



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# MULTILAYER CERAMIC CHIP CAPACITORS

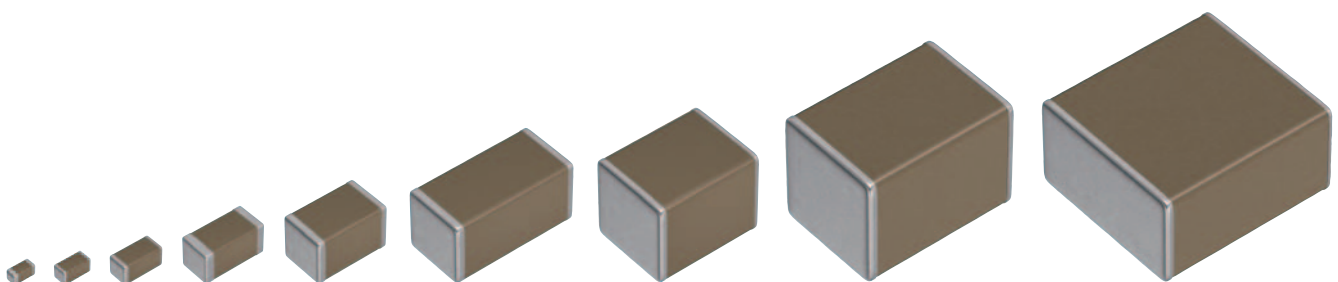
Commercial Grade, General (Up to 50V)

## C series

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<b>C0402</b>	<b>[01005 inch]</b>
<b>C0603</b>	<b>[0201 inch]</b>
<b>C1005</b>	<b>[0402 inch]</b>
<b>C1608</b>	<b>[0603 inch]</b>
<b>C2012</b>	<b>[0805 inch]</b>
<b>C3216</b>	<b>[1206 inch]</b>
<b>C3225</b>	<b>[1210 inch]</b>
<b>C4532</b>	<b>[1812 inch]</b>
<b>C5750</b>	<b>[2220 inch]</b>

\* Dimensions code: JIS[EIA]



## REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

### SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using this products.

#### REMINDERS

1. The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

- |   |  |
|---|--|
| (1) Aerospace/aviation equipment                                  | (8) Public information-processing equipment                                  |
| (2) Transportation equipment (cars, electric trains, ships, etc.) | (9) Military equipment   |
| (3) Medical equipment   | (10) Electric heating apparatus, burning equipment                           |
| (4) Power-generation control equipment                            | (11) Disaster prevention/crime prevention equipment                          |
| (5) Atomic energy-related equipment                               | (12) Safety equipment  |
| (6) Seabed equipment  | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment                              |  |

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

- We may modify products or discontinue production of a product listed in this catalog without prior notification.
- We provide "Delivery Specification" that explain precautions for the specifications and safety of each product listed in this catalog. We strongly recommend that you exchange these delivery specifications with customers that use one of these products.
- If you plan to export a product listed in this catalog, keep in mind that it may be a restricted item according to the "Foreign Exchange and Foreign Trade Control Law". In such cases, it is necessary to acquire export permission in harmony with this law.
- Any reproduction or transferring of the contents of this catalog is prohibited without prior permission from our company.
- We are not responsible for problems that occur related to the intellectual property rights or other rights of our company or a third party when you use a product listed in this catalog. We do not grant license of these rights.
- This catalog only applies to products purchased through our company or one of our company's official agencies. This catalog does not apply to products that are purchased through other third parties.

Notice: Effective January 2013, TDK will use a new catalog number which adds product thickness and packaging specification detail. This new catalog number should be referenced on all catalog orders going forward, and is not applicable for OEM part number orders.

Please be aware the last five digits of the catalog number will differ from the item description (internal control number) on the product label.

Contact your local TDK Sales representative for more information.

(Example)

Catalog issued date	Catalog number	Item description (on delivery label)
Prior to January 2013	C1608C0G1E103J(080AA)	C1608C0G1E103JT000N
January 2013 and later	C1608C0G1E103J080AA	C1608C0G1E103JT000N



# C series

## General (Up to 50V)



Type: C0402 [01005 inch], C0603 [0201 inch], C1005 [0402 inch], C1608 [0603 inch], C2012 [0805 inch], C3216 [1206 inch], C3225 [1210 inch], C4532 [1812 inch], C5750 [2220 inch]

### ■ SERIES OVERVIEW

TDK multilayer ceramic chip capacitor C series is a product for surface mount which multiple sheets of dielectric and conductive material are layered alternately. The monolithic structure ensures superior mechanical strength and reliability.

Also the lower ESR, ESL and better frequency characteristics are offered by the simple structure than other capacitors.

The capacitance range is up to 100uF and the line-up has been expanding to the region of the film capacitor or electrolytic capacitor.

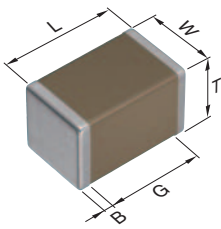
### ■ FEATURES

- The superior mechanical strength and reliability due to the monolithic structure.
- Low ESR, ESL and excellent frequency characteristics allow for a circuit design that closely conforms to theoretical values.
- Low self-heating and high ripple resistance due to low ESR.
- No polarity.

### ■ APPLICATIONS

- General electronic equipment
- Mobile devices
- Servers, PCs, tablets
- Power supply circuit

### ■ SHAPE & DIMENSIONS



L	Body length
W	Body width
T	Body height
B	Terminal width
G	Terminal spacing

Dimensions in mm

Type	L	W	T	B	G
<b>C0402</b>	0.40±0.02	0.20±0.02	0.20±0.02	0.07 min.	0.14 min.
<b>C0603</b>	0.60±0.03	0.30±0.03	0.30±0.03	0.10 min.	0.20 min.
<b>C1005</b>	1.00±0.05	0.50±0.05	0.50±0.05	0.10 min.	0.30 min.
<b>C1608</b>	1.60±0.10	0.80±0.10	0.80±0.10	0.20 min.	0.30 min.
<b>C2012</b>	2.00±0.20	1.25±0.20	1.25±0.20	0.20 min.	0.50 min.
<b>C3216</b>	3.20±0.20	1.60±0.20	1.60±0.20	0.20 min.	1.00 min.
<b>C3225</b>	3.20±0.40	2.50±0.30	2.50±0.30	0.20 min.	—
<b>C4532</b>	4.50±0.40	3.20±0.40	3.20±0.40	0.20 min.	—
<b>C5750</b>	5.70±0.40	5.00±0.40	2.80±0.30	0.20 min.	—

\* Dimensional tolerances are typical values.

## ■ CATALOG NUMBER CONSTRUCTION

<b>C</b>	<b>3216</b>	<b>X5R</b>	<b>1A</b>	<b>107</b>	<b>M</b>	<b>160</b>	<b>A</b>	<b>C</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

### (1) Series name

### (2) Dimensions L x W (mm)

Code	EIA	Length	Width	Terminal width
0402	CC01005	0.40	0.20	0.07
0603	CC0201	0.60	0.30	0.10
1005	CC0402	1.00	0.50	0.10
1608	CC0603	1.60	0.80	0.20
2012	CC0805	2.00	1.25	0.20
3216	CC1206	3.20	1.60	0.20
3225	CC1210	3.20	2.50	0.20
4532	CC1812	4.50	3.20	0.20
5750	CC2220	5.70	5.00	0.20

### (3) Temperature characteristics

Temperature characteristics	Temperature coefficient or capacitance change	Temperature range
CH	0±60 ppm/°C	-25 to +85°C
C0G	0±30 ppm/°C	-55 to +125°C
JB	±10%	-25 to +85°C
X5R	±15%	-55 to +85°C
X6S	±22%	-55 to +105°C
X7R	±15%	-55 to +125°C
X7S	±22%	-55 to +125°C

### (4) Rated voltage (DC)

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

### (5) Nominal capacitance (pF)

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

(Example)OR5 = 0.5pF  
 101 = 100pF  
 225 = 2,200,000pF = 2.2μF

### (6) Capacitance tolerance

Code	Tolerance
B	±0.10pF
C	±0.25pF
D	±0.50pF
F	±1%
G	±2%
J	±5%
K	±10%
M	±20%

### (7) Nominal thickness

Code	Thickness
020	0.20 mm
030	0.30 mm
050	0.50 mm
060	0.60 mm
080	0.80 mm
085	0.85 mm
115	1.15 mm
125	1.25 mm
130	1.30 mm
160	1.60 mm
200	2.00 mm
230	2.30 mm
250	2.50 mm
280	2.80 mm
320	3.20 mm

### (8) Packaging style

Code	Style
A	178mm reel, 4mm pitch
B	178mm reel, 2mm pitch
K	178mm reel, 8mm pitch


### (9) Special reserved code


Code	Description
A, B, C	TDK internal code

## Capacitance range chart

C0402 [01005 inch]

Capacitance		Tolerance	C0G	CH	JB				
(pF)	Code		1C (16V)	1C (16V)	1C (16V)	1A (10V)	0J (6.3V)	0G (4V)	
0.5	0R5	C:±0.25pF	█	█					
0.75	R75								
1	010								
1.5	1R5								
2	020								
2.2	2R2								
3	030								
3.3	3R3								
4	040								
4.7	4R7								
5	050	D:±0.50pF	█	█					
6	060								
6.8	6R8								
7	070								
8	080								
9	090								
10	100								
12	120		J:±5% K:±10% M:±20%	█	█				
15	150								
18	180								
22	220								
27	270								
33	330								
39	390								
47	470								
56	560								
68	680								
82	820								
100	101	K:±10% M:±20%			█				
150	151								
220	221								
330	331								
470	471								
680	681								
1,000	102					█	█		
1,500	152					█	█		
2,200	222					█	█		

Standard thickness  
 0.20 mm


 Background gray: The product which is not recommended to a new design.


■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

## Capacitance range chart

C0402 [01005 inch]

Capacitance		Tolerance	X5R				X6S			X7R		
(pF)	Code		1C (16V)	1A (10V)	0J (6.3V)	0G (4V)	1A (10V)	0J (6.3V)	0G (4V)	1A (10V)	0J (6.3V)	0G (4V)
100	101	K:±10% M:±20%										
150	151											
220	221											
330	331											
470	471											
680	681											
1,000	102	M:±20%										
1,500	152											
2,200	222											
22,000	223											
47,000	473											
100,000	104											
220,000	224											

Standard thickness  
 0.20 mm

 Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

MULTILAYER CERAMIC CHIP CAPACITORS TDK

Capacitance range chart

C0603 [0201 inch]

Capacitance		Tolerance	C0G		CH		JB				X5R					
(pF)	Code		1H (50V)	1E (25V)	1H (50V)	1E (25V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	0G (4V)	
0.5	0R5	C:±0.25pF	█	█	█	█										
0.75	R75															
1	010															
1.5	1R5															
2	020															
2.2	2R2															
3	030															
3.3	3R3															
4	040															
4.7	4R7															
5	050	D:±0.50pF	█	█	█	█										
6	060															
6.8	6R8															
7	070															
8	080															
9	090															
10	100															
12	120		J:±5% K:±10% M:±20%	█	█	█	█									
15	150															
18	180															
22	220															
27	270															
33	330															
39	390															
47	470															
56	560															
68	680															
82	820															
100	101	K:±10% M:±20%					█				█					
150	151															
220	221															
330	331															
470	471															
680	681															
1,000	102															
1,500	152															
2,200	222															
3,300	332															
4,700	472															
6,800	682															
10,000	103															
15,000	153															
22,000	223															
47,000	473															
100,000	104															
150,000	154															
220,000	224															
330,000	334															
470,000	474															
1,000,000	105	M:±20%												█		

Standard thickness 0.30 mm

Background gray: The product which is not recommended to a new design.

Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.




⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.



## Capacitance range chart

C0603 [0201 inch]

Capacitance		Tolerance	X6S					X7R				X7S			
(pF)	Code		1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	0G (4V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	1A (10V)	0J (6.3V)	0G (4V)	
100	101	K:±10% M:±20%													
150	151														
220	221														
330	331														
470	471														
680	681														
1,000	102														
1,500	152														
2,200	222														
3,300	332														
4,700	472														
10,000	103														
22,000	223														
47,000	473														
100,000	104														
150,000	154														
220,000	224														
330,000	334														
470,000	474	M:±20%													

Standard thickness  0.30 mm Background gray: The product which is not recommended to a new design. Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.


## Capacitance range chart


C1005 [0402 inch]

Capacitance		Tolerance	COG		CH
(pF)	Code		1H (50V)	1E (25V)	1H (50V)
0.5	0R5	B:±0.10pF C:±0.25pF	█		█
0.75	R75				
1	010				
1.5	1R5				
2	020				
3	030	C:±0.25pF D:±0.50pF	█		█
4	040				
5	050				
6	060				
7	070				
8	080	F:±1% G:±2% J:±5%	█		█
9	090				
10	100				
12	120				
15	150				
18	180				
22	220				
27	270				
33	330				
39	390				
47	470	F:±1% G:±2% J:±5% K:±10%	█		█
56	560				
68	680				
82	820				
100	101				
120	121				
150	151				
180	181				
220	221				
270	271				
330	331	█			█
390	391				
470	471				
560	561				
680	681				
820	821	█			█
1,000	102				

Standard thickness

 0.50 mm

 Background gray: The product which is not recommended to a new design.

 Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

Capacitance range chart

C1005 [0402 inch]

Capacitance		Tolerance	JB						
(pF)	Code		1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	0G (4V)
220	221	K:±10% M:±20%	█						
330	331								
470	471								
680	681								
1,000	102								
1,500	152								
2,200	222								
3,300	332								
4,700	472								
6,800	682								
10,000	103				█				
15,000	153				█	█			
22,000	223				█	█			
33,000	333				█	█			
47,000	473				█	█	█		
68,000	683				█	█	█		
100,000	104				█	█	█		
150,000	154				█	█	█		
220,000	224				█	█	█		
330,000	334				█	█	█		
470,000	474			█	█	█			
680,000	684			█	█	█			
1,000,000	105			█	█	█	█		
1,500,000	155			█	█	█	█		
2,200,000	225			█	█	█	█		
3,300,000	335			█	█	█	█		
4,700,000	475			█	█	█	█		

Standard thickness  
 0.50 mm

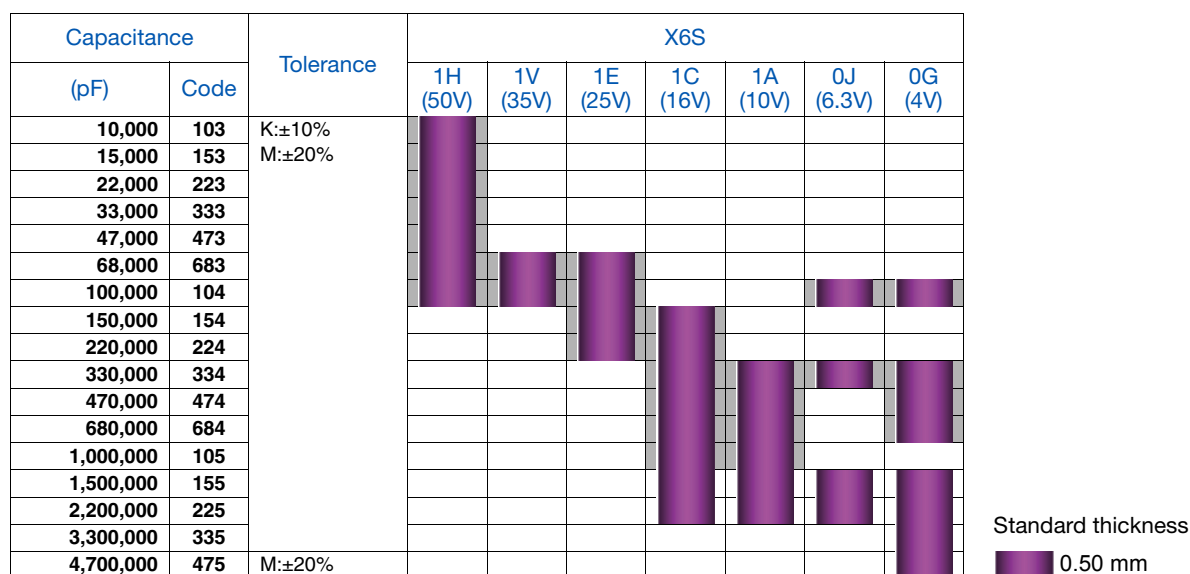
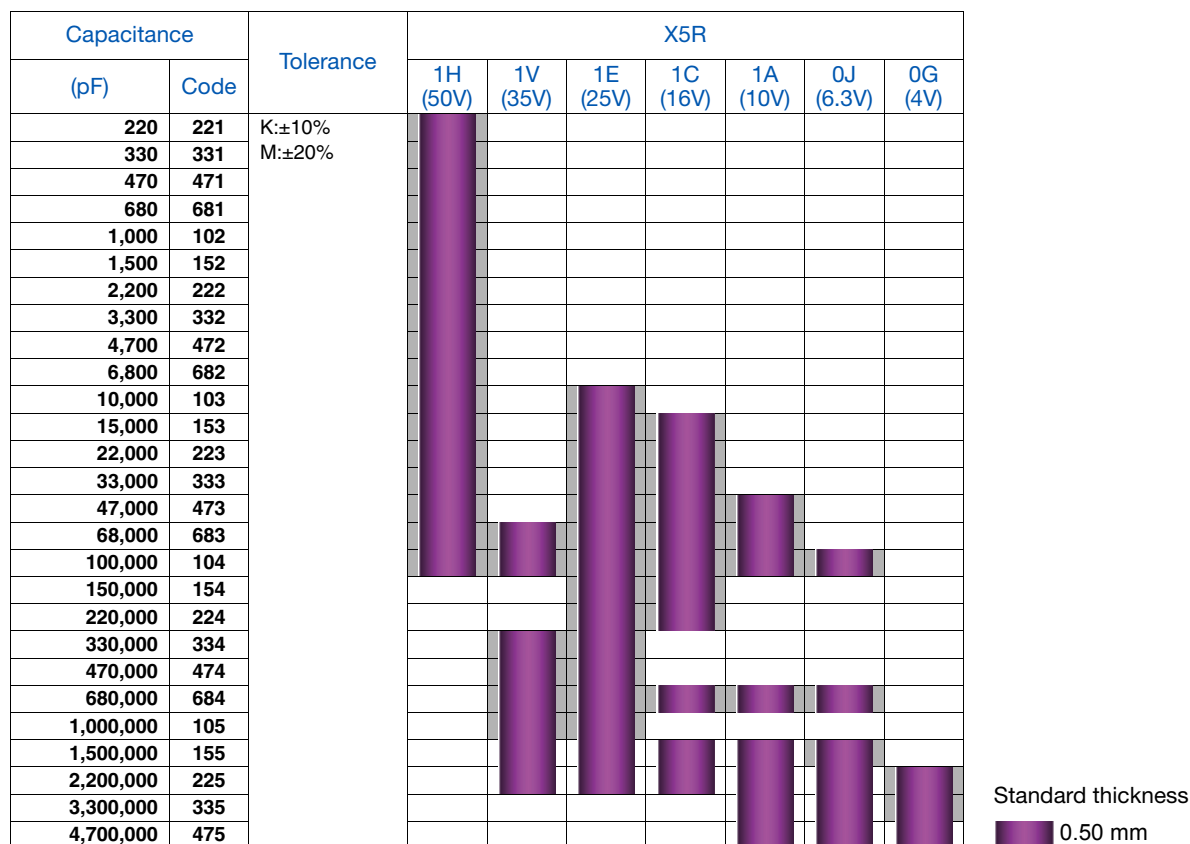
Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use.  
 Please note that the contents may change without any prior notice due to reasons such as upgrading.

## Capacitance range chart

C1005 [0402 inch]

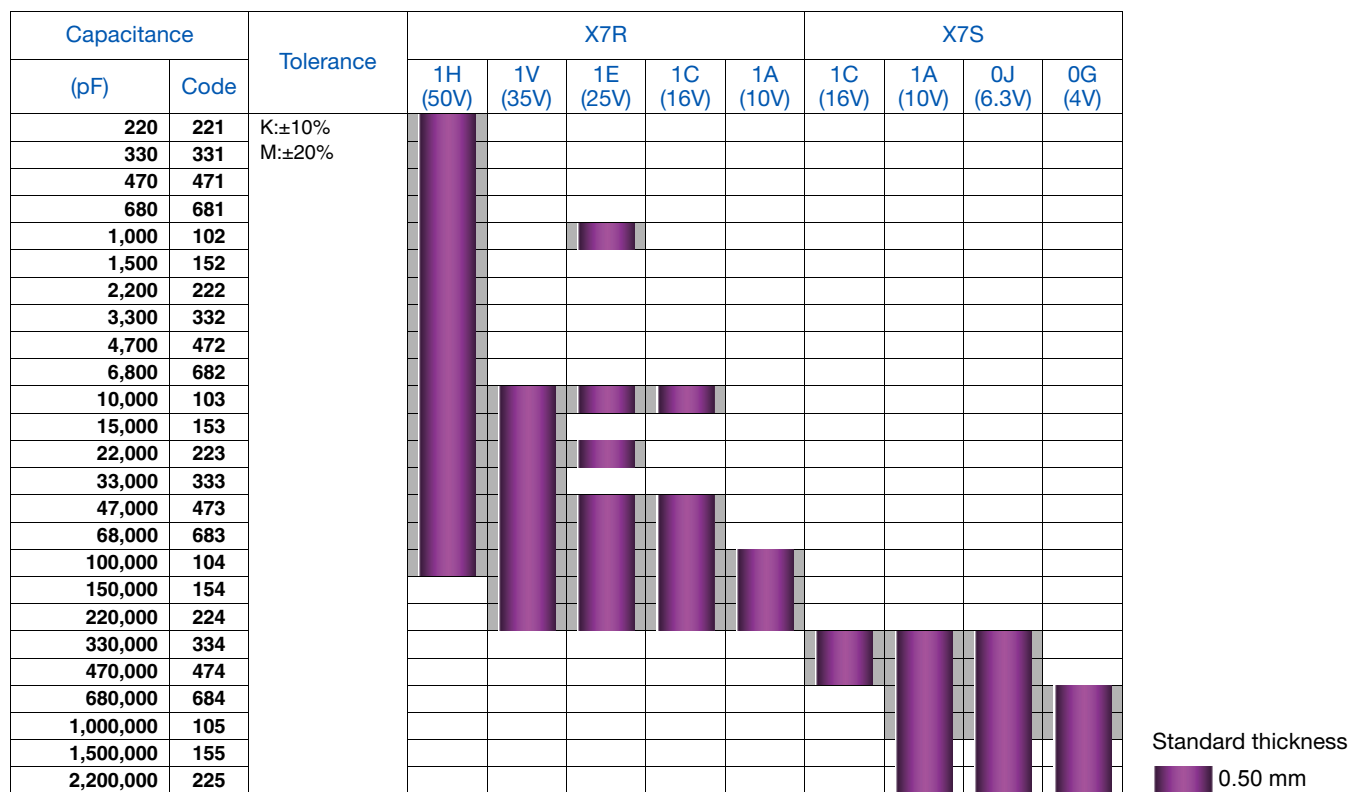


■ Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

Capacitance range chart

C1005 [0402 inch]



█ Background gray: The product which is not recommended to a new design.

█ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

## Capacitance range chart

C1608 [0603 inch]

Capacitance		Tolerance	COG			CH	
(pF)	Code		1H (50V)	1V (35V)	1E (25V)	1H (50V)	1V (35V)
0.5	0R5	C:±0.25pF					
0.75	R75						
1	010						
1.5	1R5						
2	020						
3	030						
4	040						
5	050						
6	060	C:±0.25pF D:±0.50pF					
7	070						
8	080						
9	090						
10	100						
12	120	F:±1% G:±2% J:±5%					
15	150						
18	180						
22	220						
27	270						
33	330						
39	390						
47	470						
56	560						
68	680						
82	820						
100	101	F:±1% G:±2% J:±5% K:±10%					
120	121						
150	151						
180	181						
220	221						
270	271						
330	331						
390	391						
470	471						
560	561						
680	681						
820	821						
1,000	102	J:±5% K:±10%					
1,200	122						
1,500	152						
1,800	182						
2,200	222						
2,700	272						
3,300	332						
3,900	392						
4,700	472						
5,600	562						
6,800	682						
8,200	822						
10,000	103						
15,000	153						
18,000	183						

Standard thickness  
0.80 mm

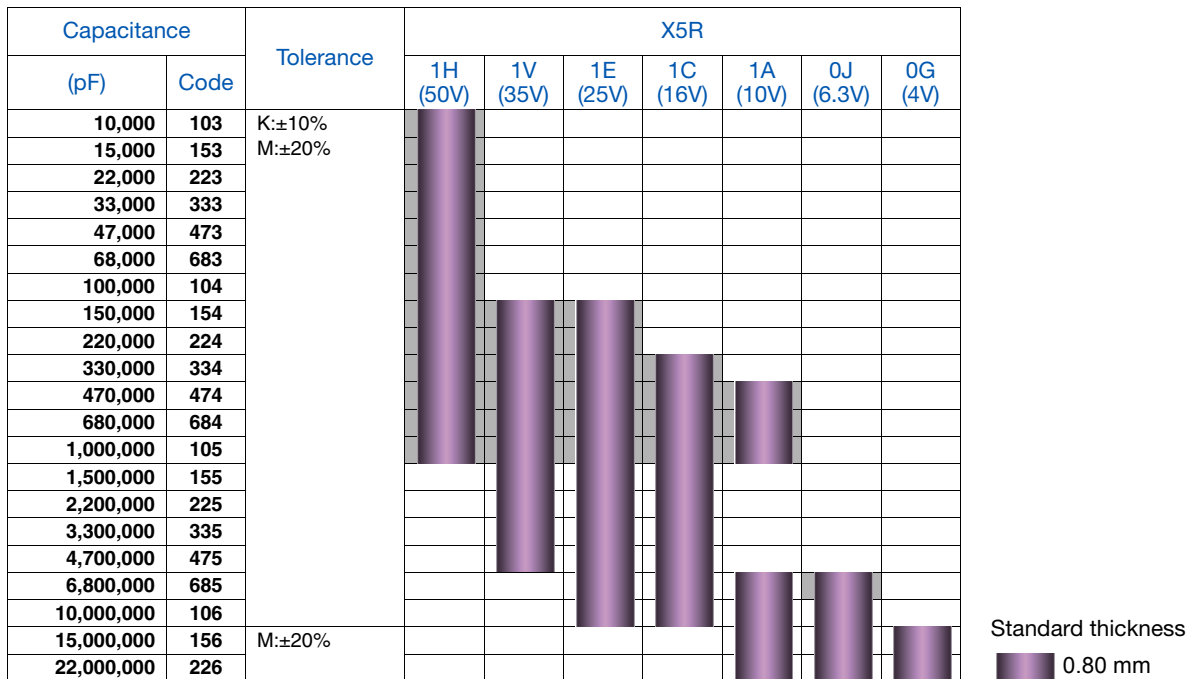
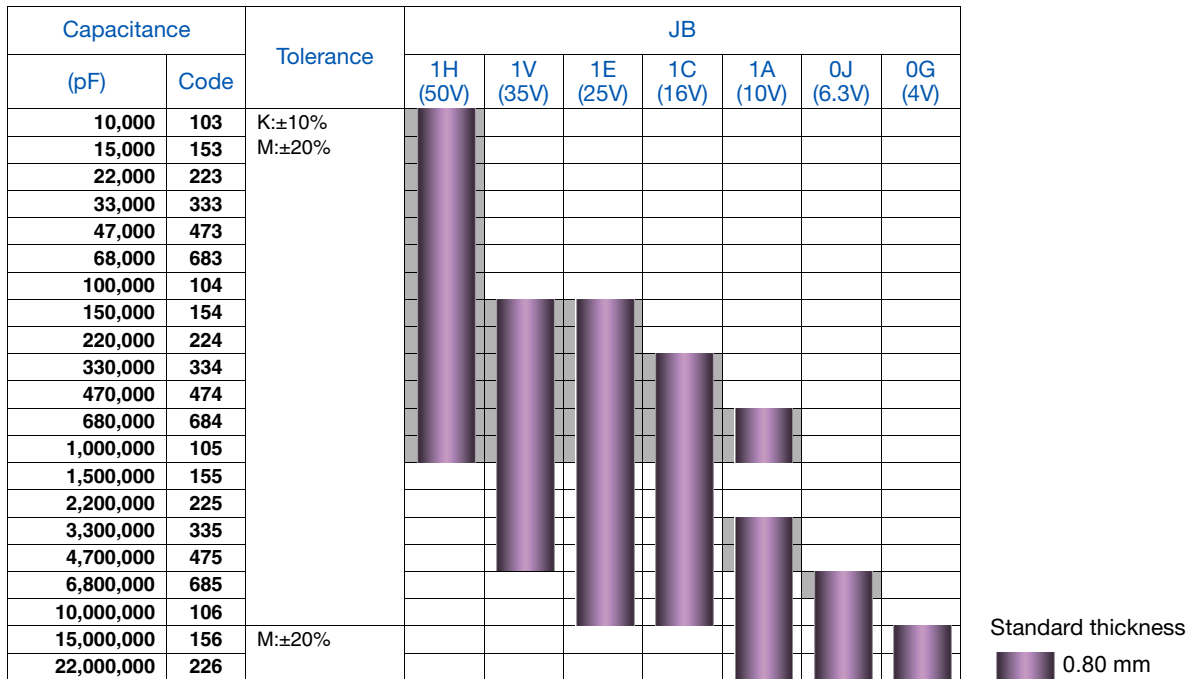
Background gray: The product which is not recommended to a new design.

Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.



## Capacitance range chart

C1608 [0603 inch]

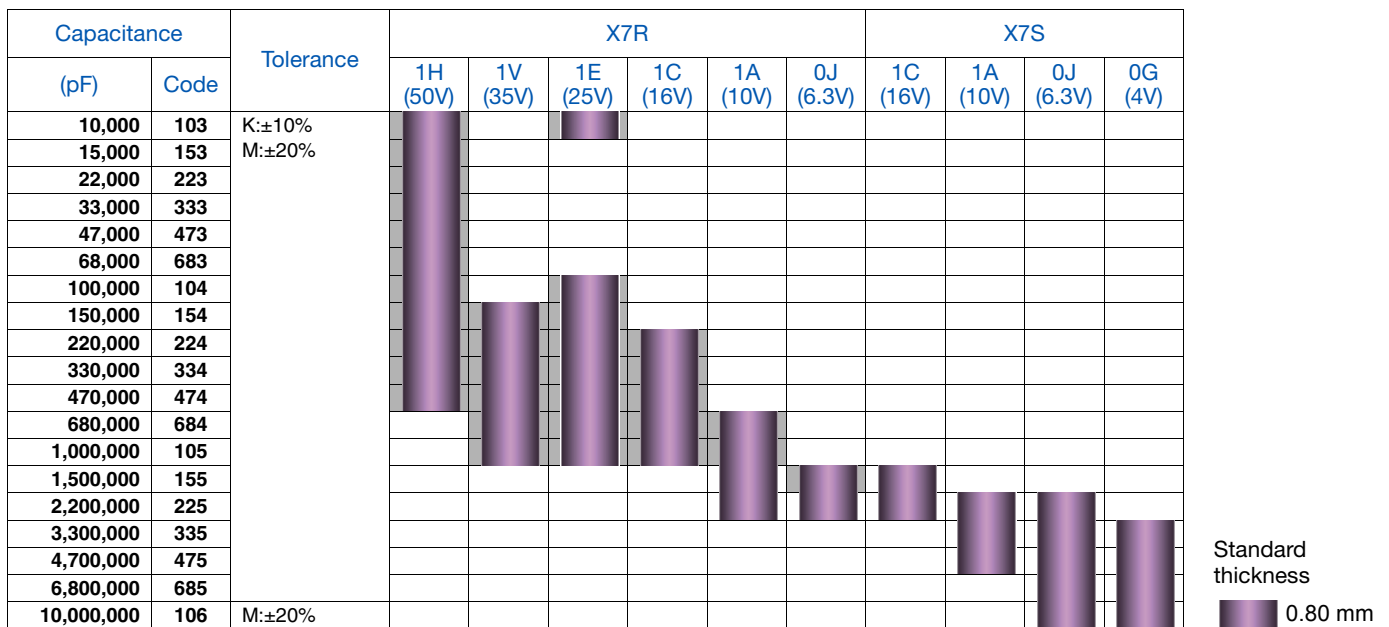
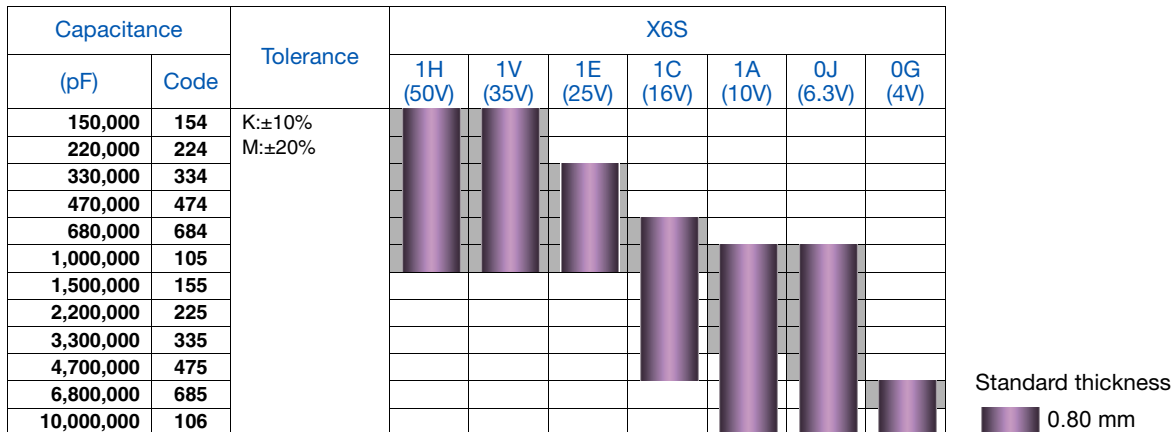


Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

## Capacitance range chart

C1608 [0603 inch]



■ Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

Capacitance range chart

C2012 [0805 inch]

Capacitance		Tolerance	C0G			CH		JB					
(pF)	Code		1H (50V)	1V (35V)	1E (25V)	1H (50V)	1V (35V)	1H (50V)	1V (35V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)
1,000	102	J:±5% K:±10%	█			█							
1,200	122					█							
1,500	152					█							
1,800	182					█							
2,200	222					█							
2,700	272					█							
3,300	332					█							
3,900	392					█							
4,700	472					█							
5,600	562					█							
6,800	682					█							
8,200	822					█							
10,000	103					█							
15,000	153			█		█							
18,000	183			█	█	█	█						
22,000	223		█	█	█	█							
27,000	273		█	█	█	█							
30,000	303		█	█	█	█							
33,000	333		█	█	█	█							
100,000	104	K:±10% M:±20%						█					
150,000	154								█				
220,000	224								█				
330,000	334								█				
470,000	474								█				
680,000	684								█				
1,000,000	105								█				
1,500,000	155								█				
2,200,000	225								█				
3,300,000	335								█				
4,700,000	475							█					
6,800,000	685							█					
10,000,000	106							█					
15,000,000	156	M:±20%						█					
22,000,000	226								█				
33,000,000	336								█				
47,000,000	476								█				

Standard thickness █ 0.60 mm █ 0.85 mm █ 1.25 mm

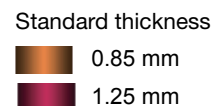
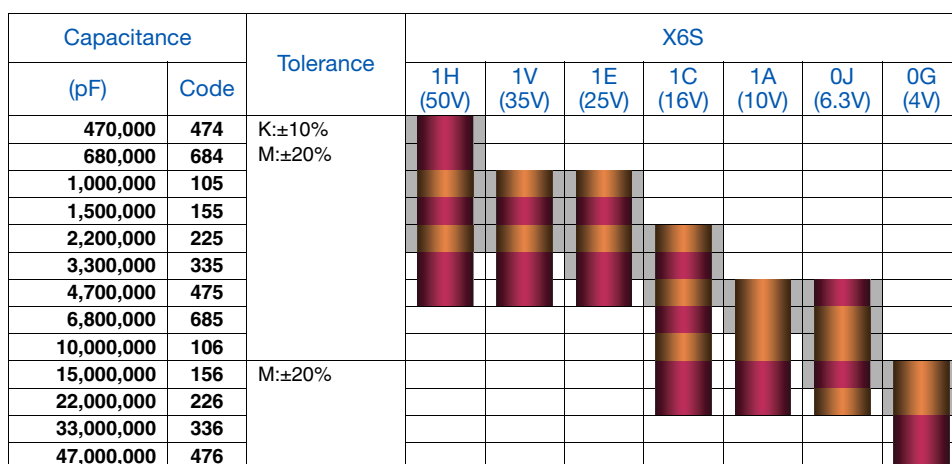
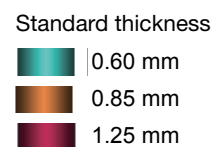
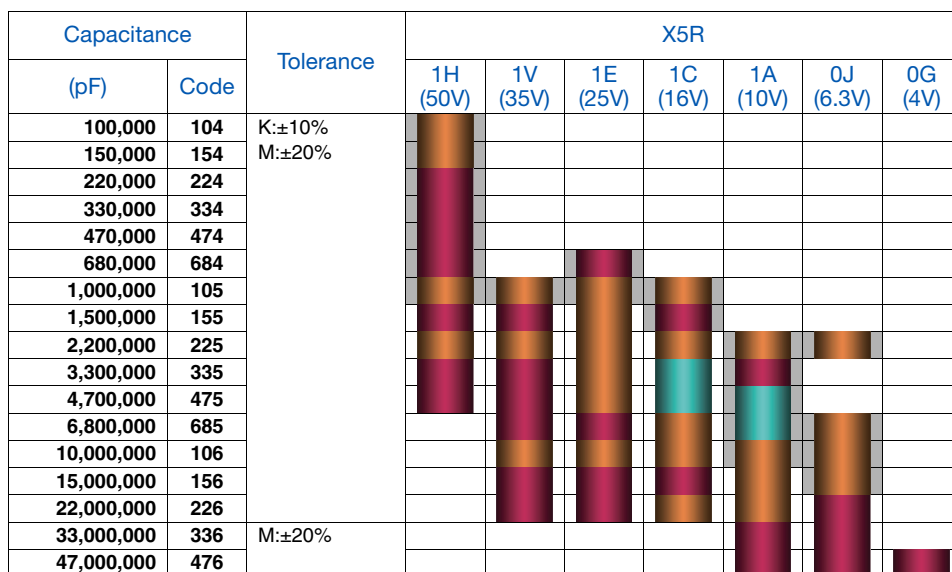
█ Background gray: The product which is not recommended to a new design.

█ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

Capacitance range chart

C2012 [0805 inch]

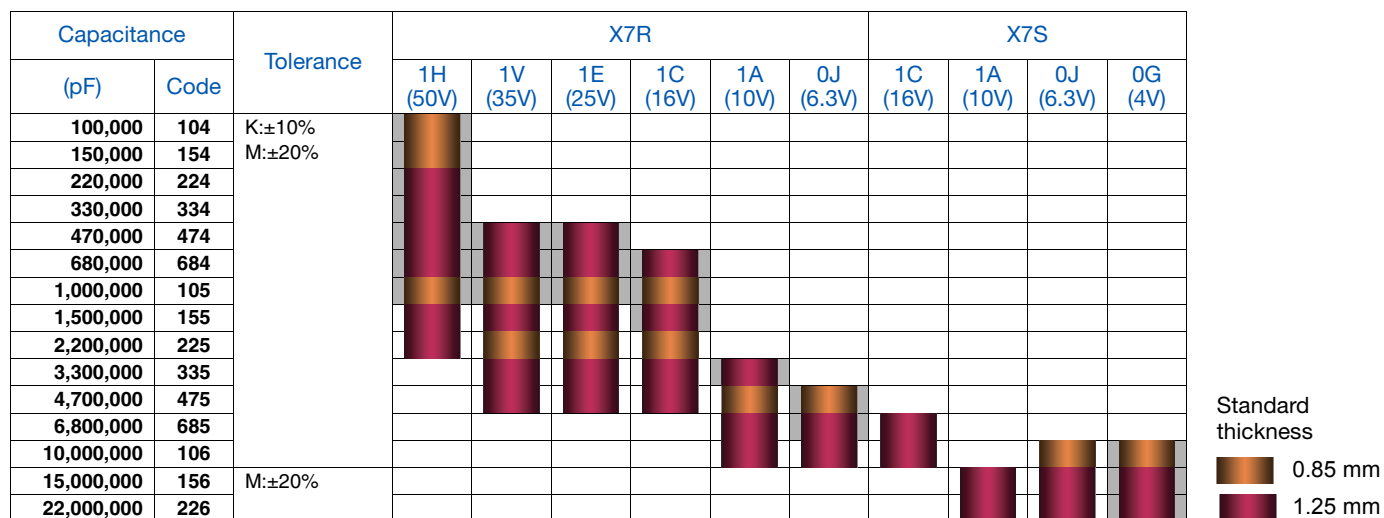


Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

Capacitance range chart

C2012 [0805 inch]

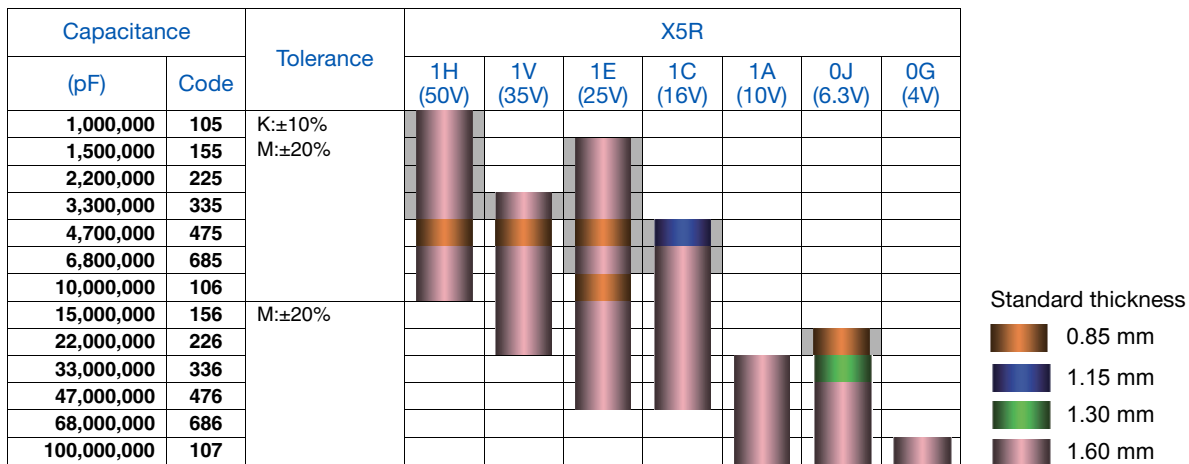
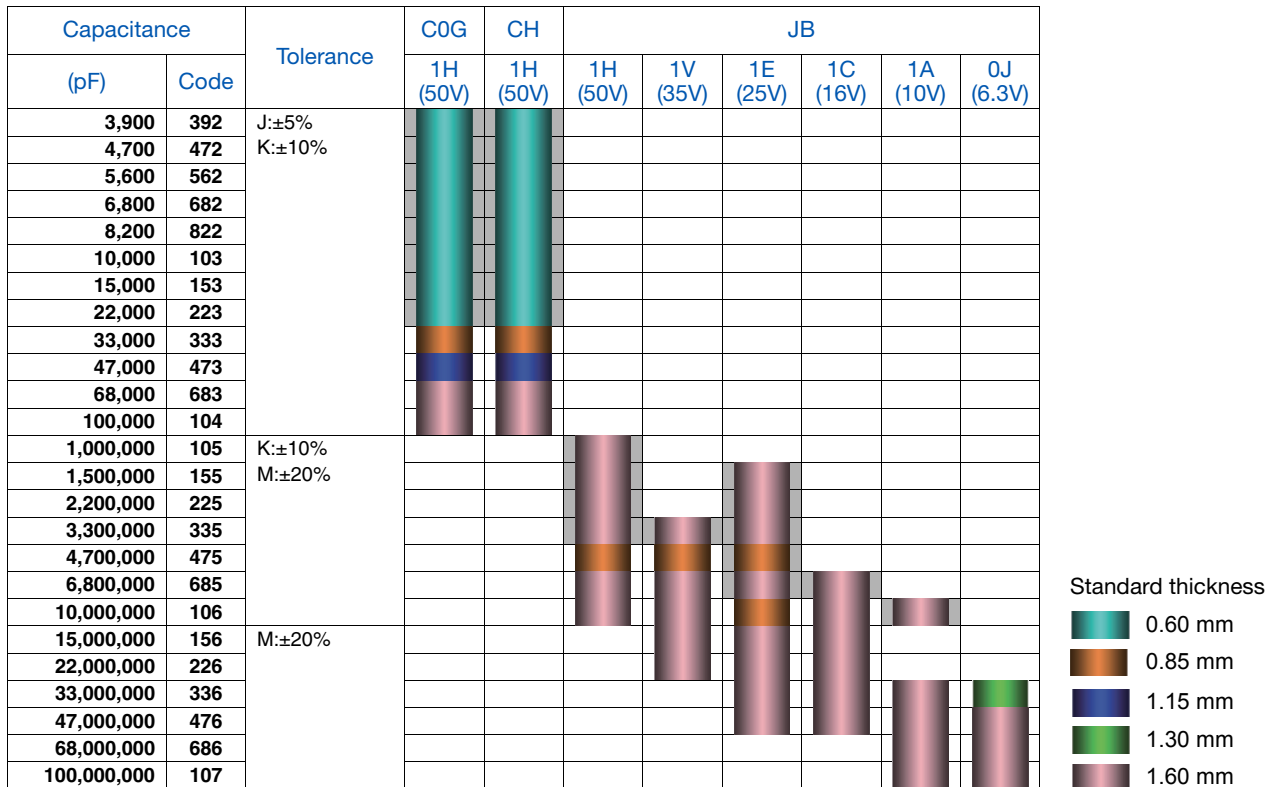


█ Background gray: The product which is not recommended to a new design.

█ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

## Capacitance range chart

C3216 [1206 inch]



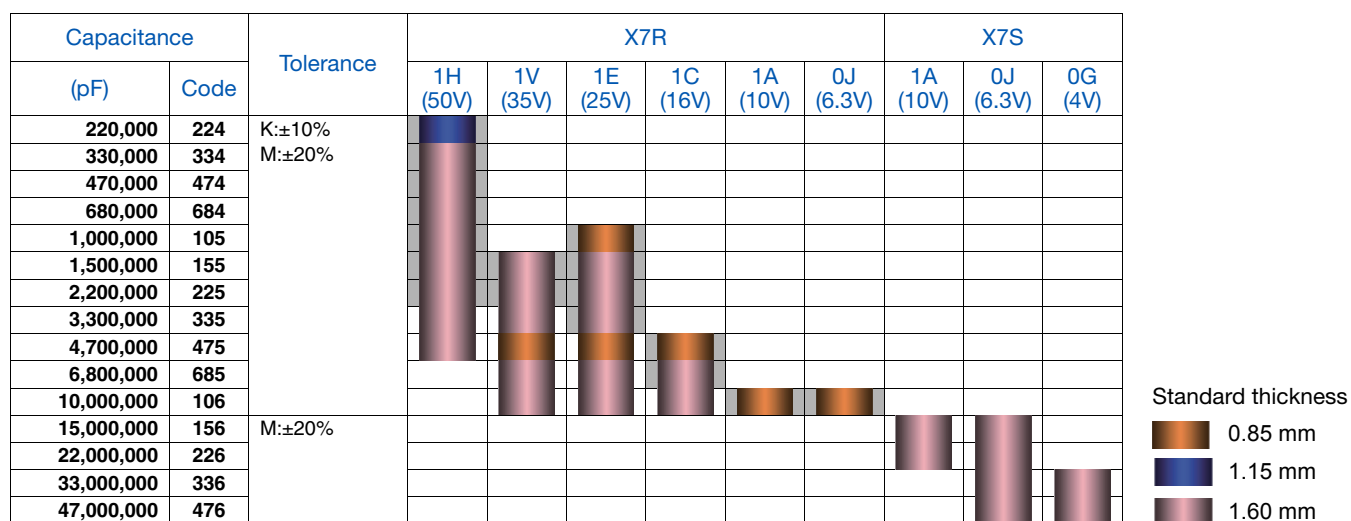
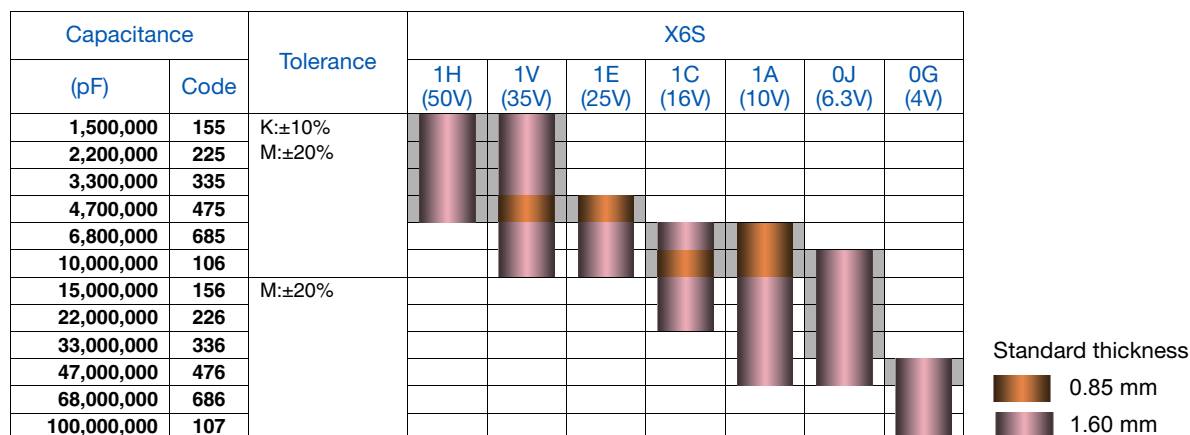
Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.



Capacitance range chart

C3216 [1206 inch]



█ Background gray: The product which is not recommended to a new design.

█ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

MULTILAYER CERAMIC CHIP CAPACITORS TDK

Capacitance range chart

C3225 [1210 inch]

Capacitance		Tolerance	C0G	CH	JB					X5R				
(pF)	Code		1H (50V)	1H (50V)	1H (50V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	1H (50V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)
22,000	223	J:±5% K:±10%	■	■										
33,000	333		■	■										
47,000	473		■	■										
68,000	683		■	■										
100,000	104		■	■										
2,200,000	225	K:±10% M:±20%			■				■					
3,300,000	335				■				■					
4,700,000	475				■	■			■	■				
6,800,000	685				■	■	■		■	■	■			
10,000,000	106				■	■	■	■	■	■	■			
15,000,000	156	M:±20%									■	■	■	
22,000,000	226										■	■	■	
33,000,000	336										■	■	■	
47,000,000	476										■	■	■	
68,000,000	686										■	■	■	
100,000,000	107									■	■	■		

Standard thickness ■ 1.25 mm ■ 1.60 mm ■ 2.00 mm ■ 2.30 mm ■ 2.50 mm

Capacitance		Tolerance	X6S						X7R				X7S	
(pF)	Code		1H (50V)	1V (35V)	1E (25V)	1C (16V)	0J (6.3V)	0G (4V)	1H (50V)	1E (25V)	1C (16V)	1A (10V)	1H (50V)	0J (6.3V)
1,000,000	105	K:±10% M:±20%						■						
1,500,000	155								■					
2,200,000	225								■	■				
3,300,000	335								■	■				
4,700,000	475								■	■				
6,800,000	685	M:±20%	■	■	■							■		
10,000,000	106		■	■	■							■		
15,000,000	156													
22,000,000	226													
47,000,000	476												■	
100,000,000	107											■		

Standard thickness ■ 1.60 mm ■ 2.00 mm ■ 2.30 mm ■ 2.50 mm

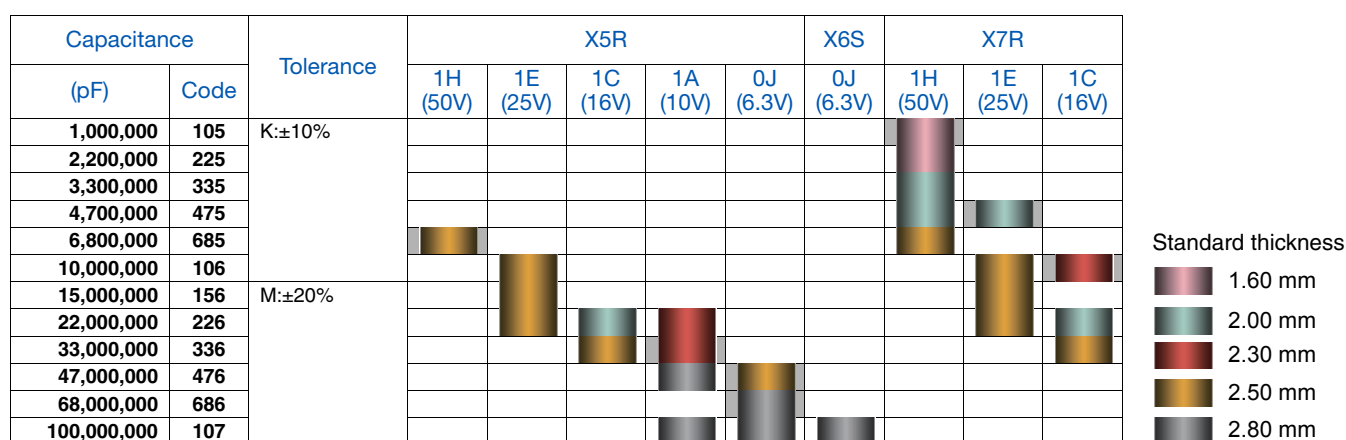
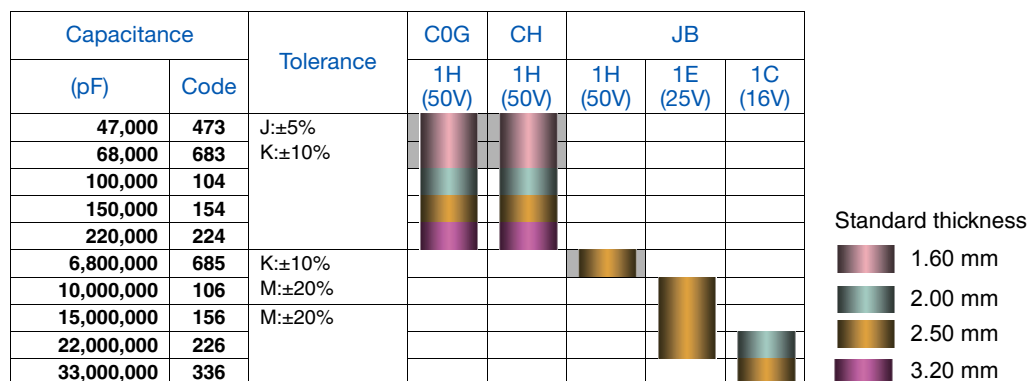
■ Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

Capacitance range chart

C4532 [1812 inch]



Background gray: The product which is not recommended to a new design.

Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.





MULTILAYER CERAMIC CHIP CAPACITORS TDK


Capacitance range chart

C5750 [2220 inch]


Capacitance		Tolerance	JB	X5R				X7R		
(pF)	Code		1E (25V)	1H (50V)	1E (25V)	1C (16V)	1A (10V)	0J (6.3V)	1H (50V)	1E (25V)
4,700,000	475	K:±10%								
6,800,000	685		M:±20%							
10,000,000	106	M:±20%								
15,000,000	156									
22,000,000	226									
33,000,000	336									
47,000,000	476									
68,000,000	686									
100,000,000	107									

Standard thickness

-  2.00 mm
-  2.30 mm
-  2.50 mm
-  2.80 mm

 Background gray: The product which is not recommended to a new design.

■ Please refer to the capacitance range table after P-24 for the details such as product thickness and capacitance tolerance.

 Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

## MULTILAYER CERAMIC CHIP CAPACITORS


**Capacitance range table**      **Temperature characteristics: C0G (-55 to +125°C, 0±30 ppm/°C)**

Capacitance	Dimensions	Thickness (mm)	Capacitance tolerance	Catalog number		
				Rated voltage Edc: 50V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
0.5 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C0R5C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H0R5C030BA	C0603C0G1E0R5C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1H0R5B050BA		
			±0.25pF	C1005C0G1H0R5C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H0R5C080AA		
0.75 pF	0402	0.20±0.02	±0.25pF			C0402C0G1CR75C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1HR75C030BA	C0603C0G1ER75C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1HR75B050BA		
			±0.25pF	C1005C0G1HR75C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1HR75C080AA		
1 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C010C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H010C030BA	C0603C0G1E010C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1H010B050BA		
			±0.25pF	C1005C0G1H010C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H010C080AA		
1.5 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C1R5C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H1R5C030BA	C0603C0G1E1R5C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1H1R5B050BA		
			±0.25pF	C1005C0G1H1R5C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H1R5C080AA		
2 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C020C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H020C030BA	C0603C0G1E020C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1H020B050BA		
			±0.25pF	C1005C0G1H020C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H020C080AA		
2.2 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C2R2C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H2R2C030BA	C0603C0G1E2R2C030BA	
3 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C030C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H030C030BA	C0603C0G1E030C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1H030B050BA		
			±0.25pF	C1005C0G1H030C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H030C080AA		
3.3 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C3R3C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H3R3C030BA	C0603C0G1E3R3C030BA	
4 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C040C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H040C030BA	C0603C0G1E040C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1H040B050BA		
			±0.25pF	C1005C0G1H040C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H040C080AA		
4.7 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C4R7C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H4R7C030BA	C0603C0G1E4R7C030BA	
5 pF	0402	0.20±0.02	±0.25pF			C0402C0G1C050C020BC
	0603	0.30±0.03	±0.25pF	C0603C0G1H050C030BA	C0603C0G1E050C030BA	
	1005	0.50±0.05	±0.10pF	C1005C0G1H050B050BA		
			±0.25pF	C1005C0G1H050C050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H050C080AA		
6 pF	0402	0.20±0.02	±0.50pF			C0402C0G1C060D020BC
	0603	0.30±0.03	±0.50pF	C0603C0G1H060D030BA	C0603C0G1E060D030BA	
	1005	0.50±0.05	±0.25pF	C1005C0G1H060C050BA		
			±0.50pF	C1005C0G1H060D050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H060C080AA		
			±0.50pF	C1608C0G1H060D080AA		
6.8 pF	0402	0.20±0.02	±0.50pF			C0402C0G1C6R8D020BC
	0603	0.30±0.03	±0.50pF	C0603C0G1H6R8D030BA	C0603C0G1E6R8D030BA	
7 pF	0402	0.20±0.02	±0.50pF			C0402C0G1C070D020BC
	0603	0.30±0.03	±0.50pF	C0603C0G1H070D030BA	C0603C0G1E070D030BA	
	1005	0.50±0.05	±0.25pF	C1005C0G1H070C050BA		
			±0.50pF	C1005C0G1H070D050BA		
	1608	0.80±0.10	±0.25pF	C1608C0G1H070C080AA		
			±0.50pF	C1608C0G1H070D080AA		

■ Gray item: The product which is not recommended to a new design.

## MULTILAYER CERAMIC CHIP CAPACITORS


**Capacitance range table**      **Temperature characteristics: C0G (-55 to +125°C, 0±30 ppm/°C)**

Capacitance	Dimensions	Thickness (mm)	Capacitance tolerance	Catalog number		
				Rated voltage Edc: 50V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
8 pF	0402	0.20±0.02	±0.50pF			C0402C0G1C080D020BC
	0603	0.30±0.03	±0.50pF	C0603C0G1H080D030BA	C0603C0G1E080D030BA	
	1005	0.50±0.05	±0.25pF	C1005C0G1H080C050BA		
			±0.50pF	C1005C0G1H080D050BA		
1608	0.80±0.10	±0.25pF	C1608C0G1H080C080AA			
		±0.50pF	C1608C0G1H080D080AA			
9 pF	0402	0.20±0.02	±0.50pF			C0402C0G1C090D020BC
	0603	0.30±0.03	±0.50pF	C0603C0G1H090D030BA	C0603C0G1E090D030BA	
	1005	0.50±0.05	±0.25pF	C1005C0G1H090C050BA		
			±0.50pF	C1005C0G1H090D050BA		
1608	0.80±0.10	±0.25pF	C1608C0G1H090C080AA			
		±0.50pF	C1608C0G1H090D080AA			
10 pF	0402	0.20±0.02	±0.50pF			C0402C0G1C100D020BC
	0603	0.30±0.03	±0.50pF	C0603C0G1H100D030BA	C0603C0G1E100D030BA	
	1005	0.50±0.05	±0.25pF	C1005C0G1H100C050BA		
			±0.50pF	C1005C0G1H100D050BA		
1608	0.80±0.10	±0.25pF	C1608C0G1H100C080AA			
		±0.50pF	C1608C0G1H100D080AA			
12 pF	0402	0.20±0.02	±10%			C0402C0G1C120K020BC
			±5%			C0402C0G1C120J020BC
	0603	0.30±0.03	±10%	C0603C0G1H120K030BA	C0603C0G1E120K030BA	
			±5%	C0603C0G1H120J030BA	C0603C0G1E120J030BA	
1005	0.50±0.05	±5%	C1005C0G1H120J050BA			
		±5%	C1608C0G1H120J080AA			
15 pF	0402	0.20±0.02	±10%			C0402C0G1C150K020BC
			±5%			C0402C0G1C150J020BC
	0603	0.30±0.03	±10%	C0603C0G1H150K030BA	C0603C0G1E150K030BA	
			±5%	C0603C0G1H150J030BA	C0603C0G1E150J030BA	
1005	0.50±0.05	±1%	C1005C0G1H150F050BA			
		±2%	C1005C0G1H150G050BA			
1608	0.80±0.10	±5%	C1005C0G1H150J050BA			
		±1%	C1608C0G1H150F080AA			
18 pF	0402	0.20±0.02	±10%			C0402C0G1C180K020BC
			±5%			C0402C0G1C180J020BC
	0603	0.30±0.03	±10%	C0603C0G1H180K030BA	C0603C0G1E180K030BA	
			±5%	C0603C0G1H180J030BA	C0603C0G1E180J030BA	
1005	0.50±0.05	±5%	C1005C0G1H180J050BA			
		±5%	C1608C0G1H180J080AA			
22 pF	0402	0.20±0.02	±10%			C0402C0G1C220K020BC
			±5%			C0402C0G1C220J020BC
	0603	0.30±0.03	±10%	C0603C0G1H220K030BA	C0603C0G1E220K030BA	
			±5%	C0603C0G1H220J030BA	C0603C0G1E220J030BA	
1005	0.50±0.05	±1%	C1005C0G1H220F050BA			
		±2%	C1005C0G1H220G050BA			
1608	0.80±0.10	±5%	C1005C0G1H220J050BA			
		±1%	C1608C0G1H220F080AA			
27 pF	0402	0.20±0.02	±10%			C0402C0G1C270K020BC
			±5%			C0402C0G1C270J020BC
	0603	0.30±0.03	±10%	C0603C0G1H270K030BA	C0603C0G1E270K030BA	
			±5%	C0603C0G1H270J030BA	C0603C0G1E270J030BA	
1005	0.50±0.05	±5%	C1005C0G1H270J050BA			
		±5%	C1608C0G1H270J080AA			

■ Gray item: The product which is not recommended to a new design.