

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%)

PRODUCT IDENTIFICATION

CD	12	-E	2GA	222	M	Y	N	S	A
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

- (1) Type
- (2) Shape
- (3) Capacitance temperature characteristics
- (4) Rated voltage
- (5) Nominal capacitance
- (6) Capacitance tolerance
- (7) Class
- (8) Lead type
- (9) Safety standard
- (10) Halogen-free compatible product

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	E(+20, -55%)	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		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

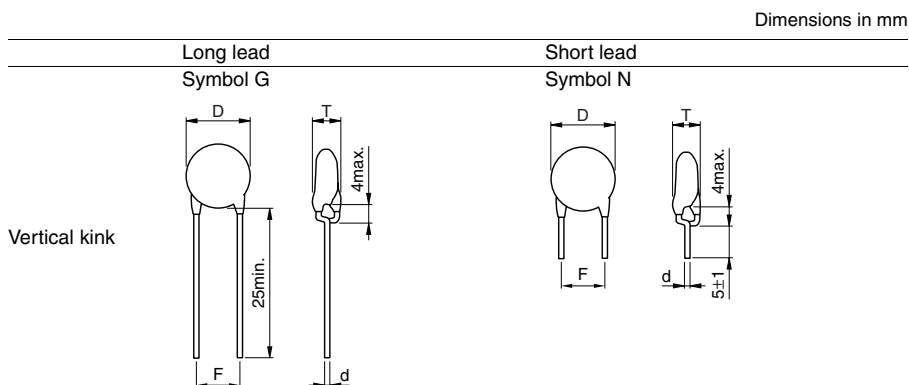
* □ : Lead shape symbol

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.

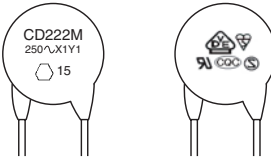
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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HALOGEN-FREE PRODUCT

MARKINGS

Item	Marking examples
1. Series	CD
2. Nominal capacitance	222(2200pF)
3. Capacitance tolerance	M($\pm 20\%$)
4. Rated voltage Eac	250V $\sim$ (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

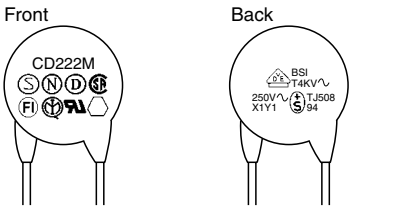
Safety standard	Standard No. of IEC	Standard No.	Temperature characteristics	Insulation sub-class	Rated voltage Eac(V)	Approval report No.		
						Japan	Taiwan	Xiamen
BSI	IEC 60065	BS EN 60065	B, E	X1, Y1	250	KM37103	KM37103	KM37103
	IEC 60384-14	BS EN60384-14						
VDE	IEC 60384-14	EN 60384-14	B, E	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($\pm 20\%$)
4. Rated voltage Eac	250V $\sim$ (AC.250V)
5. Withstand voltage Eac	T4KV $\sim$ (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	



(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)				

* 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).

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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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