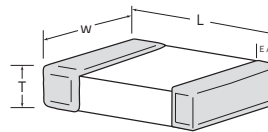
Test parameters for Multilayer Ceramic Capacitors - NPO/COG:

1MHz ± 100KHz at 1.0 ± 0.2 Vrms ≤ 1000pF, 25°C
 1KHz ± 100Hz at 1.0 ± 0.2 Vrms > 1000pF, 25°C

Note: To ensure proper capacitance readings, the voltage level must be held constant. The HP4284 and Agilent E4980 has a "ALC" (Automatic Level Control) function and should be switched to the "ON" position for accurate capacitance readings.

Voltage and Capacitance Range

COG (NPO) Dielectric



Values that are typically available.

(All measurements in inches)

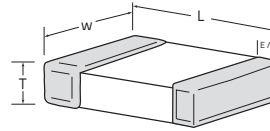
Size	01005 (± 0.0008)		0201 (± 0.002)		0402 (± 0.004)		0504 (± 0.008)		0603 (± 0.006)		0805 (± 0.008)			1206 (± 0.008)		1210 (± 0.008)		1812 (± 0.012)				
	L	W	T (max)	Min E/B	6.3V	16V	25V	50V	25V	50V	25V	50V	100V	50V	100V	25V	50V	100V	50V	100V	50V	100V
OR1	0.1pF																					
OR2	0.2pF																					
OR3	0.3pF																					
OR4	0.4pF																					
OR5	0.5pF																					
1R0	1.0pF																					
1R2	1.2																					
1R5	1.5																					
1R8	1.8																					
2R2	2.2																					
2R7	2.7																					
3R3	3.3																					
3R9	3.9																					
4R7	4.7																					
5R0	5.0																					
5R6	5.6																					
6R8	6.8																					
8R2	8.2																					
100	10pF																					
120	12																					
150	15																					
180	18																					
220	22																					

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

COG (NPO) Dielectric



Values that are typically available.

(All measurements in inches)

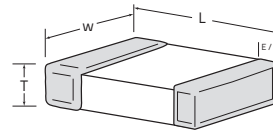
Size	01005 (± 0.0008)		0201 (± 0.002)		0402 (± 0.004)		0504 (± 0.008)		0603 (± 0.006)		0805 (± 0.008)		1206 (± 0.008)		1210 (± 0.008)		1812 (± 0.012)		2220 / 2221 (± 0.016)				
L	.016		.024		.040		.053		.063		.080		.126		.126		.177		.225 / .225				
W	.008		.012		.020		.040		.032		.050		.063		.098		.126		.200 / .210				
T (max)	.008		.012		.025		.040		.033		.055		.070		.075		.085		.108 / .108				
Min E/B	.002		.002		.004		.005		.008		.020 ± .010		.020 ± .010		.020 ± .010		.024 ± .015		.025 ± .015				
VDCW (MAX)	6.3V	16V	25V	50V	25V	50V	25V	50V	100V	50V	100V	50V	100V	25V	50V	100V	50V	100V	50V	100V	50V	100V	
270	27																						
330	33																						
390	39																						
470	47																						
560	56																						
680	68																						
820	82																						
101	100pF																						
121	120																						
151	150																						
181	180																						
221	220																						
271	270																						
331	330																						
391	390																						
471	470																						
561	560																						
681	680																						
821	820																						
102	1000pF																						
122	1200																						
152	1500																						
182	1800																						
222	2200																						
272	2700																						
332	3300																						
392	3900																						
472	4700																						
562	5600																						
682	6800																						
822	8200																						
103	.01uF																						
123	.012																						
153	.015																						
183	.018																						
223	.022																						
273	.027																						
333	.033																						
393	.039																						
473	.047																						
563	.056																						
683	.068																						
823	.082																						
104	.100uF																						
124	.120																						
154	.150																						
184	.180																						
224	.220																						
274	.270																						
334	.330																						
394	.390																						
474	.470																						
564	.560																						
684	.680																						
824	.820																						

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

X7R Dielectric



Values that are typically available.

(All measurements in inches)

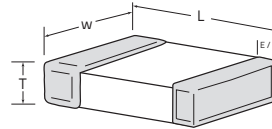
Size	01005 (± 0.0008)		0201 (± 0.002)				0402 (± 0.004)				0504 (± 0.008)			0603 (± 0.006)				0805 (± 0.008)				
L	.016		.024				.040				.053			.063				.080				
W	.008		.012				.020				.040			.032				.050				
T (max)	.008		.012				.025				.040			.038				.058				
Min E/B	.002		.002				.004				.005			.008				.020 ± .010				
VDCW (MAX)	6.3V	10V	6.3V	10V	16V	25V	16V	25V	50V	100V	25V	50V	100V	10V	16V	25V	50V	100V	25V	50V	100V	
101	100pF																					
121	120																					
151	150																					
181	180																					
221	220																					
271	270																					
331	330																					
391	390																					
471	470																					
561	560																					
681	680																					
821	820																					
102	1000pF																					
122	1200																					
152	1500																					
182	1800																					
222	2200																					
272	2700																					
332	3300																					
392	3900																					
472	4700																					
562	5600																					
682	6800																					
822	8200																					
103	.01uF																					
123	.012																					
153	.015																					
183	.018																					
223	.022																					
273	.027																					
333	.033																					

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.
All components manufactured with the X7R dielectric are also available as an X5R dielectric.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

X7R Dielectric



Values that are typically available.

(All measurements in inches)

Size	0201 (± 0.002)			0402 (± 0.004)					0603 (± 0.006)					0805 (± 0.008)						
L	.024			.040					.063					.080						
W	.012			.020					.032					.050						
T (max)*	.012			.025					.038					.058						
Min E/B	.002			.004					.008					.020 ± .010						
VDCW (MAX)	4V	6.3V	10V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	100V	6.3V	10V	16V	25V	50V	100V
393	.039																			
473	.047																			
563	.056																			
683	.068																			
823	.082																			
104	.100uF																			
124	.120																			
154	.150																			
184	.180																			
224	.220																			
274	.270																			
334	.330																			
394	.390																			
474	.470																			
564	.560																			
684	.680																			
824	.820																			
105	1.00uF																			
125	1.20																			
155	1.50																			
185	1.80																			
225	2.20																			
335	3.30																			
475	4.70																			
685	6.80																			
106	10.0uF																			
156	15.0uF																			
226	22.0uF																			
476	47.0uF																			
107	100.0uF																			

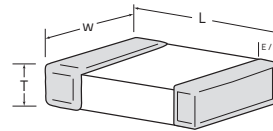
* For values above 1uF, thickness may be greater than specified above.
 T(max): 0603 – 0.040"
 0805 – 0.060"

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.
 All components manufactured with the X7R dielectric are also available as an X5R dielectric.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

X7R Dielectric



Values that are typically available.

(All measurements in inches)

Size	1206 (± 0.008)					1210 (±0.008)					1812 (±0.012)					2220 / 2221 °(±0.016)				
L	.126					.126					.177					.225 / .225				
W	.063					.098					.126					.200 / .210				
T (max)*	.070					.125					.085					.108 / .108				
Min E/B	.020 ± .010					.020 ± .010					.024 ± .015					.025 ± .015				
VDCW (MAX)	10V	16V	25V	50V	100V	10V	16V	25V	50V	100V	6.3V	10V	16V	25V	50V	100V	16V	25V	50V	100V
102	1000pF																			
122	1200																			
152	1500																			
182	1800																			
222	2200																			
272	2700																			
332	3300																			
392	3900																			
472	4700																			
562	5600																			
682	6800																			
822	8200																			
103	.01uF																			
123	.012																			
153	.015																			
183	.018																			
223	.022																			
273	.027																			
333	.033																			
393	.039																			
473	.047																			
563	.056																			
683	.068																			
823	.082																			
104	.100uF																			
124	.120																			
154	.150																			
184	.180																			
224	.220																			
274	.270																			
334	.330																			

* For values above 1uF, thickness may be greater than specified above.

T(max): 1206 - 0.075" 1812 - 0.130"
 1210 - 0.125" 2220 - 0.135"

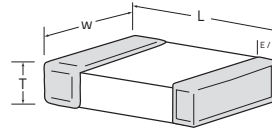
Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.

All components manufactured with the X7R dielectric are also available as an X5R dielectric.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

X7R Dielectric



Values that are typically available.

(All measurements in inches)

Size	1206 (± 0.008)						1210 (±0.008)						1812 (±0.012)						2220 / 2221 (±0.016)			
L	.126						.126						.177						.225 / .225			
W	.063						.098						.126						.200 / .210			
T (max)*	.070						.125						.095						.108 / .108			
Min E/B	.020 ± .010						.020 ± .010						.024 ± .015						.025 ± .015			
VDCW (MAX)	6.3V	10V	16V	25V	50V	100V	6.3V	10V	16V	25V	50V	100V	6.3V	10V	16V	25V	50V	100V	16V	25V	50V	100V
394	.390																					
474	.470																					
564	.560																					
684	.680																					
824	.820																					
105	1.00uF																					
125	1.20																					
155	1.50																					
185	1.80																					
225	2.20																					
335	3.30																					
475	4.70																					
685	6.80																					
106	10.0uF																					
156	15.0uF																					
226	22.0uF																					
476	47.0uF																					
107	100.0uF																					

* For values above 1uF, thickness may be greater than specified above.

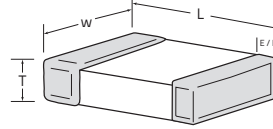
T(max): 1206 – 0.075" 1812 – 0.130"
 1210 – 0.125" 2220 – 0.135"

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.
 All components manufactured with the X7R dielectric are also available as an X5R dielectric.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

X5R Dielectric



Values that are typically available.

(All measurements in inches)

Size	01005 (± 0.0008)		0201 (± 0.002)				0402 (± 0.004)					0603 (± 0.006)					0805 (± 0.008)					1206 (± 0.008)				1210 (±0.016)		1812 (±0.016)				
L	.016		.024				.040					.063					.080					.126				.126		.177				
W	.008		.012				.020					.032					.050					.063				.098		.126				
T (max)	.008		.012				.025					.040					.060					.072				.125		.130				
Min E/B	.002		.002				.004					.008					.020 ± .010					.020 ± .010				.020 ± .010		.024 ± .015				
VDCW (MAX)	6.3V 10V		4V 6.3V		10V 16V		25V 4V		6.3V 10V		16V 25V		50V 6.3V		10V 16V		25V 35V		6.3V 10V		16V 25V		50V 6.3V		10V 16V		25V 16V		25V 16V		16V 25V	
102	1000pF																															
122	1200																															
152	1500																															
182	1800																															
222	2200																															
272	2700																															
332	3300																															
392	3900																															
472	4700																															
562	5600																															
682	6800																															
822	8200																															
103	.01uF																															
153	.015																															
223	.022																															
333	.033																															
393	.039																															
473	.047																															
104	0.10uF																															
154	.150																															
224	.220																															
334	.330																															
474	.470																															
684	.680																															
105	1.00uF																															
125	1.20																															
155	1.50																															
185	1.80																															
225	2.20																															
335	3.30																															

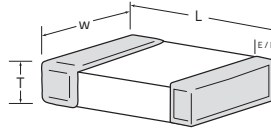
For values above 1uF, thickness may be greater than specified above.
 T(max): 1206 - 0.075" 1812 - 0.130"
 1210 - 0.125" 2220 - 0.135"

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.
 All components manufactured with the X7R dielectric are also available as an X5R dielectric.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

X5R Dielectric (0402 - 1206)



Values that are typically available.

(All measurements in inches)

Size	0402 (± 0.009)			0603 (± 0.006)			0805 (± 0.008)					1206 (± 0.008)								
L	.040			.063			.080					.126								
W	.020			.032			.050					.063								
T (max)	.027			.040			.060					.072								
Min E/B	.004			.008			.020 ± .010					.020 ± .010								
VDCW (MAX)		4V	6.3V	10V	4V	6.3V	10V	16V	25V	4V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V
CAPACITANCE CODE CAPACITANCE VALUE	395	3.90uF																		
	475	4.70uF																		
	685	6.80uF																		
	106	10.0uF																		
	156	15.0uF																		
	226	22.0uF																		
	476	47.0uF																		
	107	100.0uF																		
	157	150.0uF																		
	227	220.0uF																		

X5R Dielectric (1210 - 2221)

(All measurements in inches)

Size	1210 (±0.016)					1812 (±0.016)				2220 / 2221 (±0.016)				
L	.126					.177				.225 / .225				
W	.098					.126				.200 / .210				
T (max)	.125					.130				.135				
Min E/B	.020 ± .010					.024 ± .015				.025 ± .015				
VDCW (MAX)		6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	6.3V	10V	25V	50V
CAPACITANCE CODE CAPACITANCE VALUE	395	3.90uF												
	475	4.70uF												
	685	6.80uF												
	106	10.0uF												
	156	15.0uF												
	226	22.0uF												
	476	47.0uF												
	107	100.0uF												
	157	150.0uF												
	227	220.0uF												

For values above 1uF, thickness may be greater than specified above.

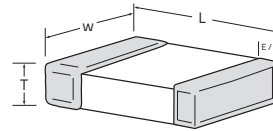
T(max): 1206 - 0.075" 1812 - 0.130"
 1210 - 0.125" 2220 - 0.135"

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available. All components manufactured with the X7R dielectric are also available as an X5R dielectric.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

Z5U Dielectric



Values that are typically available.

(All measurements in inches)

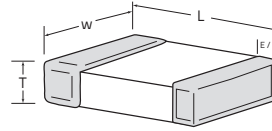
Size	0504 (± 0.008)		0603 (± 0.006)		0805 (± 0.008)		1206 (± 0.008)		1210 (± 0.016)		1812 (± 0.016)		2220 / 2221 (± 0.016)	
L	.050		.063		.080		.126		.126		.177		.225 / .225	
W	.040		.032		.050		.063		.098		.126		.200 / .210	
T (max)	.040		.038		.058		.070		.075		.085		.108 / .108	
Min E/B	.005		.008		.020 ± .010		.020 ± .010		.020 ± .010		.024 ± .015		.025 ± .015	
VDCW (MAX)	25V	50V	25V	50V	25V	50V	25V	50V	25V	50V	25V	50V	25V	50V
102	1000pF													
122	1200													
152	1500													
182	1800													
222	2200													
272	2700													
332	3300													
392	3900													
472	4700													
562	5600													
682	6800													
822	8200													
103	.01uF													
123	.012													
153	.015													
183	.018													
223	.022													
273	.027													
333	.033													
393	.039													
473	.047													
563	.056													
683	.068													
823	.082													
104	.100uF													
124	.120													
154	.150													
184	.180													
224	.220													
274	.270													
334	.330													

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

Z5U Dielectric



Values that are typically available.

(All measurements in inches)

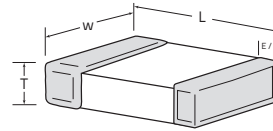
Size	0504 (± 0.008)		0603 (± 0.006)		0805 (± 0.008)		1206 (± 0.008)		1210 (±0.016)		1812 (±0.016)		2220 / 2221 (±0.016)			
L	.050		.063		.080		.126		.126		.177		.225 / .225			
W	.040		.032		.050		.063		.098		.126		.200 / .210			
T (max)	.040		.038		.058		.070		.075		.085		.108 / .108			
Min E/B	.005		.008		.020 ± .010		.020 ± .010		.020 ± .010		.024 ± .015		.025 ± .015			
VDCW (MAX)	25V		50V		25V		50V		25V		50V		25V		50V	
394	.390															
474	.470															
564	.560															
684	.680															
824	.820															
105	1.00uF															
125	1.20															
155	1.50															
185	1.80															
225	2.20															
335	3.30															
395	3.90															
475	4.70															
685	6.80															
106	10.0uF															
156	15.0uF															
226	22.0uF															
476	47.0uF															
107	100.0uF															

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available. For values above 1uF, thickness may be greater than specified above.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

Y5V Dielectric



Values that are typically available.

(All measurements in inches)

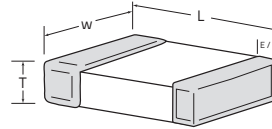
Size	0201 (± 0.002)		0402 (± 0.004)				0603 (± 0.006)				0805 (± 0.008)				1206 (± 0.008)				1210 (±0.016)				1812 (±0.016)					
L	.024		.040				.063				.080				.126				.126				.177					
W	.012		.020				.032				.050				.063				.098				.126					
T (max)	.012		.025				.038				.058				.070				.096				.085					
Min E/B	.002		.004				.008				.020 ± .010				.020 ± .010				.020 ± .010				.024 ± .015					
VDCW (MAX)	10V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	10V	16V	25V	50V	6.3V	10V	16V	25V	6.3V	10V	25V	
102	1000pF																											
122	1200																											
152	1500																											
182	1800																											
222	2200																											
272	2700																											
332	3300																											
392	3900																											
472	4700																											
562	5600																											
682	6800																											
822	8200																											
103	.01uF																											
123	.012																											
153	.015																											
183	.018																											
223	.022																											
273	.027																											
333	.033																											
393	.039																											
473	.047																											
563	.056																											
683	.068																											
823	.082																											
104	.100uF																											
124	.120																											
154	.150																											
184	.180																											
224	.220																											
274	.270																											
334	.330																											

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available.
For values above 1uF, thickness may be greater than specified above.

General Purpose Ceramic Capacitors (C Series)

Voltage and Capacitance Range

Y5V Dielectric



Values that are typically available.

(All measurements in inches)

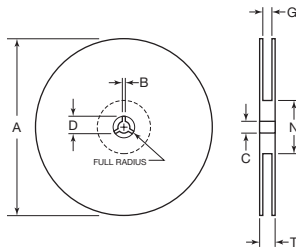
Size	0201 (± 0.002)		0402 (± 0.004)		0603 (± 0.006)				0805 (± 0.008)				1206 (± 0.008)				1210 (± 0.016)				1812 (± 0.016)						
L	.024		.040		.063				.080				.126				.126				.177						
W	.012		.020		.032				.050				.063				.098				.126						
T (max)	.012		.025		.038				.058				.070				0.10				.085						
Min E/B	.002		.004		.008				.020 ± .010				.020 ± .010				.020 ± .010				.024 ± .015						
VDCW (MAX)	10V	6.3V	10V	16V	6.3V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	10V	16V	25V	50V	6.3V	10V	16V	25V	50V	6.3V	10V	25V	
394	.390																										
474	.470																										
564	.560																										
684	.680																										
824	.820																										
105	1.00uF																										
125	1.20																										
155	1.50																										
185	1.80																										
225	2.20																										
335	3.30																										
395	3.90																										
475	4.70																										
685	6.80																										
106	10.0uF																										
156	15.0uF																										
226	22.0uF																										
476	47.0uF																										
107	100.0uF																										

Note: Additional values may be available. Please contact us for more information. Due to demand and raw material fluctuations, specific values may not be available. For values above 1uF, thickness may be greater than specified above.

General Purpose Ceramic Capacitors (C Series)

Tape and Reel Specifications

All tape and reel specifications must be adhered to per EIA-481-1-A.

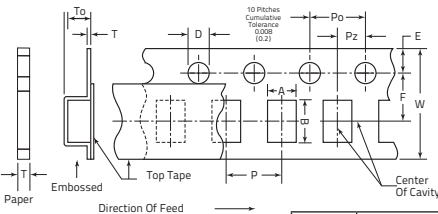


Reel Dimensions

Unit: mm (inch)

Tape	B min	C	A (7")	A (13")	D min	N min	G	T max
4mm	2.0 (0.079)	13 ± 0.05 (0.512 ± 0.02)	178 ± 2.0 (7 ± 0.079)	-	21 ± 0.8 (0.82 ± 0.03)	50 (1.97)	5.0 ± 1.5 (0.196 ± 0.05)	8.0 max (0.315 max)
8mm	2.0 (0.07)	13 ± 0.05 (0.512 ± 0.02)	178 ± 2.0 (7 ± 0.079)	330 ± 2.0 (13 ± 0.08)	20.2 (0.795)	50 (1.97)	10 ± 1.5 (0.394 ± 0.059)	14.9 (0.587)
12mm	2.0 (0.07)	13 ± 0.05 (0.512 ± 0.02)	178 ± 2.0 (7 ± 0.079)	330 ± 2.0 (13 ± 0.08)	20.2 (0.795)	50 (1.97)	10 ± 1.5 (0.394 ± 0.059)	14.9 (0.587)

Taping Specifications



Paper Tape Carrier Dimensions (8mm)

7 in. Reel Quantities **

Size	01005 (E)	01005 (P)	0201	0402	0603	0805	1206	1210	1812	2221
Tape Size	4mm	8mm	8mm	8mm	8mm	8mm	8mm	8mm	12mm	12mm
Min Qty Per Reel	40,000*	20,000*	15,000	5,000	3,000	2,000	2,000	1,000	1,000	1,000
Max Qty Per Reel	40,000*	20,000*	15,000	10,000	4,000	5,000	5,000	5,000	3,000	1,000

Note: ** Quantity dependent on thickness
*Smaller quantities may be available. Please contact us.

Unit: mm (inch)

Size (inches)	A	B	W	F	E	Po	Pz	D	t	P
01005	$\frac{0.25 \pm 0.05}{(0.010 \pm .002)}$	$\frac{0.45 \pm 0.05}{(0.018 \pm .002)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{-.00}$ $\frac{-.00}{(.039 \pm .002)}$	$\frac{1.5 \pm 0.1}{(.064 \pm .004)}$	$\frac{1.15 \text{ MAX}}{(.045 \text{ MAX})}$	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$
0201	$\frac{0.37 \pm 0.05}{(0.014 \pm .002)}$	$\frac{0.67 \pm 0.05}{(0.026 \pm .002)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{-.00}$ $\frac{-.00}{(.039 \pm .002)}$	$\frac{1.5 \pm 0.1}{(.064 \pm .004)}$	$\frac{1.15 \text{ MAX}}{(.045 \text{ MAX})}$	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$
0402	$\frac{0.65 \pm 0.1}{(.026 \pm .004)}$	$\frac{1.10 \pm 0.2}{(.043 \pm .008)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{-.00}$ $\frac{-.00}{(.039 \pm .002)}$	$\frac{1.5 \pm 0.1}{(.064 \pm .004)}$	$\frac{1.15 \text{ MAX}}{(.045 \text{ MAX})}$	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$
0603	$\frac{1.10 \pm 0.2}{(.043 \pm .008)}$	$\frac{1.90 \pm 0.2}{(.075 \pm .008)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{-.00}$ $\frac{-.00}{(.039 \pm .002)}$	$\frac{1.5 \pm 0.1}{(.064 \pm .004)}$	$\frac{1.15 \text{ MAX}}{(.045 \text{ MAX})}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
0805	$\frac{1.16 \pm 0.2}{(.046 \pm .008)}$	$\frac{2.4 \pm 0.2}{(.095 \pm .008)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{-.00}$ $\frac{-.00}{(.039 \pm .002)}$	$\frac{1.5 \pm 0.1}{(.064 \pm .004)}$	$\frac{1.15 \text{ MAX}}{(.045 \text{ MAX})}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
1206	$\frac{2.0 \pm 0.2}{(.079 \pm .008)}$	$\frac{3.6 \pm 0.2}{(.142 \pm .008)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{-.00}$ $\frac{-.00}{(.039 \pm .002)}$	$\frac{1.5 \pm 0.1}{(.064 \pm .004)}$	$\frac{1.15 \text{ MAX}}{(.045 \text{ MAX})}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$

Embossed Carrier Dimensions (4mm, 8mm & 12mm)

Size (inches)	A	B	W	F	E	Po	Pz	D	To	T	P
01005	$\frac{0.23}{(0.009)}$	$\frac{0.43}{(0.016)}$	$\frac{4.0 \pm 0.05}{(0.157 \pm 0.002)}$	$\frac{1.8 \pm 0.02}{(0.070 \pm 0.001)}$	$\frac{0.9 \pm 0.05}{(0.035 \pm 0.002)}$	$\frac{2.0 \pm 0.04}{(0.079 \pm 0.001)}$	$\frac{2.00}{(0.079)}$	$\frac{0.8 \pm 0.04}{(0.031 \pm 0.001)}$	$\frac{0.5 \text{ max}}{(0.019 \text{ max})}$	$\frac{0.15 - 0.4}{(0.005 - 0.015)}$	$\frac{1.00}{(0.039)}$
0805	$\frac{1.48 \pm 0.2}{(.058 \pm .008)}$	$\frac{2.3 \pm 0.2}{(.091 \pm .008)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$	$\frac{1.5 \pm 0.1}{-.00}$ $\frac{-.00}{(.06 \pm .004)}$	$\frac{2.5 \text{ MAX}}{(.098 \text{ MAX})}$	$\frac{0.6 \text{ MAX}}{(.024 \text{ MAX})}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
1206	$\frac{2.0 \pm 0.2}{(.079 \pm .008)}$	$\frac{3.6 \pm 0.2}{(.142 \pm .008)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$	$\frac{1.5 \pm 0.1}{-.00}$ $\frac{-.00}{(.06 \pm .004)}$	$\frac{2.5 \text{ MAX}}{(.098 \text{ MAX})}$	$\frac{0.6 \text{ MAX}}{(.024 \text{ MAX})}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
1210	$\frac{2.9 \pm 0.2}{(.114 \pm .008)}$	$\frac{3.6 \pm 0.2}{(.142 \pm .008)}$	$\frac{8.0 \pm 0.2}{(.315 \pm .008)}$	$\frac{3.5 \pm 0.1}{(.138 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$	$\frac{1.5 \pm 0.1}{-.00}$ $\frac{-.00}{(.06 \pm .004)}$	$\frac{2.5 \text{ MAX}}{(.098 \text{ MAX})}$	$\frac{0.6 \text{ MAX}}{(.024 \text{ MAX})}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$
1812	$\frac{3.6 \pm 0.2}{(.142 \pm .008)}$	$\frac{4.9 \pm 0.2}{(.193 \pm .008)}$	$\frac{12.0 \pm 0.3}{(.472 \pm .012)}$	$\frac{5.6 \pm 0.1}{(.221 \pm .004)}$	$\frac{1.75 \pm 0.1}{(.069 \pm .004)}$	$\frac{4.0 \pm 0.1}{(.157 \pm .004)}$	$\frac{2.0 \pm 0.05}{(.079 \pm .002)}$	$\frac{1.5 \pm 0.1}{-.00}$ $\frac{-.00}{(.06 \pm .004)}$	$\frac{3.8 \text{ MAX}}{(.150 \text{ MAX})}$	$\frac{0.6 \text{ MAX}}{(.024 \text{ MAX})}$	$\frac{8.0 \pm 0.1}{(.315 \pm .004)}$