

Mid-high Voltage Ceramic Capacitors

Disk type with lead

Safety standard approved

CD series

Issue date: June 2009

- 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 Temperature range: -25 to +105°C
CLASS 2 HIGH DIELECTRIC

FEATURES

- Smaller than conventional capacitors.
- 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.

PRODUCT IDENTIFICATION

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

- (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

MARKINGS

Item	Marking examples	
1. Series	CD	<div> <div>Front</div> </div> <div> <div>Back</div> </div> <p>(Marking position of the monogram is reference.)</p>
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	94 (2009.4)*	
9. Regulatory body safety standards compliance markings	<div> <div>BSI (U.K.)</div> <div>BSI</div> <div>SEV (Switzerland)</div> <div>TJ508</div> <div>FIMKO (Finland)</div> <div>FI</div> <div>NEMKO (Norway)</div> <div>N</div> </div> <div> <div>SEMKO (Sweden)</div> <div>S</div> <div>UL (U.S.A.)</div> <div>UL</div> <div>DEMKO (Denmark)</div> <div>D</div> <div>IMQ (Italy)</div> <div>IMQ</div> </div> <div> <div>VDE (Germany)</div> <div>VDE</div> <div>CSA (Canada)</div> <div>CSA</div> </div>	

* 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).

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 IEC 60384-14	BS EN 60065 BS EN60384-14	B, E	X1, Y1	250	226495	226495	226495
VDE	IEC 60384-14	EN60384-14	B, E	X1 Y1	400 250	138526	138550	124321
SEV	IEC 60384-14	EN60384-14	B, E	X1 Y1	400 250	08.0891	08.0891	08.0891
SEMKO	IEC 60384-14	EN60384-14	B, E	X1, Y1	250	0139185/01-02	0139185/01-02	9945094
NEMKO	IEC 60384-14	EN60384-14	B, E	X1, Y1	250	P01101987	P01101987	P99102682
DEMKO	IEC 60384-14	EN60384-14	B, E	X1, Y1	250	310959-01	310959-01	99-04087
FIMKO	IEC 60384-14	EN60384-14	B, E	X1, Y1	250	FI 17415	FI 17415	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.

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CAPACITANCE AND DIMENSIONS

Part No	Capacitance temperature characteristics	Capacitance (pF)	Capacitance tolerance	Dimensions (mm)		
				D max.	F	ød
CD70-B2GA101KY□S	B(±10%)	100	K(±10%)	7	10+2, -1	0.6±0.05
CD70-B2GA151KY□S		150	K(±10%)	7	10+2, -1	0.6±0.05
CD85-B2GA221KY□S		220	K(±10%)	8.5	10+2, -1	0.6±0.05
CD90-B2GA331KY□S		330	K(±10%)	9	10+2, -1	0.6±0.05
CD90-B2GA391KY□S		390	K(±10%)	9	10+2, -1	0.6±0.05
CD95-B2GA471KY□S		470	K(±10%)	9.5	10+2, -1	0.6±0.05
CD75-E2GA681MY□S	E(+20, -55%)	680	M(±20%)	7.5	10+2, -1	0.6±0.05
CD85-E2GA102MY□S		1,000	M(±20%)	8.5	10+2, -1	0.6±0.05
CD10-E2GA152MY□S		1,500	M(±20%)	10	10+2, -1	0.6±0.05
CD12-E2GA222MY□S		2,200	M(±20%)	11.5	10+2, -1	0.6±0.05
CD14-E2GA332MY□S		3,300	M(±20%)	13.5	10+2, -1	0.6±0.05
CD15-E2GA392MY□S		3,900	M(±20%)	14.5	10+2, -1	0.6±0.05
CD16-E2GA472MY□S		4,700	M(±20%)	15.5	10+2, -1	0.6±0.05

* □ : Lead shape symbol

SHAPES AND DIMENSIONS

VERTICAL KINK LEAD TYPE

Dimensions in mm

	Long lead Symbol G	Short lead Symbol N
Vertical kink		

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

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

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