

## Metallized Polypropylene (PP) - Capacitors for DC-Link Applications

### Special Features

- Capacitances up to 150  $\mu\text{F}$
- High volume/capacitance ratio
- Excellent self-healing properties
- Very low dissipation factor
- High reliability
- 2-pin and 4-pin contact configuration (plate versions on request)
- According to RoHS 2002/95/EC

### Typical Applications

As intermediate circuit capacitor e.g. in high power converter technology, power supplies, solar inverters etc.

### Construction

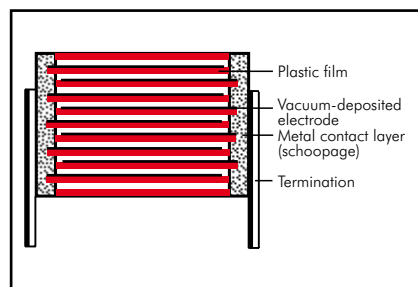
#### Dielectric:

Polypropylene (PP) film

#### Capacitor electrodes:

Vacuum-deposited

#### Internal construction:



#### Encapsulation:

Solvent-resistant, flame-retardant plastic case with epoxy resin seal, UL 94 V-0

#### Terminations:

Tinned wire (plate versions on request).

#### Marking:

Colour: Red. Marking: Black.

Epoxy resin seal: Red

### Electrical Data

**Capacitance range:** 2  $\mu\text{F}$  to 150  $\mu\text{F}$

**Rated voltages:** 600 VDC, 800 VDC, 900 VDC, 1100 VDC, 1300 VDC

**Capacitance tolerances:**  $\pm 20\%$ ,  $\pm 10\%$ ,  $\pm 5\%$

**Operating temperature range:**

$-55^\circ\text{C}$  to  $+105^\circ\text{C}$  (hot spot including self-heating)

**Climatic test category:** 55/085/56

in accordance with IEC

**Insulation resistance** at  $+20^\circ\text{C}$ :

$\geq 30\,000 \text{ sec (M}\Omega \times \mu\text{F)}$

(mean value: 100 000 sec)

Measuring voltage: 100 V/1 min.

**Dissipation factors** at  $+20^\circ\text{C}$ :

$\tan \delta \leq 10 \times 10^{-4}$  at 1 kHz ( $C \leq 50 \mu\text{F}$ )

$\tan \delta \leq 15 \times 10^{-4}$  at 1 kHz ( $C > 50 \mu\text{F}$ )

**Test voltage:** 1.2  $U_r$ , 2sec

**Dielectric absorption:** 0.05 %

**Voltage and current derating:**

A derating factor of 1.35% per K must be applied from  $+85^\circ\text{C}$  for DC voltages and from  $+70^\circ\text{C}$  for AC currents ( $I_{\text{rms}}$ ). Additionally a derating factor of 4.5% per K must be applied from  $+85^\circ\text{C}$  for AC currents ( $I_{\text{rms}}$ )

**Maximum pulse rise time:**

| PCM  | 600 VDC | 800 VDC | 900 VDC | 1100 VDC | 1300 VDC |
|------|---------|---------|---------|----------|----------|
| 27.5 | 19      | 21      | 25      | 31       | 36       |
| 37.5 | 14      | 15      | 16      | 21       | 25       |
| 52.5 | 10      | 12      | 13      | 15       | 18       |

for pulses equal to the rated voltage

### Packing

Transportation-safe packing in cardboard boxes.

**Packing units:**

| L    | pcs. per packing unit |
|------|-----------------------|
| 31.5 | 100                   |
| 41.5 | 100                   |
| 57   | 50                    |

**Reliability:** Operational life  $> 100\,000$  hours ( $U_r$  and  $70^\circ\text{C}$ )

Failure rate  $\lambda_0$  ( $0.5 \times U_r$  and  $40^\circ\text{C}$ )

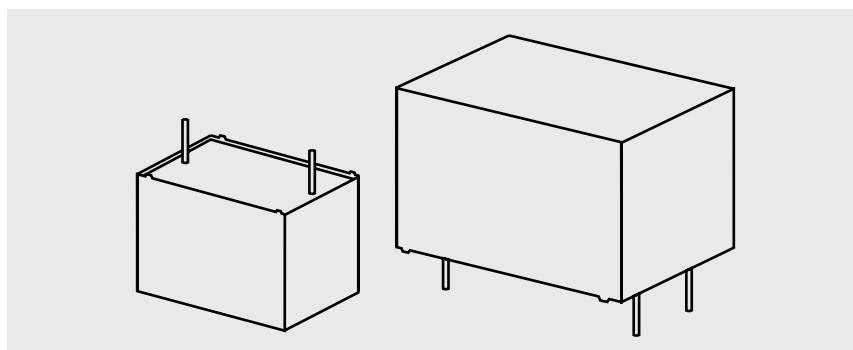
| $\Pi =  C_N [\mu\text{F}] \times U_r [\text{V}] $ | $\lambda_0$        |
|---------------------------------------------------|--------------------|
| $\Pi \leq 10\,000$                                | $< 2 \text{ fit}$  |
| $10\,000 < \Pi \leq 25\,000$                      | $< 5 \text{ fit}$  |
| $25\,000 < \Pi \leq 50\,000$                      | $< 10 \text{ fit}$ |
| $50\,000 < \Pi \leq 100\,000$                     | $< 20 \text{ fit}$ |
| $\Pi > 100\,000$                                  | $< 30 \text{ fit}$ |

### Specific dissipation:

| Box size<br>WxHxL in mm | Specific dissipation in Watts per K<br>above the ambient temperature |
|-------------------------|----------------------------------------------------------------------|
| 19x32x41.5              | 0.054                                                                |
| 20x39.5x41.5            | 0.065                                                                |
| 24x45.5x41.5            | 0.080                                                                |
| 31x46x41.5              | 0.092                                                                |
| 35x50x41.5              | 0.106                                                                |
| 40x55x41.5              | 0.123                                                                |
| 35x50x57                | 0.132                                                                |
| 45x55x57                | 0.164                                                                |
| 45x65x57                | 0.184                                                                |

\* other box sizes see main catalogue.

For further details and graphs please refer to Technical Information.



## Continuation

### General Data

| Capacitance |    |      |      |       |     | 600 VDC (70° C) / 450 VDC (85° C) |                                 |                     | Part number       |
|-------------|----|------|------|-------|-----|-----------------------------------|---------------------------------|---------------------|-------------------|
|             | W  | H    | L    | PCM** | Pin | I <sub>S</sub><br>A               | I <sub>rms</sub> (10 kHz)*<br>A | ESR (10 kHz)*<br>mΩ |                   |
| 2 µF        | 9  | 19   | 31.5 | 27.5  | 2   | 38                                | 2                               | 56                  | DCP4I042006A_____ |
| 5 "         | 13 | 24   | 31.5 | 27.5  | 2/4 | 95                                | 3.5                             | 22                  | DCP4I045006D_____ |
| 7 "         | 15 | 26   | 31.5 | 27.5  | 2/4 | 133                               | 4.5                             | 16                  | DCP4I047006F_____ |
| 10 µF       | 17 | 29   | 31.5 | 27.5  | 2/4 | 190                               | 6                               | 11                  | DCP4I051006G_____ |
| 15 "        | 17 | 34,5 | 31.5 | 27.5  | 2/4 | 285                               | 7.5                             | 7.4                 | DCP4I051506I_____ |
| 20 "        | 20 | 39,5 | 31.5 | 27.5  | 2/4 | 380                               | 9                               | 6.2                 | DCP4I052006J_____ |
|             | 20 | 39,5 | 41.5 | 37.5  | 2/4 | 280                               | 10                              | 6.2                 | DCP4I052007G_____ |
| 25 "        | 20 | 39,5 | 41.5 | 37.5  | 2/4 | 350                               | 11.5                            | 5                   | DCP4I052507G_____ |
| 30 "        | 24 | 45,5 | 41.5 | 37.5  | 2/4 | 420                               | 14                              | 4.1                 | DCP4I053007H_____ |
| 35 "        | 24 | 45,5 | 41.5 | 37.5  | 2/4 | 490                               | 14.5                            | 3.8                 | DCP4I053507H_____ |
| 40 "        | 31 | 46   | 41.5 | 37.5  | 2/4 | 560                               | 16.5                            | 3.3                 | DCP4I054007I_____ |
| 45 "        | 31 | 46   | 41.5 | 37.5  | 2/4 | 630                               | 17                              | 3.2                 | DCP4I054507I_____ |
| 50 "        | 35 | 50   | 41.5 | 37.5  | 2/4 | 700                               | 19                              | 2.9                 | DCP4I055007J_____ |
| 55 "        | 35 | 50   | 41.5 | 37.5  | 2/4 | 770                               | 17                              | 3.8                 | DCP4I055507J_____ |
| 60 "        | 35 | 50   | 41.5 | 37.5  | 2/4 | 840                               | 17.5                            | 3.4                 | DCP4I056007J_____ |
| 65 "        | 40 | 55   | 41.5 | 37.5  | 2/4 | 910                               | 19.5                            | 3.3                 | DCP4I056507K_____ |
|             | 35 | 50   | 57   | 52.5  | 4   | 650                               | 20                              | 3.3                 | DCP4I056509F_____ |
| 70 "        | 40 | 55   | 41.5 | 37.5  | 2/4 | 980                               | 20                              | 3.1                 | DCP4I057007K_____ |
|             | 35 | 50   | 57   | 52.5  | 4   | 700                               | 20.5                            | 3.1                 | DCP4I057009F_____ |
| 75 "        | 40 | 55   | 41.5 | 37.5  | 2/4 | 1050                              | 20.5                            | 3                   | DCP4I057507K_____ |
|             | 35 | 50   | 57   | 52.5  | 4   | 750                               | 21                              | 3                   | DCP4I057509F_____ |
| 80 "        | 40 | 55   | 41.5 | 37.5  | 2/4 | 1120                              | 22                              | 2.6                 | DCP4I058007K_____ |
|             | 35 | 50   | 57   | 52.5  | 4   | 800                               | 22                              | 2.6                 | DCP4I058009F_____ |
| 85 "        | 35 | 50   | 57   | 52.5  | 4   | 850                               | 22.5                            | 2.1                 | DCP4I058509F_____ |
| 90 "        | 35 | 50   | 57   | 52.5  | 4   | 900                               | 23.5                            | 1.9                 | DCP4I059009F_____ |
| 95 "        | 45 | 55   | 57   | 52.5  | 4   | 950                               | 24                              | 2.8                 | DCP4I059509H_____ |
| 100 µF      | 45 | 55   | 57   | 52.5  | 4   | 1000                              | 25                              | 2.6                 | DCP4I061009H_____ |
| 110 "       | 45 | 55   | 57   | 52.5  | 4   | 1100                              | 26.5                            | 2.3                 | DCP4I061109H_____ |
| 115 "       | 45 | 65   | 57   | 52.5  | 4   | 1150                              | 27.5                            | 2.5                 | DCP4I061159J_____ |
| 120 "       | 45 | 65   | 57   | 52.5  | 4   | 1200                              | 28                              | 2.3                 | DCP4I061209J_____ |
| 130 "       | 45 | 65   | 57   | 52.5  | 4   | 1300                              | 29.5                            | 2.1                 | DCP4I061309J_____ |
| 140 "       | 45 | 65   | 57   | 52.5  | 4   | 1400                              | 31                              | 1.9                 | DCP4I061409J_____ |
| 150 "       | 45 | 65   | 57   | 52.5  | 4   | 1500                              | 33                              | 1.7                 | DCP4I061509J_____ |

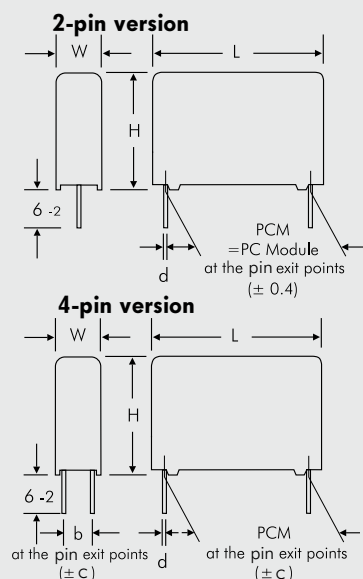
New box sizes, values and ranges.

\* General guide

\*\* PCM = Printed circuit module = pin spacing

Dims. in mm.

| Part number completion: |                                 |
|-------------------------|---------------------------------|
| Version code:           | 2-pin = D2<br>4-pin = D4        |
| Tolerance:              | 20 % = M<br>10 % = K<br>5 % = J |
| Packing:                | bulk = S                        |
| Pin length:             | 6-2 = SD                        |



| PCM  | d   |
|------|-----|
| 27.5 | 0.8 |
| 37.5 | 1   |

| W  | PCM  | b    | d   | c   |
|----|------|------|-----|-----|
| 11 | 27.5 | 5    | 0.8 | 0.4 |
| 13 | 27.5 | 7.5  | 0.8 | 0.4 |
| 15 | 27.5 | 7.5  | 0.8 | 0.4 |
| 17 | 27.5 | 10   | 0.8 | 0.4 |
| 20 | 27.5 | 12.5 | 0.8 | 0.4 |
| 19 | 37.5 | 10   | 1   | 0.4 |
| 20 | 37.5 | 12.5 | 1   | 0.4 |
| 24 | 37.5 | 12.5 | 1   | 0.4 |
| 31 | 37.5 | 20   | 1   | 0.4 |
| 35 | 37.5 | 20   | 1   | 0.4 |
| 40 | 37.5 | 20   | 1   | 0.4 |
| 35 | 52.5 | 20   | 1.2 | 0.8 |
| 45 | 52.5 | 20   | 1.2 | 0.8 |

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## Continuation

### General Data

| Capacitance | 800 VDC (70° C) / 700 VDC (85° C) |      |      |       |     |                     |                                 |                     | Part number       |
|-------------|-----------------------------------|------|------|-------|-----|---------------------|---------------------------------|---------------------|-------------------|
|             | W                                 | H    | L    | PCM** | Pin | I <sub>s</sub><br>A | I <sub>rms</sub> (10 kHz)*<br>A | ESR (10 kHz)*<br>mΩ |                   |
| 2 µF        | 9                                 | 19   | 31.5 | 27.5  | 2   | 42                  | 2                               | 52                  | DCP4L042006A_____ |
| 5 "         | 13                                | 24   | 31.5 | 27.5  | 2/4 | 105                 | 4                               | 21                  | DCP4L045006D_____ |
| 7 "         | 17                                | 29   | 31.5 | 27.5  | 2/4 | 147                 | 5                               | 15                  | DCP4L047006G_____ |
| 10 µF       | 17                                | 34.5 | 31.5 | 27.5  | 2/4 | 210                 | 6.5                             | 10                  | DCP4L051006I_____ |
| 15 "        | 20                                | 39.5 | 31.5 | 27.5  | 2/4 | 315                 | 9                               | 6.9                 | DCP4L051506J_____ |
|             | 20                                | 39.5 | 41.5 | 37.5  | 2/4 | 225                 | 9.5                             | 6.9                 | DCP4L051507G_____ |
| 20 "        | 20                                | 39.5 | 41.5 | 37.5  | 2/4 | 300                 | 10                              | 6.2                 | DCP4L052007G_____ |
| 25 "        | 24                                | 45.5 | 41.5 | 37.5  | 2/4 | 375                 | 12.5                            | 5                   | DCP4L052507H_____ |
| 30 "        | 24                                | 45.5 | 41.5 | 37.5  | 2/4 | 450                 | 14                              | 4.1                 | DCP4L053007H_____ |
| 35 "        | 31                                | 46   | 41.5 | 37.5  | 2/4 | 525                 | 15.5                            | 3.8                 | DCP4L053507I_____ |
| 40 "        | 31                                | 46   | 41.5 | 37.5  | 2/4 | 600                 | 16.5                            | 3.3                 | DCP4L054007I_____ |
| 45 "        | 35                                | 50   | 41.5 | 37.5  | 2/4 | 675                 | 17.5                            | 3.4                 | DCP4L054507J_____ |
| 50 "        | 35                                | 50   | 41.5 | 37.5  | 2/4 | 750                 | 19                              | 3                   | DCP4L055007J_____ |
| 55 "        | 40                                | 55   | 41.5 | 37.5  | 2/4 | 825                 | 19.5                            | 3.2                 | DCP4L055507K_____ |
| 60 "        | 40                                | 55   | 41.5 | 37.5  | 2/4 | 900                 | 20.5                            | 2.9                 | DCP4L056007K_____ |
|             | 35                                | 50   | 57   | 52.5  | 4   | 720                 | 21.5                            | 2.9                 | DCP4L056009F_____ |
| 65 "        | 35                                | 50   | 57   | 52.5  | 4   | 780                 | 22.5                            | 2.2                 | DCP4L056509F_____ |
| 70 "        | 45                                | 55   | 57   | 52.5  | 4   | 840                 | 23.5                            | 3                   | DCP4L057009H_____ |
| 75 "        | 45                                | 55   | 57   | 52.5  | 4   | 900                 | 24                              | 2.9                 | DCP4L057509H_____ |
| 80 "        | 45                                | 55   | 57   | 52.5  | 4   | 960                 | 24.5                            | 3                   | DCP4L058009H_____ |
| 85 "        | 45                                | 65   | 57   | 52.5  | 4   | 1020                | 25                              | 2.6                 | DCP4L058509J_____ |
| 90 "        | 45                                | 65   | 57   | 52.5  | 4   | 1080                | 25.5                            | 2.5                 | DCP4L059009J_____ |
| 95 "        | 45                                | 65   | 57   | 52.5  | 4   | 1140                | 26                              | 2.4                 | DCP4L059509J_____ |
| 100 µF      | 45                                | 65   | 57   | 52.5  | 4   | 1200                | 26.5                            | 2.3                 | DCP4L061009J_____ |
| 110 "       | 45                                | 65   | 57   | 52.5  | 4   | 1320                | 27.5                            | 2.2                 | DCP4L061109J_____ |
| 115 "       | 45                                | 65   | 57   | 52.5  | 4   | 1380                | 28                              | 2.1                 | DCP4L061159J_____ |

| Capacitance | 900 VDC (70° C) / 760 VDC (85° C) |      |      |       |     |                     |                                 |                     | Part number       |
|-------------|-----------------------------------|------|------|-------|-----|---------------------|---------------------------------|---------------------|-------------------|
|             | W                                 | H    | L    | PCM** | Pin | I <sub>s</sub><br>A | I <sub>rms</sub> (10 kHz)*<br>A | ESR (10 kHz)*<br>mΩ |                   |
| 2 µF        | 11                                | 21   | 31.5 | 27.5  | 2/4 | 50                  | 2.5                             | 44                  | DCP4N042006B_____ |
| 5 "         | 17                                | 29   | 31.5 | 27.5  | 2/4 | 125                 | 4.5                             | 18                  | DCP4N045006G_____ |
| 7 "         | 17                                | 34.5 | 31.5 | 27.5  | 2/4 | 175                 | 6                               | 13                  | DCP4N047006I_____ |
| 10 µF       | 20                                | 39.5 | 31.5 | 27.5  | 2/4 | 250                 | 8                               | 8.8                 | DCP4N051006J_____ |
|             | 20                                | 39.5 | 41.5 | 37.5  | 2/4 | 160                 | 8.5                             | 8.8                 | DCP4N051007G_____ |
| 15 "        | 20                                | 39.5 | 41.5 | 37.5  | 2/4 | 240                 | 10.5                            | 5.8                 | DCP4N051507G_____ |
| 20 "        | 24                                | 45.5 | 41.5 | 37.5  | 2/4 | 320                 | 13                              | 4.8                 | DCP4N052007H_____ |
| 25 "        | 31                                | 46   | 41.5 | 37.5  | 2/4 | 400                 | 15.5                            | 3.8                 | DCP4N052507I_____ |
| 30 "        | 31                                | 46   | 41.5 | 37.5  | 2/4 | 480                 | 15.5                            | 3.7                 | DCP4N053007I_____ |
| 35 "        | 35                                | 50   | 41.5 | 37.5  | 2/4 | 560                 | 18                              | 3.2                 | DCP4N053507J_____ |
| 40 "        | 40                                | 55   | 41.5 | 37.5  | 2/4 | 640                 | 19.5                            | 3.2                 | DCP4N054007K_____ |
|             | 35                                | 50   | 57   | 52.5  | 4   | 520                 | 20.5                            | 3.2                 | DCP4N054009F_____ |
| 45 "        | 35                                | 50   | 57   | 52.5  | 4   | 585                 | 21                              | 2.8                 | DCP4N054509F_____ |
| 50 "        | 35                                | 50   | 57   | 52.5  | 4   | 650                 | 22                              | 3.3                 | DCP4N055009F_____ |
| 55 "        | 45                                | 55   | 57   | 52.5  | 4   | 715                 | 22.5                            | 3.2                 | DCP4N055509H_____ |
| 60 "        | 45                                | 55   | 57   | 52.5  | 4   | 780                 | 23                              | 3                   | DCP4N056009H_____ |
| 65 "        | 45                                | 55   | 57   | 52.5  | 4   | 845                 | 24                              | 2.9                 | DCP4N056509H_____ |
| 70 "        | 45                                | 65   | 57   | 52.5  | 4   | 910                 | 24.5                            | 3.3                 | DCP4N057009J_____ |
| 75 "        | 45                                | 65   | 57   | 52.5  | 4   | 975                 | 25                              | 2.9                 | DCP4N057509J_____ |
| 80 "        | 45                                | 65   | 57   | 52.5  | 4   | 1040                | 25.5                            | 2.8                 | DCP4N058009J_____ |

New box sizes, values and ranges.

\* General guide

\*\* PCM = Printed circuit module = pin spacing

Dims. in mm.

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Continuation next page

## Continuation

### General Data

| Capacitance |    |      |      |       |     | 1100 VDC (70° C) / 920 VDC (85° C) |                                 |                     | Part number       |
|-------------|----|------|------|-------|-----|------------------------------------|---------------------------------|---------------------|-------------------|
|             | W  | H    | L    | PCM** | Pin | I <sub>S</sub><br>A                | I <sub>rms</sub> (10 kHz)*<br>A | ESR (10 kHz)*<br>mΩ |                   |
| 2 µF        | 13 | 24   | 31.5 | 27.5  | 2/4 | 62                                 | 3                               | 36                  | DCP4P042006D_____ |
| 5 "         | 17 | 34.5 | 31.5 | 27.5  | 2/4 | 155                                | 5.5                             | 14                  | DCP4P045006I_____ |
| 7 "         | 20 | 39.5 | 31.5 | 27.5  | 2/4 | 217                                | 7.5                             | 10                  | DCP4P047006J_____ |
|             | 19 | 32   | 41.5 | 37.5  | 2/4 | 147                                | 7.5                             | 10                  | DCP4P047007F_____ |
| 10 µF       | 20 | 39.5 | 41.5 | 37.5  | 2/4 | 210                                | 9.5                             | 7.2                 | DCP4P051007G_____ |
| 15 "        | 31 | 46   | 41.5 | 37.5  | 2/4 | 315                                | 13                              | 5.4                 | DCP4P051507I_____ |
| 20 "        | 35 | 50   | 41.5 | 37.5  | 2/4 | 420                                | 15                              | 4.7                 | DCP4P052007J_____ |
| 25 "        | 40 | 55   | 41.5 | 37.5  | 2/4 | 525                                | 16.5                            | 4.6                 | DCP4P052507K_____ |
| 30 "        | 35 | 50   | 57   | 52.5  | 4   | 450                                | 17.5                            | 4.4                 | DCP4P053009F_____ |
| 35 "        | 35 | 50   | 57   | 52.5  | 4   | 525                                | 18                              | 4                   | DCP4P053509F_____ |
| 40 "        | 45 | 55   | 57   | 52.5  | 4   | 600                                | 19                              | 4.5                 | DCP4P054009H_____ |
| 45 "        | 45 | 55   | 57   | 52.5  | 4   | 675                                | 20                              | 4.1                 | DCP4P054509H_____ |
| 50 "        | 45 | 65   | 57   | 52.5  | 4   | 750                                | 21                              | 4.1                 | DCP4P055009J_____ |
| 55 "        | 45 | 65   | 57   | 52.5  | 4   | 825                                | 22                              | 3.8                 | DCP4P055509J_____ |
| 60 "        | 45 | 65   | 57   | 52.5  | 4   | 900                                | 23                              | 3.5                 | DCP4P056009J_____ |

| Capacitance |    |      |      |       |     | 1300 VDC (70° C) / 1100 VDC (85° C) |                                 |                     | Part number       |
|-------------|----|------|------|-------|-----|-------------------------------------|---------------------------------|---------------------|-------------------|
|             | W  | H    | L    | PCM** | Pin | I <sub>S</sub><br>A                 | I <sub>rms</sub> (10 kHz)*<br>A | ESR (10 kHz)*<br>mΩ |                   |
| 2 µF        | 15 | 26   | 31.5 | 27.5  | 2/4 | 72                                  | 3                               | 36                  | DCP4R242006F_____ |
| 5 "         | 20 | 39.5 | 31.5 | 27.5  | 2/4 | 180                                 | 6                               | 14                  | DCP4R245006J_____ |
|             | 20 | 39.5 | 41.5 | 37.5  | 2/4 | 125                                 | 7                               | 14                  | DCP4R245007G_____ |
| 7 "         | 20 | 39.5 | 41.5 | 37.5  | 2/4 | 175                                 | 8                               | 10                  | DCP4R247007G_____ |
| 10 µF       | 24 | 45.5 | 41.5 | 37.5  | 2/4 | 250                                 | 10.5                            | 7.2                 | DCP4R251007H_____ |
| 15 "        | 31 | 46   | 41.5 | 37.5  | 2/4 | 375                                 | 14                              | 4.8                 | DCP4R251507I_____ |
| 20 "        | 40 | 55   | 41.5 | 37.5  | 2/4 | 500                                 | 17.5                            | 4                   | DCP4R252007K_____ |
|             | 35 | 50   | 57   | 52.5  | 4   | 360                                 | 18                              | 4                   | DCP4R252009F_____ |
| 25 "        | 35 | 50   | 57   | 52.5  | 4   | 450                                 | 19                              | 3.6                 | DCP4R252509F_____ |
| 30 "        | 45 | 55   | 57   | 52.5  | 4   | 540                                 | 20                              | 4                   | DCP4R253009H_____ |
| 35 "        | 45 | 65   | 57   | 52.5  | 4   | 630                                 | 21                              | 4.1                 | DCP4R253509J_____ |
| 40 "        | 45 | 65   | 57   | 52.5  | 4   | 720                                 | 22                              | 3.7                 | DCP4R254009J_____ |

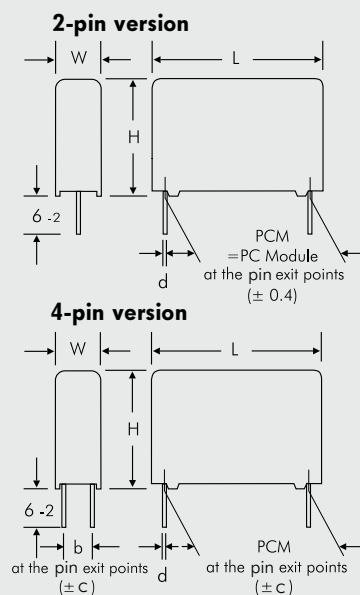
New box sizes, values and ranges.

\* General guide

\*\* PCM = Printed circuit module = pin spacing

Dims. in mm.

| Part number completion: |                                 |
|-------------------------|---------------------------------|
| Version code:           | 2-pin = D2<br>4-pin = D4        |
| Tolerance:              | 20 % = M<br>10 % = K<br>5 % = J |
| Packing:                | bulk = S                        |
| Pin length:             | 6-2 = SD                        |



| PCM  | d   |
|------|-----|
| 27.5 | 0.8 |
| 37.5 | 1   |

| W  | PCM  | b    | d   | c   |
|----|------|------|-----|-----|
| 11 | 27.5 | 5    | 0.8 | 0.4 |
| 13 | 27.5 | 7.5  | 0.8 | 0.4 |
| 15 | 27.5 | 7.5  | 0.8 | 0.4 |
| 17 | 27.5 | 10   | 0.8 | 0.4 |
| 20 | 27.5 | 12.5 | 0.8 | 0.4 |
| 19 | 37.5 | 10   | 1   | 0.4 |
| 20 | 37.5 | 12.5 | 1   | 0.4 |
| 24 | 37.5 | 12.5 | 1   | 0.4 |
| 31 | 37.5 | 20   | 1   | 0.4 |
| 35 | 37.5 | 20   | 1   | 0.4 |
| 40 | 37.5 | 20   | 1   | 0.4 |
| 35 | 52.5 | 20   | 1.2 | 0.8 |
| 45 | 52.5 | 20   | 1.2 | 0.8 |

Rights reserved to amend design data without prior notification.

A WIMA part number consists of 18 digits and is composed as follows:

- Field 1 - 4: Type description
- Field 5 - 6: Rated voltage
- Field 7 - 10: Capacitance
- Field 11 - 12: Size and PCM
- Field 13 - 14: Special features (e.g. Snubber versions)
- Field 15: Capacitance tolerance
- Field 16: Packing
- Field 17 - 18: Lead length (untaped)

| 1                        | 2 | 3 | 4 | 5                     | 6 | 7                   | 8 | 9 | 10 | 11                         | 12 | 13 | 14 | 15                                                                                                                                                                                                                                                                                                                                                                                                                                                | 16   | 17   | 18 |
|--------------------------|---|---|---|-----------------------|---|---------------------|---|---|----|----------------------------|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|----|
| M                        | K | S | 2 | C                     | 0 | 2                   | 1 | 0 | 0  | 1                          | A  | 0  | 0  | M                                                                                                                                                                                                                                                                                                                                                                                                                                                 | S    | S    | D  |
| MKS 2                    |   |   |   | 63 VDC                |   | 0.01 µF             |   |   |    | 2.5x6.5x7.2                |    | -  |    | 20%                                                                                                                                                                                                                                                                                                                                                                                                                                               | bulk | 6 -2 |    |
|                          |   |   |   |                       |   |                     |   |   |    |                            |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| <b>Type description:</b> |   |   |   | <b>Rated voltage:</b> |   | <b>Capacitance:</b> |   |   |    | <b>Size:</b>               |    |    |    | <b>Tolerance:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |    |
| SMD-PET = SMDT           |   |   |   | 2.5 VDC = A1          |   | 22 pF = 0022        |   |   |    | 4.8x3.3x3 Size 1812 = X1   |    |    |    | 20% = M                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |      |    |
| SMD-PPS = SMDI           |   |   |   | 4 VDC = A2            |   | 47 pF = 0047        |   |   |    | 4.8x3.3x4 Size 1812 = X2   |    |    |    | 10% = K                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |      |    |
| FKP 02 = FKP0            |   |   |   | 14 VDC = A3           |   | 100 pF = 0100       |   |   |    | 5.7x5.1x3.5 Size 2220 = Y1 |    |    |    | 5% = J                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |      |    |
| MKS 02 = MKS0            |   |   |   | 28 VDC = A4           |   | 150 pF = 0150       |   |   |    | 5.7x5.1x4.5 Size 2220 = Y2 |    |    |    | 2.5% = H                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |    |
| FKS 2 = FKS2             |   |   |   | 40 VDC = A5           |   | 220 pF = 0220       |   |   |    | 7.2x6.1x3 Size 2824 = T1   |    |    |    | 1% = E                                                                                                                                                                                                                                                                                                                                                                                                                                            |      |      |    |
| FKP 2 = FKP2             |   |   |   | 5 VDC = A6            |   | 330 pF = 0330       |   |   |    | 7.2x6.1x5 Size 2824 = T2   |    |    |    | ...                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |      |    |
| MKS 2 = MKS2             |   |   |   | 50 VDC = B0           |   | 470 pF = 0470       |   |   |    | 10.2x7.6x5 Size 4030 = K1  |    |    |    | <b>Packing:</b><br>AMMO H16.5 340x340 = A<br>AMMO H16.5 490x370 = B<br>AMMO H18.5 340x340 = C<br>AMMO H18.5 490x370 = D<br>REEL H16.5 360 = F<br>REEL H16.5 500 = H<br>REEL H18.5 360 = I<br>REEL H18.5 500 = J<br>ROLL H16.5 = N<br>ROLL H18.5 = O<br>BLISTER W12 180 = P<br>BLISTER W12 330 = Q<br>BLISTER W16 330 = R<br>BLISTER W24 330 = T<br>Bulk Mini = M<br>Bulk Standard = S<br>Bulk Maxi = G<br>TPS Mini = X<br>TPS Standard = Y<br>... |      |      |    |
| MKP 2 = MKP2             |   |   |   | 63 VDC = C0           |   | 680 pF = 0680       |   |   |    | 12.7x10.2x6 Size 5040 = V1 |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| FKS 3 = FKS3             |   |   |   | 100 VDC = D0          |   | 1000 pF = 1100      |   |   |    | 15.3x13.7x7 Size 6054 = Q1 |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| FKP 3 = FKP3             |   |   |   | 160 VDC = E0          |   | 1500 pF = 1150      |   |   |    | 2.5x7x4.6 PCM 2.5 = 0B     |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MKS 4 = MKS4             |   |   |   | 250 VDC = F0          |   | 2200 pF = 1220      |   |   |    | 3x7.5x4.6 PCM 2.5 = 0C     |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MKP 4 = MKP4             |   |   |   | 400 VDC = G0          |   | 3300 pF = 1330      |   |   |    | 2.5x6.5x7.2 PCM 5 = 1A     |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MKP 10 = MKP1            |   |   |   | 450 VDC = H0          |   | 4700 pF = 1470      |   |   |    | 3x7.5x7.2 PCM 5 = 1B       |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| FKP 4 = FKP4             |   |   |   | 600 VDC = I0          |   | 6800 pF = 1680      |   |   |    | 2.5x7x10 PCM 7.5 = 2A      |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| FKP 1 = FKP1             |   |   |   | 630 VDC = J0          |   | 0.01 µF = 2100      |   |   |    | 3x8.5x10 PCM 7.5 = 2B      |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MKP-X2 = MKX2            |   |   |   | 700 VDC = K0          |   | 0.022 µF = 2220     |   |   |    | 3x9x13 PCM 10 = 3A         |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MKP-X2 R = MKXR          |   |   |   | 800 VDC = L0          |   | 0.047 µF = 2470     |   |   |    | 4x9x13 PCM 10 = 3C         |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MKP-Y2 = MKY2            |   |   |   | 850 VDC = M0          |   | 0.1 µF = 3100       |   |   |    | 5x11x18 PCM 15 = 4B        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MP 3-X2 = MPX2           |   |   |   | 900 VDC = N0          |   | 0.22 µF = 3220      |   |   |    | 6x12.5x18 PCM 15 = 4C      |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MP 3-X1 = MPX1           |   |   |   | 1000 VDC = O1         |   | 0.47 µF = 3470      |   |   |    | 5x14x26.5 PCM 22.5 = 5A    |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MP 3-Y2 = MPY2           |   |   |   | 1100 VDC = P0         |   | 1 µF = 4100         |   |   |    | 6x15x26.5 PCM 22.5 = 5B    |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| MP 3R-Y2 = MPRY          |   |   |   | 1200 VDC = Q0         |   | 2.2 µF = 4220       |   |   |    | 9x19x31.5 PCM 27.5 = 6A    |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| Snubber MKP = SNMP       |   |   |   | 1250 VDC = R0         |   | 4.7 µF = 4470       |   |   |    | 11x21x31.5 PCM 27.5 = 6B   |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| Snubber FKP = SNFP       |   |   |   | 1500 VDC = S0         |   | 10 µF = 5100        |   |   |    | 9x19x41.5 PCM 37.5 = 7A    |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| GTO MKP = GTOM           |   |   |   | 1600 VDC = T0         |   | 22 µF = 5220        |   |   |    | 11x22x41.5 PCM 37.5 = 7B   |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| DC-LINK MKP 4 = DCP4     |   |   |   | 2000 VDC = U0         |   | 47 µF = 5470        |   |   |    | 94x49x182 DCH_ = H0        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| DC-LINK MKP 5 = DCP5     |   |   |   | 2500 VDC = V0         |   | 100 µF = 6100       |   |   |    | 94x77x182 DCH_ = H1        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| DC-LINK MKP 6 = DCP6     |   |   |   | 3000 VDC = W0         |   | 220 µF = 6220       |   |   |    | ...                        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| DC-LINK HC = DCH_        |   |   |   | 4000 VDC = X0         |   | 1 F = A010          |   |   |    |                            |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| SuperCap C = SCSC        |   |   |   | 6000 VDC = Y0         |   | 2.5 F = A025        |   |   |    |                            |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| SuperCap MC = SCMC       |   |   |   | 250 VAC = 0V          |   | 50 F = A500         |   |   |    | <b>Special features:</b>   |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| SuperCap R = SCSR        |   |   |   | 275 VAC = 1V          |   | 100 F = B100        |   |   |    | Standard = 00              |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
| SuperCap MR = SCMR       |   |   |   | 300 VAC = 2V          |   | 110 F = B110        |   |   |    | Version A1 = 1A            |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
|                          |   |   |   | 400 VAC = 3V          |   | 600 F = B600        |   |   |    | Version A1.1.1 = 1B        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
|                          |   |   |   | 440 VAC = 4V          |   | 1200 F = C120       |   |   |    | Version A1.2 = 1C          |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
|                          |   |   |   | 500 VAC = 5V          |   | ...                 |   |   |    | ...                        |    |    |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |    |
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