

Disc Type Capacitors with Lead

High Voltage Ceramic Capacitors

Commercial Grade

CK45 series

Type: CK45 [B, E characteristics, Edc: 1kV to 3kV]





REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

⚠ REMINDERS
On not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
On not use for a purpose outside of the contents regulated in the delivery specifications.
The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications

quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions.

The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or

If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

- (1) Aerospace/Aviation equipment
- (2) Transportation equipment (cars, electric trains, ships, etc.)

equipment, industrial robots) under a normal operation and use condition.

- (3) Medical equipment
- (4) Power-generation control equipment
- (5) Atomic energy-related equipment
- (6) Seabed equipment
- (7) Transportation control equipment

- (8) Public information-processing equipment
- (9) Military equipment
- (10) Electric heating apparatus, burning equipment
- (11) Disaster prevention/crime prevention equipment
- (12) Safety equipment
- (13) Other applications that are not considered general-purpose applications
- Please refer to the guideline of notabilia for fixed ceramic capacitors issued by JEITA(Japan Electronics and Information Technology Association, EIAJ RCR-2335).

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.



Disc Type Capacitors with Lead

Product compatible with RoHS directive Halogen-free

High Voltage Ceramic Capacitors, Commercial Grade

Overview of CK45 Series

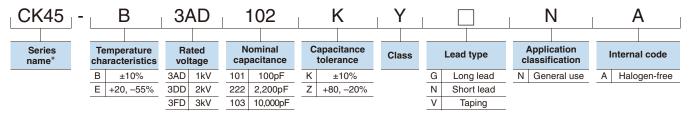
FEATURES

- These products shall conform to RoHS Directive due to lead(Pb) free of lead wire and internal solder material.
- Ocompatible with halogen-free external resin coating.

APPLICATION

For use in DC ballast

PART NUMBER CONSTRUCTION



^{*} Please refer to P-5~10 about the product dimensions.

■ OPERATING TEMPERATURE RANGE

Temperature	Temperature range*					
characteristics	Operating temperature	Storage temperature** (°C)				
В	-25 to +105	-25 to +105				
E	-25 to +105	-25 to +105				

^{*}The maximum operating temperature of 105°C includes capacitor self-generated heat of up to 20°C.

PACKAGE QUANTITY

Time	Package	quantity
Туре	Taping (pieces / box)	Bulk (pieces / bag)
CK45	1000	1000

^{* 500} pieces applies to the following part. CK45-E3DD103ZYVNA

^{**} The storage temperature range applies to after MLCC is mounted on board.

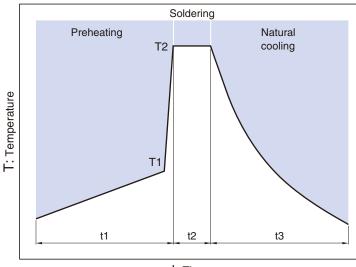
RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. http://product.tdk.com/en/environment/rohs/

Halogen-free: Indicates that CI content is less than 900ppm, Br content is less than 900ppm, and that the total CI and Br content is less than 1500ppm.



Overview of CK45 Series

■ RECOMMENDED FLOW PROFILE



t: Time

Preheating		Peak		Natural cooling
Temp.	Time	Temp.	Time	Time
T1	t1	T2	t2	t3
110°C min.	30 to 60s.	260°C	Within 10s.	Over 60s.



CAPACITANCE AND DIMENSIONS

□Temperature Characteristics: B (±10%)

□Rated Voltage Edc: 1kV

Capacitance	Dimensi	ons (mm)		Taping					
(pF)	Capacitance tolerance	D max.	T max.	F (Applied to bulk)	F (Applied to taping)	d	dimensions***	* Part No.*	
100	±10%	5.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD101KY□NA**	
150	±10%	5.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD151KY□NA	
220	±10%	5.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD221KY□NA	
330	±10%	5.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD331KY□NA	
470	±10%	5.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD471KY□NA	
680	±10%	5.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD681KY□NA	
1,000	±10%	6.0	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD102KY□NA	
1,500	±10%	7.0	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD152KY□NA	
2,200	±10%	8.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD222KY□NA	
3,300	±10%	9.5	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD332KY□NA	
4,700	±10%	11.0	5.0	5.0±1.5	5.0+0.8,-0.2	0.6±0.05	V1	CK45-B3AD472KY□NA	

 $^{^{\}star}$ The part numbers are TDK's standard specification products.

LIST OF STANDARD LEAD SHAPES

Symbol G
Bulk/Long lead

Symbol N
Bulk/Short lead

Taping

Vertical kink

Terminal Symbol V
Taping

- TDK's standard product is vertical kink.
- TDK's recommendation is short lead type with the symbol N for bulk products.

^{**} The " \square " of the Part Number contains the lead type, G, N or V. Please refer to the details of each shape is shown below.

^{***} Please refer to P-11 about the taping dimemsions.



CAPACITANCE AND DIMENSIONS

□Temperature Characteristics: B (±10%)

□Rated Voltage Edc: 2kV

Consoitance	Capacitance Capacitance				Taping			
(pF)	tolerance	D max.	T max.	F (Applied to bulk)	F (Applied to taping)	d	dimensions***	Part No.*
100	±10%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD101KY NA**
150	±10%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD151KY□NA
220	±10%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD221KY□NA
330	±10%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD331KY□NA
470	±10%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD471KY□NA
680	±10%	6.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD681KY□NA
1,000	±10%	7.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD102KY□NA
1,500	±10%	8.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD152KY□NA
2,200	±10%	10.0	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-B3DD222KY□NA
3,300	±10%	11.5	5.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3DD332KY□NA
4,700	±10%	14.0	5.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3DD472KY□NA

 $^{^{\}star}$ The part numbers are TDK's standard specification products.

LIST OF STANDARD LEAD SHAPES

Symbol G
Bulk/Long lead

Symbol N
Bulk/Short lead

Taping

Vertical kink

Terminal Symbol V
Taping

- TDK's standard product is vertical kink.
- TDK's recommendation is short lead type with the symbol N for bulk products.

^{**} The " \square " of the Part Number contains the lead type, G, N or V. Please refer to the details of each shape is shown below.

^{***} Please refer to P-11 about the taping dimemsions.



CAPACITANCE AND DIMENSIONS

☐Temperature Characteristics: B (±10%)

□Rated Voltage Edc: 3kV

Consoitones	Dimensi	ons (mm)		- Taping				
Capacitance (pF)	Capacitance tolerance	D max.	T max.	F (Applied to bulk)	F (Applied to taping)	d	dimensions***	Part No.*
100	±10%	5.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD101KY□NA**
150	±10%	5.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD151KY□NA
220	±10%	5.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD221KY□NA
330	±10%	6.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD331KY□NA
470	±10%	7.0	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD471KY□NA
680	±10%	8.0	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD681KY□NA
1,000	±10%	9.0	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD102KY□NA
1,500	±10%	10.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD152KY□NA
2,200	±10%	12.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-B3FD222KY□NA

^{*} The part numbers are TDK's standard specification products.

LIST OF STANDARD LEAD SHAPES

Symbol G
Bulk/Long lead

Symbol N
Bulk/Short lead

Taping

Vertical kink

Vertical kink

- TDK's standard product is vertical kink.
- TDK's recommendation is short lead type with the symbol N for bulk products.

^{**} The " \square " of the Part Number contains the lead type, G, N or V. Please refer to the details of each shape is shown below.

^{***} Please refer to P-11 about the taping dimemsions.



CAPACITANCE AND DIMENSIONS

□Temperature Characteristics: E (+20, −55%)

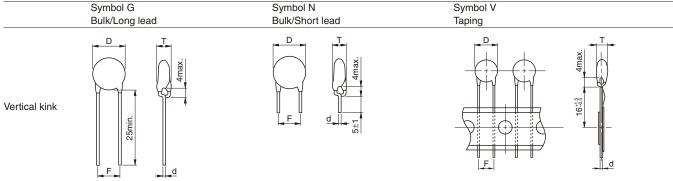
□Rated Voltage Edc: 1kV

Capacitance	Capacitance	Dimensi	ons (mm)		- Taping			
(pF)	tolerance	D max.	T max.	F	F	d	dimensions***	Part No.*
(P:)	totoranoo	D IIIax.	i iliux.	(Applied to bulk)	(Applied to taping)	u	difficitions	
470	+80, –20%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3AD471ZY□NA**
1,000	+80, -20%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3AD102ZY□NA
2,200	+80, -20%	6.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3AD222ZY□NA
4,700	+80, -20%	8.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3AD472ZY□NA
10,000	+80, -20%	11.5	5.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-E3AD103ZY□NA

^{*} The part numbers are TDK's standard specification products.

LIST OF STANDARD LEAD SHAPES

Dimemsions in mm



- TDK's standard product is vertical kink.
- TDK's recommendation is short lead type with the symbol N for bulk products.

^{**} The " \square " of the Part Number contains the lead type, G, N or V. Please refer to the details of each shape is shown below.

^{***} Please refer to P-11 about the taping dimemsions.



CAPACITANCE AND DIMENSIONS

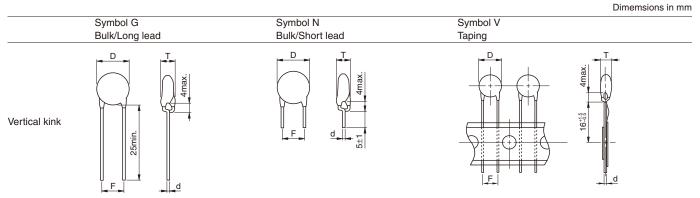
□Temperature Characteristics: E (+20, −55%)

□Rated Voltage Edc: 2kV

Capacitance	Dimensi	ons (mm)		- Taping				
(pF)	Capacitance tolerance	D max.	T max.	F	F	d	dimensions***	Part No.*
(P:)	1010141100	D IIIax.	i iliux.	(Applied to bulk)	(Applied to taping)	ŭ	difficitions	
470	+80, -20%	5.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3DD471ZY□NA**
1,000	+80, -20%	6.0	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3DD102ZY□NA
2,200	+80, -20%	8.0	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3DD222ZY□NA
4,700	+80, -20%	10.5	5.0	5.0±1.5	5.0+0.8, -0.2	0.6±0.05	V1	CK45-E3DD472ZY□NA
10,000	+80, -20%	14.5	5.0	7.5±1.5	7.5±0.8	0.6±0.05	V3	CK45-E3DD103ZY□NA

^{*} The part numbers are TDK's standard specification products.

LIST OF STANDARD LEAD SHAPES



- TDK's standard product is vertical kink.
- TDK's recommendation is short lead type with the symbol N for bulk products.

^{**} The " \square " of the Part Number contains the lead type, G, N or V. Please refer to the details of each shape is shown below.

^{***} Please refer to P-11 about the taping dimemsions.



CAPACITANCE AND DIMENSIONS

□Temperature Characteristics: E (+20, -55%)

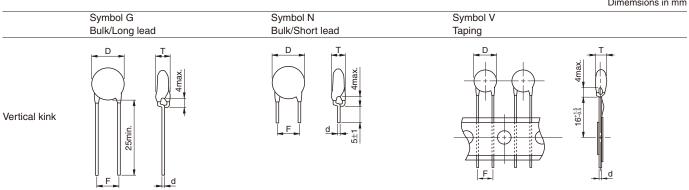
□Rated Voltage Edc: 3kV

Capacitance	Capacitance	Dimensi	ons (mm)				Taping	
(pF)	tolerance	D max.	T max.	F (Applied to bulk)	F (Applied to taping)	d	dimensions***	Part No.*
470	+80, -20%	6.0	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-E3FD471ZY□NA**
1,000	+80, -20%	7.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-E3FD102ZY□NA
2,200	+80, -20%	9.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-E3FD222ZY□NA
4,700	+80, -20%	12.5	6.0	7.5±1.5	7.5±0.8	0.6±0.05	V2	CK45-E3FD472ZY□NA

^{*} The part numbers are TDK's standard specification products.

LIST OF STANDARD LEAD SHAPES

Dimemsions in mm



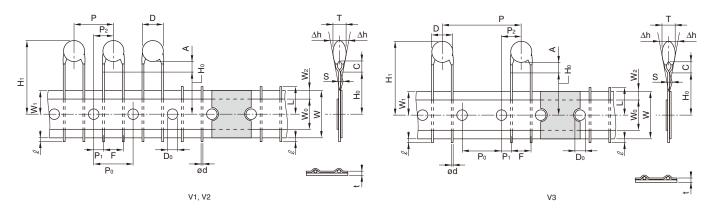
- TDK's standard product is vertical kink.
- TDK's recommendation is short lead type with the symbol N for bulk products.

^{**} The " 🗌 " of the Part Number contains the lead type, G, N or V. Please refer to the details of each shape is shown below.

^{***} Please refer to P-11 about the taping dimemsions.



TAPING DIMEMSIONS



Item	Cumbal	Dimensions(mm)			Remarks
item	Symbol	V1	V2	V3	nemarks
Body diameter	D	Depends on the	e specification of	each product.	
Body thickness	Т	Depends on the	e specification of	each product.	
Lead-wire diameter	ød	0.6±0.05	0.6±0.05	0.6±0.05	
Pitch of component	Р	12.7±1.0	15.0±1.0	30.0±1.0	Including the slant of body
Feed hole pitch	P ₀	12.7±0.3	15.0±0.3	15.0±0.3	Excepting the tape splicing part
Feed hole center to lead	P1	3.85±0.7	3.75±0.7	3.75±0.7	
Feed hole center to component center	P ₂	6.35±1.3	7.5±1.3	7.5±1.3	
Lead-to lead distance	F	5+0.8, -0.2	7.5±0.8	7.5±0.8	Measuring point is bottom kink
Component alignment	Δh	0±2.0	0±2.0	0±2.0	Including the slanting body due to bending lead-wire
Tape width	W	18.0+1.0, -0.5	18.0+1.0, -0.5	18.0+1.0, -0.5	
Adhesive tape width	Wo	10.0min.	10.0min.	10.0min.	
Hole position	W ₁	9.0±0.5	9.0±0.5	9.0±0.5	
Adhesive tape position	W2	4.0max.	4.0max.	4.0max.	Adhesive tape do not stick out the tape
Bottom of kink from tape center	Ho	16.0+1.5, -0.5	16.0+1.5, -0.5	16.0+1.5, -0.5	
Height of body from tape center	H ₁	46.0max.	46.0max.	46.0max.	
Lead-wire protrusion	l	1.0max.	1.0max.	1.0max.	
Feed hole diameter	D ₀	4.0±0.2	4.0±0.2	4.0±0.2	
Total tape thickness	t	0.6±0.3	0.6±0.3	0.6±0.3	Including adhesive tape
Length of snipped lead	L	11.0max.	11.0max.	11.0max.	
Coating on lead	С	4.0max.	4.0max.	4.0max.	
Height of kink	А	4.0max.	4.0max.	4.0max.	Measuring point is bottom kink
Spring action	S	2.0max.	2.0max.	2.0max.	

■ AMMO PACK INNER BOX SIZE



Dimensions in mm

Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use. Please note that the contents may change without any prior notice due to reasons such as upgrading.

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

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Ceramic Disc Capacitors category:

Click to view products by TDK manufacturer:

Other Similar products are found below:

5AU100JCECA 5AU220JCGCA 5AU560JCJCA DEF2CLH020CA3B DEF2CLH030CJ3B 101GHR102K 564RC0GBA302EJ470K

NCD102K1KVY5FF NCD103M1KVZ5UF NCD331K1KVY5FF 440LT68AP-R CK60AX471M AOL-1502-02 NCD103M1KVZ5UJTBF

DEF2CLH040CN3A DEF2CLH080DA3B 0811-040-X7R0-102K 8903D0 90410-10 CK61BX471K YV101103Z060HAND5P

SL102101J060BAND5P YP202102K080D04A7H ZU501103M090B20C6P ZU102103M100X05B0P YP102271K050B20C6P

YP102391K050BAND5P YP501101K040BAND5P ZU102103M100BAND5H YP102681K060B20C6P YP501121K040B20C6P

SL102181J070HAND5P YP501471K040B20C6P SL102151J070HAND5P YP501102K050HAND5P ZU501102M050B20C6P

YP501472K100B20C6P ZU102103M100B20C0P YV500223Z080HAND5P F121K25S3NN63J5R F121K25S3NP63K7R

F121K25S3NR63K7R F122K47S3NP63K7R F681K43S3NR63K7R S470J25SL0N6TJ5R HVCC103Y6P152MEAX S103Z43Y5VN6TJ5R

DCH102K34Y5PP6FJ5A0 CC1H220KA1EDCH4B1100 CC3A222MC1GEF45H31MF