Ultra high voltage ceramic capacitors
For power circuit breakers

TSF series

FEATURES

- Lineup of rated voltage Eac: 20kV
- Strong impulse voltage
- High capacitance and excellent temperature characteristics
- Low loss and low distortion factor
- Uses high-reliability mold resin

APPLICATION

Circuit breakers for gas insulation switchgears (available for SF6 gas)

PART NUMBER CONSTRUCTION

607	34	ZT	112	J	4D	A	S

Product category	Internal code	Temperature characteristic		Nominal capacitance		Capacitance tolerance		Rated voltage		Voltage classification		Insulation structure	
Ultra high voltage ceramic capacitors		ZT	Z5T(+10 to +85°C, +22,-33%)	401	400pF	J	±5%	4D	20kV	A	AC voltage specification	S	Mold type
				112	1080pF	K	±10%						

* Please refer to P-2 about the product dimensions.

□OPERATING TEMPERATURE RANGE

series	Operating temperature(°C)	Storage temperature(°C)
TSF	–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





TSF series

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS SPECIFICATION TABLE

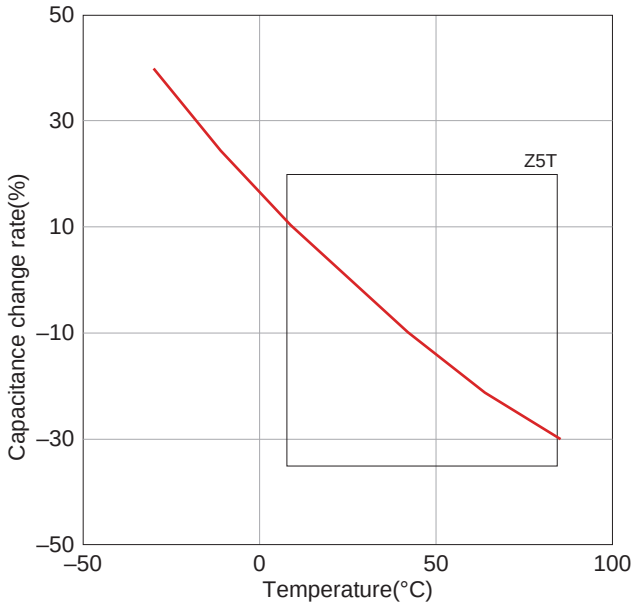
Class 2 (Temperature stable)

Temperature characteristic: Z5T (+10 to +85°C, +22,-33%)

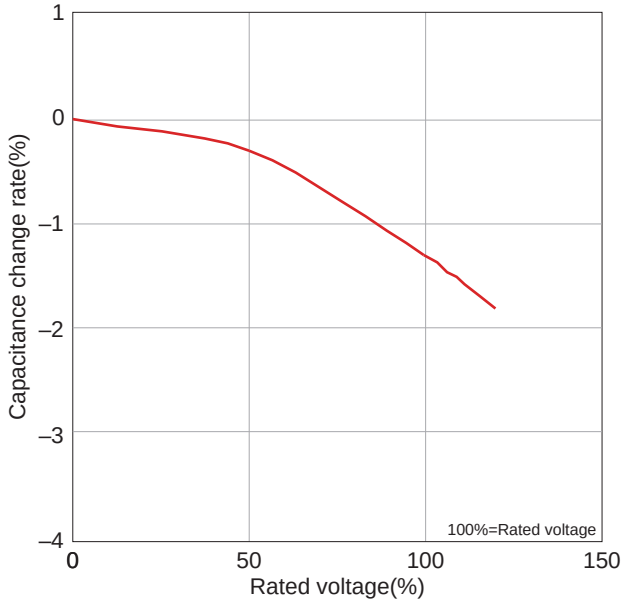
Part numbers	Sub part numbers	Rated voltage (kVAC)	Capacitance (pF)	Withstanding voltage [1min.in insulating liquid] (kVAC)	Dissipation factor(tanδ) (%) max.	Insulation resistance (MΩ) min.	AC corona starting voltage [3pC*] (kVAC) min.	Lightning impulse withstanding voltage (kV) min.
60734ZT112J4DAS2	TSF-40C	20	1080±5%	42	0.1	10,000	25	±110
60722ZT401K4DAS	TSF-30	20	400±10%	30	0.3	10,000	25	±110

* pC : Pico coulomb

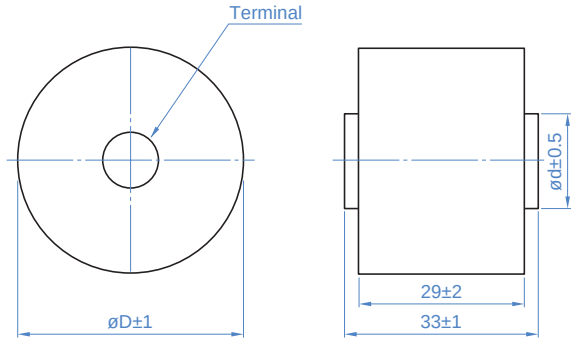
TEMPERATURE CHARACTERISTIC



AC VOLTAGE CHARACTERISTIC



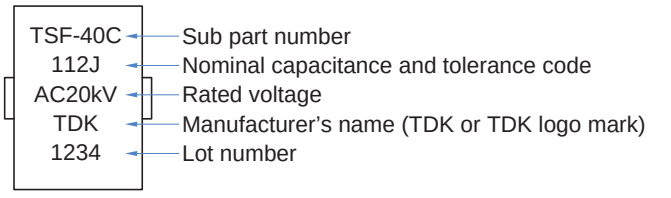
SHAPE & DIMENSIONS



Molded with epoxide resin; alumina filler.

Part numbers	Sub part numbers	øD (mm)	ød (mm)
60734ZT112J4DAS2	TSF-40C	40	15
60722ZT401K4DAS	TSF-30	30	10

MARKINGS



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 prodcuts 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 prodcuts are not exposed to radiant heat from chambers or transformers.
• Please contact us when using in SF6 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.