

# **Disc Type Capacitors with Lead**

High Voltage Ceramic Capacitors Commercial Grade

Safety Standard Approved CD series

Issue date: February 2013

<sup>•</sup> All specifications are subject to change without notice.

<sup>•</sup> 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.

## **公TDK**

# **Disc Type Capacitors with Lead**

**Conformity to RoHS Directive** 

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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	Capacitance
remperature characteristics	range	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	М	Υ	Ν	Κ	Α
(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	Capacitance Capacitance		Dimensions (mm)			
Fait No.		(pF)	tolerance	D max.	T max.	F	d	
CD45SL2GA100JY□*KA		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	- SL (+350 to -1000ppm/°C)	22	J (±5%)	7.0	7.0	10.0+2.0, -1.0	0.6±0.05	
CD45SL2GA330JY□KA	- 3L (+330 to -1000ppiii/ C)	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		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	B (±10%)	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		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	- Z5U (+22, –56%) - -	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	

 $<sup>^*</sup>$   $\square$  : 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)

Vertical kink

Dimensions in mm

Long lead
Symbol G
Symbol N

P

P

Symbol N

Symbol N

Symbol N

P

Symbol N

Symbol N

Symbol N

- 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	CD222M
3. Capacitance tolerance	M	±20%	440~X1 400~Y1
4. Rated voltage Eac	440∼X1	X1: AC.440V	29
•	400∼Y1	Y1: AC.400V	
5. TDK's logogram	$\wedge$	Production base code	H
6. Date code	29	2012.9*	
			(Marking position is reference.)

<sup>\*</sup> 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).

<sup>\*</sup> The expression has become simplified due to a revision in the standards.

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



## **CERTIFIED STATUS OF VARIOUS COUNTRIES**

Safety Standard No.	Temperature	Insulation	Datadualtana	Approval report No.		
standard	ndard	characteristics	sub-class	Rated voltage	Taiwan	Xiamen
BSI	BS EN60384-14				KM37103	KM37103
VDE	EN 60384-14	<del></del>	X1, Y1	X1: AC.440V Y1: AC.400V	40017931	40017931
SEV	EN 60384-14	<del></del>			12.0223	12.0223
SEMKO	EN 60384-14				1125241	1125241
NEMKO	EN 60384-14	<del></del>			P12215264	P12215264
DEMKO	EN 60384-14				D-01094	D-01094
FIMKO	EN 60384-14	— SL, B, Z5U			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

<sup>•</sup> Certificate numbers shall be changed owing to the revisions of the related standards.

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