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.

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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)

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

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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	0.6±0.05
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

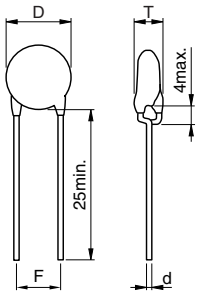
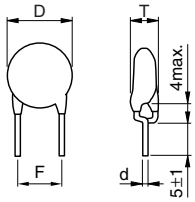
LIST OF STANDARD LEAD SHAPES

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

Example) TDK Product Name: **CD90ZU2GA222MYNKA**

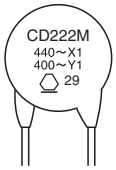
└ N: Lead type (Vertical kink, Short)

Dimensions in mm

	Long lead	Short lead
	Symbol G	Symbol N
Vertical kink		

- 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	
2. Nominal capacitance	222	2200pF	
3. Capacitance tolerance	M	±20%	
4. Rated voltage Eac	440～X1	X1: AC.440V	
	400～Y1	Y1: AC.400V	
5. TDK's logogram	⬡	Production base code	
6. Date code	29	2012.9*	

(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.

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

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.