



MULTILAYER CERAMIC CHIP CAPACITORS



CGA Series Automotive Grade Open Mode

Type: CGA4 [EIA CC0805]

**Issue date:
Oct 2013**



REMINDERS

Please read before using this product

SAFETY REMINDERS



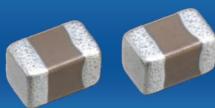
REMINDERS

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.

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	C1608C0G1E103JT000N
January 2013 and Later	C1608C0G1E103J080AA	C1608C0G1E103JT000N



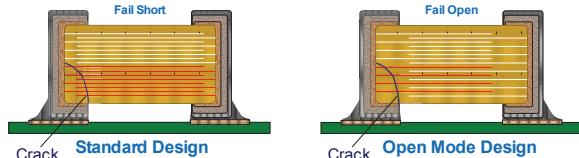
CGA Series

Open Mode

Type: CGA4 [EIA CC0805]



- When a chip capacitor is cracked by mechanical stress such as board bending, open mode construction helps user reduce the risk of short circuits.



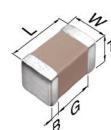
- Open Mode capacitor is designed with wider gap between the terminal and the internal electrodes to help reduce the risk of short circuit in the event of capacitor cracking due to mechanical stress such as board bending.
- AEC-Q200 compliant.

Applications



- High reliability and high mechanical stress applications
- Battery line circuit with high board flex stress
- DC-DC Converter

Shape & Dimensions



L	Body Length
W	Body Width
T	Body Height
B	Terminal Width
G	Terminal Spacing



Catalog Number Construction

CGA • 4 • J • 2 • X7R • 1H • 104 • K • 125 • A • M

Series Name

Dimensions L x W (mm)

Code	Length	Width	Terminal
4	2.00 ± 0.20	1.25 ± 0.20	0.20 min.

Thickness T Code (mm)

Code	Thickness
J	1.25 mm

Voltage Condition for Life Test

Symbol	Condition
2	2 × R.V.

Temperature Characteristics

Temperature Characteristics	Capacitance Change	Temperature Range
X7R	± 15%	-55 to +125°C
X8R	± 15%	-55 to +150°C

Rated Voltage (DC)

Code	Voltage (DC)
1H	50V

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.

Ex. 0R2 = 0.2pF; 103 = 10,000pF; 105 = 1,000,000pF = 1,000nF = 1µF

Nominal Thickness

Code	Thickness
125	1.25 mm

Packaging Style

Code	Style
A	178" Reel, 4mm Pitch

Special Reserved Code

Code	Description
M	Open Mode Design



Capacitance Range Chart

CGA4(2012) [EIA CC0805]

Capacitance Range Chart

Temperature Characteristics: X7R ($\pm 15\%$), X8R ($\pm 15\%$)

Rated Voltage: 50V (1H)

Capacitance (pF)	Code	Tolerance	X7R	X8R
			1H (50V)	1H (50V)
47,000	473	K: $\pm 10\%$		
68,000	683			
100,000	104		■	■

Standard Thickness

1.25 mm



Capacitance Range Table

Class 2 (Temperature Stable)

Temperature Characteristics: X7R (-55 to +125°C, $\pm 15\%$)

Capacitance	Size	Thickness (mm)	Capacitance Tolerance	Catalog Number
				Rated Voltage Edc: 50V
100 nF	2012	1.25 $\pm 0.25/-0.20$	$\pm 10\%$	CGA4J2X7R1H104K125AM

Class 2 (Temperature Stable)

Temperature Characteristics: X8R (-55 to +150°C, $\pm 15\%$)

Capacitance	Size	Thickness (mm)	Capacitance Tolerance	Catalog Number
				Rated Voltage Edc: 50V
47 nF	2012	1.25 ± 0.20	$\pm 10\%$	CGA4J2X8R1H473K125AM
68 nF	2012	1.25 ± 0.20	$\pm 10\%$	CGA4J2X8R1H683K125AM