

MPY

Plastic Case DC-Link Capacitor for PCB



General characteristics

- **Application** Industrial high-end power supplies.
Frequency converters, Inverters of solar power.
- **Reference standards** IEC 61071 (GB/T 17702)
- **Climatic Category** 40/105/56
- **Construction** Metallized polypropylene film structure.
Plastic case (UL94, Vo) filled with epoxy resin.
- **Features** Used in DC-Link circuits, Can replace electrolytic capacitor.
Used in Low ESR, high ripple current handling capabilities.
Low ESL, Self healing property, Long lifetime.
High mechanical stability due to 4pin terminals.
- **Technical data**

| | | | |
|------------------|-------------------------------|-----------------------|---|
| Temp. range | -40°C~105°C * 1 | Insulation resistance | 3,000 ΩF or more |
| Rated voltage | 450V、800V、1100V、1300V | Voltage Proof | Between Terminals : |
| Capacitance | 450V 5.0~110.0 μF | | 1.5VR _{dC} (10S) |
| | 800V 1.0~60.0 μF | | Terminals to Case : |
| | 1100V 2.0~40.0 μF | | 2110V.ac (10S) |
| | 1300V 1.5~27.0 μF | Maximum peak current | $I(AO-P) = C(\mu F) \times dv/dt(AO-P)$ |
| Cap. Tolerance | ±5%(J) ±10%(K) ±20%(M) | Lifetime Expectancy | 100 000h |
| Tangent of angle | 0.002 or less (at 100Hz 25°C) | | |

* 1 (+85°C to +105°C decreasing factor 1.35% per °C for Un,85°C)

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Part number system

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| M | P | Y | * | * | 0 | 4 | 5 | 0 | K | 5 | 0 | 6 | A | | | | |

1、Digit 1 to 3 : Type of capacitor

2、Digit 4 to 5 : Internal use

3、Digit 6 to 9 : Rated DC. Voltage
450V.DC

4、Digit 10 : Tolerance on capacitance

J : $\pm 5\%$

K : $\pm 10\%$

M : $\pm 20\%$

5、Digit 11 to 13 : Capacitance Code

Capacitance value shall be given by 3-digit figure of which unit used is expressed in pF.

The first 2 digits are significant figures of the capacitance value, the third digit to indicate the number of additional zeros to follow the significant figure.

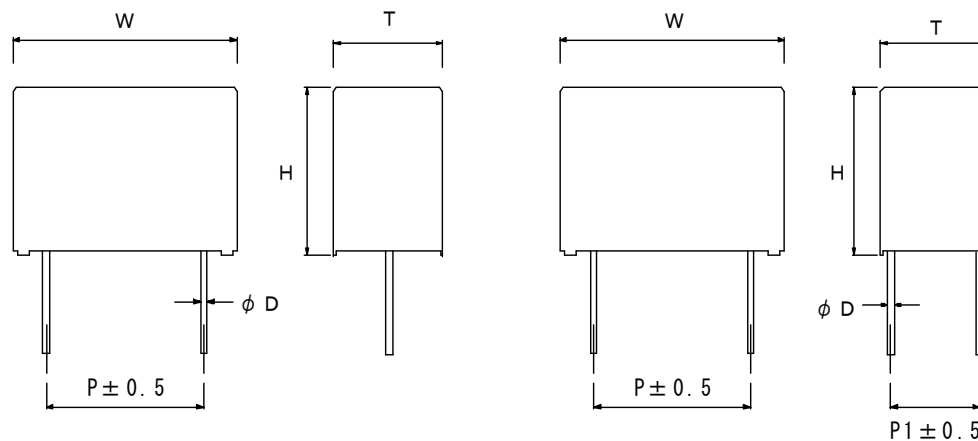
6、Digit 14 : Lead style Code

A : Tow pins

B : Four pins $P = 10.2\text{mm}$

C : Four pins $P = 20.3\text{mm}$

7、Digit 15 to 18 : Model code (internal use)



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2-pin

| W.V | Capacitance (μ F) | IRms70°C | ERS(10KHz) | Dimension (mm) | | | | |
|----------|---------------------------|----------|------------|----------------|------|------|------|----------|
| | | 10KHz | m Ω | W | H | T | P | ϕ d |
| 450V.DC | 5 | 5.0 | 8.5 | 32.0 | 21.0 | 11.0 | 27.5 | 0.8 |
| | 10 | 6.5 | 7.5 | 32.0 | 24.5 | 15.0 | 27.5 | 0.8 |
| | 22 | 10.0 | 5.0 | 32.0 | 37.0 | 22.0 | 27.5 | 0.8 |
| | 30 | 11.5 | 9.0 | 42.0 | 39.5 | 20.0 | 37.5 | 1.0 |
| | 35 | 12.5 | 9.0 | 41.5 | 37.5 | 27.5 | 37.5 | 1.0 |
| | 40 | 13.5 | 5.5 | 41.5 | 37.5 | 28.0 | 37.5 | 1.0 |
| | 50 | 15.0 | 4.0 | 41.0 | 43.0 | 28.0 | 37.5 | 1.0 |
| | 60 | 16.5 | 3.0 | 42.0 | 45.0 | 30.0 | 37.5 | 1.0 |
| 800V.DC | 1 | 7.5 | 13.6 | 31.5 | 23.0 | 13.5 | 27.5 | 0.8 |
| | 2.2 | 10.0 | 5.1 | 31.5 | 33.0 | 18.0 | 27.5 | 0.8 |
| | 3 | 5.0 | 9.0 | 32.0 | 21.0 | 11.0 | 27.5 | 0.8 |
| | 5 | 5.0 | 7.0 | 32.0 | 24.5 | 15.0 | 27.5 | 0.8 |
| | 12 | 6.0 | 6.5 | 32.0 | 37.0 | 22.0 | 27.5 | 0.8 |
| | 14 | 10.0 | 7.0 | 41.0 | 33.5 | 18.5 | 37.5 | 1.0 |
| | 20 | 11.5 | 6.5 | 41.5 | 37.5 | 27.5 | 37.5 | 1.0 |
| | 25 | 13.5 | 4.5 | 41.0 | 43.0 | 28.0 | 37.5 | 1.0 |
| | 30 | 14.0 | 5.0 | 42.0 | 45.0 | 30.0 | 37.5 | 1.0 |
| 1100V.DC | 2 | 4.0 | 11.0 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 |
| | 5 | 6.5 | 7.0 | 31.5 | 30.0 | 19.0 | 27.5 | 0.8 |
| | 7 | 7.5 | 5.5 | 31.5 | 36.5 | 22.0 | 27.5 | 0.8 |
| | 12 | 10.0 | 7.0 | 42.0 | 39.5 | 20.0 | 37.5 | 1.0 |
| | 14 | 12.0 | 6.0 | 41.5 | 37.5 | 27.5 | 37.5 | 1.0 |
| | 16 | 12.0 | 5.5 | 41.0 | 43.0 | 28.0 | 37.5 | 1.0 |
| | 20 | 13.0 | 3.5 | 42.0 | 45.0 | 30.0 | 37.5 | 1.0 |
| 1300V.DC | 1.5 | 4.5 | 10.5 | 31.5 | 21.5 | 12.5 | 27.5 | 0.8 |
| | 3 | 6.0 | 7.0 | 32.0 | 28.0 | 17.0 | 27.5 | 0.8 |
| | 5 | 8.0 | 6.0 | 32.0 | 37.0 | 22.0 | 27.5 | 0.8 |
| | 10 | 11.0 | 7.0 | 41.5 | 37.5 | 27.5 | 37.5 | 1.0 |
| | 14 | 13.0 | 5.0 | 42.0 | 45.0 | 30.0 | 37.5 | 1.0 |

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4-pin

| W.V | Capacitance (μ F) | IRms70°C | ERS(10KHz) | Dimension (mm) | | | | |
|----------|---------------------------|----------|------------|----------------|------|------|------|------|
| | | 10KHz | m Ω | W | H | T | P | P1 |
| 450V.DC | 30 | 12.5 | 8.0 | 42.0 | 39.5 | 20.0 | 37.5 | 10.2 |
| | 35 | 13.5 | 8.0 | 41.5 | 37.5 | 27.5 | 37.5 | 10.2 |
| | 40 | 14.5 | 5.0 | 41.5 | 37.5 | 27.5 | 37.5 | 10.2 |
| | 50 | 16.0 | 4.0 | 41.0 | 43.0 | 28.0 | 37.5 | 20.3 |
| | 75 | 16.0 | 5.5 | 57.5 | 43.5 | 29.5 | 52.5 | 20.3 |
| | 80 | 16.5 | 5.0 | 57.5 | 43.5 | 29.5 | 52.5 | 20.3 |
| | 100 | 18.0 | 4.0 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |
| | 110 | 19.0 | 4.0 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |
| 800V.DC | 15 | 10.5 | 7.0 | 41.5 | 39.5 | 20.0 | 37.5 | 10.2 |
| | 20 | 12.0 | 5.5 | 41.5 | 37.5 | 27.5 | 37.5 | 10.2 |
| | 22 | 13.0 | 5.0 | 41.5 | 37.5 | 27.5 | 37.5 | 10.2 |
| | 30 | 15.0 | 3.5 | 42.0 | 45.0 | 30.0 | 37.5 | 20.3 |
| | 45 | 16.0 | 4.0 | 57.5 | 43.5 | 29.5 | 52.5 | 20.3 |
| | 50 | 16.0 | 4.0 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |
| | 55 | 17.0 | 3.5 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |
| | 60 | 19.0 | 3.0 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |
| 1100V.DC | 12 | 11.0 | 6.5 | 42.0 | 39.5 | 20.0 | 37.5 | 10.2 |
| | 14 | 12.5 | 9.0 | 41.5 | 37.5 | 27.5 | 37.5 | 10.2 |
| | 16 | 13.0 | 5.0 | 41.0 | 43.0 | 28.0 | 37.5 | 10.2 |
| | 20 | 15.0 | 3.0 | 42.0 | 45.0 | 30.0 | 37.5 | 20.3 |
| | 30 | 16.0 | 5.0 | 57.0 | 43.5 | 29.5 | 52.5 | 20.3 |
| | 40 | 20.0 | 3.5 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |
| 1300V.DC | 8 | 9.0 | 8.0 | 41.5 | 39.5 | 20.0 | 37.5 | 10.2 |
| | 10 | 12.0 | 6.5 | 41.5 | 37.5 | 27.5 | 37.5 | 10.2 |
| | 12 | 13.0 | 5.5 | 41.0 | 43.0 | 28.0 | 37.5 | 20.3 |
| | 20 | 14.0 | 5.5 | 57.5 | 43.5 | 29.5 | 52.5 | 20.3 |
| | 25 | 17.0 | 4.5 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |
| | 27 | 17.5 | 4.5 | 57.5 | 50.0 | 35.0 | 52.5 | 20.3 |