

# Ultra-high Voltage Ceramic Capacitors

Molded type with metal terminals

For distribution lines

FD(Eac: 10 to 25kV) series

Issue date: June 2011

- All specifications are subject to change without notice.
  - 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.
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# Ultra-high Voltage Ceramic Capacitors

## Molded Type with Metal Terminals FD Series

Conformity to RoHS Directive

### FOR HIGH VOLTAGE POWER CIRCUIT/AC HEAVY DUTY

Temperature range:  $-30$  to  $+85^{\circ}\text{C}$ /Capacitance temperature characteristics: Y5P ( $\pm 10\%$ )

### CLASS 2 HIGH DIELECTRIC

Molded from resins that provide outstanding insulation and moisture resistance, these capacitors are ideal for high-voltage power circuits in electrical power transmission and receiving devices.

### FEATURES

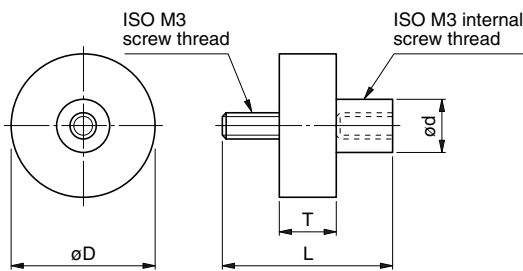
- They are compact in size and exhibit excellent low-loss, low-distortion characteristics.
- Capacitance values are largely unaffected by variations in applied voltage.
- Internal screw thread design simplifies mounting requirements.

### APPLICATIONS

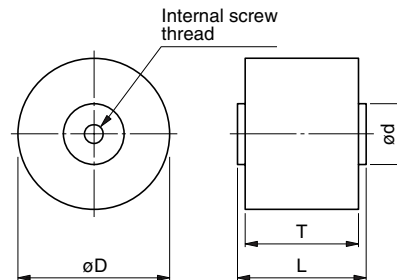
- High voltage surge absorbers, gas circuit breakers in electrical power transmission and receiving devices, and lightning arresters.
- Voltage distribution elements in high-voltage measuring devices.
- Impedance matching in transformers and high-voltage AC circuits.



### FD-9AU to FD-16AU



### FD-18AU to FD-36AU



### CAPACITANCE/ELECTRICAL CHARACTERISTICS/DIMENSIONS

| Part No. | Application   | Capacitance<br>(pF) $\pm 10\%$ | Withstand<br>voltage<br>Erms(kV) | Insulation<br>resistance<br>(M $\Omega$ )min. | AC corona starting<br>voltage<br>Erms(kV) min. [3PC*] | Dimensions (mm) |      |      |          | Internal<br>screw |
|----------|---------------|--------------------------------|----------------------------------|-----------------------------------------------|-------------------------------------------------------|-----------------|------|------|----------|-------------------|
|          |               |                                |                                  |                                               |                                                       | $\phi D$        | T    | L    | $\phi d$ |                   |
| FD-9AU   | AC.10kVr.m.s. | 100                            | 15                               | 10,000                                        | 12                                                    | 16              | 15   | 27   | 5        | ISO M3            |
| FD-10AU  |               | 250                            | 15                               | 10,000                                        | 12                                                    | 21              | 15   | 27   | 5        | ISO M3            |
| FD-11AU  |               | 500                            | 15                               | 10,000                                        | 12                                                    | 28              | 15   | 27   | 5        | ISO M3            |
| FD-12AU  |               | 1,000                          | 15                               | 10,000                                        | 12                                                    | 38              | 15   | 27   | 5        | ISO M3            |
| FD-16AU  | AC.13kVr.m.s. | 250                            | 20                               | 10,000                                        | 16                                                    | 26              | 18.5 | 30.5 | 5        | ISO M3            |
| FD-18AU  |               | 500                            | 20                               | 10,000                                        | 16                                                    | 34              | 23.5 | 27.5 | 10       | ISO M4            |
| FD-20AU  |               | 1,000                          | 20                               | 10,000                                        | 16                                                    | 48              | 23.5 | 27.5 | 15       | ISO M5            |
| FD-22AU  | AC.20kVr.m.s. | 250                            | 30                               | 10,000                                        | 24                                                    | 30              | 29   | 33   | 10       | ISO M4            |
| FD-24AU  |               | 500                            | 30                               | 10,000                                        | 24                                                    | 40              | 29   | 33   | 15       | ISO M5            |
| FD-33AU  | AC.25kVr.m.s. | 250                            | 40                               | 10,000                                        | 32                                                    | 34              | 35   | 39   | 10       | ISO M4            |
| FD-36AU  |               | 500                            | 40                               | 10,000                                        | 32                                                    | 48              | 35   | 39   | 15       | ISO M5            |

\* PC: Pico coulomb

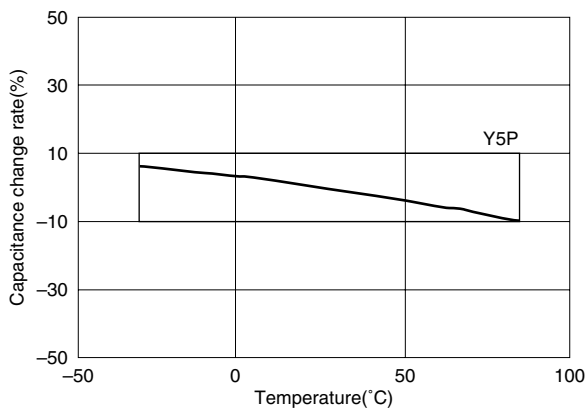
• In addition to the above, products are available that can be used in SF6 gas without modification (S type: molded with epoxide resin; alumina filler).

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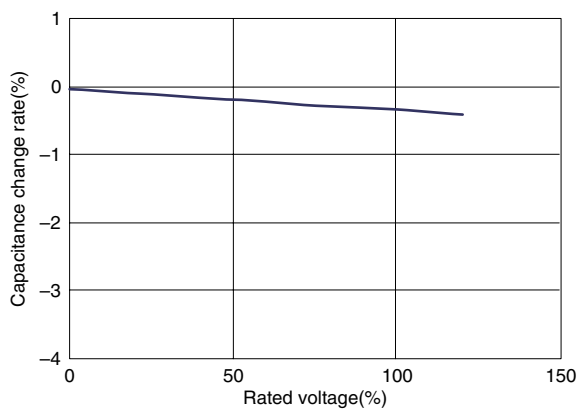
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## TYPICAL CAPACITANCE CHARACTERISTICS

### CAPACITANCE vs. TEMPERATURE CHARACTERISTICS



### CAPACITANCE vs. AC VOLTAGE CHARACTERISTICS



## PRECAUTIONS

### (1) During transportation and storage

- Do not transport or store where the capacitor 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 capacitor is not exposed to radiant heat from chambers or transformers.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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