

Ultra high voltage ceramic capacitors For distribution lines

FD series, MD series



FEATURES

- FD series (rated voltage Eac:10 to 25 kV) and MD series (rated voltage Eac:7.2kV) are available
- Molded type metal screw terminals for easy mounting
- Uses high-reliability mold resin
- Extremely stable temperature characteristics

APPLICATION

Distribution line switches (zero-phase detection, demarcation point), traded volume detection

PART NUMBER CONSTRUCTION

607	10	YP		101		K		4A		A		A	
Product category	Internal code	Temperature characteristics		Nominal capacitance		Capacitance tolerance		Rated voltage		Voltage classification		Insulation structure	
Ultra high voltage ceramic capacitors		YP	Y5P (−30 to +85°C, ±10%)	500	50pF	J	±5%	3K	7.2kV	A	AC voltage specifications	A	Mold type
				101	100pF	K	±10%	4A	10kV				
		CH	CH (−30 to +85°C, 0±60ppm/°C)	251	250pF			4C	13kV				
				102	1000pF			4D	20kV				
								4E	25kV				

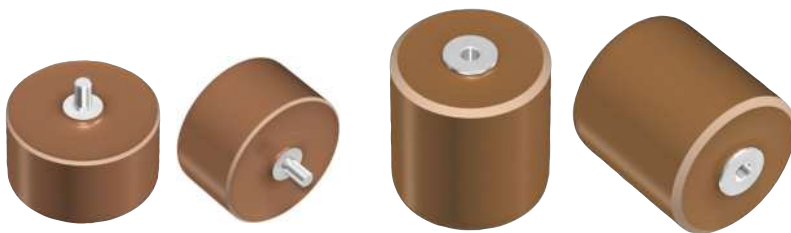
* Please refer to P-3 to 4 about the product dimensions.

OPERATING TEMPERATURE RANGE

Series	Operating temperature(°C)	Storage temperature(°C)
FD	−30 to +85	−30 to +85
MD	−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



FD series

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

Class 2 (Temperature stable)

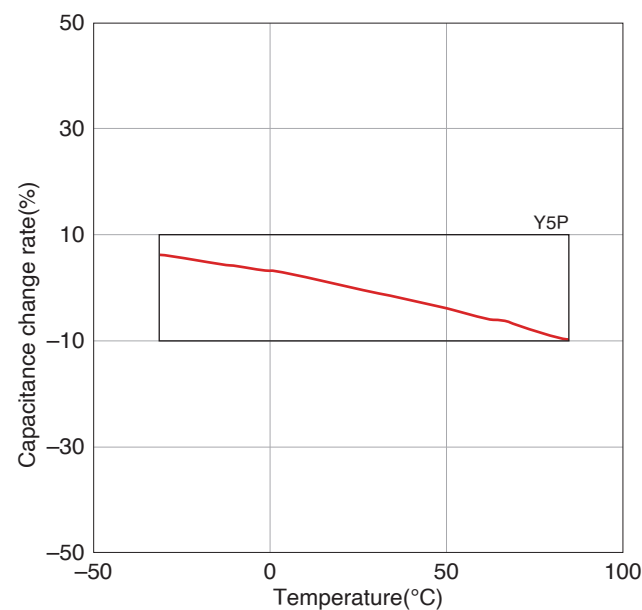
Temperature characteristic: Y5P(−30 to +85°C, ±10%)

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.
		(kVAC)	(pF)	[1min, in insulating liquid] (kVAC)			
60710YP101K4AAA2	FD-9AT	10	100±10%	15	0.3	10,000	12
60715YP251K4AAA	FD-10AT	10	250±10%	15	0.3	10,000	12
60722YP501K4AAA	FD-11AT	10	500±10%	15	0.3	10,000	12
60731YP102K4AAA	FD-12A	10	1,000±10%	15	0.3	10,000	12
60718YP251K4CAA	FD-16A	13	250±10%	20	0.3	10,000	16
60726YP501K4CAA	FD-18A	13	500±10%	20	0.3	10,000	16
60737YP102K4CAA	FD-20A	13	1,000±10%	20	0.3	10,000	16
60723YP251K4DAA	FD-22A	20	250±10%	30	0.3	10,000	24
60718YP251K4DAA	FD-23A	20	250±10%	30	0.3	10,000	24
60732YP501K4DAA	FD-24A	20	500±10%	30	0.3	10,000	24
60726YP251K4EAA	FD-33A	25	250±10%	40	0.3	10,000	32
60736YP501K4EAA	FD-36A	25	500±10%	40	0.3	10,000	32

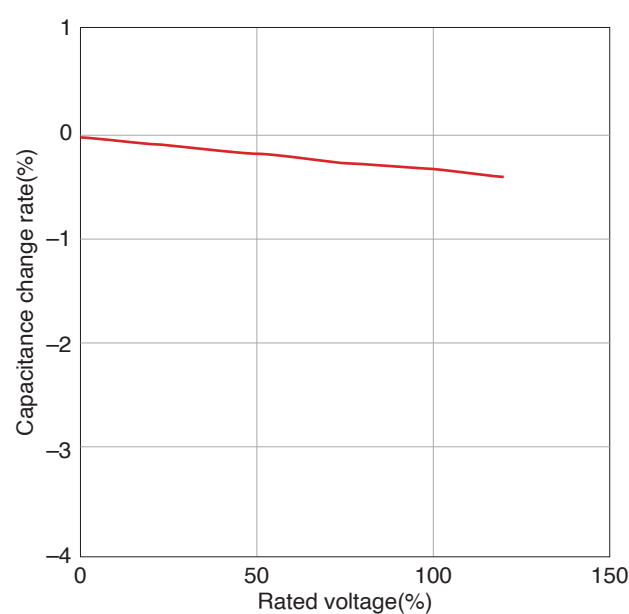
* pC : Pico coulomb

● In addition to the above, products of secondary-molded type are also available.

TEMPERATURE CHARACTERISTIC



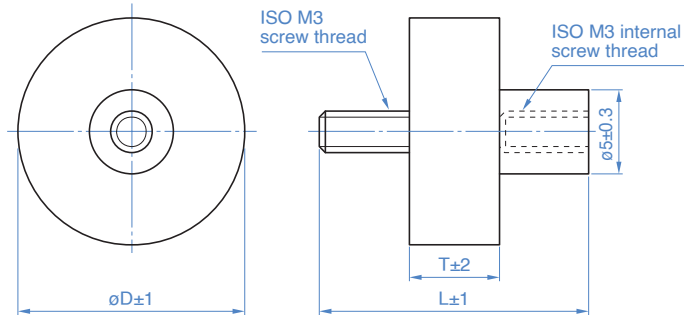
AC VOLTAGE CHARACTERISTIC



FD series

■ SHAPE & DIMENSIONS

FD-9A to FD-16A

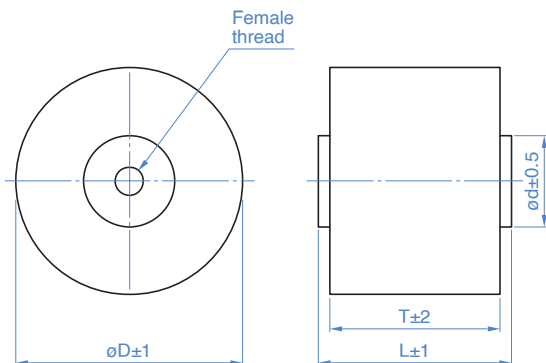


MARKINGS

FD-9A	Sub part number
101K	Nominal capacitance and tolerance code
AC10kV	Rated voltage
TDK	Manufacturer's name (TDK or TDK logo mark)
1234	Lot number

Part numbers	Sub part numbers	ϕD (mm)	T (mm)	L (mm)	Effective male thread size (mm)	Effective female thread depth (mm)
60710YP101K4AAA2	FD-9AT	16	15	27	4 min.	6+1/0
60715YP251K4AAA	FD-10AT	21	15	27	4 min.	6+1/0
60722YP501K4AAA	FD-11AT	28	15	27	4 min.	6+1/0
60731YP102K4AAA	FD-12A	38	15	27	4 min.	6+1/0
60718YP251K4CAA	FD-16A	26	18.5	30.5	4 min.	6+1/0

FD-18A to FD-36A



MARKINGS

FD-22A	Sub part number
251K	Nominal capacitance and tolerance code
AC20kV	Rated voltage
TDK	Manufacturer's name (TDK or TDK logo mark)
1234	Lot number

Part numbers	Sub part numbers	ϕD (mm)	T (mm)	L (mm)	ϕd (mm)	Internal screw	Effective female thread depth (mm)
60726YP501K4CAA	FD-18A	34	23.5	27.5	10	ISO M4	5+1/0
60737YP102K4CAA	FD-20A	48	23.5	27.5	15	ISO M5	5+1/0
60723YP251K4DAA	FD-22A	30	29.2	33.2	10	ISO M4	5+1/0
60718YP251K4DAA	FD-23A	26	24	28	8	ISO M4	5+1/0
60732YP501K4DAA	FD-24A	40	29	33	15	ISO M5	5+1/0
60726YP251K4EAA	FD-33A	34	35	39	10	ISO M4	5+1/0
60736YP501K4EAA	FD-36A	48	34.5	38.5	15	ISO M5	5+1/0

MD series

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

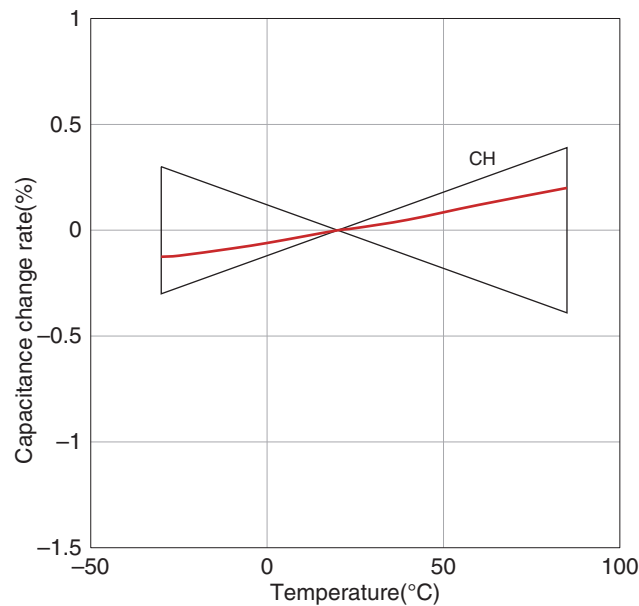
Class 1 (Temperature compensating)

Temperature characteristic: CH(−25 to +85°C, 0±60ppm/°C)

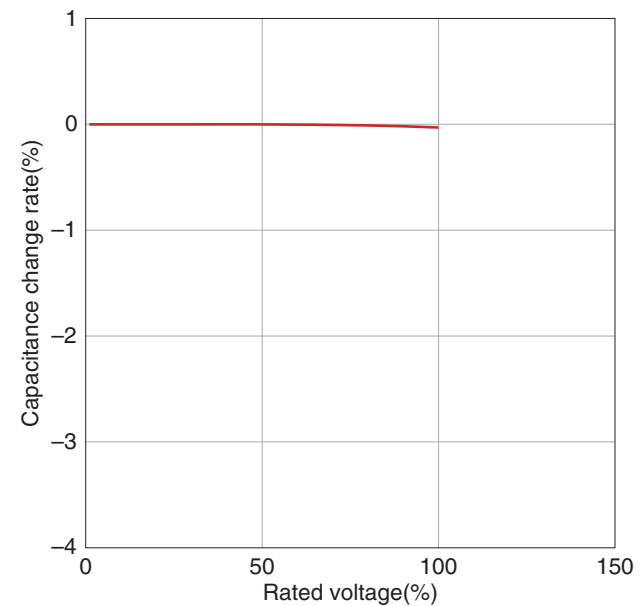
Part number	Sub part number	Rated voltage	Capacitance	Withstanding voltage	Dissipation factor(tanδ)	Insulation resistance	AC corona starting voltage
		(kVAC)	(pF)	[1min, in insulating liquid] (kVAC)	(%) max.	(MΩ) min.	[3pC*] (kVAC) min.
60729CH500J3KAA	MD-1A	7.2	50±5%	30	0.2	10,000	15

* pC : Pico coulomb

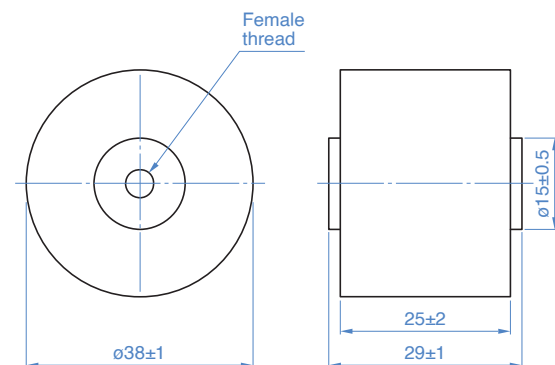
TEMPERATURE CHARACTERISTIC



AC VOLTAGE CHARACTERISTIC



SHAPE & DIMENSIONS



Effective female thread depth: 5+1/0mm

MARKINGS

MD-1A	Sub part number
5 0 0 J	Nominal capacitance and tolerance code
AC7.2kV	Rated voltage
T D K	Manufacturer's name (TDK or TDK logo mark)
1 2 3 4	Lot number

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_2SO_4 , HCl , or HNO_3 .
- 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_6 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
- (2) Transportation equipment (cars, electric trains, ships, etc.)
- (3) Medical equipment (excepting Pharmaceutical Affairs Law classification Class1,2)
- (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

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.