

# Multilayer Ceramic Chip Capacitors

## General use

### C series

**Type:** C0402[EIA CC01005]  
C0603[EIA CC0201]  
C1005[EIA CC0402]  
C1608[EIA CC0603]  
C2012[EIA CC0805]  
C3216[EIA CC1206]  
C3225[EIA CC1210]  
C4532[EIA CC1812]  
C5750[EIA CC2220]

**Issue date:** September 2011

- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

## REMINDERS

Please read this before using the product.

### SAFETY REMINDERS

#### REMINDERS

1. If you intend to use a product listed in this catalog for a purpose that may cause loss of life or other damage, you must contact our company's sales window.
2. We may modify products or discontinue production of a product listed in this catalog without prior notification.
3. 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.
4. 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.
5. Any reproduction or transferring of the contents of this catalog is prohibited without prior permission from our company.
6. 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.
7. 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.
8. The descriptions in this catalog apply as of September, 2011.

# Multilayer Ceramic Chip Capacitors

## General Use

Conformity to RoHS Directive

### C Series

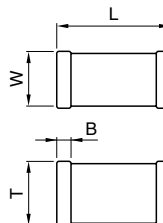
#### FEATURES

- An electrostatic capacity has been obtained that reaches the electrolytic capacitor range through precision technology that enables the use of multiple thinner ceramic dielectric layers.
- Since these capacitors are composed of only ceramics and metals and have a monolithic structure, they offer a long service life and high reliability.
- Low 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.

#### APPLICATION EXAMPLES

- Decoupling and ripple filters for general electronic devices
- Time constant circuits, resonance circuits, coupling circuits (Products with CH or COG temperature characteristics are recommended. Use as a replacement for film capacitors is also possible.)

#### SHAPES AND DIMENSIONS



#### DIMENSIONS

The dimensions of each product are described within the product name.

##### Dimensions L×W

The 4-digit number in the product name corresponds to the dimensions of L×W.

Refer to the table below for specific values.

Dimension code	Dimensions in mm		
	L	W	B
0402	0.4±0.02	0.2±0.02	0.07min.
0603	0.6±0.03	0.3±0.03	0.1min.
1005	1.0±0.05	0.5±0.05	0.1min.
1608	1.6±0.1	0.8±0.1	0.2min.
2012	2.0±0.2	1.25±0.2	0.2min.
3216	3.2±0.2	1.6±0.2	0.2min.
3225	3.2±0.4	2.5±0.3	0.2min.
4532	4.5±0.4	3.2±0.4	0.2min.
5750	5.7±0.4	5.0±0.4	0.2min.

- Dimension tolerances are typical values.

##### Product's Thickness T

The value in parentheses at the end of the product name corresponds to thickness T.

Refer to the table of "CAPACITANCE RANGES" for specific values.

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice. Please read the precautions before using this catalog.

**PRODUCT IDENTIFICATION**

C 1005 CH 1H 100 C ( 050 B A )  
 (1) (2) (3) (4) (5) (6) (7) (8) (9)

**(1) Series name**
**(2) Dimensions L×W**

0402	0.4×0.2mm
0603	0.6×0.3mm
1005	1.0×0.5mm
1608	1.6×0.8mm
2012	2.0×1.25mm
3216	3.2×1.6mm
3225	3.2×2.5mm
4532	4.5×3.2mm
5750	5.7×5.0mm

**(3) Capacitance temperature characteristics**
**Class 1 (Temperature compensation)**

Temperature characteristics	Capacitance change	Temperature range
COG	0±30ppm/°C	-55 to +125°C
CH	0±60ppm/°C	-25 to +85°C

**Class 2 (Temperature stable and general purpose)**

Temperature characteristics	Capacitance change	Temperature range
X5R	±15%	-55 to +85°C
X6S	±22%	-55 to +105°C
X7R	±15%	-55 to +125°C
JB	±10%	-25 to +85°C
Y5V	+22, -82%	-30 to +85°C
JF	+30, -80%	-25 to +85°C

**(4) Rated voltage E<sub>dc</sub>**

0G	4V
0J	6.3V
1A	10V
1C	16V
1E	25V
1V	35V
1H	50V

**(5) Nominal capacitance**

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.

0R5	0.5pF
R75	0.75pF
010	1pF
100	10pF
471	470pF
102	1,000pF
333	33,000pF
474	470,000pF
225	2,200,000pF (2.2μF)

**(6) Capacitance tolerance**

Symbol	Tolerance	Applicable capacitance range
B	±0.1pF	
C	±0.25pF	10pF or less
D	±0.5pF	
J	±5%	
K	±10%	
M	±20%	Over 10pF
Z	+80, -20%	

**(7) Dimensions T**

Expressed by a three-digit number in mm units.

The second and third digits denote the first and second decimal places, respectively.

050	0.50mm
085	0.85mm
125	1.25mm

**(8) Packaging style**

A	ø178mm reel with 4mm-pitch
B	ø178mm reel with 2mm-pitch
C	ø178mm reel with 1mm-pitch
D	ø330mm reel with 4mm-pitch
E	ø330mm reel with 2mm-pitch
F	ø330mm reel with 1mm-pitch
H	Bulk(bag)
J	ø330mm reel with 8mm-pitch
K	ø178mm reel with 8mm-pitch

**(9) TDK internal code**

In brochures issued in August, 2011 and later, the product thickness and packing specifications are described at the end of the ordering name [the product name described in brochures] in parentheses.

Since the existing ordering name could not clearly express the product thickness and packing specifications, it has been changed to a new product description method that solves this inconvenience.

Please be aware that the last five digits of the ordering name on the delivery label and those in the brochure differ.

No changes have been made to the delivery name.

**(Example)**

Brochure issued date	Ordering name (description in the brochure)	Delivery name (description on the delivery label)
Prior to July, 2011	C1608X5R1C105K	C1608X5R1C105KT000N
August, 2011 or later	C1608X5R1C105K(080AA)	C1608X5R1C105KT000N

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.
- Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**

**TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No. Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
0.5pF	0402	0.20±0.02	±0.25pF				C0402C0G1C0R5C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1H0R5C(030BA)		C0603C0G1E0R5C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1H0R5B(050BA) C1005C0G1H0R5C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1H0R5C(080AA)			
0.75pF	0402	0.20±0.02	±0.25pF				C0402C0G1CR75C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1HR75C(030BA)		C0603C0G1ER75C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1HR75B(050BA) C1005C0G1HR75C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1HR75C(080AA)			
1pF	0402	0.20±0.02	±0.25pF				C0402C0G1C010C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1H010C(030BA)		C0603C0G1E010C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1H010B(050BA) C1005C0G1H010C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1H010C(080AA)			
1.5pF	0402	0.20±0.02	±0.25pF				C0402C0G1C1R5C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1H1R5C(030BA)		C0603C0G1E1R5C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1H1R5B(050BA) C1005C0G1H1R5C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1H1R5C(080AA)			
2pF	0402	0.20±0.02	±0.25pF				C0402C0G1C020C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1H020C(030BA)		C0603C0G1E020C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1H020B(050BA) C1005C0G1H020C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1H020C(080AA)			
3pF	0402	0.20±0.02	±0.25pF				C0402C0G1C030C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1H030C(030BA)		C0603C0G1E030C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1H030B(050BA) C1005C0G1H030C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1H030C(080AA)			
4pF	0402	0.20±0.02	±0.25pF				C0402C0G1C040C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1H040C(030BA)		C0603C0G1E040C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1H040B(050BA) C1005C0G1H040C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1H040C(080AA)			
5pF	0402	0.20±0.02	±0.25pF				C0402C0G1C050C(020BA)
	0603	0.30±0.03	±0.25pF	C0603C0G1H050C(030BA)		C0603C0G1E050C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005C0G1H050B(050BA) C1005C0G1H050C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608C0G1H050C(080AA)			
6pF	0402	0.20±0.02	±0.5pF				C0402C0G1C060D(020BA)
	0603	0.30±0.03	±0.5pF	C0603C0G1H060D(030BA)		C0603C0G1E060D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005C0G1H060C(050BA) C1005C0G1H060D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608C0G1H060C(080AA) C1608C0G1H060D(080AA)			
7pF	0402	0.20±0.02	±0.5pF				C0402C0G1C070D(020BA)
	0603	0.30±0.03	±0.5pF	C0603C0G1H070D(030BA)		C0603C0G1E070D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005C0G1H070C(050BA) C1005C0G1H070D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608C0G1H070C(080AA) C1608C0G1H070D(080AA)			
8pF	0402	0.20±0.02	±0.5pF				C0402C0G1C080D(020BA)
	0603	0.30±0.03	±0.5pF	C0603C0G1H080D(030BA)		C0603C0G1E080D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005C0G1H080C(050BA) C1005C0G1H080D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608C0G1H080C(080AA) C1608C0G1H080D(080AA)			
9pF	0402	0.20±0.02	±0.5pF				C0402C0G1C090D(020BA)
	0603	0.30±0.03	±0.5pF	C0603C0G1H090D(030BA)		C0603C0G1E090D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005C0G1H090C(050BA) C1005C0G1H090D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608C0G1H090C(080AA) C1608C0G1H090D(080AA)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No. Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
10pF	0402	0.20±0.02	±0.5pF				C0402C0G1C100D(020BA)
	0603	0.30±0.03	±0.5pF	C0603C0G1H100D(030BA)		C0603C0G1E100D(030BA)	
	1005	0.50±0.05	±0.25pF	C1005C0G1H100C(050BA)			
			±0.5pF	C1005C0G1H100D(050BA)			
12pF	1608	0.80±0.10	±0.25pF	C1608C0G1H100C(080AA)			
			±0.5pF	C1608C0G1H100D(080AA)			
	0402	0.20±0.02	±5%				C0402C0G1C120J(020BA)
	0603	0.30±0.03	±5%	C0603C0G1H120J(030BA)		C0603C0G1E120J(030BA)	
15pF	1005	0.50±0.05	±5%	C1005C0G1H120J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H120J(080AA)			
	0402	0.20±0.02	±5%				C0402C0G1C150J(020BA)
	0603	0.30±0.03	±5%	C0603C0G1H150J(030BA)		C0603C0G1E150J(030BA)	
18pF	1005	0.50±0.05	±5%	C1005C0G1H150J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H150J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H180J(030BA)		C0603C0G1E180J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H180J(050BA)			
22pF	1608	0.80±0.10	±5%	C1608C0G1H180J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H220J(030BA)		C0603C0G1E220J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H220J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H220J(080AA)			
27pF	0603	0.30±0.03	±5%	C0603C0G1H270J(030BA)		C0603C0G1E270J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H270J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H270J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H330J(030BA)		C0603C0G1E330J(030BA)	
33pF	1005	0.50±0.05	±5%	C1005C0G1H330J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H330J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H390J(030BA)		C0603C0G1E390J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H390J(050BA)			
39pF	1608	0.80±0.10	±5%	C1608C0G1H390J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H470J(030BA)		C0603C0G1E470J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H470J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H470J(080AA)			
47pF	0603	0.30±0.03	±5%	C0603C0G1H560J(030BA)		C0603C0G1E560J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H560J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H560J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H680J(030BA)		C0603C0G1E680J(030BA)	
56pF	1005	0.50±0.05	±5%	C1005C0G1H680J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H680J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H820J(030BA)		C0603C0G1E820J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H820J(050BA)			
68pF	1608	0.80±0.10	±5%	C1608C0G1H820J(080AA)			
	0603	0.30±0.03	±5%	C0603C0G1H101J(030BA)		C0603C0G1E101J(030BA)	
	1005	0.50±0.05	±5%	C1005C0G1H101J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H101J(080AA)			
82pF	1005	0.50±0.05	±5%	C1005C0G1H121J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H121J(080AA)			
	1005	0.50±0.05	±5%	C1005C0G1H151J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H151J(080AA)			
100pF	1005	0.50±0.05	±5%	C1005C0G1H181J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H181J(080AA)			
	1005	0.50±0.05	±5%	C1005C0G1H221J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H221J(080AA)			
120pF	1005	0.50±0.05	±5%	C1005C0G1H271J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H271J(080AA)			
	1005	0.50±0.05	±5%	C1005C0G1H331J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H331J(080AA)			
150pF	1005	0.50±0.05	±5%	C1005C0G1H391J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H391J(080AA)			
	1005	0.50±0.05	±5%	C1005C0G1H471J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H471J(080AA)			
180pF	1005	0.50±0.05	±5%	C1005C0G1H561J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H561J(080AA)			
	1005	0.50±0.05	±5%	C1005C0G1H681J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H681J(080AA)			
220pF	1005	0.50±0.05	±5%	C1005C0G1H821J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H821J(080AA)			
	1005	0.50±0.05	±5%	C1005C0G1H821J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H821J(080AA)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: C0G(0±30ppm/°C)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
1nF	1005	0.50±0.05	±5%	C1005C0G1H102J(050BA)			
	1608	0.80±0.10	±5%	C1608C0G1H102J(080AA)			
	2012	0.60±0.10	±5%	C2012C0G1H102J(060AA)			
1.2nF	1608	0.80±0.10	±5%	C1608C0G1H122J(080AA)			
	2012	0.60±0.10	±5%	C2012C0G1H122J(060AA)			
1.5nF	1608	0.80±0.10	±5%	C1608C0G1H152J(080AA)			
	2012	0.60±0.10	±5%	C2012C0G1H152J(060AA)			
1.8nF	1608	0.80±0.10	±5%	C1608C0G1H182J(080AA)			
	2012	0.60±0.10	±5%	C2012C0G1H182J(060AA)			
2.2nF	1608	0.80±0.10	±5%	C1608C0G1H222J(080AA)			
	2012	0.60±0.10	±5%	C2012C0G1H222J(060AA)			
		0.85±0.10	±5%	C2012C0G1H222J(085AA)			
2.7nF	1608	0.80±0.10	±5%	C1608C0G1H272J(080AA)			
		0.60±0.10	±5%	C2012C0G1H272J(060AA)			
	2012	0.80±0.10	±5%	C1608C0G1H332J(080AA)			
3.3nF	2012	0.60±0.10	±5%	C2012C0G1H332J(060AA)			
		0.85±0.10	±5%	C2012C0G1H332J(085AA)			
		1.25±0.10	±5%	C2012C0G1H332J(125AA)			
3.9nF	1608	0.80±0.10	±5%	C1608C0G1H392J(080AA)			
		0.60±0.10	±5%	C2012C0G1H392J(060AA)			
		0.85±0.10	±5%	C2012C0G1H392J(085AA)			
4.7nF	2012	1.25±0.10	±5%	C2012C0G1H392J(125AA)			
		0.80±0.10	±5%	C1608C0G1H472J(080AA)			
		0.60±0.10	±5%	C2012C0G1H472J(060AA)			
5.6nF	1608	0.85±0.10	±5%	C2012C0G1H472J(085AA)			
		1.25±0.10	±5%	C2012C0G1H472J(125AA)			
		0.80±0.10	±5%	C1608C0G1H562J(080AA)			
6.8nF	2012	0.60±0.10	±5%	C2012C0G1H562J(060AA)			
		0.85±0.10	±5%	C2012C0G1H562J(085AA)			
		1.25±0.10	±5%	C2012C0G1H562J(125AA)			
8.2nF	1608	0.80±0.10	±5%	C1608C0G1H682J(080AA)			
		0.60±0.10	±5%	C2012C0G1H682J(060AA)			
		1.25±0.10	±5%	C2012C0G1H682J(125AA)			
10nF	2012	0.80±0.10	±5%	C1608C0G1H822J(080AA)			
		0.60±0.10	±5%	C2012C0G1H822J(060AA)			
		1.25±0.10	±5%	C2012C0G1H822J(125AA)			
15nF	1608	0.80±0.10	±5%	C1608C0G1H103J(080AA)			
		0.60±0.10	±5%	C2012C0G1H103J(060AA)			
		1.25±0.10	±5%	C2012C0G1H103J(125AA)			
22nF	3216	0.60+0.10/-0.20	±5%	C3216C0G1H103J(060AA)			
		0.85±0.10	±5%	C2012C0G1H153J(085AA)			
		1.25±0.10	±5%	C2012C0G1H223J(125AA)			
33nF	2012	0.60+0.10/-0.20	±5%	C3216C0G1H223J(060AA)			
		1.25±0.10	±5%	C2012C0G1H333J(125AA)			
		0.85±0.10	±5%	C3216C0G1H333J(085AA)			
47nF	3216	1.15±0.10	±5%	C3216C0G1H473J(115AA)			
		2.00±0.20	±5%	C3225C0G1H473J(200AA)			
		1.60±0.15	±5%	C4532C0G1H473J(160KA)			
68nF	3216	1.60±0.10	±5%	C3216C0G1H683J(160AA)			
		2.00±0.20	±5%	C3225C0G1H683J(200AA)			
		1.60±0.15	±5%	C4532C0G1H683J(160KA)			
100nF	3216	1.60±0.20	±5%	C3216C0G1H104J(160AA)			
		2.50±0.30	±5%	C3225C0G1H104J(250AA)			
		2.00±0.20	±5%	C4532C0G1H104J(200KA)			
150nF	4532	2.50±0.30	±5%	C4532C0G1H154J(250KA)			
220nF	4532	3.20±0.30	±5%	C4532C0G1H224J(320KA)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No. Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
0.5pF	0402	0.20±0.02	±0.25pF				C0402CH1C0R5C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1H0R5C(030BA)		C0603CH1E0R5C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1H0R5B(050BA) C1005CH1H0R5C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1H0R5C(080AA)			
0.75pF	0402	0.20±0.02	±0.25pF				C0402CH1CR75C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1HR75C(030BA)		C0603CH1ER75C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1HR75B(050BA) C1005CH1HR75C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1HR75C(080AA)			
1pF	0402	0.20±0.02	±0.25pF				C0402CH1C010C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1H010C(030BA)		C0603CH1E010C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1H010B(050BA) C1005CH1H010C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1H010C(080AA)			
1.5pF	0402	0.20±0.02	±0.25pF				C0402CH1C1R5C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1H1R5C(030BA)		C0603CH1E1R5C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1H1R5B(050BA) C1005CH1H1R5C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1H1R5C(080AA)			
2pF	0402	0.20±0.02	±0.25pF				C0402CH1C020C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1H020C(030BA)		C0603CH1E020C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1H020B(050BA) C1005CH1H020C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1H020C(080AA)			
3pF	0402	0.20±0.02	±0.25pF				C0402CH1C030C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1H030C(030BA)		C0603CH1E030C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1H030B(050BA) C1005CH1H030C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1H030C(080AA)			
4pF	0402	0.20±0.02	±0.25pF				C0402CH1C040C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1H040C(030BA)		C0603CH1E040C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1H040B(050BA) C1005CH1H040C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1H040C(080AA)			
5pF	0402	0.20±0.02	±0.25pF				C0402CH1C050C(020BA)
	0603	0.30±0.03	±0.25pF	C0603CH1H050C(030BA)		C0603CH1E050C(030BA)	
	1005	0.50±0.05	±0.1pF ±0.25pF	C1005CH1H050B(050BA) C1005CH1H050C(050BA)			
	1608	0.80±0.10	±0.25pF	C1608CH1H050C(080AA)			
6pF	0402	0.20±0.02	±0.5pF				C0402CH1C060D(020BA)
	0603	0.30±0.03	±0.5pF	C0603CH1H060D(030BA)		C0603CH1E060D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005CH1H060C(050BA) C1005CH1H060D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608CH1H060C(080AA) C1608CH1H060D(080AA)			
7pF	0402	0.20±0.02	±0.5pF				C0402CH1C070D(020BA)
	0603	0.30±0.03	±0.5pF	C0603CH1H070D(030BA)		C0603CH1E070D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005CH1H070C(050BA) C1005CH1H070D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608CH1H070C(080AA) C1608CH1H070D(080AA)			
8pF	0402	0.20±0.02	±0.5pF				C0402CH1C080D(020BA)
	0603	0.30±0.03	±0.5pF	C0603CH1H080D(030BA)		C0603CH1E080D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005CH1H080C(050BA) C1005CH1H080D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608CH1H080C(080AA) C1608CH1H080D(080AA)			
9pF	0402	0.20±0.02	±0.5pF				C0402CH1C090D(020BA)
	0603	0.30±0.03	±0.5pF	C0603CH1H090D(030BA)		C0603CH1E090D(030BA)	
	1005	0.50±0.05	±0.25pF ±0.5pF	C1005CH1H090C(050BA) C1005CH1H090D(050BA)			
	1608	0.80±0.10	±0.25pF ±0.5pF	C1608CH1H090C(080AA) C1608CH1H090D(080AA)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.



**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No. Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
10pF	0402	0.20±0.02	±0.5pF				C0402CH1C100D(020BA)
	0603	0.30±0.03	±0.5pF	C0603CH1H100D(030BA)		C0603CH1E100D(030BA)	
	1005	0.50±0.05	±0.25pF	C1005CH1H100C(050BA)			
	1608	0.80±0.10	±0.5pF	C1005CH1H100D(050BA)			
12pF	0402	0.20±0.02	±5%				C0402CH1C120J(020BA)
	0603	0.30±0.03	±5%	C0603CH1H120J(030BA)		C0603CH1E120J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H120J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H120J(080AA)			
15pF	0402	0.20±0.02	±5%				C0402CH1C150J(020BA)
	0603	0.30±0.03	±5%	C0603CH1H150J(030BA)		C0603CH1E150J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H150J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H150J(080AA)			
18pF	0603	0.30±0.03	±5%	C0603CH1H180J(030BA)		C0603CH1E180J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H180J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H180J(080AA)			
	0603	0.30±0.03	±5%	C0603CH1H220J(030BA)		C0603CH1E220J(030BA)	
22pF	1005	0.50±0.05	±5%	C1005CH1H220J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H220J(080AA)			
	0603	0.30±0.03	±5%	C0603CH1H270J(030BA)		C0603CH1E270J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H270J(050BA)			
27pF	0603	0.30±0.03	±5%	C0603CH1H330J(030BA)		C0603CH1E330J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H330J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H330J(080AA)			
	0603	0.30±0.03	±5%	C0603CH1H390J(030BA)		C0603CH1E390J(030BA)	
39pF	1005	0.50±0.05	±5%	C1005CH1H390J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H390J(080AA)			
	0603	0.30±0.03	±5%	C0603CH1H470J(030BA)		C0603CH1E470J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H470J(050BA)			
47pF	1608	0.80±0.10	±5%	C1608CH1H470J(080AA)			
	0603	0.30±0.03	±5%	C0603CH1H560J(030BA)		C0603CH1E560J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H560J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H560J(080AA)			
56pF	0603	0.30±0.03	±5%	C0603CH1H680J(030BA)		C0603CH1E680J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H680J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H680J(080AA)			
	0603	0.30±0.03	±5%	C0603CH1H820J(030BA)		C0603CH1E820J(030BA)	
82pF	1005	0.50±0.05	±5%	C1005CH1H820J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H820J(080AA)			
	0603	0.30±0.03	±5%	C0603CH1H101J(030BA)		C0603CH1E101J(030BA)	
	1005	0.50±0.05	±5%	C1005CH1H101J(050BA)			
100pF	1608	0.80±0.10	±5%	C1608CH1H101J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H121J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H121J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H151J(050BA)			
150pF	1608	0.80±0.10	±5%	C1608CH1H151J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H181J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H181J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H221J(050BA)			
220pF	1608	0.80±0.10	±5%	C1608CH1H221J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H271J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H271J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H331J(050BA)			
330pF	1608	0.80±0.10	±5%	C1608CH1H331J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H391J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H391J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H471J(050BA)			
470pF	1608	0.80±0.10	±5%	C1608CH1H471J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H561J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H561J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H681J(050BA)			
560pF	1608	0.80±0.10	±5%	C1608CH1H681J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H821J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H821J(080AA)			
	1005	0.50±0.05	±5%	C1005CH1H821J(050BA)			
820pF	1608	0.80±0.10	±5%	C1608CH1H821J(080AA)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)**
**TEMPERATURE CHARACTERISTICS: CH(0±60ppm/°C)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
1nF	1005	0.50±0.05	±5%	C1005CH1H102J(050BA)			
	1608	0.80±0.10	±5%	C1608CH1H102J(080AA)			
	2012	0.60±0.10	±5%	C2012CH1H102J(060AA)			
1.2nF	1608	0.80±0.10	±5%	C1608CH1H122J(080AA)			
	2012	0.60±0.10	±5%	C2012CH1H122J(060AA)			
1.5nF	1608	0.80±0.10	±5%	C1608CH1H152J(080AA)			
	2012	0.60±0.10	±5%	C2012CH1H152J(060AA)			
1.8nF	1608	0.80±0.10	±5%	C1608CH1H182J(080AA)			
	2012	0.60±0.10	±5%	C2012CH1H182J(060AA)			
2.2nF	1608	0.80±0.10	±5%	C1608CH1H222J(080AA)			
	2012	0.60±0.10	±5%	C2012CH1H222J(060AA)			
		0.85±0.10	±5%	C2012CH1H222J(085AA)			
2.7nF	1608	0.80±0.10	±5%	C1608CH1H272J(080AA)			
	2012	0.60±0.10	±5%	C2012CH1H272J(060AA)			
	1608	0.80±0.10	±5%	C1608CH1H332J(080AA)			
3.3nF	2012	0.60±0.10	±5%	C2012CH1H332J(060AA)			
		1.25±0.10	±5%	C2012CH1H332J(125AA)			
	1608	0.80±0.10	±5%	C1608CH1H392J(080AA)			
3.9nF	2012	0.60±0.10	±5%	C2012CH1H392J(060AA)			
		0.85±0.10	±5%	C2012CH1H392J(085AA)			
		1.25±0.10	±5%	C2012CH1H392J(125AA)			
4.7nF	1608	0.80±0.10	±5%	C1608CH1H472J(080AA)			
		2012	0.60±0.10	±5%	C2012CH1H472J(060AA)		
		0.85±0.10	±5%	C2012CH1H472J(085AA)			
5.6nF	1608	0.80±0.10	±5%	C1608CH1H562J(080AA)			
		2012	0.60±0.10	±5%	C2012CH1H562J(060AA)		
		0.85±0.10	±5%	C2012CH1H562J(085AA)			
6.8nF	2012	1.25±0.10	±5%	C2012CH1H562J(125AA)			
		1608	0.80±0.10	±5%	C1608CH1H682J(080AA)		
		2012	0.60±0.10	±5%	C2012CH1H682J(060AA)		
8.2nF	1608	0.80±0.10	±5%	C1608CH1H822J(080AA)			
		2012	0.60±0.10	±5%	C2012CH1H822J(060AA)		
		1.25±0.10	±5%	C2012CH1H822J(125AA)			
10nF	1608	0.80±0.10	±5%	C1608CH1H103J(080AA)			
		2012	0.60±0.10	±5%	C2012CH1H103J(060AA)		
		3216	0.60±0.10/-0.20	±5%	C3216CH1H103J(060AA)		
15nF	2012	0.85±0.10	±5%	C2012CH1H153J(085AA)			
		3216	0.60±0.10/-0.20	±5%	C3216CH1H153J(060AA)		
22nF	2012	1.25±0.10	±5%	C2012CH1H223J(125AA)			
		3216	0.60±0.10/-0.20	±5%	C3216CH1H223J(060AA)		
33nF	2012	1.25±0.20	±5%	C2012CH1H333J(125AA)			
		3216	0.85±0.10	±5%	C3216CH1H333J(085AA)		
47nF	3216	1.15±0.10	±5%	C3216CH1H473J(115AA)			
		3225	2.00±0.20	±5%	C3225CH1H473J(200AA)		
		4532	1.60±0.15	±5%	C4532CH1H473J(160KA)		
68nF	3216	1.60±0.10	±5%	C3216CH1H683J(160AA)			
		3225	2.00±0.20	±5%	C3225CH1H683J(200AA)		
		4532	1.60±0.15	±5%	C4532CH1H683J(160KA)		
100nF	3216	1.60±0.20	±5%	C3216CH1H104J(160AA)			
		3225	2.50±0.30	±5%	C3225CH1H104J(250AA)		
150nF	4532	2.00±0.20	±5%	C4532CH1H104J(200KA)			
220nF	4532	2.50±0.30	±5%	C4532CH1H154J(250KA)			
			±5%	C4532CH1H224J(320KA)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X5R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No. Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
100pF	0402	0.20±0.02	±10%				C0402X5R1C101K(020BA)
			±20%				C0402X5R1C101M(020BA)
100pF	0603	0.30±0.03	±10%			C0603X5R1E101K(030BA)	
			±20%			C0603X5R1E101M(030BA)	
150pF	0402	0.20±0.02	±10%				C0402X5R1C151K(020BA)
			±20%				C0402X5R1C151M(020BA)
150pF	0603	0.30±0.03	±10%			C0603X5R1E151K(030BA)	
			±20%			C0603X5R1E151M(030BA)	
220pF	0402	0.20±0.02	±10%				C0402X5R1C221K(020BA)
			±20%				C0402X5R1C221M(020BA)
220pF	0603	0.30±0.03	±10%			C0603X5R1E221K(030BA)	
			±20%			C0603X5R1E221M(030BA)	
330pF	1005	0.50±0.05	±10%	C1005X5R1H221K(050BA)			
			±20%	C1005X5R1H221M(050BA)			
330pF	0402	0.20±0.02	±10%				C0402X5R1C331K(020BA)
			±20%				C0402X5R1C331M(020BA)
330pF	0603	0.30±0.03	±10%			C0603X5R1E331K(030BA)	
			±20%			C0603X5R1E331M(030BA)	
470pF	1005	0.50±0.05	±10%	C1005X5R1H331K(050BA)			
			±20%	C1005X5R1H331M(050BA)			
470pF	0402	0.20±0.02	±10%				C0402X5R1C471K(020BA)
			±20%				C0402X5R1C471M(020BA)
470pF	0603	0.30±0.03	±10%			C0603X5R1E471K(030BA)	
			±20%			C0603X5R1E471M(030BA)	
680pF	1005	0.50±0.05	±10%	C1005X5R1H471K(050BA)			
			±20%	C1005X5R1H471M(050BA)			
680pF	0402	0.20±0.02	±10%				C0402X5R1C681K(020BA)
			±20%				C0402X5R1C681M(020BA)
680pF	0603	0.30±0.03	±10%			C0603X5R1E681K(030BA)	
			±20%			C0603X5R1E681M(030BA)	
1nF	1005	0.50±0.05	±10%	C1005X5R1H681K(050BA)			
			±20%	C1005X5R1H681M(050BA)			
1nF	0603	0.30±0.03	±10%			C0603X5R1E102K(030BA)	
			±20%			C0603X5R1E102M(030BA)	
1.5nF	1005	0.50±0.05	±10%	C1005X5R1H102K(050BA)			
			±20%	C1005X5R1H102M(050BA)			
1.5nF	0603	0.30±0.03	±10%			C0603X5R1E152K(030BA)	
			±20%			C0603X5R1E152M(030BA)	
2.2nF	1005	0.50±0.05	±10%	C1005X5R1H152K(050BA)			
			±20%	C1005X5R1H152M(050BA)			
2.2nF	0603	0.30±0.03	±10%			C0603X5R1E222K(030BA)	
			±20%			C0603X5R1E222M(030BA)	
3.3nF	1005	0.50±0.05	±10%	C1005X5R1H222K(050BA)			
			±20%	C1005X5R1H222M(050BA)			
3.3nF	0603	0.30±0.03	±10%			C0603X5R1E332K(030BA)	
			±20%			C0603X5R1E332M(030BA)	
4.7nF	1005	0.50±0.05	±10%	C1005X5R1H332K(050BA)			
			±20%	C1005X5R1H332M(050BA)			
4.7nF	0603	0.30±0.03	±10%				C0603X5R1C472K(030BA)
			±20%				C0603X5R1C472M(030BA)
6.8nF	1005	0.50±0.05	±10%	C1005X5R1H472K(050BA)			
			±20%	C1005X5R1H472M(050BA)			
6.8nF	1005	0.50±0.05	±10%	C1005X5R1H682K(050BA)			
			±20%	C1005X5R1H682M(050BA)			
10nF	1005	0.50±0.05	±10%	C1005X5R1H103K(050BB)			
			±20%	C1005X5R1H103M(050BB)			
10nF	1608	0.80±0.10	±10%	C1608X5R1H103K(080AA)			
			±20%	C1608X5R1H103M(080AA)			
15nF	1005	0.50±0.05	±10%	C1005X5R1H153K(050BB)			
			±20%	C1005X5R1H153M(050BB)			
15nF	1608	0.80±0.10	±10%	C1608X5R1H153K(080AA)			
			±20%	C1608X5R1H153M(080AA)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**  
**TEMPERATURE CHARACTERISTICS: X5R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.				
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V	
22nF	1005	0.50±0.05	±10%	C1005X5R1H223K(050BB)				
			±20%	C1005X5R1H223M(050BB)				
	1608	0.80±0.10	±10%	C1608X5R1H223K(080AA)				
			±20%	C1608X5R1H223M(080AA)				
33nF	1005	0.50±0.05	±10%	C1005X5R1H333K(050BB)				
			±20%	C1005X5R1H333M(050BB)				
	1608	0.80±0.10	±10%	C1608X5R1H333K(080AA)				
			±20%	C1608X5R1H333M(080AA)				
47nF	1005	0.50±0.05	±10%	C1005X5R1H473K(050BB)				
			±20%	C1005X5R1H473M(050BB)				
	1608	0.80±0.10	±10%	C1608X5R1H473K(080AA)				
			±20%	C1608X5R1H473M(080AA)				
68nF	1005	0.50±0.05	±10%	C1005X5R1V683K(050BB)	C1005X5R1E683K(050BB)			
			±20%	C1005X5R1H683M(050BB)	C1005X5R1V683M(050BB)	C1005X5R1E683M(050BB)		
	1608	0.80±0.10	±10%	C1608X5R1H683K(080AA)				
			±20%	C1608X5R1H683M(080AA)				
100nF	0603	0.30±0.03	±10%					C0603X5R1C104K(030BC)
			±20%					C0603X5R1C104M(030BC)
	1005	0.50±0.05	±10%	C1005X5R1H104K(050BB)	C1005X5R1V104K(050BB)	C1005X5R1E104K(050BB)	C1005X5R1C104K(050BA)	
			±20%	C1005X5R1H104M(050BB)	C1005X5R1V104M(050BB)	C1005X5R1E104M(050BB)		C1005X5R1C104M(050BA)
	1608	0.80±0.10	±10%	C1608X5R1H104K(080AA)				
			±20%	C1608X5R1H104M(080AA)				
	2012	0.85±0.10	±10%	C2012X5R1H104K(085AA)				
			±20%	C2012X5R1H104M(085AA)				
150nF	1005	0.50±0.05	±10%					C1005X5R1E154K(050BC)
			±20%					C1005X5R1E154M(050BC)
	1608	0.80±0.10	±10%	C1608X5R1H154K(080AB)	C1608X5R1V154K(080AB)	C1608X5R1E154K(080AA)		
			±20%	C1608X5R1H154M(080AB)	C1608X5R1V154M(080AB)	C1608X5R1E154M(080AA)		
2012	0.85±0.10	±10%	C2012X5R1H154K(085AA)					
		±20%	C2012X5R1H154M(085AA)					
220nF	0603	0.30±0.03	±10%					C0603X5R1C224K(030BC)
			±20%					C0603X5R1C224M(030BC)
	1005	0.50±0.05	±10%					C1005X5R1E224K(050BC)
			±20%					C1005X5R1E224M(050BC)
	1608	0.80±0.10	±10%	C1608X5R1H224K(080AB)	C1608X5R1V224K(080AB)	C1608X5R1E224K(080AA)		
			±20%	C1608X5R1H224M(080AB)	C1608X5R1V224M(080AB)	C1608X5R1E224M(080AA)		
	2012	1.25±0.10	±10%	C2012X5R1H224K(125AA)				
			±20%	C2012X5R1H224M(125AA)				
330nF	1005	0.50±0.05	±10%					C1005X5R1C334K(050BC)
			±20%					C1005X5R1C334M(050BC)
	1608	0.80±0.10	±10%	C1608X5R1H334K(080AB)	C1608X5R1V334K(080AB)	C1608X5R1E334K(080AB)		
			±20%	C1608X5R1H334M(080AB)	C1608X5R1V334M(080AB)	C1608X5R1E334M(080AB)		
2012	1.25±0.20	±10%	C2012X5R1H334K(125AA)					
		±20%	C2012X5R1H334M(125AA)					
470nF	1005	0.50±0.05	±10%					C1005X5R1E474K(050BC)
			±20%					C1005X5R1E474M(050BC)
	1608	0.80±0.10	±10%	C1608X5R1H474K(080AB)	C1608X5R1V474K(080AB)	C1608X5R1E474K(080AB)		C1608X5R1C474K(080AA)
			±20%	C1608X5R1H474M(080AB)	C1608X5R1V474M(080AB)	C1608X5R1E474M(080AB)		C1608X5R1C474M(080AA)
2012	1.25±0.10	±10%	C2012X5R1H474K(125AB)					
		±20%	C2012X5R1H474M(125AB)					
680nF	1005	0.50±0.05	±10%					C1005X5R1C684K(050BC)
			±20%					C1005X5R1C684M(050BC)
	1608	0.80±0.10	±10%	C1608X5R1H684K(080AB)	C1608X5R1V684K(080AB)	C1608X5R1E684K(080AB)		C1608X5R1C684K(080AA)
			±20%	C1608X5R1H684M(080AB)	C1608X5R1V684M(080AB)	C1608X5R1E684M(080AB)		C1608X5R1C684M(080AA)
2012	1.25±0.10	±10%	C2012X5R1H684K(125AB)					
		±20%	C2012X5R1H684M(125AB)					

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
 Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X5R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.				
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V	
1µF	1005	0.50±0.05	±10%				C1005X5R1C105K(050BC)	
			±20%				C1005X5R1C105M(050BC)	
	1608	0.80±0.10	±10%	C1608X5R1H105K(080AB)	C1608X5R1V105K(080AB)	C1608X5R1E105K(080AB)	C1608X5R1C105K(080AA)	
			±20%	C1608X5R1H105M(080AB)	C1608X5R1V105M(080AB)	C1608X5R1E105M(080AB)	C1608X5R1C105M(080AA)	
	2012	0.85±0.10	±10%	C2012X5R1H105K(085AB)	C2012X5R1V105K(085AB)			
			±20%	C2012X5R1H105M(085AB)	C2012X5R1V105M(085AB)			
		1.25±0.10	±10%	C2012X5R1H105K(125AB)				
			±20%	C2012X5R1H105M(125AB)				
	3216	1.60±0.10	±10%	C3216X5R1H105K(160AA)				
			±20%	C3216X5R1H105M(160AA)				
1.5µF	1608	0.80±0.10	±10%			C1608X5R1E155K(080AC)	C1608X5R1C155K(080AB)	
			±20%			C1608X5R1E155M(080AC)	C1608X5R1C155M(080AB)	
	2012	0.85±0.10	±10%			C2012X5R1E155K(085AC)		
			±20%			C2012X5R1E155M(085AC)		
	1.25±0.10	±10%	C2012X5R1H155K(125AB)	C2012X5R1V155K(125AB)				
		±20%	C2012X5R1H155M(125AB)	C2012X5R1V155M(125AB)				
	3216	1.60±0.10	±10%	C3216X5R1H155K(160AB)				
			±20%	C3216X5R1H155M(160AB)				
	2.2µF	1608	0.80±0.10	±10%		C1608X5R1V225K(080AC)	C1608X5R1E225K(080AC)	C1608X5R1C225K(080AB)
				±20%		C1608X5R1V225M(080AC)	C1608X5R1E225M(080AC)	C1608X5R1C225M(080AB)
2012		0.85±0.10	±10%	C2012X5R1H225K(085AB)	C2012X5R1V225K(085AB)			
			±20%	C2012X5R1H225M(085AB)	C2012X5R1V225M(085AB)			
1.25±0.20		±10%	C2012X5R1H225K(125AB)	C2012X5R1V225K(125AB)	C2012X5R1E225K(125AC)	C2012X5R1C225K(125AA)		
		±20%	C2012X5R1H225M(125AB)	C2012X5R1V225M(125AB)	C2012X5R1E225M(125AC)	C2012X5R1C225M(125AA)		
3216		1.60±0.20	±10%	C3216X5R1H225K(160AB)				
			±20%	C3216X5R1H225M(160AB)				
3.3µF		1608	0.80±0.10	±10%				C1608X5R1C335K(080AC)
				±20%				C1608X5R1C335M(080AC)
	2012	0.60±0.10	±10%				C2012X5R1C335K(060AC)	
			±20%				C2012X5R1C335M(060AC)	
		0.85±0.10	±10%			C2012X5R1E335K(085AC)	C2012X5R1C335K(085AB)	
			±20%			C2012X5R1E335M(085AC)	C2012X5R1C335M(085AB)	
	1.25±0.10	±10%			C2012X5R1E335K(125AB)	C2012X5R1C335K(125AB)		
		±20%			C2012X5R1E335M(125AB)	C2012X5R1C335M(125AB)		
	3216	1.60±0.10	±10%	C2012X5R1H335K(125AB)	C2012X5R1V335K(125AB)			
			±20%	C2012X5R1H335M(125AB)	C2012X5R1V335M(125AB)			
4.7µF	1608	0.80±0.10	±10%				C1608X5R1C475K(080AC)	
			±20%				C1608X5R1C475M(080AC)	
4.7µF	2012	0.60±0.10	±10%				C2012X5R1C475K(060AC)	
			±20%				C2012X5R1C475M(060AC)	
		0.85±0.10	±10%			C2012X5R1E475K(085AC)	C2012X5R1C475K(085AB)	
			±20%			C2012X5R1E475M(085AC)	C2012X5R1C475M(085AB)	
	1.25±0.10	±10%			C2012X5R1E475K(125AB)	C2012X5R1C475K(125AB)		
		±20%			C2012X5R1E475M(125AB)	C2012X5R1C475M(125AB)		
	3216	1.60±0.10	±10%	C2012X5R1H475K(125AB)	C2012X5R1V475K(125AB)			
			±20%	C2012X5R1H475M(125AB)	C2012X5R1V475M(125AB)			
	3216	1.60±0.10	±10%	C3216X5R1H475K(085AB)	C3216X5R1V475K(085AB)			
			±20%	C3216X5R1H475M(085AB)	C3216X5R1V475M(085AB)			
3216	1.15±0.10	±10%			C3216X5R1E475K(115AB)			
		±20%			C3216X5R1E475M(115AB)			
3216	1.60±0.10	±10%			C3216X5R1E475K(160AA)			
		±20%			C3216X5R1E475M(160AA)			
3225	2.50±0.20	±10%	C3225X5R1H475K(250AB)					
		±20%	C3225X5R1H475M(250AB)					
6.8µF	2012	0.85±0.10	±10%				C2012X5R1C685K(085AC)	
			±20%				C2012X5R1C685M(085AC)	
	3216	1.60±0.10	±10%	C3216X5R1H685K(160AB)	C3216X5R1V685K(160AB)	C3216X5R1E685K(160AB)		
			±20%	C3216X5R1H685M(160AB)	C3216X5R1V685M(160AB)	C3216X5R1E685M(160AB)		
4532	2.50±0.30	±10%	C4532X5R1H685K(250KA)					
		±20%	C4532X5R1H685M(250KA)					

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X5R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.				
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V	
10µF	2012	0.85±0.10	±10%				C2012X5R1C106K(085AC)	
			±20%				C2012X5R1C106M(085AC)	
		1.25±0.10	±10%			C2012X5R1E106K(125AC)	C2012X5R1C106K(125AB)	
			±20%			C2012X5R1E106M(125AC)	C2012X5R1C106M(125AB)	
	3216	0.85±0.10	±10%				C3216X5R1E106K(085AC)	C3216X5R1C106K(085AB)
			±20%				C3216X5R1E106M(085AC)	C3216X5R1C106M(085AB)
		1.60±0.10	±10%					C3216X5R1C106K(160AA)
			±20%					C3216X5R1C106M(160AA)
		1.60±0.20	±10%	C3216X5R1H106K(160AB)	C3216X5R1V106K(160AB)	C3216X5R1E106K(160AB)		
			±20%	C3216X5R1H106M(160AB)	C3216X5R1V106M(160AB)	C3216X5R1E106M(160AB)		
	3225	2.50±0.20	±10%				C3225X5R1E106K(250AA)	
			±20%				C3225X5R1E106M(250AA)	
	4532	2.50±0.30	±10%				C4532X5R1E106K(250KA)	
			±20%				C4532X5R1E106M(250KA)	
5750	2.30±0.20	±10%	C5750X5R1H106K(230KA)					
		±20%	C5750X5R1H106M(230KA)					
15µF	2012	1.25±0.10	±20%				C2012X5R1C156M(125AC)	
	3216	1.60±0.20	±20%			C3216X5R1E156M(160AC)	C3216X5R1C156M(160AB)	
3225	2.50±0.30	±20%				C3225X5R1C156M(250AA)		
4532	2.50±0.30	±20%			C4532X5R1E156M(250KA)			
22µF	2012	1.25±0.10	±20%				C2012X5R1C226M(125AC)	
	3216	1.60±0.20	±20%			C3216X5R1E226M(160AC)	C3216X5R1C226M(160AB)	
	3225	2.50±0.30	±20%				C3225X5R1C226M(250AA)	
4532	2.00±0.20	±20%				C4532X5R1C226M(200KA)		
		±20%						
5750	2.50±0.30	±20%			C4532X5R1E226M(250KA)			
						C5750X5R1E226M(250KA)		
33µF	3216	1.60±0.20	±20%				C3216X5R1C336M(160AB)	
							C4532X5R1C336M(250KA)	
	5750	2.00±0.20	±20%				C5750X5R1C336M(200KA)	
47µF	3216	1.60±0.20	±20%				C3216X5R1C476M(160AB)	
5750	2.30±0.20	±20%				C5750X5R1C476M(230KA)		

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X5R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
1nF	0402	0.20±0.02	±10%	C0402X5R1A102K(020BA)		
			±20%	C0402X5R1A102M(020BA)		
1.5nF	0402	0.20±0.02	±10%	C0402X5R1A152K(020BA)		
			±20%	C0402X5R1A152M(020BA)		
2.2nF	0402	0.20±0.02	±10%	C0402X5R1A222K(020BA)		
			±20%	C0402X5R1A222M(020BA)		
3.3nF	0402	0.20±0.02	±10%	C0402X5R0J332K(020BA)		
			±20%	C0402X5R0J332M(020BA)		
4.7nF	0402	0.20±0.02	±10%	C0402X5R0J472K(020BB)		
			±20%	C0402X5R0J472M(020BB)		
6.8nF	0402	0.20±0.02	±10%	C0402X5R0J682K(020BB)		
			±20%	C0402X5R0J682M(020BB)		
	0603	0.30±0.03	±10%	C0603X5R1A682K(030BA)		
			±20%	C0603X5R1A682M(030BA)		
10nF	0402	0.20±0.02	±10%	C0402X5R0J103K(020BB)		
			±20%	C0402X5R0J103M(020BB)		
	0603	0.30±0.03	±10%	C0603X5R1A103K(030BA)		
			±20%	C0603X5R1A103M(030BA)		
15nF	0603	0.30±0.03	±10%	C0603X5R0J153K(030BA)		
			±20%	C0603X5R0J153M(030BA)		
22nF	0603	0.30±0.03	±10%	C0603X5R0J223K(030BC)		
			±20%	C0603X5R0J223M(030BC)		
33nF	0603	0.30±0.03	±10%	C0603X5R0J333K(030BC)		
			±20%	C0603X5R0J333M(030BC)		
47nF	0603	0.30±0.03	±10%	C0603X5R0J473K(030BC)		
			±20%	C0603X5R0J473M(030BC)		
68nF	0603	0.30±0.03	±10%	C0603X5R0J683K(030BC)		
			±20%	C0603X5R0J683M(030BC)		
100nF	0603	0.30±0.03	±10%	C0603X5R0J104K(030BC)		
			±20%	C0603X5R0J104M(030BC)		
150nF	0603	0.30±0.03	±10%	C0603X5R0J154K(030BA)		
			±20%	C0603X5R0J154M(030BA)		
220nF	0603	0.30±0.03	±10%	C0603X5R0J224K(030BA)		
			±20%	C0603X5R0J224M(030BA)		
330nF	1005	0.50±0.05	±10%	C1005X5R1A334K(050BC)		
			±20%	C1005X5R1A334M(050BC)		
470nF	1005	0.50±0.05	±10%	C1005X5R1A474K(050BC)		
			±20%	C1005X5R1A474M(050BC)		
680nF	1005	0.50±0.05	±10%	C1005X5R1A684K(050BB)		
			±20%	C1005X5R1A684M(050BB)		
1µF	1005	0.50±0.05	±10%	C1005X5R1A105K(050BB)	C1005X5R0J105K(050BC)	
			±20%	C1005X5R1A105M(050BB)	C1005X5R0J105M(050BC)	
1.5µF	1005	0.50±0.05	±10%	C1005X5R1A155K(050BC)	C1005X5R0J155K(050BB)	
			±20%	C1005X5R1A155M(050BC)	C1005X5R0J155M(050BB)	
2.2µF	1005	0.50±0.05	±10%	C1005X5R1A225K(050BC)	C1005X5R0J225K(050BC)	C1005X5R0G225K(050BB)
			±20%	C1005X5R1A225M(050BC)	C1005X5R0J225M(050BB)	C1005X5R0G225M(050BB)
	1608	0.80±0.10	±10%	C1608X5R1A225K(080AC)	C1608X5R0J225K(080AB)	
			±20%	C1608X5R1A225M(080AC)	C1608X5R0J225M(080AB)	
3.3µF	1005	0.50±0.10	±10%	C1005X5R0J335M(050BC)		
			±20%	C1608X5R0J335K(080AB)		
	1608	0.80±0.10	±10%	C1608X5R0J335M(080AB)		
			±20%	C1608X5R1A335M(080AB)		
4.7µF	1005	0.50±0.15/-0.10	±10%	C1005X5R0J475M(050BC)	C1005X5R0G475M(050BB)	
			±20%	C1608X5R0J475K(080AB)		
	1608	0.80±0.10	±10%	C1608X5R1A475K(080AB)	C1608X5R0J475K(080AB)	
			±20%	C1608X5R1A475M(080AB)	C1608X5R0J475M(080AB)	
6.8µF	2012	0.60±0.10	±10%	C2012X5R1A475K(060AB)		
			±20%	C2012X5R1A475M(060AB)		
	1608	0.80±0.10	±10%	C2012X5R1A475K(125AA)	C1608X5R0J685K(080AB)	
			±20%	C2012X5R1A475M(125AA)	C1608X5R0J685M(080AB)	
	2012	1.25±0.10	±10%	C2012X5R1A685K(060AC)	C1608X5R0J685K(080AB)	
			±20%	C2012X5R1A685M(060AC)	C1608X5R0J685M(080AB)	
	2012	1.25±0.10	±10%	C2012X5R1A685K(125AC)		
			±20%	C2012X5R1A685M(125AC)		

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X5R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
10µF	1608	0.80±0.10	±10%	C1608X5R1A106K(080AC)	C1608X5R0J106K(080AB)	
			±20%	C1608X5R1A106M(080AC)	C1608X5R0J106M(080AB)	
	2012	0.85±0.10	±10%	C2012X5R1A106K(085AB)		
			±20%	C2012X5R1A106M(085AB)		
		1.25±0.20	±10%	C2012X5R1A106K(125AC)		
			±20%	C2012X5R1A106M(125AC)		
15µF	2012	0.85±0.10	±20%	C2012X5R1A156M(085AC)		
				C2012X5R1A156M(125AB)		
		1.25±0.10	±20%	C2012X5R1A226M(085AC)	C2012X5R0J226M(085AB)	
			±10%		C2012X5R0J226K(125AB)	
22µF	2012	1.25±0.10	±20%	C2012X5R1A226M(125AB)	C2012X5R0J226M(125AB)	
33µF	3216	1.60±0.20	±20%	C3216X5R1A226M(160AC)		
	2012	1.25±0.20	±20%		C2012X5R0J476M(125AC)	
47µF	3216	1.60±0.20	±20%	C3216X5R1A476M(160AB)	C3216X5R0J476M(160AC)	
				C3225X5R1A476M(250AC)	C3225X5R0J476M(250AA)	
68µF	3216	1.60±0.20	±20%	C3216X5R1A686M(160AC)	C3216X5R0J686M(160AB)	
	3225	2.00±0.20	±20%		C3225X5R0J686M(200AC)	
	5750	2.30±0.20	±20%	C5750X5R1A686M(230KA)		
100µF	3216	1.60+0.30/-0.10	±20%	C3216X5R1A107M(160AC)	C3216X5R0J107M(160AB)	
	3225	2.50±0.30	±20%		C3225X5R0J107M(250AC)	
	4532	2.80±0.30	±20%	C4532X5R1A107M(280KC)	C4532X5R0J107M(280KA)	
5750	2.80±0.30	±20%	C5750X5R1A107M(280KC)	C5750X5R0J107M(280KA)		

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.



**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X6S(±22%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
10nF	1005	0.50±0.05	±10%	C1005X6S1H103K(050BB)			
			±20%	C1005X6S1H103M(050BB)			
15nF	1005	0.50±0.05	±10%	C1005X6S1H153K(050BB)			
			±20%	C1005X6S1H153M(050BB)			
22nF	1005	0.50±0.05	±10%	C1005X6S1H223K(050BB)			
			±20%	C1005X6S1H223M(050BB)			
33nF	1005	0.50±0.05	±10%	C1005X6S1H333K(050BB)			
			±20%	C1005X6S1H333M(050BB)			
47nF	1005	0.50±0.05	±10%	C1005X6S1H473K(050BB)			
			±20%	C1005X6S1H473M(050BB)			
68nF	1005	0.50±0.05	±10%	C1005X6S1H683K(050BB)	C1005X6S1V683K(050BB)	C1005X6S1E683K(050BB)	
			±20%	C1005X6S1H683M(050BB)	C1005X6S1V683M(050BB)	C1005X6S1E683M(050BB)	
100nF	1005	0.50±0.05	±10%	C1005X6S1H104K(050BB)	C1005X6S1V104K(050BB)	C1005X6S1E104K(050BB)	
			±20%	C1005X6S1H104M(050BB)	C1005X6S1V104M(050BB)	C1005X6S1E104M(050BB)	
150nF	1005	0.50±0.05	±10%			C1005X6S1E154K(050BC)	C1005X6S1C154K(050BB)
			±20%			C1005X6S1E154M(050BC)	C1005X6S1C154M(050BB)
	1608	0.80±0.10	±10%	C1608X6S1H154K(080AB)	C1608X6S1V154K(080AB)		
			±20%	C1608X6S1H154M(080AB)	C1608X6S1V154M(080AB)		
220nF	1005	0.50±0.05	±10%			C1005X6S1E224K(050BC)	C1005X6S1C224K(050BB)
			±20%			C1005X6S1E224M(050BC)	C1005X6S1C224M(050BB)
	1608	0.80±0.10	±10%	C1608X6S1H224K(080AB)	C1608X6S1V224K(080AB)		
			±20%	C1608X6S1H224M(080AB)	C1608X6S1V224M(080AB)		
330nF	1608	0.80±0.10	±10%	C1608X6S1H334K(080AB)	C1608X6S1V334K(080AB)	C1608X6S1E334K(080AB)	
			±20%	C1608X6S1H334M(080AB)	C1608X6S1V334M(080AB)	C1608X6S1E334M(080AB)	
470nF	1005	0.50±0.05	±10%				C1005X6S1C474K(050BC)
			±20%				C1005X6S1C474M(050BC)
	1608	0.80±0.10	±10%	C1608X6S1H474K(080AB)	C1608X6S1V474K(080AB)	C1608X6S1E474K(080AB)	
			±20%	C1608X6S1H474M(080AB)	C1608X6S1V474M(080AB)	C1608X6S1E474M(080AB)	
2012	1.25±0.10	±10%	C2012X6S1H474K(125AB)				
		±20%	C2012X6S1H474M(125AB)				
680nF	1608	0.80±0.10	±10%	C1608X6S1H684K(080AC)	C1608X6S1V684K(080AB)	C1608X6S1E684K(080AB)	C1608X6S1C684K(080AB)
			±20%	C1608X6S1H684M(080AC)	C1608X6S1V684M(080AB)	C1608X6S1E684M(080AB)	C1608X6S1C684M(080AB)
	2012	1.25±0.10	±10%	C2012X6S1H684K(125AB)			
			±20%	C2012X6S1H684M(125AB)			
1µF	1608	0.80±0.10	±10%	C1608X6S1H105K(080AC)	C1608X6S1V105K(080AB)	C1608X6S1E105K(080AB)	C1608X6S1C105K(080AC)
			±20%	C1608X6S1H105M(080AC)	C1608X6S1V105M(080AB)	C1608X6S1E105M(080AB)	C1608X6S1C105M(080AC)
	2012	0.85±0.10	±10%	C2012X6S1H105K(085AB)	C2012X6S1V105K(085AB)	C2012X6S1E105K(085AB)	
			±20%	C2012X6S1H105M(085AB)	C2012X6S1V105M(085AB)	C2012X6S1E105M(085AB)	
2012	1.25±0.10	±10%	C2012X6S1H105K(125AB)				
		±20%	C2012X6S1H105M(125AB)				
1.5µF	1608	0.80±0.10	±10%				C1608X6S1C155K(080AC)
			±20%				C1608X6S1C155M(080AC)
	2012	1.25±0.10	±10%	C2012X6S1H155K(125AB)	C2012X6S1V155K(125AB)		
			±20%	C2012X6S1H155M(125AB)	C2012X6S1V155M(125AB)		
3216	1.60±0.10	±10%	C3216X6S1H155K(160AB)				
		±20%	C3216X6S1H155M(160AB)				
2.2µF	1608	0.80±0.10	±10%				C1608X6S1C225K(080AC)
			±20%				C1608X6S1C225M(080AC)
	2012	0.85±0.10	±10%	C2012X6S1H225K(085AC)	C2012X6S1V225K(085AB)	C2012X6S1E225K(085AB)	C2012X6S1C225K(085AB)
			±20%	C2012X6S1H225M(085AC)	C2012X6S1V225M(085AB)	C2012X6S1E225M(085AB)	C2012X6S1C225M(085AB)
2012	1.25±0.20	±10%	C2012X6S1H225K(125AB)	C2012X6S1V225K(125AB)	C2012X6S1E225K(125AB)		
		±20%	C2012X6S1H225M(125AB)	C2012X6S1V225M(125AB)	C2012X6S1E225M(125AB)		
3216	1.60±0.20	±10%	C3216X6S1H225K(160AB)				
		±20%	C3216X6S1H225M(160AB)				
3.3µF	2012	1.25±0.10	±10%				C2012X6S1C335K(125AB)
			±20%				C2012X6S1C335M(125AB)
	2012	1.25±0.20	±10%	C2012X6S1H335K(125AC)	C2012X6S1V335K(125AB)	C2012X6S1E335K(125AB)	
			±20%	C2012X6S1H335M(125AC)	C2012X6S1V335M(125AB)	C2012X6S1E335M(125AB)	
3216	1.60±0.10	±10%	C3216X6S1H335K(160AB)	C3216X6S1V335K(160AB)			
		±20%	C3216X6S1H335M(160AB)	C3216X6S1V335M(160AB)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X6S(±22%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
4.7µF	2012	0.85±0.10	±10%				C2012X6S1C475K(085AC)
			±20%				C2012X6S1C475M(085AC)
		1.25±0.10	±10%				C2012X6S1C475K(125AB)
			±20%				C2012X6S1C475M(125AB)
	1.25±0.20	±10%	C2012X6S1H475K(125AC)	C2012X6S1V475K(125AB)	C2012X6S1E475K(125AB)		
		±20%	C2012X6S1H475M(125AC)	C2012X6S1V475M(125AB)	C2012X6S1E475M(125AB)		
	3216	0.85±0.10	±10%		C3216X6S1V475K(085AC)	C3216X6S1E475K(085AB)	
			±20%		C3216X6S1V475M(085AC)	C3216X6S1E475M(085AB)	
		1.60±0.20	±10%	C3216X6S1H475K(160AB)	C3216X6S1V475K(160AB)	C3216X6S1E475K(160AB)	
			±20%	C3216X6S1H475M(160AB)	C3216X6S1V475M(160AB)	C3216X6S1E475M(160AB)	
3225	2.50±0.20	±10%	C3225X6S1H475K(250AB)				
		±20%	C3225X6S1H475M(250AB)				
6.8µF	2012	1.25±0.10	±10%				C2012X6S1C685K(125AC)
			±20%				C2012X6S1C685M(125AC)
	3216	1.60±0.10	±10%		C3216X6S1V685K(160AC)	C3216X6S1E685K(160AB)	C3216X6S1C685K(160AB)
			±20%		C3216X6S1V685M(160AC)	C3216X6S1E685M(160AB)	C3216X6S1C685M(160AB)
10µF	2012	1.25±0.10	±10%				C2012X6S1C106K(125AC)
			±20%				C2012X6S1C106M(125AC)
	0.85±0.10	±10%					C3216X6S1C106K(085AC)
		±20%					C3216X6S1C106M(085AC)
	3216	1.60±0.10	±10%				C3216X6S1C106K(160AC)
			±20%				C3216X6S1C106M(160AC)
		1.60±0.20	±10%	C3216X6S1V106K(160AC)	C3216X6S1E106K(160AB)		
			±20%	C3216X6S1V106M(160AC)	C3216X6S1E106M(160AB)		
15µF	3216	1.60±0.20	±20%				C3216X6S1C156M(160AC)
22µF	3216	1.60±0.20	±20%				C3216X6S1C226M(160AC)
	3225	2.50±0.30	±20%				C3225X6S1C226M(250AC)

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X6S(±22%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
100nF	0603	0.30±0.03	±10%		C0603X6S0J104K(030BC)	C0603X6S0G104K(030BB)
			±20%		C0603X6S0J104M(030BC)	C0603X6S0G104M(030BB)
220nF	0603	0.30±0.03	±10%		C0603X6S0J224K(030BC)	C0603X6S0G224K(030BB)
			±20%		C0603X6S0J224M(030BC)	C0603X6S0G224M(030BB)
330nF	1005	0.50±0.05	±10%	C1005X6S1A334K(050BB)	C1005X6S0J334K(050BB)	
			±20%	C1005X6S1A334M(050BB)	C1005X6S0J334M(050BB)	
470nF	1005	0.50±0.05	±10%	C1005X6S1A474K(050BB)	C1005X6S0J474K(050BC)	
			±20%	C1005X6S1A474M(050BB)	C1005X6S0J474M(050BC)	
680nF	1005	0.50±0.05	±10%	C1005X6S1A684K(050BC)	C1005X6S0J684K(050BB)	
			±20%	C1005X6S1A684M(050BC)	C1005X6S0J684M(050BB)	
1µF	1005	0.50±0.05	±10%	C1005X6S1A105K(050BC)	C1005X6S0J105K(050BB)	C1005X6S0G105K(050BC)
			±20%	C1005X6S1A105M(050BC)	C1005X6S0J105M(050BB)	C1005X6S0G105M(050BC)
1.5µF	1005	0.50±0.05	±10%			C1005X6S0G155K(050BC)
			±20%			C1005X6S0G155M(050BC)
2.2µF	1005	0.50±0.05	±20%			C1005X6S0G225M(050BC)
3.3µF	1608	0.80±0.10	±10%	C1608X6S1A225K(080AB)	C1608X6S0J225K(080AB)	
			±20%	C1608X6S1A225M(080AB)	C1608X6S0J225M(080AB)	
4.7µF	1608	0.80±0.10	±10%	C1608X6S1A335K(080AC)	C1608X6S0J335K(080AB)	
			±20%	C1608X6S1A335M(080AC)	C1608X6S0J335M(080AB)	
6.8µF	1608	0.80±0.10	±10%	C1608X6S1A475K(080AC)	C1608X6S0J475K(080AB)	
			±20%	C1608X6S1A475M(080AC)	C1608X6S0J475M(080AB)	
10µF	2012	0.85±0.10	±10%	C2012X6S1A475K(085AB)		
			±20%	C2012X6S1A475M(085AB)		
15µF	1608	0.80±0.10	±10%			C1608X6S0G685K(080AC)
			±20%			C1608X6S0G685M(080AC)
22µF	2012	0.85±0.10	±10%	C2012X6S1A685K(085AC)	C2012X6S0J685K(085AB)	
			±20%	C2012X6S1A685M(085AC)	C2012X6S0J685M(085AB)	
33µF	2012	1.25±0.10	±10%	C2012X6S1A685K(125AB)		
			±20%	C2012X6S1A685M(125AB)		
47µF	3216	0.85±0.10	±10%	C3216X6S1A685K(085AB)		
			±20%	C3216X6S1A685M(085AB)		
68µF	1608	0.80+0.20/-0.10	±20%			C1608X6S0G106M(080AC)
			±10%			C1608X6S0G106K(080AC)
100µF	2012	0.85±0.10	±10%	C2012X6S1A106K(085AC)	C2012X6S0J106K(085AB)	
			±20%	C2012X6S1A106M(085AC)	C2012X6S0J106M(085AB)	
150µF	2012	1.25±0.10	±10%	C2012X6S1A106K(125AB)	C2012X6S0J106K(125AB)	
			±20%	C2012X6S1A106M(125AB)	C2012X6S0J106M(125AB)	
220µF	3216	0.85±0.10	±10%	C3216X6S1A106K(085AB)		
			±20%	C3216X6S1A106M(085AB)		
330µF	2012	1.25±0.10	±20%	C2012X6S1A156M(125AC)	C2012X6S0J156M(125AB)	
470µF	3216	1.60±0.20	±20%	C3216X6S1A156M(160AB)		
680µF	2012	1.25±0.10	±20%	C2012X6S1A226M(125AC)	C2012X6S0J226M(125AB)	
1000µF	3216	1.60±0.20	±20%	C3216X6S1A226M(160AB)	C3216X6S0J226M(160AC)	
1500µF	3216	1.60±0.20	±20%	C3216X6S1A336M(160AC)	C3216X6S0J336M(160AB)	
2200µF	3216	1.60±0.20	±20%	C3216X6S1A476M(160AC)	C3216X6S0J476M(160AB)	C3216X6S0G476M(160AC)
3300µF	3225	2.50±0.30	±20%		C3225X6S0J476M(250AC)	
4700µF	3216	1.60±0.20	±20%			C3216X6S0G686M(160AB)
6800µF	3216	1.60+0.30/-0.10	±20%			C3216X6S0G107M(160AB)
10000µF	3225	2.50±0.30	±20%		C3225X6S0J107M(250AC)	C3225X6S0G107M(250AC)
	4532	2.80±0.30	±20%		C4532X6S0J107M(280KC)	

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X7R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		Rated voltage Edc: 25V	Rated voltage Edc: 16V
				Rated voltage Edc: 50V	Rated voltage Edc: 35V		
100pF	0603	0.30±0.03	±10%			C0603X7R1E101K(030BA)	
			±20%			C0603X7R1E101M(030BA)	
150pF	0603	0.30±0.03	±10%			C0603X7R1E151K(030BA)	
			±20%			C0603X7R1E151M(030BA)	
220pF	0603	0.30±0.03	±10%			C0603X7R1E221K(030BA)	
			±20%			C0603X7R1E221M(030BA)	
	±10%	C1005X7R1H221K(050BA)					
	±20%	C1005X7R1H221M(050BA)					
330pF	0603	0.30±0.03	±10%			C0603X7R1E331K(030BA)	
			±20%			C0603X7R1E331M(030BA)	
	±10%	C1005X7R1H331K(050BA)					
	±20%	C1005X7R1H331M(050BA)					
470pF	0603	0.30±0.03	±10%			C0603X7R1E471K(030BA)	
			±20%			C0603X7R1E471M(030BA)	
	±10%	C1005X7R1H471K(050BA)					
	±20%	C1005X7R1H471M(050BA)					
680pF	0603	0.30±0.03	±10%			C0603X7R1E681K(030BA)	
			±20%			C0603X7R1E681M(030BA)	
	±10%	C1005X7R1H681K(050BA)					
	±20%	C1005X7R1H681M(050BA)					
1nF	0603	0.30±0.03	±10%			C0603X7R1E102K(030BA)	
			±20%			C0603X7R1E102M(030BA)	
	±10%	C1005X7R1H102K(050BA)					
	±20%	C1005X7R1H102M(050BA)					
1.5nF	0603	0.30±0.03	±10%			C0603X7R1E152K(030BA)	
			±20%			C0603X7R1E152M(030BA)	
	±10%	C1005X7R1H152K(050BA)					
	±20%	C1005X7R1H152M(050BA)					
2.2nF	0603	0.30±0.03	±10%			C0603X7R1E222K(030BA)	
			±20%			C0603X7R1E222M(030BA)	
	±10%	C1005X7R1H222K(050BA)					
	±20%	C1005X7R1H222M(050BA)					
3.3nF	0603	0.30±0.03	±10%			C0603X7R1E332K(030BA)	
			±20%			C0603X7R1E332M(030BA)	
	±10%	C1005X7R1H332K(050BA)					
	±20%	C1005X7R1H332M(050BA)					
4.7nF	0603	0.30±0.03	±10%			C0603X7R1C472K(030BA)	
			±20%			C0603X7R1C472M(030BA)	
	±10%	C1005X7R1H472K(050BA)					
	±20%	C1005X7R1H472M(050BA)					
6.8nF	1005	0.50±0.05	±10%	C1005X7R1H682K(050BA)			
			±20%	C1005X7R1H682M(050BA)			
10nF	1005	0.50±0.05	±10%	C1005X7R1H103K(050BB)	C1005X7R1V103K(050BB)		
			±20%	C1005X7R1H103M(050BB)	C1005X7R1V103M(050BB)		
	±10%	C1608X7R1H103K(080AA)					
	±20%	C1608X7R1H103M(080AA)					
15nF	1005	0.50±0.05	±10%	C1005X7R1H153K(050BB)	C1005X7R1V153K(050BB)		
			±20%	C1005X7R1H153M(050BB)	C1005X7R1V153M(050BB)		
	±10%	C1608X7R1H153K(080AA)					
	±20%	C1608X7R1H153M(080AA)					
22nF	1005	0.50±0.05	±10%	C1005X7R1H223K(050BB)	C1005X7R1V223K(050BB)		
			±20%	C1005X7R1H223M(050BB)	C1005X7R1V223M(050BB)		
	±10%	C1608X7R1H223K(080AA)					
	±20%	C1608X7R1H223M(080AA)					
33nF	1005	0.50±0.05	±10%	C1005X7R1H333K(050BB)	C1005X7R1V333K(050BB)		
			±20%	C1005X7R1H333M(050BB)	C1005X7R1V333M(050BB)		
	±10%	C1608X7R1H333K(080AA)					
	±20%	C1608X7R1H333M(080AA)					
47nF	1005	0.50±0.05	±10%	C1005X7R1H473K(050BB)	C1005X7R1V473K(050BB)		
			±20%	C1005X7R1H473M(050BB)	C1005X7R1V473M(050BB)		
	±10%	C1608X7R1H473K(080AA)					
	±20%	C1608X7R1H473M(080AA)					
68nF	1005	0.50±0.05	±10%	C1005X7R1H683K(050BB)	C1005X7R1V683K(050BB)	C1005X7R1E683K(050BB)	
			±20%	C1005X7R1H683M(050BB)	C1005X7R1V683M(050BB)	C1005X7R1E683M(050BB)	
	±10%	C1608X7R1H683K(080AA)					
	±20%	C1608X7R1H683M(080AA)					

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: X7R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.				
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V	
100nF	1005	0.50±0.05	±10%	C1005X7R1H104K(050BB)	C1005X7R1V104K(050BB)	C1005X7R1E104K(050BB)	C1005X7R1C104K(050BC)	
			±20%	C1005X7R1H104M(050BB)	C1005X7R1V104M(050BB)	C1005X7R1E104M(050BB)	C1005X7R1C104M(050BC)	
	1608	0.80±0.10	±10%	C1608X7R1H104K(080AA)				
			±20%	C1608X7R1H104M(080AA)				
	2012	0.85±0.10	±10%	C2012X7R1H104K(085AA)				
			±20%	C2012X7R1H104M(085AA)				
150nF	1005	0.50±0.05	±10%				C1005X7R1C154K(050BC)	
			±20%				C1005X7R1C154M(050BC)	
	1608	0.80±0.10	±10%	C1608X7R1H154K(080AB)	C1608X7R1V154K(080AB)	C1608X7R1E154K(080AA)		
			±20%	C1608X7R1H154M(080AB)	C1608X7R1V154M(080AB)	C1608X7R1E154M(080AA)		
	2012	0.85±0.10	±10%	C2012X7R1H154K(085AA)				
			±20%	C2012X7R1H154M(085AA)				
220nF	1005	0.50±0.05	±10%				C1005X7R1C224K(050BC)	
			±20%				C1005X7R1C224M(050BC)	
	1608	0.80±0.10	±10%	C1608X7R1H224K(080AB)	C1608X7R1V224K(080AB)	C1608X7R1E224K(080AC)		
			±20%	C1608X7R1H224M(080AB)	C1608X7R1V224M(080AB)	C1608X7R1E224M(080AC)		
	2012	1.25±0.10	±10%	C2012X7R1H224K(125AA)				
			±20%	C2012X7R1H224M(125AA)				
330nF	1608	0.80±0.10	±10%	C1608X7R1H334K(080AC)	C1608X7R1V334K(080AB)	C1608X7R1E334K(080AB)		
			±20%	C1608X7R1H334M(080AC)	C1608X7R1V334M(080AB)	C1608X7R1E334M(080AB)		
	2012	1.25±0.20	±10%	C2012X7R1H334K(125AA)				
			±20%	C2012X7R1H334M(125AA)				
	470nF	1608	0.80±0.10	±10%	C1608X7R1H474K(080AC)	C1608X7R1V474K(080AB)	C1608X7R1E474K(080AB)	C1608X7R1C474K(080AC)
				±20%	C1608X7R1H474M(080AC)	C1608X7R1V474M(080AB)	C1608X7R1E474M(080AB)	C1608X7R1C474M(080AC)
2012		1.25±0.10	±10%	C2012X7R1H474K(125AB)				
			±20%	C2012X7R1H474M(125AB)				
680nF		1608	0.80±0.10	±10%		C1608X7R1V684K(080AC)	C1608X7R1E684K(080AB)	C1608X7R1C684K(080AC)
				±20%		C1608X7R1V684M(080AC)	C1608X7R1E684M(080AB)	C1608X7R1C684M(080AC)
	2012	1.25±0.10	±10%	C2012X7R1H684K(125AB)				
			±20%	C2012X7R1H684M(125AB)				
	1µF	1608	0.80±0.10	±10%		C1608X7R1V105K(080AC)	C1608X7R1E105K(080AB)	C1608X7R1C105K(080AC)
				±20%		C1608X7R1V105M(080AC)	C1608X7R1E105M(080AB)	C1608X7R1C105M(080AC)
		0.85±0.10	±10%	C2012X7R1H105K(085AC)	C2012X7R1V105K(085AB)	C2012X7R1E105K(085AB)	C2012X7R1C105K(085AA)	
			±20%	C2012X7R1H105M(085AC)	C2012X7R1V105M(085AB)	C2012X7R1E105M(085AB)	C2012X7R1C105M(085AA)	
2012		1.25±0.10	±10%	C2012X7R1H105K(125AB)				
			±20%	C2012X7R1H105M(125AB)				
1.5µF	3216	1.60±0.10	±10%	C3216X7R1H105K(160AB)				
			±20%	C3216X7R1H105M(160AB)				
	2012	1.25±0.10	±10%	C2012X7R1H155K(125AC)	C2012X7R1V155K(125AB)			
			±20%	C2012X7R1H155M(125AC)	C2012X7R1V155M(125AB)			
		1.25±0.20	±10%			C2012X7R1E155K(125AB)	C2012X7R1C155K(125AB)	
			±20%			C2012X7R1E155M(125AB)	C2012X7R1C155M(125AB)	
2.2µF	3216	1.60±0.10	±10%	C3216X7R1H155K(160AB)				
			±20%	C3216X7R1H155M(160AB)				
	2012	0.85±0.10	±10%		C2012X7R1V225K(085AC)	C2012X7R1E225K(085AB)	C2012X7R1C225K(085AB)	
			±20%		C2012X7R1V225M(085AC)	C2012X7R1E225M(085AB)	C2012X7R1C225M(085AB)	
		1.25±0.20	±10%	C2012X7R1H225K(125AC)	C2012X7R1V225K(125AB)	C2012X7R1E225K(125AB)	C2012X7R1C225K(125AB)	
			±20%	C2012X7R1H225M(125AC)	C2012X7R1V225M(125AB)	C2012X7R1E225M(125AB)	C2012X7R1C225M(125AB)	
3.3µF	3216	1.60±0.20	±10%	C3216X7R1H225K(160AB)				
			±20%	C3216X7R1H225M(160AB)				
	2012	1.25±0.20	±10%		C2012X7R1V335K(125AC)	C2012X7R1E335K(125AB)	C2012X7R1C335K(125AB)	
			±20%		C2012X7R1V335M(125AC)	C2012X7R1E335M(125AB)	C2012X7R1C335M(125AB)	
		1.60±0.10	±10%	C3216X7R1H335K(160AC)	C3216X7R1V335K(160AB)			
			±20%	C3216X7R1H335M(160AC)	C3216X7R1V335M(160AB)			

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: X7R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
4.7μF	2012	1.25±0.20	±10%	C2012X7R1V475K(125AC)	C2012X7R1E475K(125AB)	C2012X7R1C475K(125AB)	
			±20%	C2012X7R1V475M(125AC)	C2012X7R1E475M(125AB)	C2012X7R1C475M(125AB)	
	0.85±0.10	±10%	C3216X7R1V475K(085AC)	C3216X7R1E475K(085AB)	C3216X7R1C475K(085AB)		
		±20%	C3216X7R1V475M(085AC)	C3216X7R1E475M(085AB)	C3216X7R1C475M(085AB)		
	1.60±0.10	±10%		C3216X7R1E475K(160AC)			
		±20%		C3216X7R1E475M(160AC)			
6.8μF	3216	1.60±0.10	±10%	C3216X7R1V685K(160AC)	C3216X7R1E685K(160AB)	C3216X7R1C685K(160AC)	
			±20%	C3216X7R1V685M(160AC)	C3216X7R1E685M(160AB)	C3216X7R1C685M(160AC)	
	2.50±0.30	±10%	C4532X7R1H685K(250KB)				
		±20%	C4532X7R1H685M(250KB)				
	3216	1.60±0.10	±10%			C3216X7R1C106K(160AB)	
			±20%			C3216X7R1C106M(160AB)	
10μF	3216	1.60±0.10	±10%	C3216X7R1V106K(160AC)	C3216X7R1E106K(160AB)		
			±20%	C3216X7R1V106M(160AC)	C3216X7R1E106M(160AB)		
	2.50±0.20	±10%		C3225X7R1E106K(250AC)			
		±20%		C3225X7R1E106M(250AC)			
	4532	2.50±0.30	±10%		C4532X7R1E106K(250KA)		
			±20%		C4532X7R1E106M(250KA)		
15μF	3216	1.60±0.10	±10%	C5750X7R1H106K(230KB)			
			±20%	C5750X7R1H106M(230KB)			
	2.50±0.30	±10%				C3225X7R1C156M(250AB)	
		±20%				C3225X7R1C156M(250AC)	
	4532	2.50±0.30	±10%			C4532X7R1E156M(250KC)	
			±20%			C4532X7R1E156M(250K)	
22μF	3216	1.60±0.10	±10%			C5750X7R1E226M(250KA)	
			±20%			C5750X7R1E226M(250K)	
	2.50±0.30	±10%				C4532X7R1C336M(250KC)	
		±20%				C5750X7R1C336M(200KB)	
	4532	2.50±0.30	±10%				
			±20%				
5750	2.50±0.30	±10%					
		±20%					
47μF	5750	2.30±0.20	±10%				C5750X7R1C476M(230KB)
			±20%				

**TEMPERATURE CHARACTERISTICS: X7R(±15%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
100pF	0402	0.20±0.02	±10%	C0402X7R1A101K(020BA)		
			±20%	C0402X7R1A101M(020BA)		
150pF	0402	0.20±0.02	±10%	C0402X7R1A151K(020BA)		
			±20%	C0402X7R1A151M(020BA)		
220pF	0402	0.20±0.02	±10%	C0402X7R1A221K(020BA)		
			±20%	C0402X7R1A221M(020BA)		
330pF	0402	0.20±0.02	±10%	C0402X7R1A331K(020BA)		
			±20%	C0402X7R1A331M(020BA)		
470pF	0402	0.20±0.02	±10%	C0402X7R1A471K(020BA)		
			±20%	C0402X7R1A471M(020BA)		
680pF	0402	0.20±0.02	±10%	C0402X7R1A681K(020BA)		
			±20%	C0402X7R1A681M(020BA)		
220nF	1005	0.50±0.05	±10%	C1005X7R1A224K(050BB)		
			±20%	C1005X7R1A224M(050BB)		
1.5μF	1608	0.80±0.10	±10%	C1608X7R1A155K(080AC)	C1608X7R0J155K(080AB)	
			±20%	C1608X7R1A155M(080AC)	C1608X7R0J155M(080AB)	
2.2μF	1608	0.80±0.10	±10%	C1608X7R1A225K(080AC)	C1608X7R0J225K(080AB)	
			±20%	C1608X7R1A225M(080AC)	C1608X7R0J225M(080AB)	
4.7μF	2012	0.85±0.10	±10%	C2012X7R1A475K(085AC)	C2012X7R0J475K(085AB)	
			±20%	C2012X7R1A475M(085AC)	C2012X7R0J475M(085AB)	
			±20%	C2012X7R1A475K(125AC)		
6.8μF	2012	1.25±0.10	±10%	C2012X7R1A475K(125AC)		
			±20%	C2012X7R1A475M(125AC)		
10μF	2012	1.25±0.20	±10%	C2012X7R1A106K(125AC)		
			±20%	C2012X7R1A106M(125AC)		
			±10%	C3216X7R1A106K(085AC)	C3216X7R0J106K(085AB)	
±20%	C3216X7R1A106M(085AC)	C3216X7R0J106M(085AB)				

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: X7S(±22%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
6.8μF	3225	2.50±0.20	±10%	C3225X7S1H685K(250AB)			
			±20%	C3225X7S1H685M(250AB)			
10μF	3225	2.50±0.20	±10%	C3225X7S1H106K(250AB)			
			±20%	C3225X7S1H106M(250AB)			

**TEMPERATURE CHARACTERISTICS: X7S(±22%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
100nF	0603	0.30±0.03	±10%	C0603X7S0G104K(030BC)		
			±20%	C0603X7S0G104M(030BC)		
220nF	0603	0.30±0.03	±10%	C0603X7S0G224K(030BC)		
			±20%	C0603X7S0G224M(030BC)		
470nF	1005	0.50±0.05	±10%	C1005X7S1A474K(050BC)	C1005X7S0J474K(050BB)	
			±20%	C1005X7S1A474M(050BC)	C1005X7S0J474M(050BB)	
1μF	1005	0.50±0.05	±10%	C1005X7S0G105K(050BC)		
			±20%	C1005X7S0G105M(050BC)		
2.2μF	1608	0.80±0.10	±10%	C1608X7S1A225K(080AC)	C1608X7S0J225K(080AB)	
			±20%	C1608X7S1A225M(080AC)	C1608X7S0J225M(080AB)	
4.7μF	1608	0.80±0.10	±10%	C1608X7S0G475K(080AC)		
			±20%	C1608X7S0G475M(080AC)		
10μF	2012	0.85±0.10	±10%	C2012X7S0G106K(085AC)		
			±20%	C2012X7S0G106M(085AC)		
47μF	3225	2.50±0.30	±20%	C3225X7S0J476M(250AC)		

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: JB(±10%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No. Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
100pF	0402	0.20±0.02	±10% ±20%				C0402JB1C101K(020BA) C0402JB1C101M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E101K(030BA) C0603JB1E101M(030BA)	
150pF	0402	0.20±0.02	±10% ±20%				C0402JB1C151K(020BA) C0402JB1C151M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E151K(030BA) C0603JB1E151M(030BA)	
220pF	0402	0.20±0.02	±10% ±20%				C0402JB1C221K(020BA) C0402JB1C221M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E221K(030BA) C0603JB1E221M(030BA)	
330pF	0402	0.20±0.02	±10% ±20%				C0402JB1C331K(020BA) C0402JB1C331M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E331K(030BA) C0603JB1E331M(030BA)	
470pF	0402	0.20±0.02	±10% ±20%				C0402JB1C471K(020BA) C0402JB1C471M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E471K(030BA) C0603JB1E471M(030BA)	
680pF	0402	0.20±0.02	±10% ±20%				C0402JB1C681K(020BA) C0402JB1C681M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E681K(030BA) C0603JB1E681M(030BA)	
1nF	0402	0.20±0.02	±10% ±20%				C0402JB1C102K(020BA) C0402JB1C102M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E102K(030BA) C0603JB1E102M(030BA)	
1.5nF	0402	0.20±0.02	±10% ±20%				C0402JB1C152K(020BA) C0402JB1C152M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E152K(030BA) C0603JB1E152M(030BA)	
2.2nF	0402	0.20±0.02	±10% ±20%				C0402JB1C222K(020BA) C0402JB1C222M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E222K(030BA) C0603JB1E222M(030BA)	
3.3nF	0402	0.20±0.02	±10% ±20%				C0402JB1C332K(020BA) C0402JB1C332M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E332K(030BA) C0603JB1E332M(030BA)	
4.7nF	0402	0.20±0.02	±10% ±20%				C0402JB1C472K(020BA) C0402JB1C472M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E472K(030BA) C0603JB1E472M(030BA)	
6.8nF	0402	0.20±0.02	±10% ±20%				C0402JB1C682K(020BA) C0402JB1C682M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E682K(030BA) C0603JB1E682M(030BA)	
10nF	0402	0.20±0.02	±10% ±20%				C0402JB1C103K(020BA) C0402JB1C103M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E103K(030BA) C0603JB1E103M(030BA)	
15nF	0402	0.20±0.02	±10% ±20%				C0402JB1C153K(020BA) C0402JB1C153M(020BA)
	0603	0.30±0.03	±10% ±20%			C0603JB1E153K(030BA) C0603JB1E153M(030BA)	

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.



**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: JB(±10%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
22nF	1005	0.50±0.05	±10%	C1005JB1H223K(050BB)			
			±20%	C1005JB1H223M(050BB)			
	1608	0.80±0.10	±10%	C1608JB1H223K(080AA)			
			±20%	C1608JB1H223M(080AA)			
33nF	1005	0.50±0.05	±10%	C1005JB1H333K(050BB)			
			±20%	C1005JB1H333M(050BB)			
	1608	0.80±0.10	±10%	C1608JB1H333K(080AA)			
			±20%	C1608JB1H333M(080AA)			
47nF	1005	0.50±0.05	±10%	C1005JB1H473K(050BB)			
			±20%	C1005JB1H473M(050BB)			
	1608	0.80±0.10	±10%	C1608JB1H473K(080AA)			
			±20%	C1608JB1H473M(080AA)			
68nF	1005	0.50±0.05	±10%	C1005JB1H683K(050BB)	C1005JB1V683K(050BB)	C1005JB1E683K(050BB)	
			±20%	C1005JB1H683M(050BB)	C1005JB1V683M(050BB)	C1005JB1E683M(050BB)	
	1608	0.80±0.10	±10%	C1608JB1H683K(080AA)			
			±20%	C1608JB1H683M(080AA)			
100nF	0603	0.30±0.03	±10%				C0603JB1C104K(030BC)
			±20%				C0603JB1C104M(030BC)
	1005	0.50±0.05	±10%	C1005JB1H104K(050BB)	C1005JB1V104K(050BB)	C1005JB1E104K(050BB)	C1005JB1C104K(050BA)
			±20%	C1005JB1H104M(050BB)	C1005JB1V104M(050BB)	C1005JB1E104M(050BB)	C1005JB1C104M(050BA)
	1608	0.80±0.10	±10%	C1608JB1H104K(080AA)			
			±20%	C1608JB1H104M(080AA)			
	2012	0.85±0.10	±10%	C2012JB1H104K(085AA)			
			±20%	C2012JB1H104M(085AA)			
150nF	1005	0.50±0.05	±10%			C1005JB1E154K(050BC)	C1005JB1C154K(050BB)
			±20%			C1005JB1E154M(050BC)	C1005JB1C154M(050BB)
	1608	0.80±0.10	±10%	C1608JB1H154K(080AB)	C1608JB1V154K(080AB)	C1608JB1E154K(080AA)	
			±20%	C1608JB1H154M(080AB)	C1608JB1V154M(080AB)	C1608JB1E154M(080AA)	
	2012	0.85±0.10	±10%	C2012JB1H154K(085AA)			
			±20%	C2012JB1H154M(085AA)			
	0603	0.30±0.03	±10%				C0603JB1C224K(030BC)
			±20%				C0603JB1C224M(030BC)
220nF	1005	0.50±0.05	±10%			C1005JB1E224K(050BC)	C1005JB1C224K(050BB)
			±20%			C1005JB1E224M(050BC)	C1005JB1C224M(050BB)
	1608	0.80±0.10	±10%	C1608JB1H224K(080AB)	C1608JB1V224K(080AB)	C1608JB1E224K(080AA)	
			±20%	C1608JB1H224M(080AB)	C1608JB1V224M(080AB)	C1608JB1E224M(080AA)	
2012	1.25±0.10	±10%	C2012JB1H224K(125AA)				
		±20%	C2012JB1H224M(125AA)				
330nF	1005	0.50±0.05	±10%				C1005JB1C334K(050BC)
			±20%				C1005JB1C334M(050BC)
	1608	0.80±0.10	±10%	C1608JB1H334K(080AB)	C1608JB1V334K(080AB)	C1608JB1E334K(080AB)	
			±20%	C1608JB1H334M(080AB)	C1608JB1V334M(080AB)	C1608JB1E334M(080AB)	
2012	1.25±0.20	±10%	C2012JB1H334K(125AA)				
		±20%	C2012JB1H334M(125AA)				
470nF	1005	0.50±0.05	±10%		C1005JB1V474K(050BC)	C1005JB1E474K(050BB)	
			±20%		C1005JB1V474M(050BC)	C1005JB1E474M(050BB)	
	1608	0.80±0.10	±10%	C1608JB1H474K(080AB)	C1608JB1V474K(080AB)	C1608JB1E474K(080AB)	C1608JB1C474K(080AA)
			±20%	C1608JB1H474M(080AB)	C1608JB1V474M(080AB)	C1608JB1E474M(080AB)	C1608JB1C474M(080AA)
2012	1.25±0.10	±10%	C2012JB1H474K(125AB)				
		±20%	C2012JB1H474M(125AB)				
680nF	1005	0.50±0.05	±10%				C1005JB1C684K(050BC)
			±20%				C1005JB1C684M(050BC)
	1608	0.80±0.10	±10%	C1608JB1H684K(080AB)	C1608JB1V684K(080AB)	C1608JB1E684K(080AB)	C1608JB1C684K(080AA)
			±20%	C1608JB1H684M(080AB)	C1608JB1V684M(080AB)	C1608JB1E684M(080AB)	C1608JB1C684M(080AA)
2012	1.25±0.10	±10%	C2012JB1H684K(125AB)				
		±20%	C2012JB1H684M(125AB)				

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: JB(±10%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
1μF	1005	0.50±0.05	±10%				C1005JB1C105K(050BC)
			±20%				C1005JB1C105M(050BC)
	1608	0.80±0.10	±10%	C1608JB1H105K(080AB)	C1608JB1V105K(080AB)	C1608JB1E105K(080AB)	C1608JB1C105K(080AA)
			±20%	C1608JB1H105M(080AB)	C1608JB1V105M(080AB)	C1608JB1E105M(080AB)	C1608JB1C105M(080AA)
	2012	0.85±0.10	±10%	C2012JB1H105K(085AB)	C2012JB1V105K(085AB)	C2012JB1E105K(085AC)	C2012JB1C105K(085AC)
			±20%	C2012JB1H105M(085AB)	C2012JB1V105M(085AB)	C2012JB1E105M(085AC)	C2012JB1C105M(085AC)
		1.25±0.10	±10%	C2012JB1H105K(125AB)		C2012JB1E105K(125AA)	
			±20%	C2012JB1H105M(125AB)		C2012JB1E105M(125AA)	
	3216	1.60±0.10	±10%	C3216JB1H105K(160AA)			
			±20%	C3216JB1H105M(160AA)			
1.5μF	1608	0.80±0.10	±10%			C1608JB1E155K(080AC)	C1608JB1C155K(080AB)
			±20%			C1608JB1E155M(080AC)	C1608JB1C155M(080AB)
	2012	0.85±0.10	±10%			C2012JB1E155K(085AC)	
			±20%			C2012JB1E155M(085AC)	
	1.25±0.10	±10%	C2012JB1H155K(125AB)	C2012JB1V155K(125AB)	C2012JB1E155K(125AB)	C2012JB1C155K(125AA)	
		±20%	C2012JB1H155M(125AB)	C2012JB1V155M(125AB)	C2012JB1E155M(125AB)	C2012JB1C155M(125AA)	
3216	1.60±0.10	±10%	C3216JB1H155K(160AB)				
		±20%	C3216JB1H155M(160AB)				
2.2μF	1608	0.80±0.10	±10%		C1608JB1V225K(080AC)	C1608JB1E225K(080AC)	C1608JB1C225K(080AB)
			±20%		C1608JB1V225M(080AC)	C1608JB1E225M(080AC)	C1608JB1C225M(080AB)
	2012	0.85±0.10	±10%	C2012JB1H225K(085AB)	C2012JB1V225K(085AB)		
			±20%	C2012JB1H225M(085AB)	C2012JB1V225M(085AB)		
		1.25±0.10	±10%			C2012JB1E225K(125AC)	C2012JB1C225K(125AA)
			±20%			C2012JB1E225M(125AC)	C2012JB1C225M(125AA)
	1.25±0.20	±10%	C2012JB1H225K(125AB)	C2012JB1V225K(125AB)			
		±20%	C2012JB1H225M(125AB)	C2012JB1V225M(125AB)			
3216	1.60±0.20	±10%	C3216JB1H225K(160AB)				
		±20%	C3216JB1H225M(160AB)				
3.3μF	1608	0.80±0.10	±10%				C1608JB1C335K(080AC)
			±20%				C1608JB1C335M(080AC)
	2012	0.60±0.10	±10%				C2012JB1C335K(060AC)
			±20%				C2012JB1C335M(060AC)
		0.85±0.10	±10%			C2012JB1E335K(085AC)	C2012JB1C335K(085AB)
			±20%			C2012JB1E335M(085AC)	C2012JB1C335M(085AB)
	1.25±0.10	±10%			C2012JB1E335K(125AB)	C2012JB1C335K(125AB)	
		±20%			C2012JB1E335M(125AB)	C2012JB1C335M(125AB)	
1.25±0.20	±10%	C2012JB1H335K(125AB)	C2012JB1V335K(125AB)				
	±20%	C2012JB1H335M(125AB)	C2012JB1V335M(125AB)				
3216	1.60±0.10	±10%	C3216JB1H335K(160AB)	C3216JB1V335K(160AB)			
		±20%	C3216JB1H335M(160AB)	C3216JB1V335M(160AB)			
4.7μF	1608	0.80±0.10	±10%				C1608JB1C475K(080AC)
			±20%				C1608JB1C475M(080AC)
	2012	0.60±0.10	±10%				C2012JB1C475K(060AC)
			±20%				C2012JB1C475M(060AC)
		0.85±0.10	±10%			C2012JB1E475K(085AC)	C2012JB1C475K(085AB)
			±20%			C2012JB1E475M(085AC)	C2012JB1C475M(085AB)
	1.25±0.10	±10%			C2012JB1E475K(125AB)	C2012JB1C475K(125AB)	
		±20%			C2012JB1E475M(125AB)	C2012JB1C475M(125AB)	
	1.25±0.20	±10%	C2012JB1H475K(125AB)	C2012JB1V475K(125AB)			
		±20%	C2012JB1H475M(125AB)	C2012JB1V475M(125AB)			
3216	0.85±0.10	±10%	C3216JB1H475K(085AB)	C3216JB1V475K(085AB)			
		±20%	C3216JB1H475M(085AB)	C3216JB1V475M(085AB)			
	1.15±0.10	±10%			C3216JB1E475K(115AB)		
		±20%			C3216JB1E475M(115AB)		
1.60±0.10	±10%			C3216JB1E475K(160AA)			
	±20%			C3216JB1E475M(160AA)			
1.60±0.20	±10%	C3216JB1H475K(160AB)	C3216JB1V475K(160AB)				
	±20%	C3216JB1H475M(160AB)	C3216JB1V475M(160AB)				
3225	2.50±0.20	±10%	C3225JB1H475K(250AB)				
		±20%	C3225JB1H475M(250AB)				
6.8μF	2012	0.85±0.10	±10%				C2012JB1C685K(085AC)
			±20%				C2012JB1C685M(085AC)
	1.25±0.10	±10%			C2012JB1E685K(125AC)	C2012JB1C685K(125AB)	
		±20%			C2012JB1E685M(125AC)	C2012JB1C685M(125AB)	
	3216	1.60±0.10	±10%	C3216JB1H685K(160AB)	C3216JB1V685K(160AB)	C3216JB1E685K(160AB)	
		±20%	C3216JB1H685M(160AB)	C3216JB1V685M(160AB)	C3216JB1E685M(160AB)		
4532	2.50±0.30	±10%	C4532JB1H685K(250KA)				
		±20%	C4532JB1H685M(250KA)				

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: JB(±10%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
10μF	2012	0.85±0.10	±10%				C2012JB1C106K(085AC)
			±20%				C2012JB1C106M(085AC)
		1.25±0.10	±10%			C2012JB1E106K(125AC)	C2012JB1C106K(125AB)
			±20%			C2012JB1E106M(125AC)	C2012JB1C106M(125AB)
	3216	0.85±0.10	±10%			C3216JB1E106K(085AC)	C3216JB1C106K(085AB)
			±20%			C3216JB1E106M(085AC)	C3216JB1C106M(085AB)
		1.60±0.10	±10%	C3216JB1H106K(160AB)	C3216JB1V106K(160AB)	C3216JB1E106K(160AB)	
			±20%	C3216JB1H106M(160AB)	C3216JB1V106M(160AB)	C3216JB1E106M(160AB)	
		1.60±0.20	±10%			C3225JB1E106K(250AA)	
			±20%			C3225JB1E106M(250AA)	
3225	2.50±0.20	±10%			C4532JB1E106K(250KA)		
		±20%			C4532JB1E106M(250KA)		
15μF	2012	1.25±0.10	±20%				C2012JB1C156M(125AC)
			±20%				C3216JB1E156M(160AC)
	3216	1.60±0.20	±20%				C3225JB1C156M(250AA)
			±20%				C4532JB1E156M(250KA)
22μF	2012	1.25±0.10	±20%				C2012JB1C226M(125AC)
			±20%				C3216JB1E226M(160AC)
	3216	1.60±0.20	±20%				C3225JB1C226M(250AA)
			±20%				C4532JB1C226M(200KA)
	4532	2.50±0.30	±20%				C4532JB1E226M(250KA)
			±20%				C5750JB1E226M(250KA)
5750	2.50±0.30	±20%					
		±20%					
33μF	3216	1.60±0.20	±20%				C3216JB1C336M(160AB)
			±20%				C4532JB1C336M(250KA)
47μF	3216	1.60±0.20	±20%				C3216JB1C476M(160AB)

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

• All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: JB(±10%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
1nF	0402	0.20±0.02	±10%	C0402JB1A102K(020BA)		
			±20%	C0402JB1A102M(020BA)		
1.5nF	0402	0.20±0.02	±10%	C0402JB1A152K(020BA)		
			±20%	C0402JB1A152M(020BA)		
2.2nF	0402	0.20±0.02	±10%	C0402JB1A222K(020BA)		
			±20%	C0402JB1A222M(020BA)		
3.3nF	0402	0.20±0.02	±10%		C0402JB0J332K(020BA)	
			±20%		C0402JB0J332M(020BA)	
4.7nF	0402	0.20±0.02	±10%		C0402JB0J472K(020BB)	
			±20%		C0402JB0J472M(020BB)	
6.8nF	0402	0.20±0.02	±10%		C0402JB0J682K(020BB)	
			±20%		C0402JB0J682M(020BB)	
	0603	0.30±0.03	±10%	C0603JB1A682K(030BB)		
			±20%	C0603JB1A682M(030BB)		
10nF	0402	0.20±0.02	±10%		C0402JB0J103K(020BB)	
			±20%		C0402JB0J103M(020BB)	
	0603	0.30±0.03	±10%	C0603JB1A103K(030BB)		
			±20%	C0603JB1A103M(030BB)		
15nF	0603	0.30±0.03	±10%	C0603JB1A153K(030BB)		
			±20%	C0603JB1A153M(030BB)		
22nF	0603	0.30±0.03	±10%	C0603JB1A223K(030BB)		
			±20%	C0603JB1A223M(030BB)		
33nF	0603	0.30±0.03	±10%	C0603JB1A333K(030BB)		
			±20%	C0603JB1A333M(030BB)		
47nF	0603	0.30±0.03	±10%	C0603JB1A473K(030BB)		
			±20%	C0603JB1A473M(030BB)		
68nF	0603	0.30±0.03	±10%	C0603JB1A683K(030BB)		
			±20%	C0603JB1A683M(030BB)		
100nF	0603	0.30±0.03	±10%	C0603JB1A104K(030BB)		
			±20%	C0603JB1A104M(030BB)		
150nF	0603	0.30±0.03	±10%	C0603JB1A154K(030BB)		
			±20%	C0603JB1A154M(030BB)		
220nF	0603	0.30±0.03	±10%	C0603JB1A224K(030BB)		
			±20%	C0603JB1A224M(030BB)		
330nF	1005	0.50±0.05	±10%	C1005JB1A334K(050BC)		
			±20%	C1005JB1A334M(050BC)		
470nF	1005	0.50±0.05	±10%	C1005JB1A474K(050BC)		
			±20%	C1005JB1A474M(050BC)		
680nF	1005	0.50±0.05	±10%	C1005JB1A684K(050BB)		
			±20%	C1005JB1A684M(050BB)		
1μF	1005	0.50±0.05	±10%	C1005JB1A105K(050BB)	C1005JB0J105K(050BC)	
			±20%	C1005JB1A105M(050BB)	C1005JB0J105M(050BC)	
1.5μF	1005	0.50±0.05	±10%	C1005JB1A155K(050BC)	C1005JB0J155K(050BB)	
			±20%	C1005JB1A155M(050BC)	C1005JB0J155M(050BB)	
2.2μF	1005	0.50±0.05	±10%	C1005JB1A225K(050BC)	C1005JB0J225K(050BC)	C1005JB0G225K(050BB)
			±20%	C1005JB1A225M(050BC)	C1005JB0J225M(050BB)	C1005JB0G225M(050BB)
	1608	0.80±0.10	±10%	C1608JB1A225K(080AC)	C1608JB0J225K(080AB)	
			±20%	C1608JB1A225M(080AC)	C1608JB0J225M(080AB)	

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2**
**TEMPERATURE CHARACTERISTICS: JB(±10%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
3.3μF	1005	0.50±0.10	±20%		C1005JB0J335M(050BC)	C1005JB0G335M(050BB)
			±10%		C1608JB0J335K(080AB)	
	1608	0.80±0.15/-0.10	±20%		C1608JB0J335M(080AB)	
			±10%	C1608JB1A335K(080AB)		
		0.80±0.10	±20%	C1608JB1A335M(080AB)		
4.7μF	1005	0.50±0.15/-0.10	±20%		C1005JB0J475M(050BC)	C1005JB0G475M(050BB)
			±10%	C1608JB1A475K(080AB)	C1608JB0J475K(080AB)	
	1608	0.80±0.10	±20%	C1608JB1A475M(080AB)	C1608JB0J475M(080AB)	
			±10%	C2012JB1A475K(060AB)		
	2012	0.60±0.10	±20%	C2012JB1A475M(060AB)		
			±10%	C2012JB1A475K(125AA)		
		1.25±0.10	±20%	C2012JB1A475M(125AA)		
6.8μF	1608	0.80±0.10	±10%	C1608JB1A685K(080AC)	C1608JB0J685K(080AB)	
			±20%	C1608JB1A685M(080AC)	C1608JB0J685M(080AB)	
	2012	0.60±0.10	±10%	C2012JB1A685K(060AC)		
			±20%	C2012JB1A685M(060AC)		
		1.25±0.10	±10%	C2012JB1A685K(125AC)		
			±20%	C2012JB1A685M(125AC)		
10μF	1608	0.80±0.10	±10%	C1608JB1A106K(080AC)	C1608JB0J106K(080AB)	
			±20%	C1608JB1A106M(080AC)	C1608JB0J106M(080AB)	
	2012	0.85±0.10	±10%	C2012JB1A106K(085AB)		
			±20%	C2012JB1A106M(085AB)		
		1.25±0.20	±10%	C2012JB1A106K(125AC)		
			±20%	C2012JB1A106M(125AC)		
15μF	2012	0.85±0.10	±20%	C2012JB1A156M(085AC)		
			±10%	C2012JB1A156M(125AB)		
22μF	2012	0.85±0.10	±20%	C2012JB1A226M(085AC)	C2012JB0J226M(085AB)	
			±10%	C2012JB1A226M(125AB)	C2012JB0J226M(125AB)	
33μF	3216	1.60±0.20	±20%	C3216JB1A226M(160AC)		
			±10%		C2012JB0J336M(125AC)	
47μF	2012	1.25±0.20	±20%		C2012JB0J476M(125AC)	
			±10%	C3216JB1A336M(160AB)		
68μF	3216	1.60±0.20	±20%	C3216JB1A476M(160AB)	C3216JB0J476M(160AC)	
			±10%	C3216JB1A686M(160AC)	C3216JB0J686M(160AB)	
100μF	3225	2.00±0.20	±20%		C3225JB0J686M(200AC)	
			±10%	C3216JB1A107M(160AC)	C3216JB0J107M(160AB)	
		2.50±0.30	±20%		C3225JB0J107M(250AC)	

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: Y5V(+22, -82%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
100nF	1005	0.50±0.05	+80%, -20%			C1005Y5V1E104Z(050BA)	
	1608	0.80±0.10	+80%, -20%	C1608Y5V1H104Z(080AA)			
220nF	1005	0.50±0.05	+80%, -20%			C1005Y5V1E224Z(050BA)	
	1608	0.80±0.10	+80%, -20%	C1608Y5V1H224Z(080AA)			
470nF	1608	0.80±0.10	+80%, -20%	C1608Y5V1H474Z(080AA)			
1µF	1608	0.80±0.10	+80%, -20%			C1608Y5V1E105Z(080AA)	
	2012	0.85±0.10	+80%, -20%	C2012Y5V1H105Z(085AA)			
2.2µF	1608	0.80±0.10	+80%, -20%				C1608Y5V1C225Z(080AA)
	2012	1.25±0.10	+80%, -20%	C2012Y5V1H225Z(125AA)			
4.7µF	2012	1.25±0.20	+80%, -20%			C2012Y5V1E475Z(125AA)	
	3216	1.60±0.10	+80%, -20%	C3216Y5V1H475Z(160AA)			
10µF	2012	1.25±0.20	+80%, -20%				C2012Y5V1C106Z(125AA)
	3216	1.60±0.20	+80%, -20%			C3216Y5V1E106Z(160AA)	
	3225	1.60±0.20	+80%, -20%	C3225Y5V1H106Z(160AA)			
22µF	3216	1.60±0.20	+80%, -20%				C3216Y5V1C226Z(160AA)
	3225	2.00±0.20	+80%, -20%			C3225Y5V1E226Z(200AA)	
	5750	2.00±0.20	+80%, -20%	C5750Y5V1H226Z(200KA)			
47µF	3225	2.30±0.20	+80%, -20%				C3225Y5V1C476Z(230AA)
	5750	2.00±0.20	+80%, -20%			C5750Y5V1E476Z(200KA)	
100µF	5750	2.50±0.30	+80%, -20%				C5750Y5V1C107Z(250KA)

**TEMPERATURE CHARACTERISTICS: Y5V(+22, -82%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
470nF	1005	0.50±0.05	+80%, -20%	C1005Y5V1A474Z(050BA)		
1µF	1005	0.50±0.05	+80%, -20%		C1005Y5V0J105Z(050BA)	
4.7µF	1608	0.80±0.10	+80%, -20%		C1608Y5V0J475Z(080AA)	
22µF	2012	1.25±0.20	+80%, -20%		C2012Y5V0J226Z(125AA)	
47µF	3216	1.60±0.30/-0.10	+80%, -20%		C3216Y5V0J476Z(160AA)	
	3225	2.00±0.20	+80%, -20%	C3225Y5V1A476Z(200AA)		
100µF	3225	2.50±0.30	+80%, -20%		C3225Y5V0J107Z(250AA)	
	4532	2.50±0.30	+80%, -20%	C4532Y5V1A107Z(250KA)		

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.  
Please read the precautions before using this catalog.

**CAPACITANCE RANGES: CLASS 2****TEMPERATURE CHARACTERISTICS: JF(+30, -80%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.			
				Rated voltage Edc: 50V	Rated voltage Edc: 35V	Rated voltage Edc: 25V	Rated voltage Edc: 16V
100nF	1005	0.50±0.05	+80%, -20%				
	1608	0.80±0.10	+80%, -20%	C1608JF1H104Z(080AA)			
220nF	1005	0.50±0.05	+80%, -20%				C1005JF1E224Z(050BA)
	1608	0.80±0.10	+80%, -20%	C1608JF1H224Z(080AA)			
470nF	1608	0.80±0.10	+80%, -20%	C1608JF1H474Z(080AA)			
	1608	0.80±0.10	+80%, -20%				C1608JF1E105Z(080AA)
1µF	2012	0.85±0.10	+80%, -20%	C2012JF1H105Z(085AA)			
	1608	0.80±0.10	+80%, -20%				C1608JF1C225Z(080AA)
2.2µF	2012	1.25±0.10	+80%, -20%	C2012JF1H225Z(125AA)			
	2012	1.25±0.20	+80%, -20%				C2012JF1E475Z(125AA)
4.7µF	3216	1.60±0.10	+80%, -20%	C3216JF1H475Z(160AA)			
	2012	1.25±0.20	+80%, -20%				C2012JF1C106Z(125AA)
10µF	3216	1.60±0.20	+80%, -20%				C3216JF1E106Z(160AA)
	3225	1.60±0.20	+80%, -20%	C3225JF1H106Z(160AA)			
	3216	1.60±0.20	+80%, -20%				C3216JF1C226Z(160AA)
22µF	3225	2.00±0.20	+80%, -20%				C3225JF1E226Z(200AA)
	5750	2.00±0.20	+80%, -20%	C5750JF1H226Z(200KA)			
47µF	3225	2.30±0.20	+80%, -20%				C3225JF1C476Z(230AA)
	5750	2.00±0.20	+80%, -20%				C5750JF1E476Z(200KA)
100µF	5750	2.50±0.30	+80%, -20%				C5750JF1C107Z(250KA)

**TEMPERATURE CHARACTERISTICS: JF(+30, -80%)**

Capacitance	Dimension L×W	Thickness T(mm)	Capacitance tolerance	Part No.		
				Rated voltage Edc: 10V	Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
470nF	1005	0.50±0.05	+80%, -20%	C1005JF1A474Z(050BA)		
1µF	1005	0.50±0.05	+80%, -20%			C1005JF0J105Z(050BA)
4.7µF	1608	0.80±0.10	+80%, -20%			C1608JF0J475Z(080AA)
22µF	2012	1.25±0.20	+80%, -20%			C2012JF0J226Z(125AA)
	3216	1.60±0.30/-0.10	+80%, -20%			C3216JF0J476Z(160AA)
47µF	3225	2.00±0.20	+80%, -20%	C3225JF1A476Z(200AA)		
	3225	2.50±0.30	+80%, -20%			C3225JF0J107Z(250AA)
100µF	4532	2.50±0.30	+80%, -20%	C4532JF1A107Z(250KA)		

- For more information about the products of other capacitance or data, please contact us.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

- All specifications are subject to change without notice.  
Please read the precautions before using this catalog.