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)

(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

- 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	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

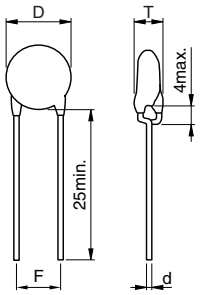
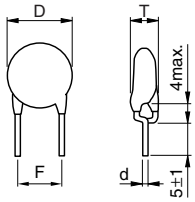
LIST OF STANDARD LEAD SHAPES

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

Example) TDK Product Name: **CD90ZU2GA222MYNKA**

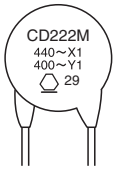
└ N: Lead type (Vertical kink, Short)

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.

- 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.