

Disc Type Capacitors with Lead

High Voltage Ceramic Capacitors
Commercial Grade

Safety Standard Approved
CD series

Issue date: February 2013

- 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.
-

Disc Type Capacitors with Lead

Conformity to RoHS Directive

High Voltage Ceramic Capacitors
Commercial Grade

Safety Standard Approved
CD Series

REINFORCED INSULATION TYPE CLASS 2 HIGH DIELECTRIC

FEATURES

- Compliant with IEC and the safety standards of various countries.
- This ceramic capacitor meets reinforced insulation's Safety Standards.
Since it is rated at a withstand voltage of AC.4000V, it can be used in single-unit configurations within European Class II devices.
- Flame-resistant reinforced outer insulation prevents fires, electrical shock, and other potential hazards.
- Compatible with halogen-free external resin coating.

OPERATING TEMPERATURE RANGE: -25 to +125°C

TEMPERATURE CHARACTERISTICS AND TOLERANCE

| Temperature characteristics | Test temperature range | Capacitance tolerance |
|-----------------------------|------------------------|-----------------------|
| SL (+350 to -1000ppm/°C) | +20 to +85°C | J (±5%) |
| B (±10%) | -25 to +85°C | K (±10%) |
| Z5U (+22, -56%) | +10 to +85°C | M (±20%) |

PRODUCT IDENTIFICATION

CD 90 ZU 2GA 222 M Y N K A
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

- Type
- Shape
- Temperature characteristics
- Rated voltage
- Nominal capacitance
- Capacitance tolerance
- Class
- Lead type
- Safety standard
- Halogen-free compatible product

• 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.

CAPACITANCE AND DIMENSIONS

| Part No. | Temperature characteristics | Capacitance (pF) | Capacitance tolerance | Dimensions (mm) | | | |
|--------------------|-----------------------------|------------------|-----------------------|-----------------|--------|----------------|----------------|
| | | | | D max. | T max. | F | d |
| CD45SL2GA100JY□*KA | SL (+350 to -1000ppm/°C) | 10 | J (±5%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD45SL2GA150JY□KA | | 15 | J (±5%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD45SL2GA220JY□KA | | 22 | J (±5%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD45SL2GA330JY□KA | | 33 | J (±5%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD45SL2GA470JY□KA | | 47 | J (±5%) | 8.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD45SL2GA680JY□KA | | 68 | J (±5%) | 9.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD70-B2GA101KY□KA | B (±10%) | 100 | K (±10%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD70-B2GA151KY□KA | | 150 | K (±10%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD70-B2GA221KY□KA | | 220 | K (±10%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD75-B2GA331KY□KA | | 330 | K (±10%) | 7.5 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD85-B2GA471KY□KA | | 470 | K (±10%) | 9.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD65ZU2GA681MY□KA | | Z5U (+22, -56%) | 680 | M (±20%) | 7.0 | 7.0 | 10.0+2.0, -1.0 |
| CD70ZU2GA102MY□KA | 1,000 | | M (±20%) | 7.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD80ZU2GA152MY□KA | 1,500 | | M (±20%) | 8.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD90ZU2GA222MY□KA | 2,200 | | M (±20%) | 9.5 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD11ZU2GA332MY□KA | 3,300 | | M (±20%) | 12.0 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |
| CD12ZU2GA472MY□KA | 4,700 | | M (±20%) | 13.5 | 7.0 | 10.0+2.0, -1.0 | 0.6±0.05 |

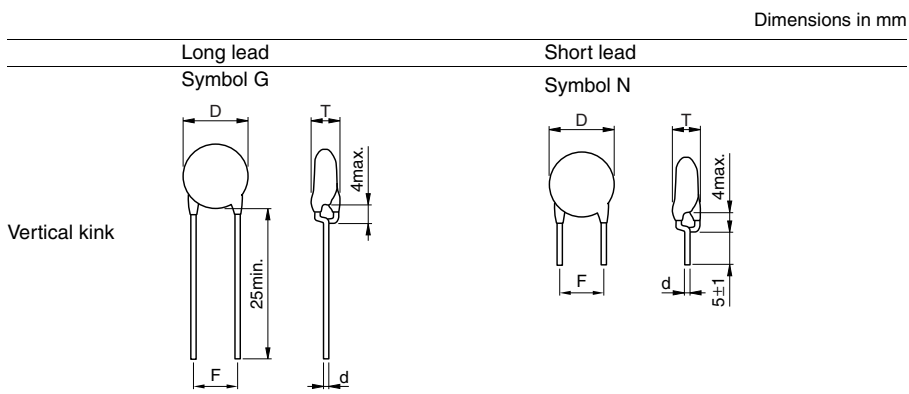
* □ : Lead shape symbol

LIST OF STANDARD LEAD SHAPES

The lead type is indicated by the letter which is the 15th character of the product name.

Example) TDK Product Name: **CD90ZU2GA222MYNKA**

└ N: Lead type (Vertical kink, Short)



- We recommend using a vertical kink type.
- For bulk products, we recommend a short lead type with the symbol N.

MARKINGS

| Item | Markings | Specifications | Marking examples |
|--------------------------|------------------|----------------------------|---|
| 1. Series | CD | CD series | <p>(Marking position is reference.)</p> |
| 2. Nominal capacitance | 222 | 2200pF | |
| 3. Capacitance tolerance | M | ±20% | |
| 4. Rated voltage Eac | 440~X1 400~Y1 | X1: AC.440V Y1: AC.400V | |
| 5. TDK's logogram | | Production base code | |
| 6. Date code | | 2012.9* | |

* Year and month of production: last digit of year + month denoted by 1, 2, 3, 4, 5, 6, 7, 8, 9, O (October), N (November), or D (December).

* The expression has become simplified due to a revision in the standards.

• For more information about products with other capacitance or other data, please contact us.

• All specifications are subject to change without notice.

CERTIFIED STATUS OF VARIOUS COUNTRIES

| Safety standard | Standard No. | Temperature characteristics | Insulation sub-class | Rated voltage | Approval report No. | |
|-----------------|-------------------|-----------------------------|----------------------|----------------------------|---------------------|----------------|
| | | | | | Taiwan | Xiamen |
| BSI | BS EN60384-14 | SL, B, Z5U | X1, Y1 | X1: AC.440V Y1: AC.400V | KM37103 | KM37103 |
| VDE | EN 60384-14 | | | | 40017931 | 40017931 |
| SEV | EN 60384-14 | | | | 12.0223 | 12.0223 |
| SEMKO | EN 60384-14 | | | | 1125241 | 1125241 |
| NEMKO | EN 60384-14 | | | | P12215264 | P12215264 |
| DEMKO | EN 60384-14 | | | | D-01094 | D-01094 |
| FIMKO | EN 60384-14 | | | | FI 27387 | FI 27387 |
| IMQ | EN 60384-14 | | | | V3691 | V3691 |
| SAA | AS3250 | | | | CS6268 | CS6268 |
| UL | UL 60384-14 | | | | E37861 | E37861 |
| CSA | CAN/CSA-E60384-14 | | | | 1785504 | 1785504 |
| CQC | GB/T14472-1998 | | | | CQC12001082617 | CQC10001052863 |

- Certificate numbers shall be changed owing to the revisions of the related standards.