

## Ultra high voltage ceramic capacitors For high voltage power supplies/lasers

# FHV series



### FEATURES

- Lineup of rated voltage Edc: 15 to 50kV
- High capacitance and excellent temperature, bias characteristics
- Low loss and low distortion factor
- Metal screw terminals for easy mounting
- Uses high-reliability mold resin

### APPLICATION

High-voltage power circuits (for medical devices, lithography, industrial analyzers)

### PART NUMBER CONSTRUCTION

607	50	YS	702	K	4C	D	A
Product category	Internal code	Temperature characteristic	Nominal capacitance	Capacitance tolerance	Rated voltage	Voltage classification	Insulation structure
Ultra high voltage ceramic capacitors		YS Y5S(-30 to +85°C, ±22%)	701 700pF 851 850pF 132 1300pF 702 7000pF	K ±10%	4C 15kV 4D 20kV 4F 30kV 4G 40kV 4H 50kV	D DC voltage specification	A Mold type

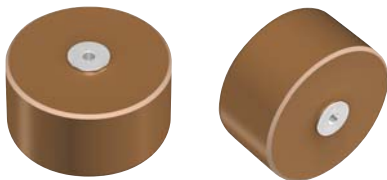
\* Please refer to P-3 about the product dimensions.

### OPERATING TEMPERATURE RANGE

Series	Operating temperature(°C)	Storage temperature(°C)
FHV	-30 to +85	-30 to +85

The maximum operating temperature of +85°C includes capacitor self-generated heat of up to 20°C.

### PRODUCT APPEARANCE



# FHV series

## ELECTRICAL CHARACTERISTICS

### CHARACTERISTICS SPECIFICATION TABLE

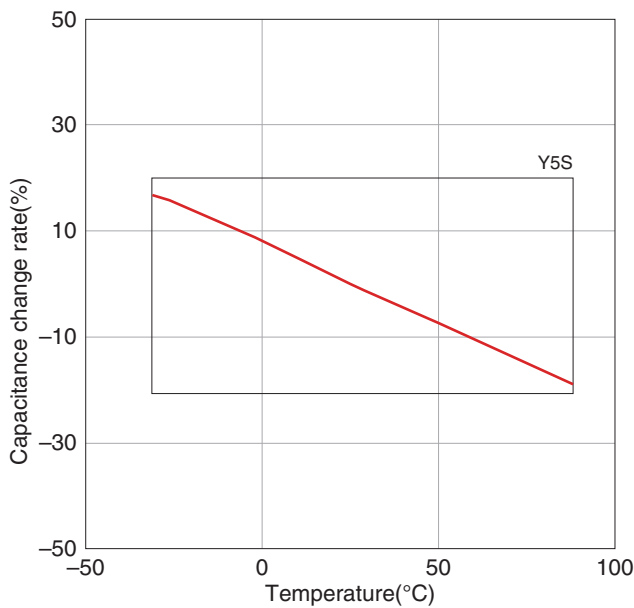
Class 2 (Temperature stable)

Temperature characteristic: Y5S (-30 to +85°C, ±22%)

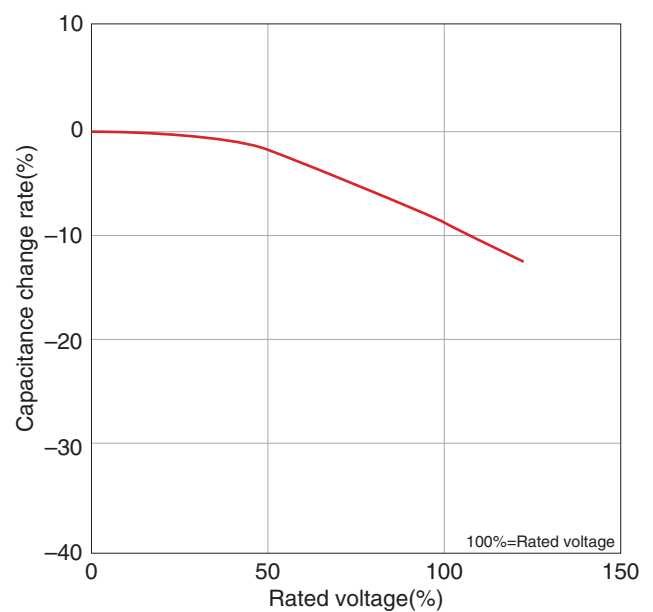
Part numbers	Sub part numbers	Rated voltage	Capacitance	Withstanding voltage	Dissipation factor(tanδ) (%) max.	Insulation resistance (MΩ) min.	AC corona starting voltage [3pC* ] (kVAC) min.
		(kVDC)	(pF)	[1min, in insulating liquid] (kVDC)			
<a href="#">60750YS702K4CDA</a>	FHV-153AN	15	7,000±10%	22.5	0.1	10,000	7.5
<a href="#">60729YS172K4DDA</a>	FHV-1AN	20	1,700±10%	30	0.1	10,000	10
<a href="#">60739YS302K4DDA</a>	FHV-2AN	20	3,000±10%	30	0.1	10,000	10
<a href="#">60750YS522K4DDA</a>	FHV-3AN	20	5,200±10%	30	0.1	10,000	10
<a href="#">60729YS122K4FDA</a>	FHV-4AN	30	1,200±10%	45	0.1	10,000	15
<a href="#">60739YS212K4FDA</a>	FHV-5AN	30	2,100±10%	45	0.1	10,000	15
<a href="#">60750YS352K4FDA</a>	FHV-6AN	30	3,500±10%	45	0.1	10,000	15
<a href="#">60729YS851K4GDA</a>	FHV-7AN	40	850±10%	60	0.1	10,000	20
<a href="#">60739YS152K4GDA</a>	FHV-8AN	40	1,500±10%	60	0.1	10,000	20
<a href="#">60750YS262K4GDA</a>	FHV-9AN	40	2,600±10%	60	0.1	10,000	20
<a href="#">60729YS701K4HDA</a>	FHV-10AN	50	700±10%	75	0.1	10,000	25
<a href="#">60739YS132K4HDA</a>	FHV-11AN	50	1,300±10%	75	0.1	10,000	25
<a href="#">60750YS212K4HDA</a>	FHV-12AN	50	2,100±10%	75	0.1	10,000	25

\* pC : Pico coulomb

### TEMPERATURE CHARACTERISTIC

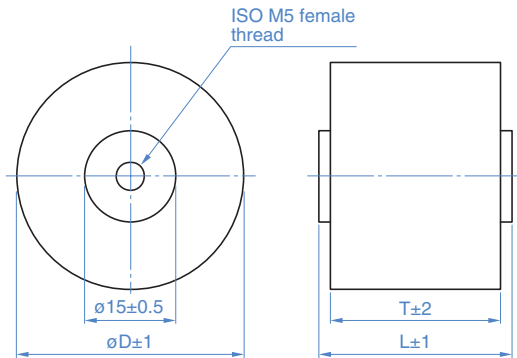


### DC VOLTAGE CHARACTERISTIC



# FHV series

## SHAPE & DIMENSIONS



Effective female thread depth: 5+1/0mm

## MARKINGS

FHV-5AN	Sub part number
212K	Nominal capacitance and tolerance code
DC30kV	Rated voltage
TDK	Manufacturer's name (TDK or TDK logo mark)
1234	Lot number

Part numbers	Sub part numbers	$\phi D$ (mm)	T (mm)	L (mm)
<a href="#">60750YS702K4CDA</a>	FHV-153AN	60	16.5	20.5
<a href="#">60729YS172K4DDA</a>	FHV-1AN	38	18.5	22.5
<a href="#">60739YS302K4DDA</a>	FHV-2AN	48	18.5	22.5
<a href="#">60750YS522K4DDA</a>	FHV-3AN	60	18.5	22.5
<a href="#">60729YS122K4FDA</a>	FHV-4AN	38	22	26
<a href="#">60739YS212K4FDA</a>	FHV-5AN	48	22	26
<a href="#">60750YS352K4FDA</a>	FHV-6AN	60	22	26
<a href="#">60729YS851K4GDA</a>	FHV-7AN	38	26	30
<a href="#">60739YS152K4GDA</a>	FHV-8AN	48	26	30
<a href="#">60750YS262K4GDA</a>	FHV-9AN	60	26	30
<a href="#">60729YS701K4HDA</a>	FHV-10AN	38	29	33
<a href="#">60739YS132K4HDA</a>	FHV-11AN	48	29	33
<a href="#">60750YS212K4HDA</a>	FHV-12AN	60	29	33

## 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 this products.

#### REMINDERS

##### (1) During transportation and storage

- Do not transport or store where the products will be exposed to high temperature or high humidity.
- Do not expose to poisonous gases such as H<sub>2</sub>SO<sub>4</sub>, HCl, or HNO<sub>3</sub>.
- Avoid excessive impact such as that caused by falling.

##### (2) During operation

- Avoid contact with electrolytes such as perspiration. Do not touch with bare hands.
- Avoid excessive impact such as that caused by falling.
- Do not apply solder to stud terminals.
- Do not re-machine the terminals.

##### (3) Usage

- Make sure that the products are not exposed to radiant heat from chambers or transformers.
- Please contact us when using in SF<sub>6</sub> gas.

##### (4) Others

The products listed on this catalog are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or 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 set forth in the each catalog, please contact us.

- |  |  |
|--|--|
| (1) Aerospace/aviation equipment   | (8) Public information-processing equipment                                  |
| (2) Transportation equipment (cars, electric trains, ships, etc.)                    | (9) Military equipment   |
| (3) Medical equipment (excepting Pharmaceutical Affairs Law classification Class1,2) | (10) Electric heating apparatus, burning equipment                           |
| (4) Power-generation control equipment   | (11) Disaster prevention/crime prevention equipment                          |
| (5) Atomic energy-related equipment  | (12) Safety equipment  |
| (6) Seabed equipment   | (13) Other applications that are not considered general-purpose applications |
| (7) Transportation control equipment   |  |

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.