

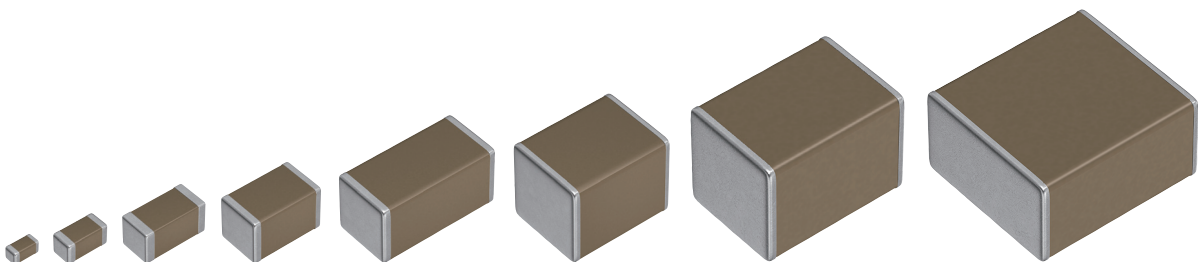
MULTILAYER CERAMIC CHIP CAPACITORS

Automotive grade, general (Up to 75V)

CGA series

| | |
|-------------|------------------------|
| CGA1 | 0603 [EIA 0201] |
| CGA2 | 1005 [EIA 0402] |
| CGA3 | 1608 [EIA 0603] |
| CGA4 | 2012 [EIA 0805] |
| CGA5 | 3216 [EIA 1206] |
| CGA6 | 3225 [EIA 1210] |
| CGA8 | 4532 [EIA 1812] |
| CGA9 | 5750 [EIA 2220] |

* Dimensions code: JIS[EIA]



Reminders for using these products

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

SAFETY REMINDERS

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

REMINDERS

1. The products listed in this specification are intended for use in automotive applications under normal operation and usage conditions. The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality requires a more stringent level of safety or reliability, or whose failure, malfunction or defect could cause serious damage to society, person or property.

Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below or for any other use exceeding the range or conditions set forth in this specification sheet. If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in this specification, please contact us.

- | | |
|--|--|
| (1) Aerospace/aviation equipment | (7) Transportation control equipment |
| (2) Transportation equipment (electric trains, ships, etc.) | (8) Public information-processing equipment |
| (3) Medical equipment (excepting Pharmaceutical Affairs Law classification Class1,2) | (9) Military equipment |
| (4) Power-generation control equipment | (10) Electric heating apparatus, burning equipment |
| (5) Atomic energy-related equipment | (11) Disaster prevention/crime prevention equipment |
| (6) Seabed equipment | (12) Safety equipment |
| | (13) Other applications that are not considered general-purpose applications |

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

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

Notice: Effective January 2013, TDK will use a new catalog number which adds product thickness and packaging specification detail. This new catalog number should be referenced on all catalog orders going forward, and is not applicable for OEM part number orders. Please be aware the last five digits of the catalog number will differ from the item description (internal control number) on the product label. Contact your local TDK Sales representative for more information.

(Example)

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

CGA series

General (Up to 75V)



Type: CGA1/0603 [EIA 0201], CGA2/1005 [EIA 0402], CGA3/1608 [EIA 0603],
CGA4/2012 [EIA 0805], CGA5/3216 [EIA 1206], CGA6/3225 [EIA 1210],
CGA8/4532 [EIA 1812], CGA9/5750 [EIA 2220]

SERIES OVERVIEW

General type CGA series is a surface-mounted component, which multilayer dielectrics and inner electrodes are stacked alternately. The monolithic structure ensures superior mechanical strength and high reliability. Also, outstanding frequency characteristics such as low ESR and low ESL are provided owing to the simpler structure than other capacitors. The capacitance range is up to 100 μ F and the lineup has been expanding to a range of the film capacitor and electrolytic capacitor.

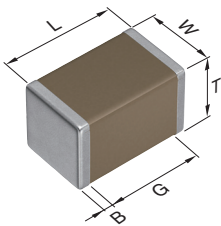
FEATURES

- Superior mechanical strength and high reliability due to the monolithic structure
- Outstanding frequency characteristics such as low ESR and low ESL by the simple structure
- Low self-heating value and high resistance to ripple on account of the low ESR
- No polarity
- Qualified based on AEC-Q200

APPLICATIONS

- Smoothing and decoupling use in power lines for automotive applications such as ADAS, autonomous driving system ECU
- LC resonance circuit (COG type)
- Applications requiring high reliability

SHAPE & DIMENSIONS



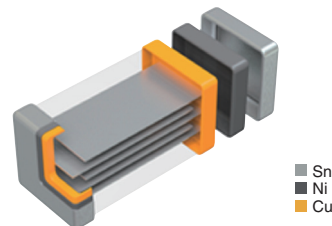
| | |
|---|------------------|
| L | Body length |
| W | Body width |
| T | Body height |
| B | Terminal width |
| G | Terminal spacing |

Dimensions in mm

| Type | L | W | T | B |
|------|-----------------|-----------------|-----------------|-----------|
| CGA6 | 3.20 \pm 0.40 | 2.50 \pm 0.30 | 2.50 \pm 0.30 | 0.20 min. |
| CGA7 | 4.50 \pm 0.40 | 2.00 \pm 0.20 | 2.00 \pm 0.20 | 0.20 min. |
| CGA8 | 4.50 \pm 0.40 | 3.20 \pm 0.40 | 2.50 \pm 0.30 | 0.20 min. |
| CGA9 | 5.70 \pm 0.40 | 5.00 \pm 0.40 | 2.80 \pm 0.30 | 0.20 min. |

*Dimensional tolerances are typical values.

PRODUCT STRUCTURE



The structure which multilayer dielectrics and inner electrodes are stacked alternately. The monolithic and simple structure contributes to superior mechanical strength and excellent frequency characteristics.

MULTILAYER CERAMIC CHIP CAPACITORS



CATALOG NUMBER CONSTRUCTION

| | | | | | | | | | | |
|------------|----------|----------|----------|------------|-----------|------------|----------|------------|----------|----------|
| CGA | 6 | P | 1 | X7T | 0G | 107 | M | 250 | A | C |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |

(1)Series

(2)Dimensions L x W (mm)

| Code | EIA | Length | Width | Terminal width |
|------|------|--------|-------|----------------|
| 1 | 0201 | 0.60 | 0.30 | 0.10 |
| 2 | 0402 | 1.00 | 0.50 | 0.10 |
| 3 | 0603 | 1.60 | 0.80 | 0.20 |
| 4 | 0805 | 2.00 | 1.25 | 0.20 |
| 5 | 1206 | 3.20 | 1.60 | 0.20 |
| 6 | 1210 | 3.20 | 2.50 | 0.20 |
| 8 | 1812 | 4.50 | 3.20 | 0.20 |
| 9 | 2220 | 5.70 | 5.00 | 0.20 |

(3)Thickness code

| Code | Thickness |
|------|-----------|
| A | 0.30 mm |
| B | 0.50 mm |
| C | 0.60 mm |
| E | 0.80 mm |
| F | 0.85 mm |
| H | 1.15 mm |
| J | 1.25 mm |
| L | 1.60 mm |
| M | 2.00 mm |
| N | 2.30 mm |
| P | 2.50 mm |
| Q | 2.80 mm |
| R | 3.20 mm |

(4)Voltage condition for life test

| Symbol | Condition |
|--------|------------|
| 1 | 1 x R.V. |
| 2 | 2 x R.V. |
| 3 | 1.5 x R.V. |

(5)Temperature characteristics

| Temperature characteristics | Temperature coefficient or capacitance change | Temperature range |
|-----------------------------|---|-------------------|
| C0G | 0±30 ppm/°C | -55 to +125°C |
| X5R | ±15% | -55 to +85°C |
| X7R | ±15% | -55 to +125°C |
| X7S | ±22% | -55 to +125°C |
| X7T | +22,-33% | -55 to +125 °C |

(6)Rated voltage (DC)

| Code | Voltage (DC) |
|------|--------------|
| 0E | 2.5V |
| 0G | 4V |
| 0J | 6.3V |
| 1A | 10V |
| 1C | 16V |
| 1E | 25V |
| 1V | 35V |
| 1H | 50V |
| 1N | 75V |

(7)Nominal capacitance (pF)

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

(Example) 0R5 = 0.5pF
 101 = 100pF
 225 = 2,200,000pF = 2.2μF

(8)Capacitance tolerance

| Code | Tolerance |
|------|-----------|
| C | ±0.25pF |
| D | ±0.50pF |
| J | ±5% |
| K | ±10% |
| M | ±20% |

(9)Thickness

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

(10)Packaging style

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


(11)Special reserved code

| Code | Description |
|-------|-------------------|
| A,B,C | TDK internal code |

Capacitance range chart

CGA1/0603 [EIA 0201]

| Capacitance | | COG | | X7R | | | | | X7T |
|-------------|------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|------------|
| (pF) | Code | 1H (50V) | 1E (25V) | 1H (50V) | 1E (25V) | 1C (16V) | 1A (10V) | 0J (6.3V) | 0G (4V) |
| 1 | 010 | ■ | ■ | | | | | | |
| 1.5 | 1R5 | ■ | ■ | | | | | | |
| 2 | 020 | ■ | ■ | | | | | | |
| 2.2 | 2R2 | ■ | ■ | | | | | | |
| 3 | 030 | ■ | ■ | | | | | | |
| 3.3 | 3R3 | ■ | ■ | | | | | | |
| 4 | 040 | ■ | ■ | | | | | | |
| 4.7 | 4R7 | ■ | ■ | | | | | | |
| 5 | 050 | ■ | ■ | | | | | | |
| 6 | 060 | ■ | ■ | | | | | | |
| 6.8 | 6R8 | ■ | ■ | | | | | | |
| 7 | 070 | ■ | ■ | | | | | | |
| 8 | 080 | ■ | ■ | | | | | | |
| 9 | 090 | ■ | ■ | | | | | | |
| 10 | 100 | ■ | ■ | | | | | | |
| 12 | 120 | ■ | ■ | | | | | | |
| 15 | 150 | ■ | ■ | | | | | | |
| 18 | 180 | ■ | ■ | | | | | | |
| 22 | 220 | ■ | ■ | | | | | | |
| 27 | 270 | ■ | ■ | | | | | | |
| 33 | 330 | ■ | ■ | | | | | | |
| 39 | 390 | ■ | ■ | | | | | | |
| 47 | 470 | ■ | ■ | | | | | | |
| 56 | 560 | ■ | ■ | | | | | | |
| 68 | 680 | ■ | ■ | | | | | | |
| 82 | 820 | ■ | ■ | | | | | | |
| 100 | 101 | ■ | ■ | ■ | ■ | ■ | | | |
| 150 | 151 | | | ■ | ■ | ■ | | | |
| 220 | 221 | | | ■ | ■ | ■ | | | |
| 330 | 331 | | | ■ | ■ | ■ | | | |
| 470 | 471 | | | ■ | ■ | ■ | | | |
| 680 | 681 | | | ■ | ■ | ■ | | | |
| 1,000 | 102 | | | | ■ | ■ | | | |
| 1,500 | 152 | | | | ■ | ■ | | | |
| 2,200 | 222 | | | | ■ | ■ | | | |
| 3,300 | 332 | | | | ■ | ■ | | | |
| 4,700 | 472 | | | | | ■ | | | |
| 6,800 | 682 | | | | | ■ | | | |
| 10,000 | 103 | | | | | | ■ | ■ | |
| 100,000 | 104 | | | | | | | | ■ |


Standard thickness  0.30mm


■ For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.

Capacitance range chart

CGA2/1005 [EIA 0402]

| Capacitance | | COG | X5R | | | | | X7R | | | | | X7S | | X7T | |
|-------------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|------------|
| (pF) | Code | 1H (50V) | 1H (50V) | 1V (35V) | 1E (25V) | 1C (16V) | 1A (10V) | 1H (50V) | 1V (35V) | 1E (25V) | 1C (16V) | 1A (10V) | 0J (6.3V) | 1C (16V) | 1A (10V) | 0G (4V) |
| 1 | 010 | | | | | | | | | | | | | | | |
| 1.5 | 1R5 | | | | | | | | | | | | | | | |
| 2 | 020 | | | | | | | | | | | | | | | |
| 2.2 | 2R2 | | | | | | | | | | | | | | | |
| 3 | 030 | | | | | | | | | | | | | | | |
| 3.3 | 3R3 | | | | | | | | | | | | | | | |
| 4 | 040 | | | | | | | | | | | | | | | |
| 4.7 | 4R7 | | | | | | | | | | | | | | | |
| 5 | 050 | | | | | | | | | | | | | | | |
| 6 | 060 | | | | | | | | | | | | | | | |
| 6.8 | 6R8 | | | | | | | | | | | | | | | |
| 7 | 070 | | | | | | | | | | | | | | | |
| 8 | 080 | | | | | | | | | | | | | | | |
| 9 | 090 | | | | | | | | | | | | | | | |
| 10 | 100 | | | | | | | | | | | | | | | |
| 12 | 120 | | | | | | | | | | | | | | | |
| 15 | 150 | | | | | | | | | | | | | | | |
| 18 | 180 | | | | | | | | | | | | | | | |
| 22 | 220 | | | | | | | | | | | | | | | |
| 27 | 270 | | | | | | | | | | | | | | | |
| 33 | 330 | | | | | | | | | | | | | | | |
| 39 | 390 | | | | | | | | | | | | | | | |
| 47 | 470 | | | | | | | | | | | | | | | |
| 56 | 560 | | | | | | | | | | | | | | | |
| 68 | 680 | | | | | | | | | | | | | | | |
| 82 | 820 | | | | | | | | | | | | | | | |
| 100 | 101 | | | | | | | | | | | | | | | |
| 120 | 121 | | | | | | | | | | | | | | | |
| 150 | 151 | | | | | | | | | | | | | | | |
| 180 | 181 | | | | | | | | | | | | | | | |
| 220 | 221 | | | | | | | | | | | | | | | |
| 270 | 271 | | | | | | | | | | | | | | | |
| 330 | 331 | | | | | | | | | | | | | | | |
| 390 | 391 | | | | | | | | | | | | | | | |
| 470 | 471 | | | | | | | | | | | | | | | |
| 560 | 561 | | | | | | | | | | | | | | | |
| 680 | 681 | | | | | | | | | | | | | | | |
| 820 | 821 | | | | | | | | | | | | | | | |
| 1,000 | 102 | | | | | | | | | | | | | | | |
| 1,500 | 152 | | | | | | | | | | | | | | | |
| 2,200 | 222 | | | | | | | | | | | | | | | |
| 3,300 | 332 | | | | | | | | | | | | | | | |
| 4,700 | 472 | | | | | | | | | | | | | | | |
| 6,800 | 682 | | | | | | | | | | | | | | | |
| 10,000 | 103 | | | | | | | | | | | | | | | |
| 15,000 | 153 | | | | | | | | | | | | | | | |
| 22,000 | 223 | | | | | | | | | | | | | | | |
| 33,000 | 333 | | | | | | | | | | | | | | | |
| 47,000 | 473 | | | | | | | | | | | | | | | |
| 68,000 | 683 | | | | | | | | | | | | | | | |
| 100,000 | 104 | | | | | | | | | | | | | | | |
| 150,000 | 154 | | | | | | | | | | | | | | | |
| 220,000 | 224 | | | | | | | | | | | | | | | |
| 330,000 | 334 | | | | | | | | | | | | | | | |
| 470,000 | 474 | | | | | | | | | | | | | | | |
| 1,000,000 | 105 | | | | | | | | | | | | | | | |



Standard thickness  0.50mm Background gray: These products are not recommended for new designs. For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.


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

Capacitance range chart

CGA3/1608 [EIA 0603]

| Capacitance | | COG | X5R | X7R |
|-------------|------|-------------|-------------|-------------|
| (pF) | Code | 1H (50V) | 1H (50V) | 1H (50V) |
| 1 | 010 | | | |
| 1.5 | 1R5 | | | |
| 2 | 020 | | | |
| 2.2 | 2R2 | | | |
| 3 | 030 | | | |
| 3.3 | 3R3 | | | |
| 4 | 040 | | | |
| 4.7 | 4R7 | | | |
| 5 | 050 | | | |
| 6 | 060 | | | |
| 6.8 | 6R8 | | | |
| 7 | 070 | | | |
| 8 | 080 | | | |
| 9 | 090 | | | |
| 10 | 100 | | | |
| 12 | 120 | | | |
| 15 | 150 | | | |
| 18 | 180 | | | |
| 22 | 220 | | | |
| 27 | 270 | | | |
| 33 | 330 | | | |
| 39 | 390 | | | |
| 47 | 470 | | | |
| 56 | 560 | | | |
| 68 | 680 | | | |
| 82 | 820 | | | |
| 100 | 101 | | | |
| 120 | 121 | | | |
| 150 | 151 | | | |
| 180 | 181 | | | |
| 220 | 221 | | | |
| 270 | 271 | | | |
| 330 | 331 | | | |
| 390 | 391 | | | |
| 470 | 471 | | | |
| 560 | 561 | | | |
| 680 | 681 | | | |
| 820 | 821 | | | |
| 1,000 | 102 | | | |
| 1,200 | 122 | | | |
| 1,500 | 152 | | | |
| 1,800 | 182 | | | |
| 2,200 | 222 | | | |
| 2,700 | 272 | | | |
| 3,300 | 332 | | | |
| 3,900 | 392 | | | |
| 4,700 | 472 | | | |
| 5,600 | 562 | | | |
| 6,800 | 682 | | | |
| 8,200 | 822 | | | |
| 10,000 | 103 | | | |
| 15,000 | 153 | | | |
| 22,000 | 223 | | | |
| 33,000 | 333 | | | |
| 47,000 | 473 | | | |
| 68,000 | 683 | | | |

Standard thickness  0.80mm Background gray: These products are not recommended for new designs. For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.


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Please note that the contents may change without any prior notice due to reasons such as upgrading.

MULTILAYER CERAMIC CHIP CAPACITORS

Capacitance range chart

CGA3/1608 [EIA 0603]

| Capacitance | | X5R | | | | | X7R | | | | | X7S | | | X7T | | | |
|-------------|------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|------------|-------------|--------------|------------|
| (pF) | Code | 1H (50V) | 1V (35V) | 1E (25V) | 1C (16V) | 1A (10V) | 0J (6.3V) | 1H (50V) | 1V (35V) | 1E (25V) | 1C (16V) | 0J (6.3V) | 1C (16V) | 1A (10V) | 0G (4V) | 1A (10V) | 0J (6.3V) | 0G (4V) |
| 100,000 | 104 | █ | █ | █ | | | | █ | █ | █ | | | | | | | | |
| 150,000 | 154 | █ | █ | █ | | | | █ | █ | █ | | | | | | | | |
| 220,000 | 224 | █ | █ | █ | █ | | | █ | █ | █ | | | | | | | | |
| 330,000 | 334 | █ | █ | █ | █ | | | █ | █ | █ | | | | | | | | |
| 470,000 | 474 | █ | █ | █ | █ | | | █ | █ | █ | | | | | | | | |
| 680,000 | 684 | █ | █ | █ | █ | | | █ | █ | █ | | | | | | | | |
| 1,000,000 | 105 | | | | | | | | | | | | | | | | | |
| 1,500,000 | 155 | | | | | | | | | | | █ | █ | █ | | | | |
| 2,200,000 | 225 | | | | | | | | | | | █ | █ | █ | | | | |
| 3,300,000 | 335 | | | | | | | | | | | | | | | | | |
| 4,700,000 | 475 | | | | | | | | | | | | | | | | | |
| 10,000,000 | 106 | | | | | | | | | | | | | | | | | |

Standard thickness  0.80mm

 Background gray: These products are not recommended for new designs.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.

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

Capacitance range chart

CGA4/2012 [EIA 0805]

| Capacitance | | COG | X5R | | | | | X7R | | | | | X7S | | | X7T | |
|-------------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|--------------|
| (pF) | Code | 1H (50V) | 1H (50V) | 1V (35V) | 1E (25V) | 1C (16V) | 1A (10V) | 1H (50V) | 1V (35V) | 1E (25V) | 1C (16V) | 1A (10V) | 0J (6.3V) | 1E (25V) | 1C (16V) | 1A (10V) | 0J (6.3V) |
| 1,000 | 102 | ■ | | | | | | | | | | | | | | | |
| 1,200 | 122 | ■ | | | | | | | | | | | | | | | |
| 1,500 | 152 | ■ | | | | | | | | | | | | | | | |
| 1,800 | 182 | ■ | | | | | | | | | | | | | | | |
| 2,200 | 222 | ■ | | | | | | | | | | | | | | | |
| 2,700 | 272 | ■ | | | | | | | | | | | | | | | |
| 3,300 | 332 | ■ | | | | | | | | | | | | | | | |
| 3,900 | 392 | ■ | | | | | | | | | | | | | | | |
| 4,700 | 472 | ■ | | | | | | | | | | | | | | | |
| 5,600 | 562 | ■ | | | | | | | | | | | | | | | |
| 6,800 | 682 | ■ | | | | | | | | | | | | | | | |
| 8,200 | 822 | ■ | | | | | | | | | | | | | | | |
| 10,000 | 103 | ■ | | | | | | | | | | | | | | | |
| 15,000 | 153 | ■ | | | | | | | | | | | | | | | |
| 22,000 | 223 | ■ | | | | | | | | | | | | | | | |
| 33,000 | 333 | ■ | | | | | | | | | | | | | | | |
| 150,000 | 154 | | | | | | | ■ | | | | | | | | | |
| 220,000 | 224 | | ■ | | | | | ■ | | ■ | | | | | | | |
| 330,000 | 334 | | ■ | | | | | ■ | | ■ | | | | | | | |
| 470,000 | 474 | | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ | | | | | | |
| 680,000 | 684 | | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | | | | | | |
| 1,000,000 | 105 | | ■ | ■ | ■ | ■ | | ■ | ■ | ■ | ■ | | | | | | |
| 1,500,000 | 155 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | |
| 2,200,000 | 225 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | | |
| 3,300,000 | 335 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | |
| 4,700,000 | 475 | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | |
| 6,800,000 | 685 | | | | | ■ | ■ | | | | | ■ | ■ | ■ | ■ | | |
| 10,000,000 | 106 | | | | | ■ | ■ | | | | | ■ | ■ | ■ | ■ | | |
| 22,000,000 | 226 | | | | | | | | | | | | | | | | ■ |

Standard thickness ■ 0.60mm ■ 0.85mm ■ 1.25mm

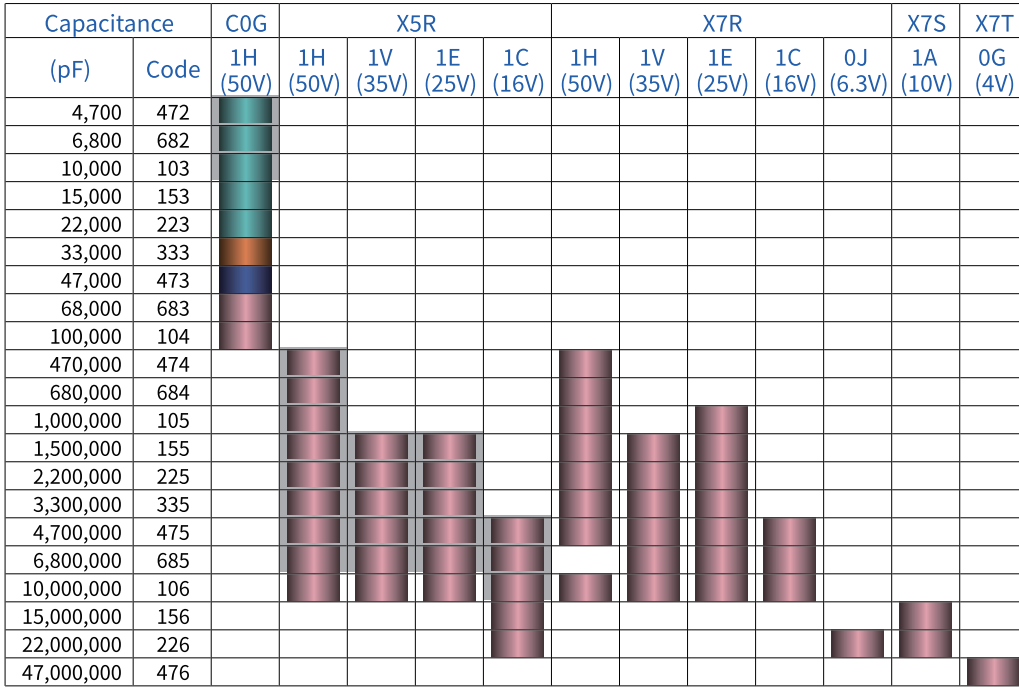
■ Background gray: These products are not recommended for new designs.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.


MULTILAYER CERAMIC CHIP CAPACITORS

Capacitance range chart

CGA5/3216 [EIA 1206]



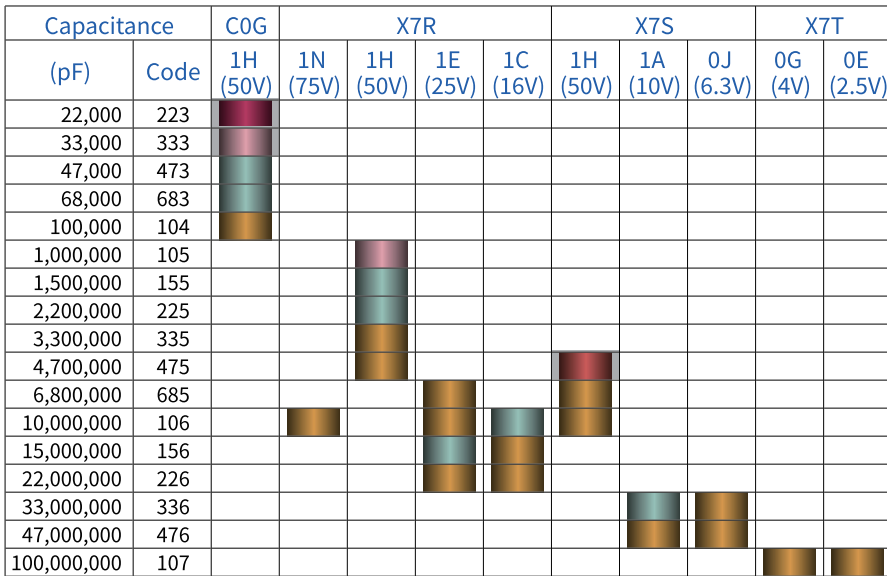
Standard thickness  0.60mm  0.85mm  1.15mm  1.60mm






 Background gray: These products are not recommended for new designs.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.

Capacitance range chart

CGA6/3225 [EIA 1210]



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

 Background gray: These products are not recommended for new designs.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.

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

Capacitance range chart

CGA8/4532 [EIA 1812]

| Capacitance | | COG | | X7R | | |
|-------------|------|-------------|-------------|-------------|-------------|---|
| (pF) | Code | 1H (50V) | 1H (50V) | 1E (25V) | 1C (16V) | |
| 47,000 | 473 | ■ | | | | |
| 68,000 | 683 | ■ | | | | |
| 100,000 | 104 | ■ | | | | |
| 150,000 | 154 | ■ | | | | |
| 220,000 | 224 | ■ | | | | |
| 1,500,000 | 155 | | ■ | | | |
| 2,200,000 | 225 | | ■ | | | |
| 3,300,000 | 335 | | ■ | | | |
| 4,700,000 | 475 | | ■ | ■ | | |
| 6,800,000 | 685 | | ■ | | | |
| 10,000,000 | 106 | | | ■ | | |
| 15,000,000 | 156 | | | ■ | ■ | |
| 22,000,000 | 226 | | | ■ | ■ | ■ |
| 33,000,000 | 336 | | | | ■ | ■ |

Standard thickness ■ 1.60mm ■ 2.00mm ■ 2.30mm ■ 2.50mm ■ 2.80mm ■ 3.20mm

■ Background gray: These products are not recommended for new designs.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.

Capacitance range chart

CGA9/5750 [EIA 2220]

| Capacitance | | X7R | | | |
|-------------|------|-------------|-------------|-------------|-------------|
| (pF) | Code | 1H (50V) | 1V (35V) | 1E (25V) | 1C (16V) |
| 4,700,000 | 475 | ■ | | | |
| 6,800,000 | 685 | ■ | | | |
| 10,000,000 | 106 | ■ | | ■ | |
| 15,000,000 | 156 | | | ■ | ■ |
| 22,000,000 | 226 | ■ | | ■ | ■ |
| 47,000,000 | 476 | | ■ | ■ | ■ |

Standard thickness ■ 2.00mm ■ 2.30mm ■ 2.50mm

■ Background gray: These products are not recommended for new designs.

■ For details such as the catalog numbers, please refer to the capacitance range table on page 12 and after.

MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance range table

Temperature characteristic: COG (-55 to +125°C, 0±30ppm/°C)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | |
|-------------|------------|----------------|-----------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V | |
| | | | | Rated voltage Edc: 50V | Rated voltage Edc: 25V |
| 1pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H010C030BA | CGA1A2C0G1E010C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H010C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H010C080AA | |
| 1.5pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H1R5C030BA | CGA1A2C0G1E1R5C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H1R5C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H1R5C080AA | |
| 2pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H020C030BA | CGA1A2C0G1E020C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H020C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H020C080AA | |
| 2.2pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H2R2C030BA | CGA1A2C0G1E2R2C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H2R2C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H2R2C080AA | |
| 3pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H030C030BA | CGA1A2C0G1E030C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H030C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H030C080AA | |
| 3.3pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H3R3C030BA | CGA1A2C0G1E3R3C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H3R3C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H3R3C080AA | |
| 4pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H040C030BA | CGA1A2C0G1E040C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H040C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H040C080AA | |
| 4.7pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H4R7C030BA | CGA1A2C0G1E4R7C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H4R7C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H4R7C080AA | |
| 5pF | 0603 | 0.30±0.03 | ±0.25pF | CGA1A2C0G1H050C030BA | CGA1A2C0G1E050C030BA |
| | 1005 | 0.50±0.05 | ±0.25pF | CGA2B2C0G1H050C050BA | |
| | 1608 | 0.80±0.10 | ±0.25pF | CGA3E2C0G1H050C080AA | |
| 6pF | 0603 | 0.30±0.03 | ±0.50pF | CGA1A2C0G1H060D030BA | CGA1A2C0G1E060D030BA |
| | 1005 | 0.50±0.05 | ±0.50pF | CGA2B2C0G1H060D050BA | |
| | 1608 | 0.80±0.10 | ±0.50pF | CGA3E2C0G1H060D080AA | |
| 6.8pF | 0603 | 0.30±0.03 | ±0.50pF | CGA1A2C0G1H6R8D030BA | CGA1A2C0G1E6R8D030BA |
| | 1005 | 0.50±0.05 | ±0.50pF | CGA2B2C0G1H6R8D050BA | |
| | 1608 | 0.80±0.10 | ±0.50pF | CGA3E2C0G1H6R8D080AA | |
| 7pF | 0603 | 0.30±0.03 | ±0.50pF | CGA1A2C0G1H070D030BA | CGA1A2C0G1E070D030BA |
| | 1005 | 0.50±0.05 | ±0.50pF | CGA2B2C0G1H070D050BA | |
| | 1608 | 0.80±0.10 | ±0.50pF | CGA3E2C0G1H070D080AA | |
| 8pF | 0603 | 0.30±0.03 | ±0.50pF | CGA1A2C0G1H080D030BA | CGA1A2C0G1E080D030BA |
| | 1005 | 0.50±0.05 | ±0.50pF | CGA2B2C0G1H080D050BA | |
| | 1608 | 0.80±0.10 | ±0.50pF | CGA3E2C0G1H080D080AA | |
| 9pF | 0603 | 0.30±0.03 | ±0.50pF | CGA1A2C0G1H090D030BA | CGA1A2C0G1E090D030BA |
| | 1005 | 0.50±0.05 | ±0.50pF | CGA2B2C0G1H090D050BA | |
| | 1608 | 0.80±0.10 | ±0.50pF | CGA3E2C0G1H090D080AA | |
| 10pF | 0603 | 0.30±0.03 | ±0.50pF | CGA1A2C0G1H100D030BA | CGA1A2C0G1E100D030BA |
| | 1005 | 0.50±0.05 | ±0.50pF | CGA2B2C0G1H100D050BA | |
| | 1608 | 0.80±0.10 | ±0.50pF | CGA3E2C0G1H100D080AA | |
| 12pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H120J030BA | CGA1A2C0G1E120J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H120J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H120J080AA | |
| 15pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H150J030BA | CGA1A2C0G1E150J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H150J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H150J080AA | |
| 18pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H180J030BA | CGA1A2C0G1E180J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H180J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H180J080AA | |
| 22pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H220J030BA | CGA1A2C0G1E220J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H220J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H220J080AA | |
| 27pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H270J030BA | CGA1A2C0G1E270J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H270J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H270J080AA | |
| 33pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H330J030BA | CGA1A2C0G1E330J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H330J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H330J080AA | |
| 39pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H390J030BA | CGA1A2C0G1E390J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H390J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H390J080AA | |
| 47pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H470J030BA | CGA1A2C0G1E470J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H470J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H470J080AA | |

Click the part numbers for details.

MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance range table

Temperature characteristic: COG (-55 to +125°C, 0±30ppm/°C)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | |
|-------------|------------|----------------|-----------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V | Rated voltage Edc: 25V |
| 56pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H560J030BA | CGA1A2C0G1E560J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H560J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H560J080AA | |
| 68pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H680J030BA | CGA1A2C0G1E680J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H680J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H680J080AA | |
| 82pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H820J030BA | CGA1A2C0G1E820J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H820J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H820J080AA | |
| 100pF | 0603 | 0.30±0.03 | ±5% | CGA1A2C0G1H101J030BA | CGA1A2C0G1E101J030BA |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H101J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H101J080AA | |
| 120pF | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H121J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H121J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H151J050BA | |
| 150pF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H151J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H181J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H181J080AA | |
| 220pF | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H221J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H221J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H271J050BA | |
| 270pF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H271J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H331J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H331J080AA | |
| 330pF | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H391J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H391J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H471J050BA | |
| 470pF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H471J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H561J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H561J080AA | |
| 560pF | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H681J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H681J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H821J050BA | |
| 680pF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H821J080AA | |
| | 1005 | 0.50±0.05 | ±5% | CGA2B2C0G1H102J050BA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H102J080AA | |
| 1nF | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H102J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H122J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H122J060AA | |
| 1.2nF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H152J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H152J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H182J080AA | |
| 1.5nF | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H182J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H222J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H222J060AA | |
| 1.8nF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H272J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H272J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H332J080AA | |
| 2.2nF | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H332J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H392J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H392J060AA | |
| 2.7nF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H472J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H472J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H472J080AA | |
| 3.3nF | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H472J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H562J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H562J060AA | |
| 3.9nF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H682J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H682J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H682J080AA | |
| 4.7nF | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H682J060AA | |
| | 3216 | 0.60±0.15 | ±5% | CGA5C2C0G1H472J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H562J080AA | |
| 5.6nF | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H562J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H682J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H682J060AA | |
| 6.8nF | 3216 | 0.60±0.15 | ±5% | CGA5C2C0G1H682J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H822J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H822J060AA | |
| 8.2nF | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H103J080AA | |
| | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H103J060AA | |
| | 1608 | 0.80±0.10 | ±5% | CGA3E2C0G1H103J080AA | |
| 10nF | 2012 | 0.60±0.15 | ±5% | CGA4C2C0G1H103J060AA | |
| | 3216 | 0.60±0.15 | ±5% | CGA5C2C0G1H103J060AA | |
| | 2012 | 0.85±0.15 | ±5% | CGA4F2C0G1H153J085AA | |
| 15nF | 3216 | 0.60±0.15 | ±5% | CGA5C2C0G1H153J060AA | |

■ Gray items: These products are not recommended for new designs.

Click the part numbers for details.

Capacitance range table

Temperature characteristic: COG (-55 to +125°C, 0±30ppm/°C)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number |
|-------------|------------|-------------------|--------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V |
| 22nF | 2012 | 1.25±0.20 | ±5% | CGA4J2C0G1H223J125AA |
| | 3216 | 0.60±0.15 | ±5% | CGA5C2C0G1H223J060AA |
| | 3225 | 1.25±0.20 | ±5% | CGA6J2C0G1H223J125AA |
| 33nF | 2012 | 1.25±0.20 | ±5% | CGA4J2C0G1H333J125AA |
| | 3216 | 0.85±0.15 | ±5% | CGA5F2C0G1H333J085AA |
| | 3225 | 1.60±0.20 | ±5% | CGA6L2C0G1H333J160AA |
| 47nF | 3216 | 1.15±0.15 | ±5% | CGA5H2C0G1H473J115AA |
| | 3225 | 2.00±0.20 | ±5% | CGA6M2C0G1H473J200AA |
| | 4532 | 1.60±0.20 | ±5% | CGA8L2C0G1H473J160KA |
| 68nF | 3216 | 1.60±0.20 | ±5% | CGA5L2C0G1H683J160AA |
| | 3225 | 2.00±0.20 | ±5% | CGA6M2C0G1H683J200AA |
| | 4532 | 1.60±0.20 | ±5% | CGA8L2C0G1H683J160KA |
| 100nF | 3216 | 1.60±0.20 | ±5% | CGA5L2C0G1H104J160AA |
| | 3225 | 2.50±0.30 | ±5% | CGA6P2C0G1H104J250AA |
| | 4532 | 2.00±0.20 | ±5% | CGA8M2C0G1H104J200KA |
| 150nF | 4532 | 2.50±0.30 | ±5% | CGA8P2C0G1H154J250KA |
| 220nF | 4532 | 3.20±0.30 | ±5% | CGA8R2C0G1H224J320KA |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

MULTILAYER CERAMIC CHIP CAPACITORS

Capacitance range table

Temperature characteristic: X5R (-55 to +85°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | |
|-------------|------------|----------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V | Rated voltage Edc: 35V | Rated voltage Edc: 25V |
| 220pF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H221K050BA | | |
| | | | ±20% | CGA2B2X5R1H221M050BA | | |
| 330pF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H331K050BA | | |
| | | | ±20% | CGA2B2X5R1H331M050BA | | |
| 470pF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H471K050BA | | |
| | | | ±20% | CGA2B2X5R1H471M050BA | | |
| 680pF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H681K050BA | | |
| | | | ±20% | CGA2B2X5R1H681M050BA | | |
| 1nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H102K050BA | | |
| | | | ±20% | CGA2B2X5R1H102M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H102K080AA | | |
| | | | ±20% | CGA3E2X5R1H102M080AA | | |
| 1.5nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H152K050BA | | |
| | | | ±20% | CGA2B2X5R1H152M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H152K080AA | | |
| | | | ±20% | CGA3E2X5R1H152M080AA | | |
| 2.2nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H222K050BA | | |
| | | | ±20% | CGA2B2X5R1H222M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H222K080AA | | |
| | | | ±20% | CGA3E2X5R1H222M080AA | | |
| 3.3nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H332K050BA | | |
| | | | ±20% | CGA2B2X5R1H332M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H332K080AA | | |
| | | | ±20% | CGA3E2X5R1H332M080AA | | |
| 4.7nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H472K050BA | | |
| | | | ±20% | CGA2B2X5R1H472M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H472K080AA | | |
| | | | ±20% | CGA3E2X5R1H472M080AA | | |
| 6.8nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1H682K050BA | | |
| | | | ±20% | CGA2B2X5R1H682M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H682K080AA | | |
| | | | ±20% | CGA3E2X5R1H682M080AA | | |
| 10nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X5R1H103K050BB | CGA2B3X5R1V103K050BB | CGA2B2X5R1E103K050BA |
| | | | ±20% | CGA2B3X5R1H103M050BB | CGA2B3X5R1V103M050BB | CGA2B2X5R1E103M050BA |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H103K080AA | | |
| | | | ±20% | CGA3E2X5R1H103M080AA | | |
| 15nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X5R1H153K050BB | CGA2B3X5R1V153K050BB | CGA2B2X5R1E153K050BA |
| | | | ±20% | CGA2B3X5R1H153M050BB | CGA2B3X5R1V153M050BB | CGA2B2X5R1E153M050BA |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H153K080AA | | |
| | | | ±20% | CGA3E2X5R1H153M080AA | | |
| 22nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X5R1H223K050BB | CGA2B3X5R1V223K050BB | CGA2B2X5R1E223K050BA |
| | | | ±20% | CGA2B3X5R1H223M050BB | CGA2B3X5R1V223M050BB | CGA2B2X5R1E223M050BA |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H223K080AA | | |
| | | | ±20% | CGA3E2X5R1H223M080AA | | |
| 33nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X5R1H333K050BB | CGA2B3X5R1V333K050BB | CGA2B2X5R1E333K050BA |
| | | | ±20% | CGA2B3X5R1H333M050BB | CGA2B3X5R1V333M050BB | CGA2B2X5R1E333M050BA |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H333K080AA | | |
| | | | ±20% | CGA3E2X5R1H333M080AA | | |
| 47nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X5R1H473K050BB | CGA2B3X5R1V473K050BB | CGA2B2X5R1E473K050BA |
| | | | ±20% | CGA2B3X5R1H473M050BB | CGA2B3X5R1V473M050BB | CGA2B2X5R1E473M050BA |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H473K080AA | | |
| | | | ±20% | CGA3E2X5R1H473M080AA | | |
| 68nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X5R1H683K050BB | CGA2B3X5R1V683K050BB | CGA2B3X5R1E683K050BB |
| | | | ±20% | CGA2B3X5R1H683M050BB | CGA2B3X5R1V683M050BB | CGA2B3X5R1E683M050BB |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H683K080AA | | |
| | | | ±20% | CGA3E2X5R1H683M080AA | | |
| 100nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X5R1H104K050BB | CGA2B3X5R1V104K050BB | CGA2B3X5R1E104K050BB |
| | | | ±20% | CGA2B3X5R1H104M050BB | CGA2B3X5R1V104M050BB | CGA2B3X5R1E104M050BB |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1H104K080AA | | CGA3E2X5R1E104K080AA |
| | | | ±20% | CGA3E2X5R1H104M080AA | | CGA3E2X5R1E104M080AA |
| 150nF | 1608 | 0.80±0.10 | ±10% | CGA3E3X5R1H154K080AB | CGA3E3X5R1V154K080AB | CGA3E2X5R1E154K080AA |
| | | | ±20% | CGA3E3X5R1H154M080AB | CGA3E3X5R1V154M080AB | CGA3E2X5R1E154M080AA |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

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MULTILAYER CERAMIC CHIP CAPACITORS

Capacitance range table

Temperature characteristic: X5R (-55 to +85°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | |
|-------------|-----------------|-----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V | Rated voltage Edc: 35V | Rated voltage Edc: 25V |
| | | | | | | |
| 220nF | 1608 | 0.80±0.10 | ±10% | CGA3E3X5R1H224K080AB | CGA3E3X5R1V224K080AB | CGA3E2X5R1E224K080AA |
| | | | ±20% | CGA3E3X5R1H224M080AB | CGA3E3X5R1V224M080AB | CGA3E2X5R1E224M080AA |
| | 2012 | 1.25±0.20 | ±10% | CGA4J2X5R1H224K125AA | | |
| | | | ±20% | CGA4J2X5R1H224M125AA | | |
| 330nF | 1608 | 0.80±0.10 | ±10% | CGA3E3X5R1H334K080AB | CGA3E3X5R1V334K080AB | CGA3E3X5R1E334K080AB |
| | | | ±20% | CGA3E3X5R1H334M080AB | CGA3E3X5R1V334M080AB | CGA3E3X5R1E334M080AB |
| | 2012 | 1.25±0.20 | ±10% | CGA4J2X5R1H334K125AA | | |
| | | | ±20% | CGA4J2X5R1H334M125AA | | |
| 470nF | 1608 | 0.80±0.10 | ±10% | CGA3E3X5R1H474K080AB | CGA3E3X5R1V474K080AB | CGA3E3X5R1E474K080AB |
| | | | ±20% | CGA3E3X5R1H474M080AB | CGA3E3X5R1V474M080AB | CGA3E3X5R1E474M080AB |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1H474K125AB | CGA4J3X5R1V474K125AB | CGA4J2X5R1E474K125AA |
| | | | ±20% | CGA4J3X5R1H474M125AB | CGA4J3X5R1V474M125AB | CGA4J2X5R1E474M125AA |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L2X5R1H474K160AA | | |
| | | | ±20% | CGA5L2X5R1H474M160AA | | |
| 680nF | 1608 | 0.80±0.10 | ±10% | CGA3E3X5R1H684K080AB | CGA3E3X5R1V684K080AB | CGA3E3X5R1E684K080AB |
| | | | ±20% | CGA3E3X5R1H684M080AB | CGA3E3X5R1V684M080AB | CGA3E3X5R1E684M080AB |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1H684K125AB | CGA4J3X5R1V684K125AB | CGA4J2X5R1E684K125AA |
| | | | ±20% | CGA4J3X5R1H684M125AB | CGA4J3X5R1V684M125AB | CGA4J2X5R1E684M125AA |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L2X5R1H684K160AA | | |
| | | | ±20% | CGA5L2X5R1H684M160AA | | |
| 1µF | 1608 | 0.80±0.10 | ±10% | CGA3E3X5R1H105K080AB | CGA3E3X5R1V105K080AB | CGA3E3X5R1E105K080AB |
| | | | ±20% | CGA3E3X5R1H105M080AB | CGA3E3X5R1V105M080AB | CGA3E3X5R1E105M080AB |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1H105K125AB | CGA4J3X5R1V105K125AB | CGA4J2X5R1E105K125AA |
| | | | ±20% | CGA4J3X5R1H105M125AB | CGA4J3X5R1V105M125AB | CGA4J2X5R1E105M125AA |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L2X5R1H105K160AA | | |
| | | | ±20% | CGA5L2X5R1H105M160AA | | |
| 1.5µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1H155K125AB | CGA4J3X5R1V155K125AB | CGA4J3X5R1E155K125AB |
| | | | ±20% | CGA4J3X5R1H155M125AB | CGA4J3X5R1V155M125AB | CGA4J3X5R1E155M125AB |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X5R1H155K160AB | CGA5L3X5R1V155K160AB | CGA5L2X5R1E155K160AA |
| | | | ±20% | CGA5L3X5R1H155M160AB | CGA5L3X5R1V155M160AB | CGA5L2X5R1E155M160AA |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1H225K125AB | CGA4J3X5R1V225K125AB | CGA4J3X5R1E225K125AB |
| | | | ±20% | CGA4J3X5R1H225M125AB | CGA4J3X5R1V225M125AB | CGA4J3X5R1E225M125AB |
| 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X5R1H225K160AB | CGA5L3X5R1V225K160AB | CGA5L2X5R1E225K160AA | |
| | | ±20% | CGA5L3X5R1H225M160AB | CGA5L3X5R1V225M160AB | CGA5L2X5R1E225M160AA | |
| 3.3µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1H335K125AB | CGA4J3X5R1V335K125AB | CGA4J3X5R1E335K125AB |
| | | | ±20% | CGA4J3X5R1H335M125AB | CGA4J3X5R1V335M125AB | CGA4J3X5R1E335M125AB |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X5R1H335K160AB | CGA5L3X5R1V335K160AB | CGA5L2X5R1E335K160AA |
| | | | ±20% | CGA5L3X5R1H335M160AB | CGA5L3X5R1V335M160AB | CGA5L2X5R1E335M160AA |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1H475K125AB | CGA4J3X5R1V475K125AB | CGA4J3X5R1E475K125AB |
| | | | ±20% | CGA4J3X5R1H475M125AB | CGA4J3X5R1V475M125AB | CGA4J3X5R1E475M125AB |
| 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X5R1H475K160AB | CGA5L3X5R1V475K160AB | CGA5L2X5R1E475K160AA | |
| | | ±20% | CGA5L3X5R1H475M160AB | CGA5L3X5R1V475M160AB | CGA5L2X5R1E475M160AA | |
| 6.8µF | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X5R1H685K160AB | CGA5L3X5R1V685K160AB | CGA5L3X5R1E685K160AB |
| | | | ±20% | CGA5L3X5R1H685M160AB | CGA5L3X5R1V685M160AB | CGA5L3X5R1E685M160AB |
| 10µF | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X5R1H106K160AB | CGA5L3X5R1V106K160AB | CGA5L3X5R1E106K160AB |
| | | | ±20% | CGA5L3X5R1H106M160AB | CGA5L3X5R1V106M160AB | CGA5L3X5R1E106M160AB |

■ Gray items: These products are not recommended for new designs.
 Click the part numbers for details.

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MULTILAYER CERAMIC CHIP CAPACITORS TDK

Capacitance range table

Temperature characteristic: X5R (-55 to +85°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | |
|-------------|------------|-----------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 16V | Rated voltage Edc: 10V | Rated voltage Edc: 6.3V |
| | | | | | | |
| 33nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1C333K050BA | | |
| | | | ±20% | CGA2B2X5R1C333M050BA | | |
| 47nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1C473K050BA | | |
| | | | ±20% | CGA2B2X5R1C473M050BA | | |
| 68nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1C683K050BA | | |
| | | | ±20% | CGA2B2X5R1C683M050BA | | |
| 100nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X5R1C104K050BA | CGA2B2X5R1A104K050BA | |
| | | | ±20% | CGA2B2X5R1C104M050BA | CGA2B2X5R1A104M050BA | |
| 150nF | 1005 | 0.50±0.05 | ±10% | CGA2B1X5R1C154K050BC | CGA2B3X5R1A154K050BB | |
| | | | ±20% | CGA2B1X5R1C154M050BC | CGA2B3X5R1A154M050BB | |
| 220nF | 1005 | 0.50±0.05 | ±10% | CGA2B1X5R1C224K050BC | CGA2B3X5R1A224K050BB | |
| | | | ±20% | CGA2B1X5R1C224M050BC | CGA2B3X5R1A224M050BB | |
| 330nF | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1C224K080AA | | |
| | | | ±20% | CGA3E2X5R1C224M080AA | | |
| 470nF | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1C334K080AA | CGA3E2X5R1A334K080AA | |
| | | | ±20% | CGA3E2X5R1C334M080AA | CGA3E2X5R1A334M080AA | |
| 680nF | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1C474K080AA | CGA3E2X5R1A474K080AA | |
| | | | ±20% | CGA3E2X5R1C474M080AA | CGA3E2X5R1A474M080AA | |
| 1µF | 1608 | 0.80±0.10 | ±10% | CGA3E2X5R1C684K080AA | CGA3E2X5R1A684K080AA | |
| | | | ±20% | CGA3E2X5R1C684M080AA | CGA3E2X5R1A684M080AA | |
| 1.5µF | 2012 | 1.25±0.20 | ±10% | CGA4J2X5R1C684K125AA | | |
| | | | ±20% | CGA4J2X5R1C684M125AA | | |
| 2.2µF | 1608 | 0.80±0.10 | ±10% | CGA3E1X5R1C105K080AC | CGA3E2X5R1A105K080AA | |
| | | | ±20% | CGA3E1X5R1C105M080AC | CGA3E2X5R1A105M080AA | |
| 3.3µF | 2012 | 1.25±0.20 | ±10% | CGA4J2X5R1C105K125AA | | |
| | | | ±20% | CGA4J2X5R1C105M125AA | | |
| 4.7µF | 1608 | 0.80±0.10 | ±10% | CGA3E1X5R1C155K080AC | CGA3E3X5R1A155K080AB | |
| | | | ±20% | CGA3E1X5R1C155M080AC | CGA3E3X5R1A155M080AB | |
| 6.8µF | 2012 | 1.25±0.20 | ±10% | CGA4J2X5R1C155K125AA | CGA4J2X5R1A155K125AA | |
| | | | ±20% | CGA4J2X5R1C155M125AA | CGA4J2X5R1A155M125AA | |
| 10µF | 1608 | 0.80±0.10 | ±10% | CGA3E1X5R1C225K080AC | CGA3E3X5R1A225K080AB | |
| | | | ±20% | CGA3E1X5R1C225M080AC | CGA3E3X5R1A225M080AB | |
| 15µF | 2012 | 1.25±0.20 | ±10% | CGA4J2X5R1C225K125AA | CGA4J2X5R1A225K125AA | |
| | | | ±20% | CGA4J2X5R1C225M125AA | CGA4J2X5R1A225M125AA | |
| 22µF | 1608 | 0.80±0.10 | ±10% | | CGA3E1X5R1A335K080AC | CGA3E3X5R0J335K080AB |
| | | | ±20% | | CGA3E1X5R1A335M080AC | CGA3E3X5R0J335M080AB |
| 33µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1C335K125AB | CGA4J2X5R1A335K125AA | |
| | | | ±20% | CGA4J3X5R1C335M125AB | CGA4J2X5R1A335M125AA | |
| 47µF | 1608 | 0.80±0.10 | ±10% | | | CGA3E1X5R0J475K080AC |
| | | | ±20% | | | CGA3E1X5R0J475M080AC |
| 68µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X5R1C475K125AB | CGA4J2X5R1A475K125AA | |
| | | | ±20% | CGA4J3X5R1C475M125AB | CGA4J2X5R1A475M125AA | |
| 100µF | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L2X5R1C475K160AA | | |
| | | | ±20% | CGA5L2X5R1C475M160AA | | |
| 150µF | 2012 | 1.25±0.20 | ±10% | CGA4J1X5R1C685K125AC | CGA4J3X5R1A685K125AB | |
| | | | ±20% | CGA4J1X5R1C685M125AC | CGA4J3X5R1A685M125AB | |
| 220µF | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L2X5R1C685K160AA | | |
| | | | ±20% | CGA5L2X5R1C685M160AA | | |
| 330µF | 2012 | 1.25±0.20 | ±10% | CGA4J1X5R1C106K125AC | CGA4J3X5R1A106K125AB | |
| | | | ±20% | CGA4J1X5R1C106M125AC | CGA4J3X5R1A106M125AB | |
| 470µF | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L1X5R1C106K160AC | | |
| | | | ±20% | CGA5L1X5R1C106M160AC | | |
| 680µF | 2012 | 1.25±0.20 | ±10% | CGA5L1X5R1C156M160AC | | |
| | | | ±20% | CGA5L1X5R1C226M160AC | | |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

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Please note that the contents may change without any prior notice due to reasons such as upgrading.

MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance range table

Temperature characteristic: X7R (-55 to +125°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | |
|-------------|------------|----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V | Rated voltage Edc: 35V | Rated voltage Edc: 25V |
| | | | | | | |
| 100pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1H101K030BA | | CGA1A2X7R1E101K030BA |
| | | | ±20% | CGA1A2X7R1H101M030BA | | CGA1A2X7R1E101M030BA |
| 150pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1H151K030BA | | CGA1A2X7R1E151K030BA |
| | | | ±20% | CGA1A2X7R1H151M030BA | | CGA1A2X7R1E151M030BA |
| 220pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1H221K030BA | | CGA1A2X7R1E221K030BA |
| | | | ±20% | CGA1A2X7R1H221M030BA | | CGA1A2X7R1E221M030BA |
| | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H221K050BA | | |
| | | | ±20% | CGA2B2X7R1H221M050BA | | |
| 330pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1H331K030BA | | CGA1A2X7R1E331K030BA |
| | | | ±20% | CGA1A2X7R1H331M030BA | | CGA1A2X7R1E331M030BA |
| | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H331K050BA | | |
| | | | ±20% | CGA2B2X7R1H331M050BA | | |
| 470pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1H471K030BA | | CGA1A2X7R1E471K030BA |
| | | | ±20% | CGA1A2X7R1H471M030BA | | CGA1A2X7R1E471M030BA |
| | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H471K050BA | | |
| | | | ±20% | CGA2B2X7R1H471M050BA | | |
| 680pF | 603 | 0.30±0.03 | ±10% | | | CGA1A2X7R1E681K030BA |
| | | | ±20% | | | CGA1A2X7R1E681M030BA |
| | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H681K050BA | | |
| | | | ±20% | CGA2B2X7R1H681M050BA | | |
| 1nF | 603 | 0.30±0.03 | ±10% | | | CGA1A2X7R1E102K030BA |
| | | | ±20% | | | CGA1A2X7R1E102M030BA |
| | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H102K050BA | | |
| | | | ±20% | CGA2B2X7R1H102M050BA | | |
| 1.5nF | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H102K080AA | | |
| | | | ±20% | CGA3E2X7R1H102M080AA | | |
| | 603 | 0.30±0.03 | ±10% | | | CGA1A2X7R1E152K030BA |
| | | | ±20% | | | CGA1A2X7R1E152M030BA |
| 2.2nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H152K050BA | | |
| | | | ±20% | CGA2B2X7R1H152M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H152K080AA | | |
| | | | ±20% | CGA3E2X7R1H152M080AA | | |
| 3.3nF | 603 | 0.30±0.03 | ±10% | | | CGA1A2X7R1E222K030BA |
| | | | ±20% | | | CGA1A2X7R1E222M030BA |
| | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H222K050BA | | |
| | | | ±20% | CGA2B2X7R1H222M050BA | | |
| 4.7nF | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H222K080AA | | |
| | | | ±20% | CGA3E2X7R1H222M080AA | | |
| | 603 | 0.30±0.03 | ±10% | | | CGA1A2X7R1E332K030BA |
| | | | ±20% | | | CGA1A2X7R1E332M030BA |
| 6.8nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H332K050BA | | |
| | | | ±20% | CGA2B2X7R1H332M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H332K080AA | | |
| | | | ±20% | CGA3E2X7R1H332M080AA | | |
| 10nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H472K050BA | | |
| | | | ±20% | CGA2B2X7R1H472M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H472K080AA | | |
| | | | ±20% | CGA3E2X7R1H472M080AA | | |
| 15nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1H682K050BA | | |
| | | | ±20% | CGA2B2X7R1H682M050BA | | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H682K080AA | | |
| | | | ±20% | CGA3E2X7R1H682M080AA | | |
| 22nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7R1H103K050BB | CGA2B3X7R1V103K050BB | CGA2B2X7R1E103K050BA |
| | | | ±20% | CGA2B3X7R1H103M050BB | CGA2B3X7R1V103M050BB | CGA2B2X7R1E103M050BA |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H103K080AA | | |
| | | | ±20% | CGA3E2X7R1H103M080AA | | |
| | 1005 | 0.50±0.05 | ±10% | CGA2B3X7R1H153K050BB | CGA2B3X7R1V153K050BB | CGA2B2X7R1E153K050BA |
| | | | ±20% | CGA2B3X7R1H153M050BB | CGA2B3X7R1V153M050BB | CGA2B2X7R1E153M050BA |
| 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H153K080AA | | | |
| | | ±20% | CGA3E2X7R1H153M080AA | | | |
| 33nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7R1H223K050BB | CGA2B3X7R1V223K050BB | CGA2B2X7R1E223K050BA |
| | | | ±20% | CGA2B3X7R1H223M050BB | CGA2B3X7R1V223M050BB | CGA2B2X7R1E223M050BA |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H223K080AA | | |
| | | | ±20% | CGA3E2X7R1H223M080AA | | |

Click the part numbers for details.

MULTILAYER CERAMIC CHIP CAPACITORS

Capacitance range table

Temperature characteristic: X7R (-55 to +125°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | | |
|-------------|------------|-----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V | Rated voltage Edc: 35V | Rated voltage Edc: 25V | |
| | | | | | | | |
| 33nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7R1H333K050BB | CGA2B3X7R1V333K050BB | CGA2B1X7R1E333K050BC | |
| | | | ±20% | CGA2B3X7R1H333M050BB | CGA2B3X7R1V333M050BB | CGA2B1X7R1E333M050BC | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H333K080AA | | | |
| | | | ±20% | CGA3E2X7R1H333M080AA | | | |
| 47nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7R1H473K050BB | CGA2B3X7R1V473K050BB | CGA2B1X7R1E473K050BC | |
| | | | ±20% | CGA2B3X7R1H473M050BB | CGA2B3X7R1V473M050BB | CGA2B1X7R1E473M050BC | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H473K080AA | | | |
| | | | ±20% | CGA3E2X7R1H473M080AA | | | |
| 68nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7R1H683K050BB | CGA2B3X7R1V683K050BB | CGA2B3X7R1E683K050BB | |
| | | | ±20% | CGA2B3X7R1H683M050BB | CGA2B3X7R1V683M050BB | CGA2B3X7R1E683M050BB | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H683K080AA | | | |
| | | | ±20% | CGA3E2X7R1H683M080AA | | | |
| 100nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7R1H104K050BB | CGA2B3X7R1V104K050BB | CGA2B3X7R1E104K050BB | |
| | | | ±20% | CGA2B3X7R1H104M050BB | CGA2B3X7R1V104M050BB | CGA2B3X7R1E104M050BB | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1H104K080AA | | CGA3E2X7R1E104K080AA | |
| | | | ±20% | CGA3E2X7R1H104M080AA | | CGA3E2X7R1E104M080AA | |
| | 2012 | 1.25±0.20 | ±10% | CGA4J2X7R1H104K125AA | | | |
| | | | ±20% | | | | |
| 150nF | 1005 | 0.50±0.05 | ±10% | | CGA2B1X7R1V154K050BC | CGA2B3X7R1E154K050BB | |
| | | | ±20% | | CGA2B1X7R1V154M050BC | CGA2B3X7R1E154M050BB | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E3X7R1H154K080AB | CGA3E3X7R1V154K080AB | CGA3E2X7R1E154K080AA | |
| | | | ±20% | CGA3E3X7R1H154M080AB | CGA3E3X7R1V154M080AB | CGA3E2X7R1E154M080AA | |
| | 2012 | 1.25±0.20 | ±10% | CGA4J2X7R1H154K125AA | | | |
| | | | ±20% | CGA4J2X7R1H154M125AA | | | |
| 220nF | 1005 | 0.50±0.05 | ±10% | | CGA2B1X7R1V224K050BC | CGA2B3X7R1E224K050BB | |
| | | | ±20% | | CGA2B1X7R1V224M050BC | CGA2B3X7R1E224M050BB | |
| | 1608 | 0.80±0.10 | ±10% | CGA3E3X7R1H224K080AB | CGA3E3X7R1V224K080AB | CGA3E1X7R1E224K080AC | |
| | | | ±20% | CGA3E3X7R1H224M080AB | CGA3E3X7R1V224M080AB | CGA3E1X7R1E224M080AC | |
| | 2012 | 1.25±0.20 | ±10% | CGA4J2X7R1H224K125AA | | CGA4J2X7R1E224K125AA | |
| | | | ±20% | CGA4J2X7R1H224M125AA | | | |
| 330nF | 1608 | 0.80±0.10 | ±10% | CGA3E3X7R1H334K080AB | CGA3E1X7R1V334K080AC | CGA3E3X7R1E334K080AB | |
| | | | ±20% | CGA3E3X7R1H334M080AB | CGA3E1X7R1V334M080AC | CGA3E3X7R1E334M080AB | |
| | 2012 | 1.25±0.20 | ±10% | CGA4J2X7R1H334K125AA | | | |
| | | | ±20% | CGA4J2X7R1H334M125AA | | | |
| | 470nF | 1608 | 0.80±0.10 | ±10% | CGA3E3X7R1H474K080AB | CGA3E1X7R1V474K080AC | CGA3E3X7R1E474K080AB |
| | | | | ±20% | CGA3E3X7R1H474M080AB | CGA3E1X7R1V474M080AC | CGA3E3X7R1E474M080AB |
| 2012 | | 1.25±0.20 | ±10% | CGA4J3X7R1H474K125AB | CGA4J3X7R1V474K125AB | CGA4J2X7R1E474K125AA | |
| | | | ±20% | CGA4J3X7R1H474M125AB | CGA4J3X7R1V474M125AB | CGA4J2X7R1E474M125AA | |
| 680nF | 1608 | 0.80±0.10 | ±10% | CGA5L2X7R1H474K160AA | | | |
| | | | ±20% | CGA5L2X7R1H474M160AA | | | |
| | 2012 | 1.25±0.20 | ±10% | | CGA3E1X7R1V684K080AC | CGA3E1X7R1E684K080AC | |
| | | | ±20% | | CGA3E1X7R1V684M080AC | CGA3E1X7R1E684M080AC | |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA4J3X7R1H684K125AB | CGA4J3X7R1V684K125AB | CGA4J3X7R1E684K125AB | |
| | | | ±20% | CGA4J3X7R1H684M125AB | CGA4J3X7R1V684M125AB | CGA4J3X7R1E684M125AB | |
| 1µF | 1608 | 0.80±0.10 | ±10% | | CGA3E1X7R1V105K080AC | CGA3E1X7R1E105K080AC | |
| | | | ±20% | | CGA3E1X7R1V105M080AC | CGA3E1X7R1E105M080AC | |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X7R1H105K125AB | CGA4J3X7R1V105K125AB | CGA4J3X7R1E105K125AB | |
| | | | ±20% | CGA4J3X7R1H105M125AB | CGA4J3X7R1V105M125AB | CGA4J3X7R1E105M125AB | |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X7R1H105K160AB | | CGA5L2X7R1E105K160AA | |
| | | | ±20% | CGA5L3X7R1H105M160AB | | CGA5L2X7R1E105M160AA | |
| 1.5µF | 3225 | 1.60±0.20 | ±10% | CGA6L2X7R1H105K160AA | | | |
| | | | ±20% | CGA6L2X7R1H105M160AA | | | |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X7R1H155K125AB | CGA4J1X7R1V155K125AC | CGA4J3X7R1E155K125AB | |
| | | | ±20% | CGA4J3X7R1H155M125AB | CGA4J1X7R1V155M125AC | CGA4J3X7R1E155M125AB | |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X7R1H155K160AB | CGA5L3X7R1V155K160AB | CGA5L2X7R1E155K160AA | |
| | | | ±20% | CGA5L3X7R1H155M160AB | CGA5L3X7R1V155M160AB | CGA5L2X7R1E155M160AA | |
| 2.2µF | 4532 | 1.60±0.20 | ±10% | CGA8L2X7R1H155K160KA | | | |
| | | | ±20% | | | | |
| | 2012 | 1.25±0.20 | ±10% | CGA4J3X7R1H225K125AB | CGA4J1X7R1V225K125AC | CGA4J3X7R1E225K125AB | |
| | | | ±20% | CGA4J3X7R1H225M125AB | CGA4J1X7R1V225M125AC | CGA4J3X7R1E225M125AB | |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X7R1H225K160AB | CGA5L3X7R1V225K160AB | CGA5L2X7R1E225K160AA | |
| | | | ±20% | CGA5L3X7R1H225M160AB | CGA5L3X7R1V225M160AB | CGA5L2X7R1E225M160AA | |
| 3225 | 2.00±0.20 | ±10% | CGA6M3X7R1H225K200AB | | | | |
| | | ±20% | CGA6M3X7R1H225M200AB | | | | |
| 4532 | 1.60±0.20 | ±10% | CGA8L2X7R1H225K160KA | | | | |
| | | ±20% | | | | | |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

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

MULTILAYER CERAMIC CHIP CAPACITORS TDK

Capacitance range table

Temperature characteristic: X7R (-55 to +125°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | | |
|-------------|------------|-----------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 75V | Rated voltage Edc: 50V | Rated voltage Edc: 35V | Rated voltage Edc: 25V |
| 3.3µF | 2012 | 1.25±0.20 | ±10% | | | CGA4J1X7R1V335K125AC | CGA4J1X7R1E335K125AC |
| | | | ±20% | | | CGA4J1X7R1V335M125AC | CGA4J1X7R1E335M125AC |
| | 3216 | 1.60+0.30,-0.10 | ±10% | | CGA5L3X7R1H335K160AB | CGA5L1X7R1V335K160AC | CGA5L1X7R1E335K160AC |
| | | | ±20% | | CGA5L3X7R1H335M160AB | CGA5L1X7R1V335M160AC | CGA5L1X7R1E335M160AC |
| | 3225 | 2.50±0.30 | ±10% | | CGA6P3X7R1H335K250AB | | |
| 4532 | 2.00±0.20 | ±20% | | CGA6P3X7R1H335M250AB | | | |
| 4.7µF | 2012 | 1.25±0.20 | ±10% | | CGA4J1X7R1H475K125AC | CGA4J1X7R1V475K125AC | CGA4J1X7R1E475K125AC |
| | | | ±20% | | | CGA4J1X7R1V475M125AC | CGA4J1X7R1E475M125AC |
| | 3216 | 1.60+0.30,-0.10 | ±10% | | CGA5L3X7R1H475K160AB | CGA5L1X7R1V475K160AC | CGA5L1X7R1E475K160AC |
| | | | ±20% | | CGA5L3X7R1H475M160AB | CGA5L1X7R1V475M160AC | CGA5L1X7R1E475M160AC |
| | 3225 | 2.50±0.30 | ±10% | | CGA6P3X7R1H475K250AB | | |
| | | | ±20% | | CGA6P3X7R1H475M250AB | | |
| | 4532 | 1.60±0.20 | ±10% | | | | CGA8L2X7R1E475K160KA |
| | 2.00±0.20 | ±20% | | CGA8M3X7R1H475K200KB | | CGA8L2X7R1E475M160KA | |
| 6.8µF | 3216 | 1.60+0.30,-0.10 | ±10% | | | CGA5L1X7R1V685K160AC | CGA5L1X7R1E685K160AC |
| | | | ±20% | | | CGA5L1X7R1V685M160AC | CGA5L1X7R1E685M160AC |
| | 3225 | 2.50±0.30 | ±10% | | | CGA6P3X7R1E685K250AB | |
| | | | ±20% | | | CGA6P3X7R1E685M250AB | |
| | 4532 | 2.50±0.30 | ±10% | | CGA8P3X7R1H685K250KB | | |
| 5750 | 2.50±0.30 | ±10% | | CGA9P2X7R1H685K250KA | | | |
| 10µF | 3216 | 1.60+0.30,-0.10 | ±10% | | CGA5L1X7R1H106K160AC | CGA5L1X7R1V106K160AC | CGA5L1X7R1E106K160AC |
| | | | ±20% | | | CGA5L1X7R1V106M160AC | CGA5L1X7R1E106M160AC |
| | 3225 | 2.50±0.30 | ±10% | CGA6P1X7R1N106K250AC | | CGA6P1X7R1E106K250AC | |
| | | | ±20% | CGA6P1X7R1N106M250AC | | CGA6P1X7R1E106M250AC | |
| | 4532 | 2.50±0.30 | ±10% | | | CGA8P2X7R1E106K250KA | |
| 5750 | 2.00±0.20 | ±20% | | | CGA9M2X7R1E106M200KA | | |
| 15µF | 3225 | 2.00±0.20 | ±10% | | | | CGA9N3X7R1H106K230KB |
| | | | ±20% | | | | CGA6M3X7R1E156M200AB |
| | 4532 | 2.80±0.30 | ±20% | | | | CGA8Q3X7R1E156M280KB |
| 22µF | 3225 | 2.50±0.30 | ±10% | | | | CGA9N2X7R1E156M230KA |
| | | | ±20% | | | | CGA6P3X7R1E226M250AB |
| | 4532 | 2.50±0.30 | ±20% | | | | CGA8P1X7R1E226M250KC |
| 47µF | 5750 | 2.30±0.20 | ±10% | | CGA9P3X7R1H226M250KB | | CGA9P2X7R1E226M250KA |
| | | | ±20% | | | CGA9N1X7R1V476M230KC | CGA9N3X7R1E476M230KB |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

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

MULTILAYER CERAMIC CHIP CAPACITORS

Capacitance range table

Temperature characteristic: X7R (-55 to +125°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | |
|-------------|------------|-----------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 16V | Rated voltage Edc: 10V | Rated voltage Edc: 6.3V |
| 100pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C101K030BA | | |
| | | | ±20% | CGA1A2X7R1C101M030BA | | |
| 150pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C151K030BA | | |
| | | | ±20% | CGA1A2X7R1C151M030BA | | |
| 220pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C221K030BA | | |
| | | | ±20% | CGA1A2X7R1C221M030BA | | |
| 330pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C331K030BA | | |
| | | | ±20% | CGA1A2X7R1C331M030BA | | |
| 470pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C471K030BA | | |
| | | | ±20% | CGA1A2X7R1C471M030BA | | |
| 680pF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C681K030BA | | |
| | | | ±20% | CGA1A2X7R1C681M030BA | | |
| 1nF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C102K030BA | | |
| | | | ±20% | CGA1A2X7R1C102M030BA | | |
| 1.5nF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C152K030BA | | |
| | | | ±20% | CGA1A2X7R1C152M030BA | | |
| 2.2nF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C222K030BA | | |
| | | | ±20% | CGA1A2X7R1C222M030BA | | |
| 3.3nF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C332K030BA | | |
| | | | ±20% | CGA1A2X7R1C332M030BA | | |
| 4.7nF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C472K030BA | | |
| | | | ±20% | CGA1A2X7R1C472M030BA | | |
| 6.8nF | 603 | 0.30±0.03 | ±10% | CGA1A2X7R1C682K030BA | | |
| | | | ±20% | CGA1A2X7R1C682M030BA | | |
| 10nF | 603 | 0.30±0.03 | ±10% | | CGA1A2X7R1A103K030BA | CGA1A2X7R0J103K030BA |
| | | | ±20% | | CGA1A2X7R1A103M030BA | CGA1A2X7R0J103M030BA |
| 33nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1C333K050BA | | |
| | | | ±20% | CGA2B2X7R1C333M050BA | | |
| 47nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1C473K050BA | | |
| | | | ±20% | CGA2B2X7R1C473M050BA | | |
| 68nF | 1005 | 0.50±0.05 | ±10% | CGA2B1X7R1C683K050BC | | |
| | | | ±20% | CGA2B1X7R1C683M050BC | | |
| 100nF | 1005 | 0.50±0.05 | ±10% | CGA2B1X7R1C104K050BC | | |
| | | | ±20% | CGA2B1X7R1C104M050BC | | |
| 150nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1C154K050BA | CGA2B1X7R1A154K050BC | CGA2B3X7R0J154K050BB |
| | | | ±20% | CGA2B2X7R1C154M050BA | CGA2B1X7R1A154M050BC | CGA2B3X7R0J154M050BB |
| 220nF | 1005 | 0.50±0.05 | ±10% | CGA2B2X7R1C224K050BA | CGA2B1X7R1A224K050BC | CGA2B3X7R0J224K050BB |
| | | | ±20% | CGA2B2X7R1C224M050BA | CGA2B1X7R1A224M050BC | CGA2B3X7R0J224M050BB |
| 330nF | 1608 | 0.80±0.10 | ±10% | CGA3E2X7R1C224K080AA | | |
| | | | ±20% | CGA3E2X7R1C224M080AA | | |
| 470nF | 1608 | 0.80±0.10 | ±10% | CGA3E1X7R1C334K080AC | | |
| | | | ±20% | CGA3E1X7R1C334M080AC | | |
| 680nF | 2012 | 1.25±0.20 | ±10% | CGA4J2X7R1C474K125AA | | |
| | | | ±20% | CGA4J2X7R1C474M125AA | | |
| 1µF | 1608 | 0.80±0.10 | ±10% | CGA3E1X7R1C105K080AC | | |
| | | | ±20% | CGA3E1X7R1C105M080AC | | |
| 1.5µF | 2012 | 1.25±0.20 | ±10% | CGA4J2X7R1C105K125AA | | |
| | | | ±20% | CGA4J2X7R1C105M125AA | | |
| 2.2µF | 1608 | 0.80±0.10 | ±10% | | CGA3E1X7R0J155K080AC | |
| | | | ±20% | | CGA3E1X7R0J155M080AC | |
| 3.3µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X7R1C155K125AB | | |
| | | | ±20% | CGA4J3X7R1C155M125AB | | |
| 4.7µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X7R1C475K125AB | CGA4J3X7R1A475K125AB | |
| | | | ±20% | CGA4J3X7R1C475M125AB | CGA4J3X7R1A475M125AB | |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L3X7R1C475K160AB | | |
| | | | ±20% | CGA5L3X7R1C475M160AB | | |

■ Gray items: These products are not recommended for new designs.
 Click the part numbers for details.

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

Capacitance range table

Temperature characteristic: X7R (-55 to +125°C, ±15%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | |
|-------------|------------|-----------------|-----------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 16V | Rated voltage Edc: 6.3V |
| 6.8µF | 2012 | 1.25±0.20 | ±10% | | CGA4J1X7R0J685K125AC |
| | | | ±20% | | CGA4J1X7R0J685M125AC |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L1X7R1C685K160AC | |
| | | | ±20% | CGA5L1X7R1C685M160AC | |
| 10µF | 2012 | 1.25±0.20 | ±10% | | CGA4J1X7R0J106K125AC |
| | | | ±20% | | CGA4J1X7R0J106M125AC |
| | 3216 | 1.60+0.30,-0.10 | ±10% | CGA5L1X7R1C106K160AC | |
| | | | ±20% | CGA5L1X7R1C106M160AC | |
| | 3225 | 2.00±0.20 | ±10% | CGA6M3X7R1C106K200AB | |
| | | | ±20% | CGA6M3X7R1C106M200AB | |
| 15µF | 3225 | 2.50±0.30 | ±20% | CGA6P3X7R1C156M250AB | |
| | | | ±20% | | CGA5L1X7R0J226M160AC |
| 22µF | 3225 | 2.50±0.30 | ±20% | CGA6P1X7R1C226M250AC | |
| | | | ±20% | CGA8N3X7R1C226M230KB | |
| 33µF | 4532 | 2.50±0.30 | ±20% | CGA8P1X7R1C336M250KC | |
| 47µF | 5750 | 2.30±0.20 | ±20% | CGA9N3X7R1C476M230KB | |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

MULTILAYER CERAMIC CHIP CAPACITORS



Capacitance range table

Temperature characteristic: X7S (-55 to +125°C, ±22%)

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | |
|-------------|------------|----------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 50V | Rated voltage Edc: 25V | Rated voltage Edc: 16V |
| 330nF | 1005 | 0.50±0.05 | ±10% | | | CGA2B1X7S1C334K050BC |
| | | | ±20% | | | CGA2B1X7S1C334M050BC |
| 470nF | 1005 | 0.50±0.05 | ±10% | | | CGA2B1X7S1C474K050BC |
| | | | ±20% | | | CGA2B1X7S1C474M050BC |
| 1.5µF | 1608 | 0.80±0.10 | ±10% | | | CGA3E1X7S1C155K080AC |
| | | | ±20% | | | CGA3E1X7S1C155M080AC |
| 2.2µF | 1608 | 0.80±0.10 | ±10% | | | CGA3E1X7S1C225K080AC |
| | | | ±20% | | | CGA3E1X7S1C225M080AC |
| 4.7µF | 3225 | 2.30±0.20 | ±10% | CGA6N3X7S1H475K230AB | | |
| | 2012 | 1.25±0.20 | ±10% | | | CGA4J1X7S1C685K125AC |
| 6.8µF | 3225 | 2.50±0.30 | ±10% | CGA6P3X7S1H685K250AB | | CGA4J1X7S1C685M125AC |
| | | | ±20% | CGA6P3X7S1H685M250AB | | CGA4J1X7S1C685M125AC |
| 10µF | 2012 | 1.25±0.20 | ±10% | | CGA4J1X7S1E106K125AC | CGA4J1X7S1C106K125AC |
| | 3225 | 2.50±0.30 | ±10% | CGA6P3X7S1H106K250AB | | CGA4J1X7S1C106M125AC |
| | | | ±20% | CGA6P3X7S1H106M250AB | | |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | |
|-------------|------------|-----------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 10V | Rated voltage Edc: 6.3V | Rated voltage Edc: 4V |
| 330nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7S1A334K050BB | | |
| | | | ±20% | CGA2B3X7S1A334M050BB | | |
| 470nF | 1005 | 0.50±0.05 | ±10% | CGA2B3X7S1A474K050BB | | |
| | | | ±20% | CGA2B3X7S1A474M050BB | | |
| 1.5µF | 1608 | 0.80±0.10 | ±10% | CGA3E3X7S1A155K080AB | | |
| | | | ±20% | CGA3E3X7S1A155M080AB | | |
| 2.2µF | 1608 | 0.80±0.10 | ±10% | CGA3E3X7S1A225K080AB | | |
| | | | ±20% | CGA3E3X7S1A225M080AB | | |
| 6.8µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X7S1A685K125AB | | |
| | 1608 | 0.80+0.30,-0.10 | ±20% | CGA4J3X7S1A685M125AB | | CGA3E1X7S0G106M080AC |
| 10µF | 2012 | 1.25±0.20 | ±10% | CGA4J3X7S1A106K125AB | | |
| | | | ±20% | CGA4J3X7S1A106M125AB | | |
| 15µF | 3216 | 1.60+0.30,-0.10 | ±20% | CGA5L1X7S1A156M160AC | | |
| 22µF | 3216 | 1.60+0.30,-0.10 | ±20% | CGA5L1X7S1A226M160AC | | |
| 33µF | 3225 | 2.00±0.20 | ±20% | CGA6M1X7S1A336M200AC | | |
| | | 2.50±0.30 | ±20% | | CGA6P1X7S0J336M250AC | |
| 47µF | 3225 | 2.50±0.30 | ±20% | CGA6P1X7S1A476M250AC | | |

■ Gray items: These products are not recommended for new designs.
Click the part numbers for details.

Capacitance range table

Temperature characteristic: X7T (-55 to +125°C, +22, -33%)

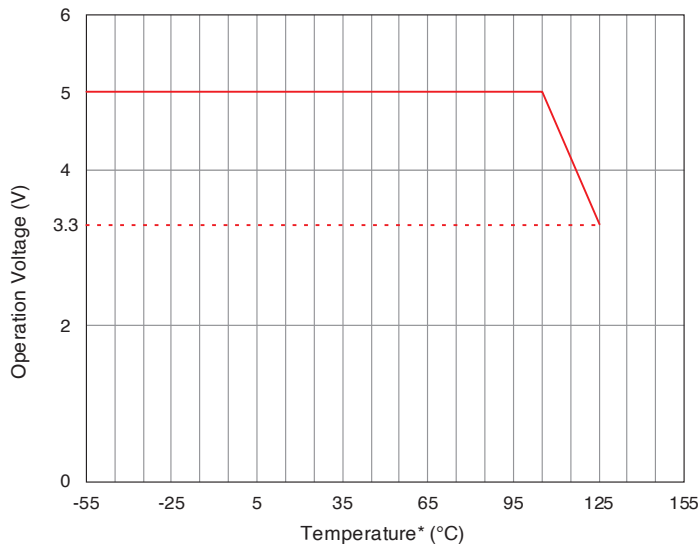
| Capacitance | Dimensions | Thickness (mm) | Capacitance tolerance | Catalog number | | | |
|-------------|------------|-----------------|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| | | | | Rated voltage Edc: 10V | Rated voltage Edc: 6.3V | Rated voltage Edc: 4V | Rated voltage Edc: 2.5V |
| 100nF | 0603 | 0.30+0.10,-0.03 | ±20% | | | CGA1A1X7T0G104M030BC | |
| 1µF | 1005 | 0.50+0.10,-0.05 | ±20% | | | CGA2B1X7T0G105M050BC | |
| 4.7µF | 1608 | 0.80+0.30,-0.10 | ±10% | CGA3E1X7T1A475K080AC | CGA3E3X7T0J475K080AB | | |
| 10µF | 1608 | 0.80+0.30,-0.10 | ±20% | CGA3EDX7T1A106M080AU | CGA3E1X7T0J106M080AC | CGA3E3X7T0G106M080AB | |
| 22µF | 2012 | 1.25+0.30,-0.15 | ±20% | | CGA4J1X7T0J226M125AC | | |
| 47µF | 3216 | 1.60+0.40,-0.10 | ±20% | | | CGA5L1X7T0G476M160AC | |
| 100µF | 3225 | 2.50+0.40,-0.30 | ±20% | | | CGA6P1X7T0G107M250AC | CGA6P3X7T0E107M250AB |

Click the part numbers for details.

CGA3EDX7T1A106M080AU is a derating guarantee product.

When the product temperature exceeds 125°C, please use the product within the derated voltage/temperature condition in the figure below

Rated voltage derating



* Including self-heating.