

Mid-high Voltage Ceramic Capacitors

Disk type with lead

Safety standard approved

CD series

Issue date: October 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.
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Mid-high Voltage Ceramic Capacitors(Disk with Lead) Safety Standard Approved CD Series

Conformity to RoHS Directive

**REINFORCED INSULATION TYPE/Operating temperature range: -25 to +105°C(UL standard: -25 to +85°C)
CLASS 2 HIGH DIELECTRIC**

FEATURES

- Flame-resistant reinforced outer insulation prevents fires, electrical shock, and other potential hazards.
- Compliant with the safety standards of 11 countries.
- This ceramic capacitor meets European Class II (reinforced insulation) Safety Standards VDE, SEV, SEMKO, BS. Since it is rated at a withstand voltage of AC.4000V, it can be used in single-unit configurations within European Class II devices.
- This product is compatible with halogen-free external resin coating (we recommend halogen-free products as standard).

CAPACITANCE TEMPERATURE CHARACTERISTICS AND TOLERANCE

| Temperature characteristics | Test temperature range | Capacitance tolerance |
|-----------------------------|------------------------|-----------------------|
| B(±10%) | -25 to +85°C | K(±10%) |
| E(+20, -55%) | -25 to +85°C | M(±20%) |

CAPACITANCE AND DIMENSIONS

| Part No. | | Capacitance temperature characteristics | Capacitance (pF) | Capacitance tolerance | Dimensions(mm) | | | |
|----------------------|-------------------|---|------------------|-----------------------|----------------|--------|----------|----------|
| Halogen-free product | Current product | | | | D max. | T max. | F | d |
| CD70-B2GA101KY□*SA | CD70-B2GA101KY□*S | B(±10%) | 100 | K(±10%) | 7.0 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD70-B2GA151KY□SA | CD70-B2GA151KY□S | | 150 | K(±10%) | 7.0 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD85-B2GA221KY□SA | CD85-B2GA221KY□S | | 220 | K(±10%) | 8.5 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD90-B2GA331KY□SA | CD90-B2GA331KY□S | | 330 | K(±10%) | 9.0 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD90-B2GA391KY□SA | CD90-B2GA391KY□S | | 390 | K(±10%) | 9.0 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD95-B2GA471KY□SA | CD95-B2GA471KY□S | | 470 | K(±10%) | 9.5 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD75-E2GA681MY□SA | CD75-E2GA681MY□S | | 680 | M(±20%) | 7.5 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD85-E2GA102MY□SA | CD85-E2GA102MY□S | | 1,000 | M(±20%) | 8.5 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD10-E2GA152MY□SA | CD10-E2GA152MY□S | | 1,500 | M(±20%) | 10.0 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD12-E2GA222MY□SA | CD12-E2GA222MY□S | | 2,200 | M(±20%) | 11.5 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD14-E2GA332MY□SA | CD14-E2GA332MY□S | E(+20, -55%) | 3,300 | M(±20%) | 13.5 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD15-E2GA392MY□SA | CD15-E2GA392MY□S | | 3,900 | M(±20%) | 14.5 | 7.0 | 10+2, -1 | 0.6±0.05 |
| CD16-E2GA472MY□SA | CD16-E2GA472MY□S | | 4,700 | M(±20%) | 15.5 | 7.0 | 10+2, -1 | 0.6±0.05 |

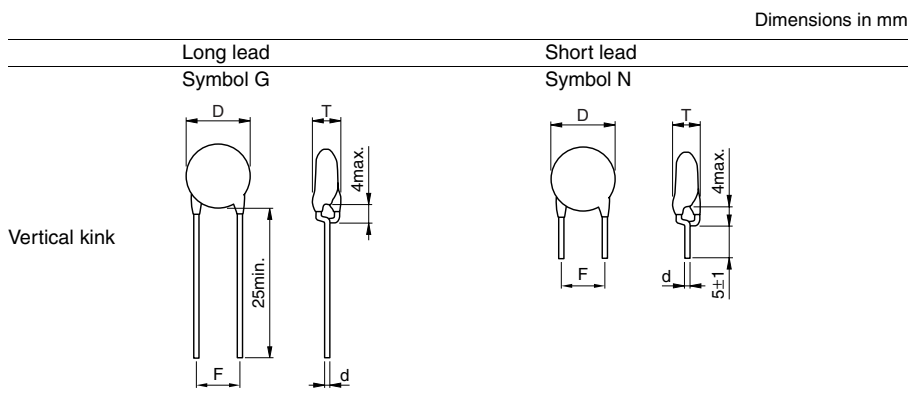
* □ : Lead shape symbol

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: **CD12-E2GA222MYNSA**

└─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.

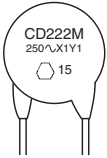

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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HALOGEN-FREE PRODUCT

MARKINGS

| Item | Marking examples |
|------------------------------------|------------------|
| 1. Series | CD |
| 2. Nominal capacitance | 222(2200pF) |
| 3. Capacitance tolerance | M(±20%) |
| 4. Rated voltage Eac | 250V ~ (AC.250V) |
| 5. Sub-class of safety performance | X1Y1 |
| 6. TDK's logogram | |
| 7. Date code | 15 (2011.5)* |

(Marking position is reference.)

* 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.

INTERNATIONALLY CERTIFIED STATUS / IEC60384-14 EN60384-14 Approved

| Safety standard | Standard No. of IEC | Standard No. | Temperature characteristics | Insulation sub-class | Rated voltage Eac(V) | Approval report No. | | |
|-----------------|---------------------|-------------------|-----------------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|
| | | | | | | Japan | Taiwan | Xiamen |
| BSI | IEC 60065 | BS EN 60065 | B, E | X1, Y1 | 250 | KM37103 | KM37103 | KM37103 |
| | IEC 60384-14 | BS EN60384-14 | | | | | | |
| VDE | IEC 60384-14 | EN 60384-14 | B, E | X1, Y1 | 250 | 40029780 | 40029780 | 40029780 |
| SEV | IEC 60384-14 | EN 60384-14 | B, E | X1, Y1 | 250 | 10.0121 | 10.0121 | 10.0121 |
| SEMKO | IEC 60384-14 | EN 60384-14 | B, E | X1, Y1 | 250 | 912465 | 912465 | 912465 |
| NEMKO | IEC 60384-14 | EN 60384-14 | B, E | X1, Y1 | 250 | P09211658 | P09211658 | P09211658 |
| DEMKO | IEC 60384-14 | EN 60384-14 | B, E | X1, Y1 | 250 | 315294-01 | 315294-01 | 315294-01 |
| FIMKO | IEC 60384-14 | EN 60384-14 | B, E | X1, Y1 | 250 | FI 25522 | FI 25522 | FI 25522 |
| IMQ | IEC 60384-14 | EN 60384-14 | B, E | X1, Y1 | 250 | V3691 | V3691 | V3691 |
| SAA | IEC 60065 | AS3250 | B, E | — | 400 | CS6268 | CS6268 | CS6268 |
| UL | — | UL 1414 | B, E | (X, Y) | 250 | E37861 | E37861 | E37861 |
| CSA | IEC 60384-14 | CAN/CSA-E60384-14 | B, E | (X, Y) | 250 | 2278970 (LR 35801) | 2278970 (LR 35801) | 2278970 (LR 35801) |
| CQC | IEC 60384-14 | GB-T 14472-1998 | B, E | X1, Y1 | 250 | CQC10001051611 | CQC10001051638 | CQC03001004816 |

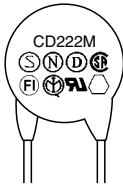
* Certificate numbers shall be changed owing to the revisions of the related standards.

CURRENT PRODUCT

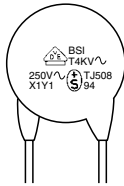
MARKINGS

| Item | Marking examples |
|---|------------------|
| 1. Series | CD |
| 2. Nominal capacitance | 222(2200pF) |
| 3. Capacitance tolerance | M(±20%) |
| 4. Rated voltage Eac | 250V ~ (AC.250V) |
| 5. Withstand voltage Eac | T4KV ~ (AC.4kV) |
| 6. Sub-class of safety performance | X1Y1 |
| 7. TDK's logogram | |
| 8. Date code | 15 (2011.5)* |
| 9. Regulatory body safety standards compliance markings | |

Front



Back



(Marking position of the monogram is reference.)

| | | | | | | | |
|----------------|-----|-------------------|-------|-----------------|--|----------------|--|
| BSI (U.K.) | BSI | SEV (Switzerland) | TJ508 | FIMKO (Finland) | | NEMKO (Norway) | |
| SEMKO (Sweden) | | UL (U.S.A.) | | DEMKO (Denmark) | | IMQ (Italy) | |
| VDE (Germany) | | CSA (Canada) | | | | | |

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| Safety standard | Standard No. of IEC | Standard No. | Temperature characteristics | Insulation sub-class | Rated voltage Eac(V) | Approval report No. | | |
|-----------------|---------------------|-----------------------|-----------------------------|----------------------|----------------------|---------------------|-----------|-----------|
| | | | | | | Japan | Taiwan | Xiamen |
| BSI | IEC 60065 | BS EN 60065 | B, E | X1, Y1 | 250 | 226495 | 226495 | 226495 |
| | IEC 60384-14 | BS EN60384-14 | | | | | | |
| VDE | IEC 60384-14 | EN60384-14 | B, E | X1, Y1 | 250 | 138526 | 138550 | 124321 |
| SEV | IEC 60384-14 | EN60384-14 | B, E | X1, Y1 | 250 | 09.0963 | 09.0963 | 09.0963 |
| SEMKO | IEC 60384-14 | EN60384-14 | B, E | X1, Y1 | 250 | 915564 | 915564 | 915396 |
| NEMKO | IEC 60384-14 | EN60384-14 | B, E | X1, Y1 | 250 | P09211509 | P09211509 | P08209310 |
| DEMKO | IEC 60384-14 | EN60384-14 | B, E | X1, Y1 | 250 | 315180-01 | 315180-01 | 314712-02 |
| FIMKO | IEC 60384-14 | EN60384-14 | B, E | X1, Y1 | 250 | FI 25452 | FI 25452 | FI 24307 |
| IMQ | IEC 60384-14 | EN60384-14 | B, E | X1, Y1 | 250 | V3691 | V3691 | V3691 |
| SAA | IEC 60065 | AS3250 | B, E | — | 400 | 6268 | 6268 | 6268 |
| UL | — | UL 1414 | B, E | (X, Y) | 250 | E37861 | E37861 | E37861 |
| CSA | — | CSA C22.2 No.0 & No.1 | B, E | (X, Y) | 250 | LR35801 | LR65972 | LR65972 |

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

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

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[MMWAF150KME](#) [PCY2130F30153](#) [PME261JB5220KR19T0](#) [A521HH333M035C](#) [QXJ2E474KTPT](#) [QXL2B333KTPT](#) [QXM2G104K](#)
[B32234-.033@250V-K](#) [B32520C6332K000](#) [B32522C6104K000](#) [B32523Q3155J](#) [B32676E6755K](#) [B81133-C1104-M3](#) [MTC355L1](#) [217-0716-](#)
[001](#) [PA225L30](#) [221A10-120](#) [CB182K0184J--](#) [KP1830-247/061-G](#) [SCD105K122A3-22](#) [SCD205K122A3-24](#) [F601BL225K063CL60A](#)
[PCX2339F65224](#) [PCX2339F65334](#) [2222 368 55105](#) [2222 370 21683](#) [QXL2E473KTPT](#) [445450-1](#) [B32524Q6155J](#) [46KI3100JBM1K](#) [MKP](#)
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