



MULTILAYER CERAMIC CHIP CAPACITORS

Commercial grade, low profile

CGB series

CGB1 0603[0201 inch]

CGB2 1005[0402 inch]

* Dimensions code: JIS[EIA]



REMINDERS FOR USING THESE PRODUCTS

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

SAFETY REMINDERS

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

REMINDERS

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

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

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

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

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

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

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

(Example)

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

CGB series

Low profile

Type: CGB1/0603 [0201 inch], CGB2/1005 [0402 inch]



SERIES OVERVIEW

Low profile CGB series is a product whose thickness is lower than general type, and so this is ideal for height-restricted applications such as mobile devices. The available maximum height is 0.22 mm or less.

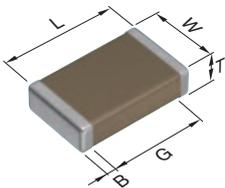
FEATURES

- The product height is lower than general products and products with maximum thicknesses from 0.22mm or less are available.

APPLICATIONS

- Ideal for height-restricted applications such as smartphone and mobile devices

SHAPE & DIMENSIONS



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

Dimensions in mm

Type	L	W	T	B	G
CGB1	0.60±0.03	0.30±0.03	0.19±0.03	0.10min.	0.20min.
CGB2	1.00±0.05	0.50±0.05	0.19±0.03	0.10min.	0.30min.

* Dimensional tolerances are typical values.

CATALOG NUMBER CONSTRUCTION

CGB	2	T	1	X6S	0G	105	M	022	B	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	CC0201	0.60	0.30	0.10 min.
2	CC0402	1.00	0.50	0.10 min.

(3) Thickness code

Code	Thickness
T	0.22 mm max.

(4) Voltage condition for life test

Symbol	Condition
1	1 × R.V.
3	1.5 × R.V.

(5) Temperature characteristics

Temperature characteristics	Capacitance change	Temperature range
X5R	±15%	-55 to +85°C
X6S	±22%	-55 to +105°C

(6) Rated voltage (DC)

Code	Voltage (DC)
0G	4V
0J	6.3V

(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
M	±20%

(9) Thickness

Code	Thickness
022	0.22 mm max.

(10) Packaging style

Code	Style
B	178mm reel, 2mm pitch

(11) Special reserved code

Code	Description
B,C	TDK internal code

Capacitance range chart

CGB1/0603 [0201 inch]

Capacitance		X5R	X6S
(pF)	Code	0J (6.3V)	0G (4V)
100,000	104		

Standard thickness  0.22 mm

■ For details such as the catalog numbers, please refer to the capacitance range table on page 6 and after.

Capacitance range chart

CGB2/1005 [0402 inch]

Capacitance		X5R	X6S
(pF)	Code	0G (4V)	0G (4V)
1,000,000	105		

Standard thickness  0.22 mm

■ For details such as the catalog numbers, please refer to the capacitance range table on page 6 and after.

Capacitance range table
Temperature characteristic: X5R (–55 to +85°C, ±15%)

Capacitance	Dimensions	Thickness (mm)	Capacitance tolerance	Catalog number	
				Rated voltage Edc: 6.3V	Rated voltage Edc: 4V
100nF	0603	0.22max.	±20%	CGB1T3X5R0J104M022BB	
1µF	1005	0.22max.	±20%		CGB2T1X5R0G105M022BC

Click the part numbers for details.

Capacitance range table
Temperature characteristic: X6S (–55 to +105°C, ±22%)

Capacitance	Dimensions	Thickness (mm)	Capacitance tolerance	Catalog number	
				Rated voltage Edc: 4V	
100nF	0603	0.22max.	±20%	CGB1T3X6S0G104M022BB	
1µF	1005	0.22max.	±20%	CGB2T1X6S0G105M022BC	

Click the part numbers for details.