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## AC Filtering Metalized Polypropylene Film Capacitor Radial Type



## FEATURES

- Robustness under high humidity
- THB 40 °C, 93 % RH, 56 days at  $U_{NAC}$
- High peak current capabilities
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

RoHS  
COMPLIANT

## APPLICATIONS

- AC filtering, UPS systems
- Renewable energy - grid interface
- Harmonic filter
- Welding equipment

## QUICK REFERENCE DATA

|                                                                |                                                                                                                                                             |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated capacitance range                                        | 1 $\mu$ F to 70 $\mu$ F                                                                                                                                     |
| Capacitance tolerance                                          | $\pm 10$ %, other tolerances available on request                                                                                                           |
| Maximum continuous AC voltage (50 Hz / 60 Hz) range, $U_{NAC}$ | 230 V <sub>AC</sub> , 250 V <sub>AC</sub> , 275 V <sub>AC</sub> , 310 V <sub>AC</sub> , 350 V <sub>AC</sub>                                                 |
| Climatic testing class                                         | 40 / 85 / 56                                                                                                                                                |
| Maximum application temperature                                | 105 °C                                                                                                                                                      |
| Maximum permissible case temperature                           | 105 °C                                                                                                                                                      |
| Reference standards                                            | IEC 61071, IEC 60068                                                                                                                                        |
| Dielectric                                                     | Polypropylene film                                                                                                                                          |
| Electrodes                                                     | Metallized dielectric film                                                                                                                                  |
| Construction                                                   | Mono construction                                                                                                                                           |
| Encapsulation                                                  | Plastic case sealed with resin; flame retardant                                                                                                             |
| Terminals                                                      | Tinned wire                                                                                                                                                 |
| Self inductance ( $L_S$ )                                      | < 1 nH per mm of lead spacing                                                                                                                               |
| Withstanding DC voltage between terminals <sup>(1)</sup>       | 1.5 $U_{NDC}$ for 10 s, cut off current 10 mA, rise time $\leq 1000$ V/s                                                                                    |
| Insulation resistance                                          | RC between leads, after 1 min > 10 000 s, measuring voltage: 500 V                                                                                          |
| Marking                                                        | Manufacturer's name, C-value, tolerance, rated voltage, manufacturer's type designation, code for dielectric material, manufacturer location, year and week |

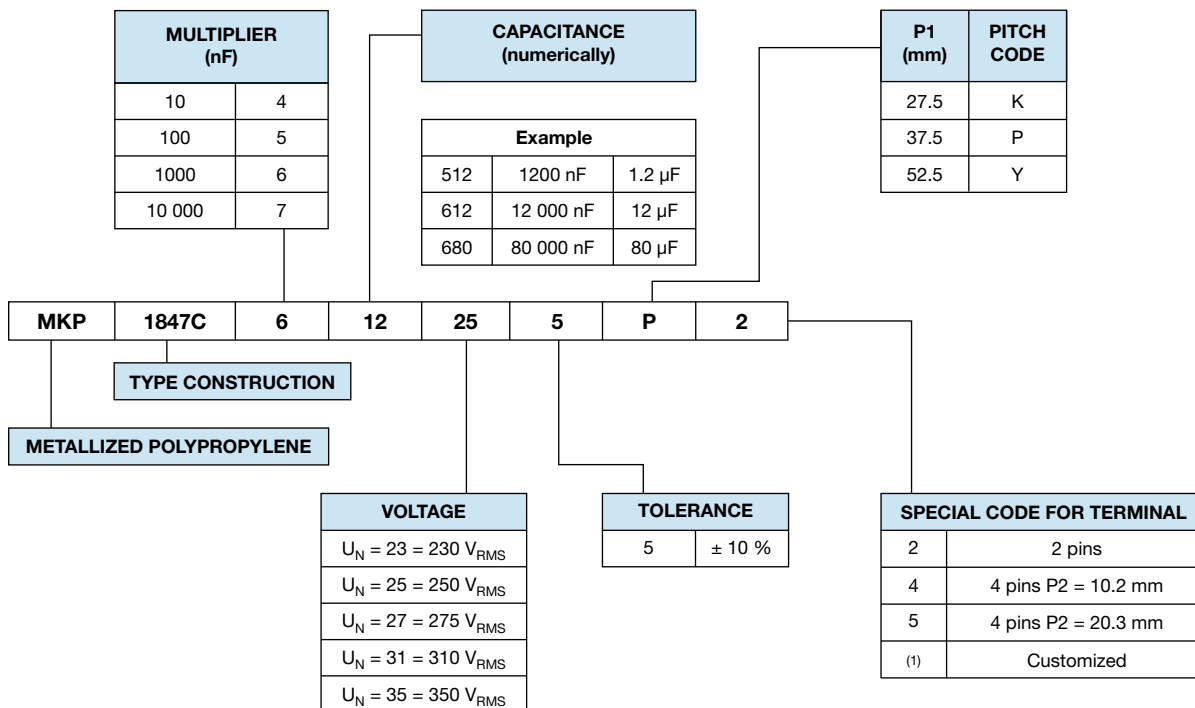
## Notes

- For more detailed data and test requirements, contact [dc-film@vishay.com](mailto:dc-film@vishay.com)
  - For general information like characteristics and definitions used for film capacitors follow the link: [www.vishay.com/doc?28147](http://www.vishay.com/doc?28147)
- <sup>(1)</sup> See document "Voltage Proof Test for Metalized Capacitors" ([www.vishay.com/doc?28169](http://www.vishay.com/doc?28169))

AC VOLTAGE RATINGS ( $V_{RMS}$ )

|                      |       |       |       |       |       |
|----------------------|-------|-------|-------|-------|-------|
| $U_{NAC}$            | 230 V | 250 V | 275 V | 310 V | 350 V |
| $U_{OPAC}$ at 85 °C  | 230 V | 250 V | 275 V | 310 V | 350 V |
| $U_{OPAC}$ at 105 °C | 160 V | 175 V | 190 V | 210 V | 240 V |

## COMPOSITION OF CATALOG NUMBER

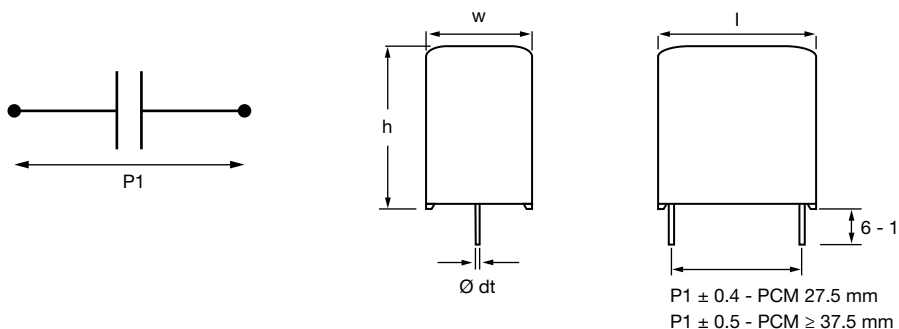


### Note

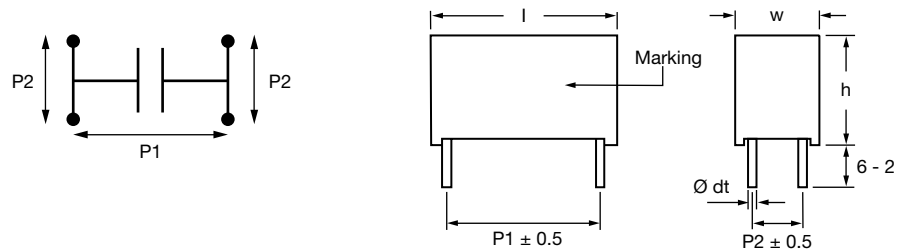
(1) Tabs terminals or customized terminals are available on request

## DIMENSIONS in millimeters

### 2 PINS



### 4 PINS



### Note

- $\varnothing dt \pm 10 \%$  of standard diameter specified



## ELECTRICAL DATA AND ORDERING CODE

| U <sub>NAC</sub><br>(V) | CAP.<br>(1)<br>(μF)                                                                                                                                 | DIMENSION (2)<br>(mm) |      |      | P1<br>(mm) | P2<br>(mm)  | (dV/dt) (3)<br>(V/μs) | I <sub>PEAK</sub><br>(A) | I <sub>RMS</sub> (4)<br>(A) |           | tan δ<br>1 kHz<br>( $< 10^{-4}$ ) (5) |           | tan δ<br>10 kHz<br>( $< 10^{-4}$ ) (5) |                    | ORDERING CODE (6)   |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------|------|------------|-------------|-----------------------|--------------------------|-----------------------------|-----------|---------------------------------------|-----------|----------------------------------------|--------------------|---------------------|
|                         |                                                                                                                                                     | w                     | h    | l    |            |             |                       |                          | 2<br>PINS                   | 4<br>PINS | 2<br>PINS                             | 4<br>PINS | 2<br>PINS                              | 4<br>PINS          |                     |
|                         |                                                                                                                                                     |                       |      |      |            |             |                       |                          |                             |           |                                       |           |                                        |                    |                     |
| 230                     | U <sub>OPAC</sub> AT 85 °C = 230 V <sub>RMS</sub> , U <sub>OPAC</sub> AT 105 °C = 160 V <sub>RMS</sub> , C-TOL. = ± 10 % (U <sub>NDC</sub> = 450 V) |                       |      |      |            |             |                       |                          |                             |           |                                       |           |                                        |                    |                     |
|                         | 2                                                                                                                                                   | 11.0                  | 21.0 | 32.0 | 27.5       | -           | 45                    | 90                       | 3.5                         | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 520 235K2  |
|                         | 3                                                                                                                                                   | 13.0                  | 23.0 | 32.0 | 27.5       | -           | 45                    | 135                      | 5.0                         | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 530 235K2  |
|                         | 4                                                                                                                                                   | 15.0                  | 25.0 | 32.0 | 27.5       | -           | 45                    | 180                      | 6.0                         | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 540 235K2  |
|                         | 5                                                                                                                                                   | 18.0                  | 28.0 | 32.0 | 27.5       | -           | 45                    | 225                      | 7.5                         | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 550 235K2  |
|                         | 6                                                                                                                                                   | 18.0                  | 28.0 | 32.0 | 27.5       | -           | 45                    | 270                      | 8.0                         | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 560 235K2  |
|                         | 7                                                                                                                                                   | 18.0                  | 28.0 | 32.0 | 27.5       | -           | 45                    | 315                      | 8.5                         | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 570 235K2  |
|                         | 8                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 45                    | 360                      | 10.0                        | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 580 235K2  |
|                         | 9                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 45                    | 405                      | 10.5                        | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 590 235K2  |
|                         | 10                                                                                                                                                  | 20.0                  | 35.0 | 32.0 | 27.5       | -           | 45                    | 450                      | 11.5                        | -         | 7                                     | -         | 30                                     | -                  | MKP1847C 610 235K2  |
|                         | 10                                                                                                                                                  | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 20                    | 200                      | 7.5                         | -         | 10                                    | -         | 75                                     | -                  | MKP1847C 610 235P2  |
|                         | 12                                                                                                                                                  | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 20                    | 240                      | 8.5                         | -         | 10                                    | -         | 75                                     | -                  | MKP1847C 612 235P2  |
|                         | 15                                                                                                                                                  | 21.5                  | 38.5 | 43.0 | 37.5       | 10.2        | 20                    | 300                      | 10.0                        | 12.0      | 10                                    | 8         | 75                                     | 70                 | MKP1847C 615 235 P* |
|                         | 20                                                                                                                                                  | 24.0                  | 44.0 | 42.0 | 37.5       | 10.2        | 20                    | 400                      | 12.5                        | 14.5      | 10                                    | 8         | 75                                     | 70                 | MKP1847C 620 235P*  |
|                         | 22                                                                                                                                                  | 24.0                  | 44.0 | 42.0 | 37.5       | 10.2        | 20                    | 440                      | 13.0                        | 15.5      | 10                                    | 8         | 75                                     | 70                 | MKP1847C 622 235P*  |
|                         | 25                                                                                                                                                  | 30.0                  | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 20                    | 500                      | 15.0                        | 17.5      | 10                                    | 8         | 75                                     | 70                 | MKP1847C 625 235P*  |
|                         | 30                                                                                                                                                  | 30.0                  | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 20                    | 600                      | 16.5                        | 19.0      | 10                                    | 8         | 75                                     | 70                 | MKP1847C 625 235P*  |
|                         | 30                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 10                    | 300                      | 12.5                        | 15.0      | 20                                    | 17        | 150                                    | 135                | MKP1847C 630 235Y*  |
|                         | 35                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 10                    | 350                      | 13.5                        | 16.0      | 20                                    | 17        | 150                                    | 135                | MKP1847C 635 235Y*  |
|                         | 40                                                                                                                                                  | 30.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 10                    | 400                      | 15.5                        | 18.0      | 20                                    | 17        | 150                                    | 135                | MKP1847C 640 235Y*  |
|                         | 45                                                                                                                                                  | 30.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 10                    | 450                      | 16.5                        | 19.0      | 20                                    | 17        | 150                                    | 135                | MKP1847C 645 235Y*  |
|                         | 50                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 10                    | 500                      | 18.5                        | 21.5      | 20                                    | 17        | 150                                    | 135                | MKP1847C 650 235Y*  |
|                         | 55                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 10                    | 550                      | 19.5                        | 22.5      | 20                                    | 17        | 150                                    | 135                | MKP1847C 655 235Y*  |
|                         | 60                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 10                    | 600                      | 20.5                        | 23.5      | 20                                    | 17        | 150                                    | 135                | MKP1847C 660 235Y*  |
|                         | 65                                                                                                                                                  | 45.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 10                    | 650                      | -                           | 25.5      | -                                     | 17        | -                                      | 135                | MKP1847C 665 235Y5  |
| 70                      | 45.0                                                                                                                                                | 45.0                  | 57.5 | 52.5 | 20.3       | 10          | 700                   | -                        | 26.0                        | -         | 17                                    | -         | 135                                    | MKP1847C 670 235Y5 |                     |
| 250                     | U <sub>OPAC</sub> AT 85 °C = 250 V <sub>RMS</sub> , U <sub>OPAC</sub> AT 105 °C = 175 V <sub>RMS</sub> , C-TOL. = ± 10 % (U <sub>NDC</sub> = 500 V) |                       |      |      |            |             |                       |                          |                             |           |                                       |           |                                        |                    |                     |
|                         | 2                                                                                                                                                   | 11.0                  | 21.0 | 32.0 | 27.5       | -           | 50                    | 100                      | 4.0                         | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 520 255K2  |
|                         | 3                                                                                                                                                   | 13.0                  | 23.0 | 32.0 | 27.5       | -           | 50                    | 150                      | 5.0                         | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 530 255K2  |
|                         | 4                                                                                                                                                   | 15.0                  | 25.0 | 32.0 | 27.5       | -           | 50                    | 200                      | 6.0                         | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 540 255K2  |
|                         | 5                                                                                                                                                   | 18.0                  | 28.0 | 32.0 | 27.5       | -           | 50                    | 250                      | 7.0                         | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 550 255K2  |
|                         | 6                                                                                                                                                   | 18.0                  | 28.0 | 32.0 | 27.5       | -           | 50                    | 300                      | 7.5                         | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 560 255K2  |
|                         | 7                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 50                    | 350                      | 8.0                         | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 570 255K2  |
|                         | 8                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 50                    | 400                      | 9.0                         | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 580 255K2  |
|                         | 9                                                                                                                                                   | 20.0                  | 35.0 | 32.0 | 27.5       | -           | 50                    | 450                      | 11.0                        | -         | 7                                     | -         | 25                                     | -                  | MKP1847C 590 255K2  |
|                         | 5                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 25                    | 125                      | 7.0                         | -         | 10                                    | -         | 70                                     | -                  | MKP1847C 550 255P2  |
|                         | 6                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 25                    | 150                      | 7.0                         | -         | 10                                    | -         | 70                                     | -                  | MKP1847C 560 255P2  |
|                         | 7                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 25                    | 175                      | 7.0                         | -         | 10                                    | -         | 70                                     | -                  | MKP1847C 570 255P2  |
|                         | 8                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 25                    | 200                      | 8.0                         | -         | 10                                    | -         | 70                                     | -                  | MKP1847C 580 255P2  |
|                         | 9                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 25                    | 225                      | 8.0                         | -         | 10                                    | -         | 70                                     | -                  | MKP1847C 590 255P2  |
|                         | 10                                                                                                                                                  | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 25                    | 250                      | 9.0                         | -         | 10                                    | -         | 70                                     | -                  | MKP1847C 610 255P2  |
|                         | 12                                                                                                                                                  | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 25                    | 300                      | 10.0                        | -         | 10                                    | -         | 70                                     | -                  | MKP1847C 612 255P2  |
|                         | 15                                                                                                                                                  | 21.5                  | 38.5 | 43.0 | 37.5       | 10.2        | 25                    | 375                      | 11.0                        | 12.0      | 10                                    | 8         | 70                                     | 65                 | MKP1847C 615 255P*  |
|                         | 20                                                                                                                                                  | 30.0                  | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 25                    | 500                      | 14.0                        | 15.0      | 10                                    | 8         | 70                                     | 65                 | MKP1847C 620 255P*  |
|                         | 22                                                                                                                                                  | 30.0                  | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 25                    | 550                      | 15.0                        | 16.0      | 10                                    | 8         | 70                                     | 65                 | MKP1847C 622 255P*  |
|                         | 25                                                                                                                                                  | 30.0                  | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 25                    | 625                      | 16.0                        | 17.0      | 10                                    | 8         | 70                                     | 65                 | MKP1847C 625 255P*  |
|                         | 15                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 12                    | 180                      | 12.0                        | 13.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 615 255Y*  |
|                         | 20                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 12                    | 240                      | 12.0                        | 13.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 620 255Y*  |
|                         | 22                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 12                    | 264                      | 12.0                        | 13.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 622 255Y*  |
|                         | 25                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 12                    | 300                      | 13.0                        | 14.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 625 255Y*  |
|                         | 30                                                                                                                                                  | 30.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 12                    | 360                      | 15.0                        | 16.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 630 255Y*  |
|                         | 35                                                                                                                                                  | 30.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 12                    | 420                      | 16.0                        | 17.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 635 255Y*  |
|                         | 40                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 12                    | 480                      | 19.0                        | 20.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 640 255Y*  |
|                         | 45                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 12                    | 540                      | 20.0                        | 21.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 645 255Y*  |
|                         | 50                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 12                    | 600                      | 21.0                        | 22.0      | 16                                    | 14        | 135                                    | 125                | MKP1847C 650 255Y*  |
|                         | 55                                                                                                                                                  | 45.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 12                    | 660                      | -                           | 24.0      | -                                     | 14        | -                                      | 125                | MKP1847C 655 255Y5  |
| 60                      | 45.0                                                                                                                                                | 45.0                  | 57.5 | 52.5 | 20.3       | 12          | 720                   | -                        | 25.0                        | -         | 14                                    | -         | 125                                    | MKP1847C 660 255Y5 |                     |



## ELECTRICAL DATA AND ORDERING CODE

| U <sub>NAC</sub><br>(V) | CAP.<br>(1)<br>(μF)                                                                                                                                 | DIMENSION (2)<br>(mm) |      |      | P1<br>(mm) | P2<br>(mm)  | (dV/dt) (3)<br>(V/μs) | I <sub>PEAK</sub><br>(A) | I <sub>RMS</sub> (4)<br>(A) |           | tan δ<br>1 kHz<br>( $< 10^{-4}$ ) (5) |           | tan δ<br>10 kHz<br>( $< 10^{-4}$ ) (5) |           | ORDERING CODE (6)   |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------|------|------------|-------------|-----------------------|--------------------------|-----------------------------|-----------|---------------------------------------|-----------|----------------------------------------|-----------|---------------------|
|                         |                                                                                                                                                     | w                     | h    | l    |            |             |                       |                          | 2<br>PINS                   | 4<br>PINS | 2<br>PINS                             | 4<br>PINS | 2<br>PINS                              | 4<br>PINS |                     |
|                         |                                                                                                                                                     |                       |      |      |            |             |                       |                          |                             |           |                                       |           |                                        |           |                     |
| 275                     | U <sub>OPAC</sub> AT 85 °C = 275 V <sub>RMS</sub> , U <sub>OPAC</sub> AT 105 °C = 190 V <sub>RMS</sub> , C-TOL. = ± 10 % (U <sub>NDC</sub> = 600 V) |                       |      |      |            |             |                       |                          |                             |           |                                       |           |                                        |           |                     |
|                         | 2                                                                                                                                                   | 13.0                  | 23.0 | 32.0 | 27.5       | -           | 55                    | 110                      | 4.5                         | -         | 5                                     | -         | 25                                     | -         | MKP1847C 520 275K2  |
|                         | 3                                                                                                                                                   | 15.0                  | 25.0 | 32.0 | 27.5       | -           | 55                    | 165                      | 5.5                         | -         | 5                                     | -         | 25                                     | -         | MKP1847C 530 275K2  |
|                         | 4                                                                                                                                                   | 18.0                  | 28.0 | 32.0 | 27.5       | -           | 55                    | 220                      | 7.0                         | -         | 5                                     | -         | 25                                     | -         | MKP1847C 540 275K2  |
|                         | 5                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 55                    | 275                      | 8.0                         | -         | 5                                     | -         | 25                                     | -         | MKP1847C 550 275K2  |
|                         | 6                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 55                    | 330                      | 9.0                         | -         | 5                                     | -         | 25                                     | -         | MKP1847C 560 275K2  |
|                         | 7                                                                                                                                                   | 20.0                  | 35.0 | 32.0 | 27.5       | -           | 55                    | 385                      | 10.0                        | -         | 5                                     | -         | 25                                     | -         | MKP1847C 570 275K2  |
|                         | 5                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 30                    | 150                      | 7.0                         | -         | 8                                     | -         | 65                                     | -         | MKP1847C 550 275P2  |
|                         | 6                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 30                    | 180                      | 7.0                         | -         | 8                                     | -         | 65                                     | -         | MKP1847C 560 275P2  |
|                         | 7                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 30                    | 210                      | 8.0                         | -         | 8                                     | -         | 65                                     | -         | MKP1847C 570 275P2  |
|                         | 8                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 30                    | 240                      | 8.0                         | -         | 8                                     | -         | 65                                     | -         | MKP1847C 580 275P2  |
|                         | 9                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 30                    | 270                      | 9.0                         | -         | 8                                     | -         | 65                                     | -         | MKP1847C 590 275P2  |
|                         | 10                                                                                                                                                  | 21.5                  | 38.5 | 43.0 | 37.5       | 10.2        | 30                    | 300                      | 10.0                        | 11.0      | 8                                     | 7         | 65                                     | 55        | MKP1847C 610 275P*  |
|                         | 12                                                                                                                                                  | 21.5                  | 38.5 | 43.0 | 37.5       | 10.2        | 30                    | 360                      | 11.0                        | 12.0      | 8                                     | 7         | 65                                     | 55        | MKP1847C 612 275P*  |
|                         | 15                                                                                                                                                  | 24.0                  | 44.0 | 42.0 | 37.5       | 10.2        | 30                    | 450                      | 13.0                        | 14.0      | 8                                     | 7         | 65                                     | 55        | MKP1847C 615 275P*  |
|                         | 20                                                                                                                                                  | 30.0                  | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 30                    | 600                      | 16.0                        | 17.0      | 8                                     | 7         | 65                                     | 55        | MKP1847C 620 275P*  |
|                         | 15                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 13                    | 195                      | 11.0                        | 12.0      | 15                                    | 12        | 125                                    | 105       | MKP1847C 615 275Y*  |
|                         | 20                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 13                    | 260                      | 12.0                        | 13.0      | 15                                    | 12        | 125                                    | 105       | MKP1847C 620 275Y*  |
|                         | 22                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 13                    | 286                      | 13.0                        | 14.0      | 15                                    | 12        | 125                                    | 105       | MKP1847C 622 275Y*  |
|                         | 25                                                                                                                                                  | 30.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 13                    | 325                      | 15.0                        | 16.0      | 15                                    | 12        | 125                                    | 105       | MKP1847C 625 275Y*  |
|                         | 30                                                                                                                                                  | 30.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 13                    | 390                      | 16.0                        | 17.0      | 15                                    | 12        | 125                                    | 105       | MKP1847C 630 275Y*  |
|                         | 35                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 13                    | 455                      | 19.0                        | 20.0      | 15                                    | 12        | 125                                    | 105       | MKP1847C 635 275Y*  |
|                         | 40                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 13                    | 520                      | 20.0                        | 21.0      | 15                                    | 12        | 125                                    | 105       | MKP1847C 640 275Y*  |
|                         | 45                                                                                                                                                  | 45.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 13                    | 585                      | -                           | 23.0      | -                                     | 12        | -                                      | 105       | MKP1847C 645 275Y5  |
|                         | 50                                                                                                                                                  | 45.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 13                    | 650                      | -                           | 24.0      | -                                     | 12        | -                                      | 105       | MKP1847C 650 275Y5  |
| 310                     | U <sub>OPAC</sub> AT 85 °C = 310 V <sub>RMS</sub> , U <sub>OPAC</sub> AT 105 °C = 210 V <sub>RMS</sub> , C-TOL. = ± 10 % (U <sub>NDC</sub> = 630 V) |                       |      |      |            |             |                       |                          |                             |           |                                       |           |                                        |           |                     |
|                         | 1                                                                                                                                                   | 11.0                  | 21.0 | 32.0 | 27.5       | -           | 68                    | 68                       | 3                           | -         | 5                                     | -         | 20                                     | -         | MKP1847C 510 315 K2 |
|                         | 2                                                                                                                                                   | 15.0                  | 25.0 | 32.0 | 27.5       | -           | 68                    | 136                      | 5                           | -         | 5                                     | -         | 20                                     | -         | MKP1847C 520 315 K2 |
|                         | 3                                                                                                                                                   | 18.0                  | 28.0 | 32.0 | 27.5       | -           | 68                    | 204                      | 7                           | -         | 5                                     | -         | 20                                     | -         | MKP1847C 530 315 K2 |
|                         | 4                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 68                    | 272                      | 8                           | -         | 5                                     | -         | 20                                     | -         | MKP1847C 540 315 K2 |
|                         | 5                                                                                                                                                   | 21.0                  | 31.0 | 32.0 | 27.5       | -           | 68                    | 340                      | 9                           | -         | 5                                     | -         | 20                                     | -         | MKP1847C 550 315 K2 |
|                         | 5                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 35                    | 175                      | 7                           | -         | 7                                     | -         | 55                                     | -         | MKP1847C 550 315 P2 |
|                         | 6                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 35                    | 210                      | 8                           | -         | 7                                     | -         | 55                                     | -         | MKP1847C 560 315 P2 |
|                         | 7                                                                                                                                                   | 18.5                  | 35.5 | 43.0 | 37.5       | -           | 35                    | 245                      | 9                           | -         | 7                                     | -         | 55                                     | -         | MKP1847C 570 315 P2 |
|                         | 8                                                                                                                                                   | 21.5                  | 38.5 | 43.0 | 37.5       | 10.2        | 35                    | 280                      | 10                          | 11        | 7                                     | 6         | 55                                     | 50        | MKP1847C 580 315 P* |
|                         | 9                                                                                                                                                   | 21.5                  | 38.5 | 43.0 | 37.5       | 10.2        | 35                    | 315                      | 10                          | 11        | 7                                     | 6         | 55                                     | 50        | MKP1847C 590 315 P* |
|                         | 10                                                                                                                                                  | 21.5                  | 38.5 | 43.0 | 37.5       | 10.2        | 35                    | 350                      | 11                          | 12        | 7                                     | 6         | 55                                     | 50        | MKP1847C 610 315 P* |
|                         | 12                                                                                                                                                  | 24.0                  | 44.0 | 42.0 | 37.5       | 10.2        | 35                    | 420                      | 12                          | 13        | 7                                     | 6         | 55                                     | 50        | MKP1847C 612 315 P* |
|                         | 15                                                                                                                                                  | 30.0                  | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 35                    | 525                      | 15                          | 16        | 7                                     | 6         | 55                                     | 50        | MKP1847C 615 315 P* |
|                         | 10                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 15                    | 150                      | 10                          | 11        | 12                                    | 10        | 105                                    | 90        | MKP1847C 610 315 Y* |
|                         | 12                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 15                    | 180                      | 10                          | 11        | 12                                    | 10        | 105                                    | 90        | MKP1847C 612 315 Y* |
|                         | 15                                                                                                                                                  | 25.0                  | 45.0 | 57.5 | 52.5       | 10.2        | 15                    | 225                      | 12                          | 13        | 12                                    | 10        | 105                                    | 90        | MKP1847C 615 315 Y* |
|                         | 20                                                                                                                                                  | 30.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 15                    | 300                      | 14                          | 15        | 12                                    | 10        | 105                                    | 90        | MKP1847C 620 315 Y* |
|                         | 22                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 15                    | 330                      | 16                          | 17        | 12                                    | 10        | 105                                    | 90        | MKP1847C 622 315 Y* |
|                         | 25                                                                                                                                                  | 35.0                  | 50.0 | 57.5 | 52.5       | 20.3        | 15                    | 375                      | 17                          | 18        | 12                                    | 10        | 105                                    | 90        | MKP1847C 625 315 Y* |
|                         | 30                                                                                                                                                  | 45.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 15                    | 450                      | -                           | 21        | -                                     | 10        | -                                      | 90        | MKP1847C 630 315 Y5 |
|                         | 35                                                                                                                                                  | 45.0                  | 45.0 | 57.5 | 52.5       | 20.3        | 15                    | 525                      | -                           | 22        | -                                     | 10        | -                                      | 90        | MKP1847C 635 315 Y5 |



## ELECTRICAL DATA AND ORDERING CODE

| U <sub>NAC</sub><br>(V) | CAP.<br>(1)<br>(μF)                                                                                                                                 | DIMENSION <sup>(2)</sup><br>(mm) |      |      | P1<br>(mm) | P2<br>(mm)  | (dV/dt) <sup>(3)</sup><br>(V/μs) | I <sub>PEAK</sub><br>(A) | I <sub>RMS</sub> <sup>(4)</sup><br>(A) |           | tan δ<br>1 kHz<br>( $< 10^{-4}$ ) <sup>(5)</sup> |           | tan δ<br>10 kHz<br>( $< 10^{-4}$ ) <sup>(5)</sup> |                     | ORDERING CODE <sup>(6)</sup> |  |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------|------|------------|-------------|----------------------------------|--------------------------|----------------------------------------|-----------|--------------------------------------------------|-----------|---------------------------------------------------|---------------------|------------------------------|--|
|                         |                                                                                                                                                     | w                                | h    | l    |            |             |                                  |                          | 2<br>PINS                              | 4<br>PINS | 2<br>PINS                                        | 4<br>PINS | 2<br>PINS                                         | 4<br>PINS           |                              |  |
|                         |                                                                                                                                                     |                                  |      |      |            |             |                                  |                          |                                        |           |                                                  |           |                                                   |                     |                              |  |
| 350                     | U <sub>OPAC</sub> AT 85 °C = 350 V <sub>RMS</sub> ; U <sub>OPAC</sub> AT 105 °C = 240 V <sub>RMS</sub> ; C-TOL. = ± 10 % (U <sub>NDC</sub> = 700 V) |                                  |      |      |            |             |                                  |                          |                                        |           |                                                  |           |                                                   |                     |                              |  |
|                         | 1                                                                                                                                                   | 11.0                             | 21.0 | 32.0 | 27.5       | -           | 100                              | 100                      | 3                                      | -         | 7                                                | -         | 20                                                | -                   | MKP1847C 510 355 K2          |  |
|                         | 2                                                                                                                                                   | 15.0                             | 25.0 | 32.0 | 27.5       | -           | 100                              | 200                      | 5                                      | -         | 7                                                | -         | 20                                                | -                   | MKP1847C 520 355 K2          |  |
|                         | 3                                                                                                                                                   | 18.0                             | 28.0 | 32.0 | 27.5       | -           | 100                              | 300                      | 7                                      | -         | 7                                                | -         | 20                                                | -                   | MKP1847C 530 355 K2          |  |
|                         | 4                                                                                                                                                   | 21.0                             | 31.0 | 32.0 | 27.5       | -           | 100                              | 400                      | 9                                      | -         | 7                                                | -         | 20                                                | -                   | MKP1847C 540 355 K2          |  |
|                         | 5                                                                                                                                                   | 18.5                             | 35.5 | 43.0 | 37.5       | -           | 50                               | 250                      | 7                                      | -         | 7                                                | -         | 50                                                | -                   | MKP1847C 550 355 P2          |  |
|                         | 6                                                                                                                                                   | 18.5                             | 35.5 | 43.0 | 37.5       | -           | 50                               | 300                      | 8                                      | -         | 7                                                | -         | 50                                                | -                   | MKP1847C 560 355 P2          |  |
|                         | 7                                                                                                                                                   | 21.5                             | 38.5 | 43.0 | 37.5       | 10.2        | 50                               | 350                      | 9                                      | 10        | 7                                                | 6         | 50                                                | 45                  | MKP1847C 570 355 P*          |  |
|                         | 8                                                                                                                                                   | 21.5                             | 38.5 | 43.0 | 37.5       | 10.2        | 50                               | 400                      | 10                                     | 11        | 7                                                | 6         | 50                                                | 45                  | MKP1847C 580 355 P*          |  |
|                         | 9                                                                                                                                                   | 24.0                             | 44.0 | 42.0 | 37.5       | 10.2        | 50                               | 450                      | 11                                     | 12        | 7                                                | 6         | 50                                                | 45                  | MKP1847C 590 355 P*          |  |
|                         | 10                                                                                                                                                  | 24.0                             | 44.0 | 42.0 | 37.5       | 10.2        | 50                               | 500                      | 12                                     | 13        | 7                                                | 6         | 50                                                | 45                  | MKP1847C 610 355 P*          |  |
|                         | 12                                                                                                                                                  | 30.0                             | 45.0 | 42.0 | 37.5       | 10.2 / 20.3 | 50                               | 600                      | 14                                     | 15        | 7                                                | 6         | 50                                                | 45                  | MKP1847C 612 355 P*          |  |
|                         | 10                                                                                                                                                  | 25.0                             | 45.0 | 57.5 | 52.5       | 10.2        | 25                               | 250                      | 10                                     | 11        | 12                                               | 10        | 100                                               | 85                  | MKP1847C 610 355 Y*          |  |
|                         | 12                                                                                                                                                  | 25.0                             | 45.0 | 57.5 | 52.5       | 10.2        | 25                               | 300                      | 11                                     | 12        | 12                                               | 10        | 100                                               | 85                  | MKP1847C 612 355 Y*          |  |
|                         | 15                                                                                                                                                  | 25.0                             | 45.0 | 57.5 | 52.5       | 10.2        | 25                               | 375                      | 12                                     | 13        | 12                                               | 10        | 100                                               | 85                  | MKP1847C 615 355 Y*          |  |
|                         | 20                                                                                                                                                  | 30.0                             | 45.0 | 57.5 | 52.5       | 20.3        | 25                               | 500                      | 15                                     | 16        | 12                                               | 10        | 100                                               | 85                  | MKP1847C 620 355 Y*          |  |
|                         | 22                                                                                                                                                  | 35.0                             | 50.0 | 57.5 | 52.5       | 20.3        | 25                               | 550                      | 17                                     | 18        | 12                                               | 10        | 100                                               | 85                  | MKP1847C 622 355 Y*          |  |
|                         | 25                                                                                                                                                  | 35.0                             | 50.0 | 57.5 | 52.5       | 20.3        | 25                               | 625                      | 18                                     | 19        | 12                                               | 10        | 100                                               | 85                  | MKP1847C 625 355 Y*          |  |
| 30                      | 45.0                                                                                                                                                | 45.0                             | 57.5 | 52.5 | 20.3       | 25          | 750                              | -                        | 22                                     | -         | 10                                               | -         | 85                                                | MKP1847C 630 355 Y5 |                              |  |

## Notes

- (1) Intermediate capacitance values available on request  
 (2) Standard dimension. For tolerances see chapter "Space Requirements for Printed-Circuit Board Applications and Dimension Tolerances"  
 (3) Rated voltage pulse slope (dU/dt)<sub>R</sub> at voltage U<sub>NDC</sub>  
 (4) Maximum RMS current at 10 kHz, +85 °C, capacitance tolerance specified  
 (5) Equivalent series resistance typical values at f = 10 kHz  
 (6) Change the "\*" symbol with special code for the terminals

## PACKAGING INFORMATION

| U <sub>NAC</sub><br>(V) | CAP. (1)<br>(μF) | Ø dt<br>(mm) | ORDERING CODE (2) | MASS<br>(g) | SPQ (3)<br>(pcs) |
|-------------------------|------------------|--------------|-------------------|-------------|------------------|
| 230                     | 2                | 0.8          | MKP1847C520235K2  | 9           | 130              |
|                         | 3                | 0.8          | MKP1847C530235K2  | 10          | 115              |
|                         | 4                | 0.8          | MKP1847C540235K2  | 12          | 100              |
|                         | 5                | 0.8          | MKP1847C550235K2  | 17          | 80               |
|                         | 6                | 0.8          | MKP1847C560235K2  | 15          | 80               |
|                         | 7                | 0.8          | MKP1847C570235K2  | 16          | 80               |
|                         | 8                | 0.8          | MKP1847C580235K2  | 23          | 65               |
|                         | 9                | 0.8          | MKP1847C590235K2  | 22          | 65               |
|                         | 10               | 0.8          | MKP1847C610235K2  | 22          | 70               |
|                         | 10               | 1.0          | MKP1847C610235P2  | 33          | 105              |
|                         | 12               | 1.0          | MKP1847C612235P2  | 31          | 105              |
|                         | 15               | 1.0          | MKP1847C615235P*  | 39          | 91               |
|                         | 20               | 1.0          | MKP1847C620235P*  | 50          | 77               |
|                         | 22               | 1.0          | MKP1847C622235P*  | 49          | 77               |
|                         | 25               | 1.0          | MKP1847C625235P*  | 66          | 63               |
|                         | 30               | 1.0          | MKP1847C630235P*  | 60          | 63               |
|                         | 30               | 1.2          | MKP1847C630235Y*  | 73          | 55               |
|                         | 35               | 1.2          | MKP1847C635235Y*  | 70          | 55               |
|                         | 40               | 1.2          | MKP1847C640235Y*  | 97          | 45               |
|                         | 45               | 1.2          | MKP1847C645235Y*  | 93          | 45               |
|                         | 50               | 1.2          | MKP1847C650235Y*  | 115         | 40               |
|                         | 55               | 1.2          | MKP1847C655235Y*  | 110         | 40               |
|                         | 60               | 1.2          | MKP1847C660235Y*  | 105         | 40               |
|                         | 65               | 1.2          | MKP1847C665235Y5  | 130         | 30               |
|                         | 70               | 1.2          | MKP1847C670235Y5  | 126         | 30               |



## PACKAGING INFORMATION

| U <sub>NAC</sub><br>(V) | CAP. <sup>(1)</sup><br>(μF) | Ø dt<br>(mm) | ORDERING CODE <sup>(2)</sup> | MASS<br>(g) | SPQ <sup>(3)</sup><br>(pcs) |
|-------------------------|-----------------------------|--------------|------------------------------|-------------|-----------------------------|
| 250                     | 2                           | 0.8          | MKP1847C520255K2             | 9           | 130                         |
|                         | 3                           | 0.8          | MKP1847C530255K2             | 10          | 115                         |
|                         | 4                           | 0.8          | MKP1847C540255K2             | 12          | 100                         |
|                         | 5                           | 0.8          | MKP1847C550255K2             | 17          | 80                          |
|                         | 6                           | 0.8          | MKP1847C560255K2             | 15          | 80                          |
|                         | 7                           | 0.8          | MKP1847C570255K2             | 22          | 65                          |
|                         | 8                           | 0.8          | MKP1847C580255K2             | 21          | 65                          |
|                         | 9                           | 0.8          | MKP1847C590255K2             | 21          | 70                          |
|                         | 5                           | 1.0          | MKP1847C550255P2             | 36          | 105                         |
|                         | 6                           | 1.0          | MKP1847C560255P2             | 35          | 105                         |
|                         | 7                           | 1.0          | MKP1847C570255P2             | 34          | 105                         |
|                         | 8                           | 1.0          | MKP1847C580255P2             | 33          | 105                         |
|                         | 9                           | 1.0          | MKP1847C590255P2             | 32          | 105                         |
|                         | 10                          | 1.0          | MKP1847C610255P2             | 31          | 105                         |
|                         | 12                          | 1.0          | MKP1847C612255P2             | 28          | 105                         |
|                         | 15                          | 1.0          | MKP1847C615255P*             | 35          | 91                          |
|                         | 20                          | 1.0          | MKP1847C620255P*             | 65          | 63                          |
|                         | 22                          | 1.0          | MKP1847C622255P*             | 62          | 63                          |
|                         | 23                          | 1.0          | MKP1847C625255P*             | 59          | 63                          |
|                         | 15                          | 1.2          | MKP1847C615255Y*             | 84          | 55                          |
|                         | 20                          | 1.2          | MKP1847C620255Y*             | 78          | 55                          |
|                         | 22                          | 1.2          | MKP1847C622255Y*             | 76          | 55                          |
|                         | 23                          | 1.2          | MKP1847C625255Y*             | 73          | 55                          |
|                         | 30                          | 1.2          | MKP1847C630255Y*             | 100         | 45                          |
|                         | 35                          | 1.2          | MKP1847C635255Y*             | 93          | 45                          |
|                         | 40                          | 1.2          | MKP1847C640255Y*             | 114         | 40                          |
|                         | 45                          | 1.2          | MKP1847C645255Y*             | 108         | 40                          |
|                         | 50                          | 1.2          | MKP1847C650255Y*             | 102         | 40                          |
|                         | 55                          | 1.2          | MKP1847C655255Y5             | 126         | 30                          |
|                         | 60                          | 1.2          | MKP1847C660255Y5             | 121         | 30                          |
| 275                     | 2                           | 0.8          | MKP1847C520275K2             | 11          | 115                         |
|                         | 3                           | 0.8          | MKP1847C530275K2             | 12          | 100                         |
|                         | 4                           | 0.8          | MKP1847C540275K2             | 17          | 80                          |
|                         | 5                           | 0.8          | MKP1847C550275K2             | 23          | 65                          |
|                         | 6                           | 0.8          | MKP1847C560275K2             | 21          | 65                          |
|                         | 7                           | 0.8          | MKP1847C570275K2             | 21          | 70                          |
|                         | 5                           | 1.0          | MKP1847C550275P2             | 35          | 105                         |
|                         | 6                           | 1.0          | MKP1847C560275P2             | 33          | 105                         |
|                         | 7                           | 1.0          | MKP1847C570275P2             | 32          | 105                         |
|                         | 8                           | 1.0          | MKP1847C580275P2             | 31          | 105                         |
|                         | 9                           | 1.0          | MKP1847C590275P2             | 29          | 105                         |
|                         | 10                          | 1.0          | MKP1847C610275P*             | 39          | 91                          |
|                         | 12                          | 1.0          | MKP1847C612275P*             | 36          | 91                          |
|                         | 15                          | 1.0          | MKP1847C615275P*             | 47          | 77                          |
|                         | 20                          | 1.0          | MKP1847C620275P*             | 59          | 63                          |
|                         | 15                          | 1.2          | MKP1847C615275Y*             | 80          | 55                          |
|                         | 20                          | 1.2          | MKP1847C620275Y*             | 73          | 55                          |
|                         | 22                          | 1.2          | MKP1847C622275Y*             | 71          | 55                          |
|                         | 25                          | 1.2          | MKP1847C625275Y*             | 99          | 45                          |
|                         | 30                          | 1.2          | MKP1847C630275Y*             | 92          | 45                          |
|                         | 35                          | 1.2          | MKP1847C635275Y*             | 112         | 40                          |
|                         | 40                          | 1.2          | MKP1847C640275Y*             | 103         | 40                          |
|                         | 45                          | 1.2          | MKP1847C645275Y5             | 126         | 30                          |
|                         | 50                          | 1.2          | MKP1847C650275Y5             | 116         | 30                          |



## PACKAGING INFORMATION

| U <sub>NAC</sub><br>(V) | CAP. <sup>(1)</sup><br>(μF) | Ø dt<br>(mm) | ORDERING CODE <sup>(2)</sup> | MASS<br>(g) | SPQ <sup>(3)</sup><br>(pcs) |
|-------------------------|-----------------------------|--------------|------------------------------|-------------|-----------------------------|
| 310                     | 1                           | 0.8          | MKP1847C510315K2             | 9           | 130                         |
|                         | 2                           | 0.8          | MKP1847C520315K2             | 13          | 100                         |
|                         | 3                           | 0.8          | MKP1847C530315K2             | 17          | 80                          |
|                         | 4                           | 0.8          | MKP1847C540315K2             | 23          | 65                          |
|                         | 5                           | 0.8          | MKP1847C550315K2             | 21          | 65                          |
|                         | 5                           | 1.0          | MKP1847C550315P2             | 33          | 105                         |
|                         | 6                           | 1.0          | MKP1847C560315P2             | 31          | 105                         |
|                         | 7                           | 1.0          | MKP1847C570315P2             | 30          | 105                         |
|                         | 8                           | 1.0          | MKP1847C580315P*             | 39          | 91                          |
|                         | 9                           | 1.0          | MKP1847C590315P*             | 37          | 91                          |
|                         | 10                          | 1.0          | MKP1847C610315P*             | 35          | 91                          |
|                         | 12                          | 1.0          | MKP1847C612315P*             | 48          | 77                          |
|                         | 15                          | 1.0          | MKP1847C615315P*             | 61          | 63                          |
|                         | 10                          | 1.2          | MKP1847C610315Y*             | 84          | 55                          |
|                         | 12                          | 1.2          | MKP1847C612315Y*             | 80          | 55                          |
|                         | 15                          | 1.2          | MKP1847C615315Y*             | 75          | 55                          |
|                         | 20                          | 1.2          | MKP1847C620315Y*             | 98          | 45                          |
|                         | 22                          | 1.2          | MKP1847C622315Y*             | 122         | 40                          |
|                         | 23                          | 1.2          | MKP1847C623315Y*             | 116         | 40                          |
|                         | 30                          | 1.2          | MKP1847C630315Y5             | 135         | 30                          |
|                         | 35                          | 1.2          | MKP1847C635315Y5             | 128         | 30                          |
| 350                     | 1                           | 0.8          | MKP1847C510355K2             | 9           | 130                         |
|                         | 2                           | 0.8          | MKP1847C520355K2             | 12          | 100                         |
|                         | 3                           | 0.8          | MKP1847C530355K2             | 16          | 80                          |
|                         | 4                           | 0.8          | MKP1847C540355K2             | 22          | 65                          |
|                         | 5                           | 1.0          | MKP1847C550355P2             | 32          | 105                         |
|                         | 6                           | 1.0          | MKP1847C560355P2             | 29          | 105                         |
|                         | 7                           | 1.0          | MKP1847C570355P*             | 38          | 91                          |
|                         | 8                           | 1.0          | MKP1847C580355P*             | 36          | 91                          |
|                         | 9                           | 1.0          | MKP1847C590355P*             | 49          | 77                          |
|                         | 10                          | 1.0          | MKP1847C610355P*             | 47          | 77                          |
|                         | 12                          | 1.0          | MKP1847C612355P*             | 63          | 63                          |
|                         | 10                          | 1.2          | MKP1847C610355Y*             | 80          | 55                          |
|                         | 12                          | 1.2          | MKP1847C612355Y*             | 76          | 55                          |
|                         | 15                          | 1.2          | MKP1847C615355Y*             | 71          | 55                          |
|                         | 20                          | 1.2          | MKP1847C620355Y*             | 93          | 45                          |
|                         | 22                          | 1.2          | MKP1847C622355Y*             | 115         | 40                          |
|                         | 23                          | 1.2          | MKP1847C623355Y*             | 107         | 40                          |
|                         | 30                          | 1.2          | MKP1847C630355Y5             | 126         | 30                          |

## Notes

- (1) Intermediate capacitance values available on request  
 (2) Change the "\*" symbol with special code for the terminals  
 (3) SPQ = Standard Packing Quantity



## CONSTRUCTION

Low inductive wound cell elements of metallized polypropylene film, potted with resin in a flame retardant case.

## SPECIFIC METHOD OF MOUNTING TO WITHSTAND VIBRATION AND SHOCK

The capacitor unit is designed for mounting on a printed circuit board.

In order to withstand vibration and shock tests, it must be insured that the stand-off pips are in good contact with the printed circuit board.

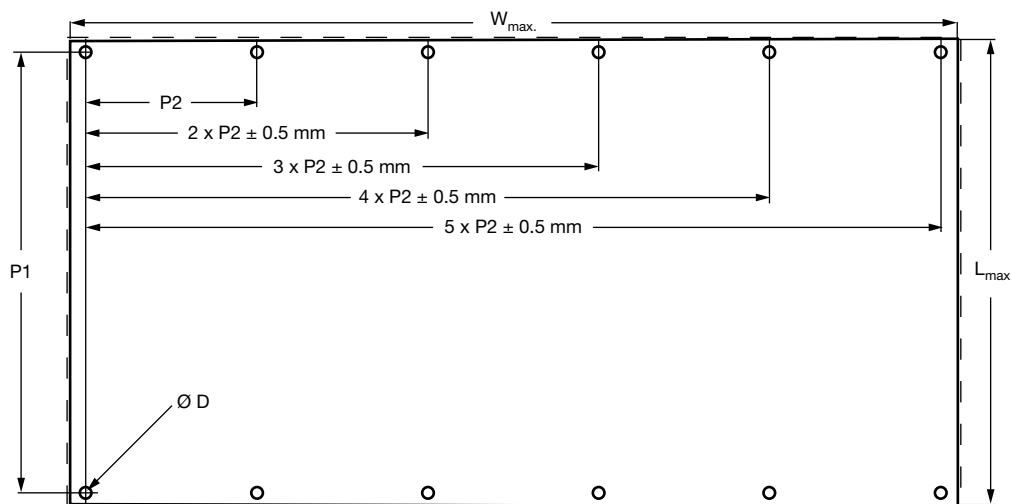
The capacitors shall be mechanically fixed by the leads and the body clamped.

## SPACE REQUIREMENTS ON PRINTED-CIRCUIT BOARD AND DIMENSIONS TOLERANCES

For the maximum product dimensions and maximum space requirements for length ( $l_{max.}$ ), width ( $w_{max.}$ ) following tolerances must be taken in account in the envelopment of the components as shown in the drawings below:

$$L_{max.} = l + \Delta l$$

$$W_{max.} = w + \Delta w$$



| P1 (mm) | $L_{max.}$ (mm) | $W_{max.}$ (mm) | $\varnothing D$ (mm) | $\Delta h$ (mm) |
|---------|-----------------|-----------------|----------------------|-----------------|
| 27.5    | $l + 2$         | $w + 1.6$       | 1.2                  | 0.2             |
| 37.5    | $l + 3$         | $w + 2.0$       | 1.5                  | 0.5             |
| 52.5    | $l + 4$         | $w + 2.4$       | 1.7                  | 0.5             |

For the maximum height  $h_{max.}$ , a  $\Delta h$  of 0.5 mm must be taken in account on the height dimension  $h$ .

For the minimum product dimensions for length ( $l_{min.}$ ), width ( $w_{min.}$ ), and height ( $h_{min.}$ ) following tolerances of the components are valid:

$$l_{min.} = l - \Delta l, w_{min.} = w - \Delta w \text{ and } h_{min.} = h - \Delta h$$

For products with pitch = 27.5 mm,  $\Delta l = 1.5$  mm, and  $\Delta w = \Delta h = 0.5$  mm

For products with pitch = 37.5 mm,  $\Delta l = 1.5$  mm, and  $\Delta w = \Delta h = 1.0$  mm

For products with pitch = 52.5 mm,  $\Delta l = 1.5$  mm, and  $\Delta w = \Delta h = 1.0$  mm

## SOLDERING CONDITIONS

For general soldering conditions and wave soldering profile we refer to the document "Characteristics and Definitions Used for Film Capacitors": [www.vishay.com/doc?26033](http://www.vishay.com/doc?26033).

## STORAGE TEMPERATURE

$T_{stg} = -23$  °C to  $+35$  °C with relative humidity of maximum 75 % without condensation

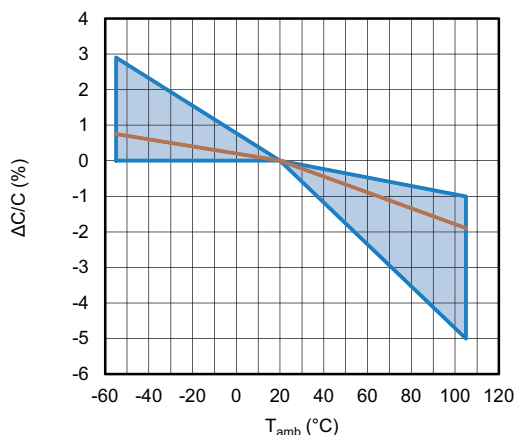
## RATINGS AND CHARACTERISTICS REFERENCE CONDITIONS

Unless otherwise specified, all electrical values apply to an ambient temperature of  $23$  °C  $\pm 1$  °C, an atmospheric pressure of 86 kPa to 106 kPa and a relative humidity of  $50$  %  $\pm 2$  %.

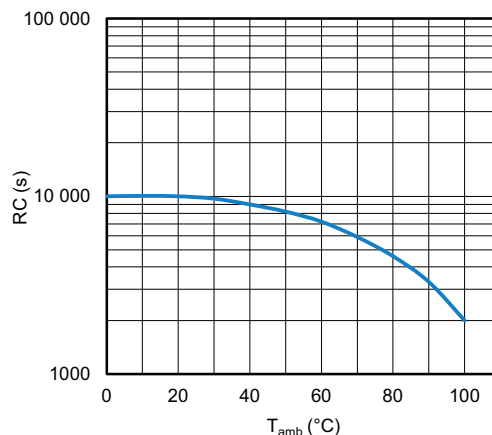
For reference testing, a conditioning period shall be applied over  $96$  h  $\pm 4$  h by heating the products in a circulating air oven at the rated temperature and a relative humidity of  $50$  %  $\pm 2$  %.



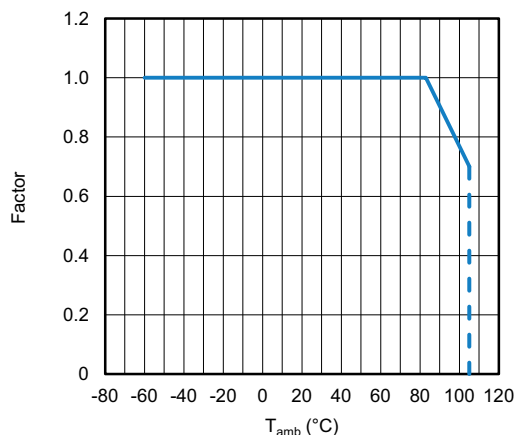
## CHARACTERISTICS



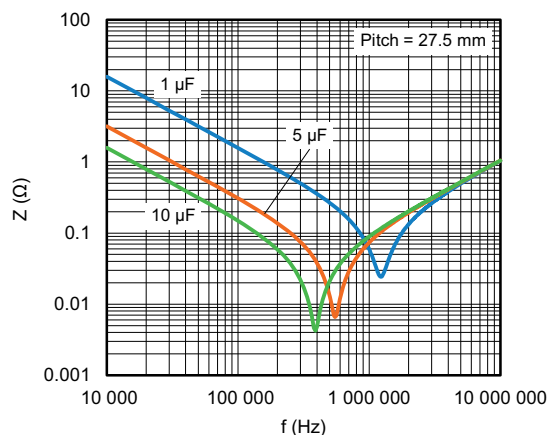
Capacitance as a function of ambient temperature (typical)



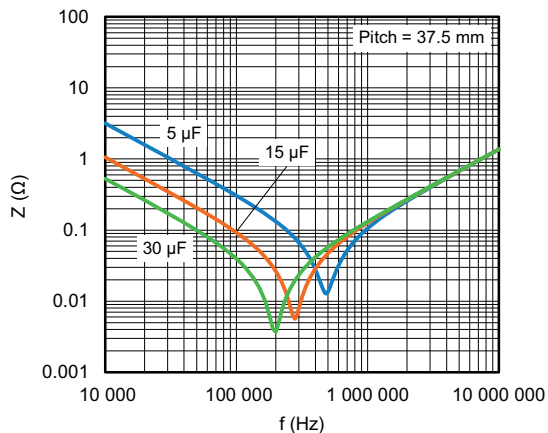
Insulation resistance as a function of ambient temperature (typical)



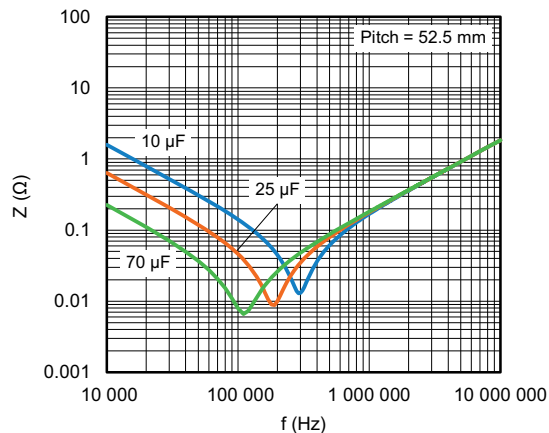
RMS voltage in function of temperature



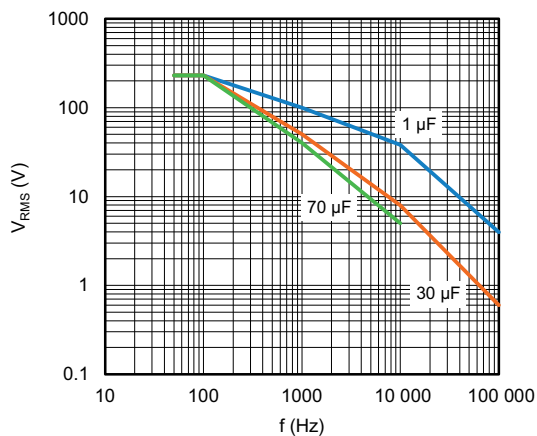
Impedance vs. Frequency (typical)



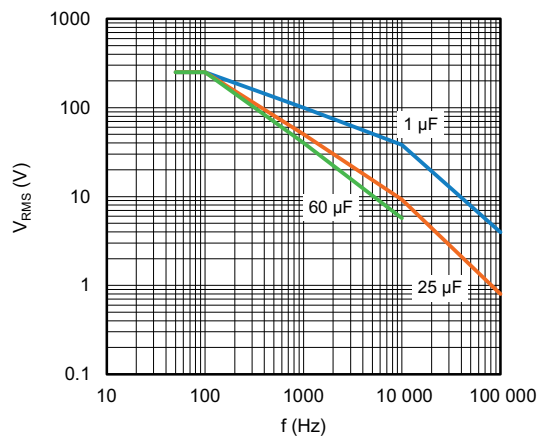
Impedance vs. Frequency (typical)



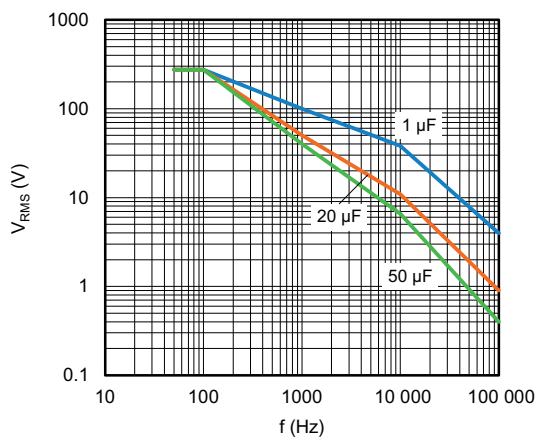
Impedance vs. Frequency (typical)



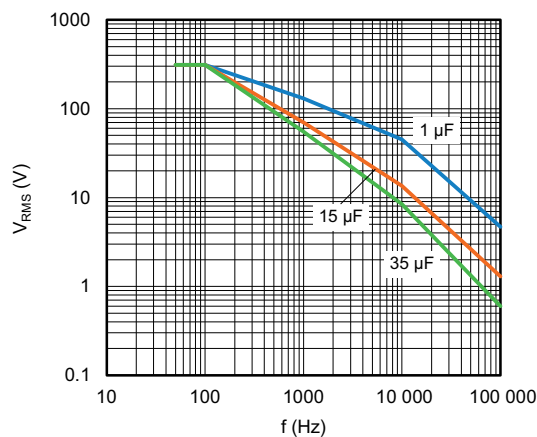
Maximum RMS voltage as function of frequency  
 $T_{amb} \leq 85^\circ\text{C}$ ;  $U_r = 230\text{ V}_{AC}$



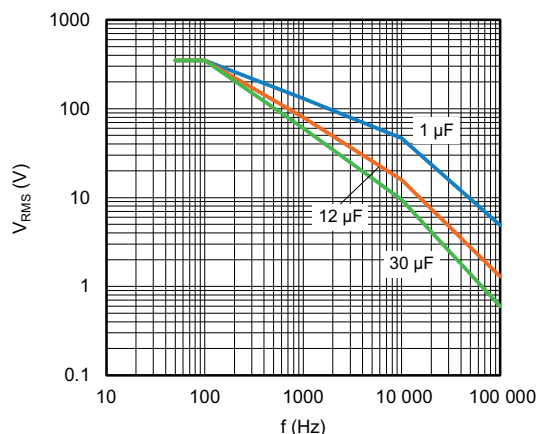
Maximum RMS voltage as function of frequency  
 $T_{amb} \leq 85^\circ\text{C}$ ;  $U_r = 250\text{ V}_{AC}$



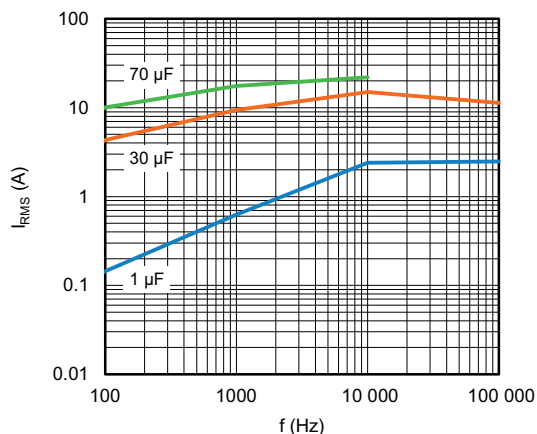
Maximum RMS voltage as function of frequency  
 $T_{amb} \leq 85^\circ\text{C}$ ;  $U_r = 275\text{ V}_{AC}$



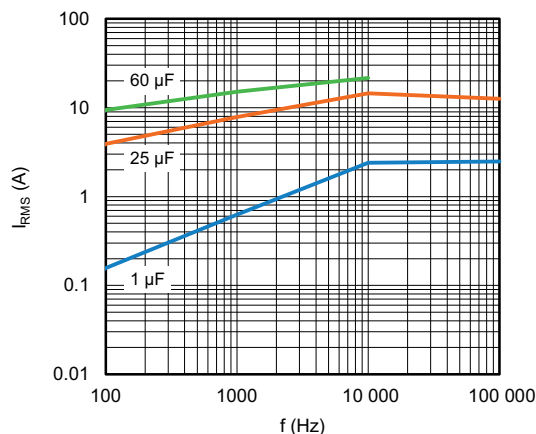
Maximum RMS voltage as function of frequency  
 $T_{amb} \leq 85^\circ\text{C}$ ;  $U_r = 310\text{ V}_{AC}$



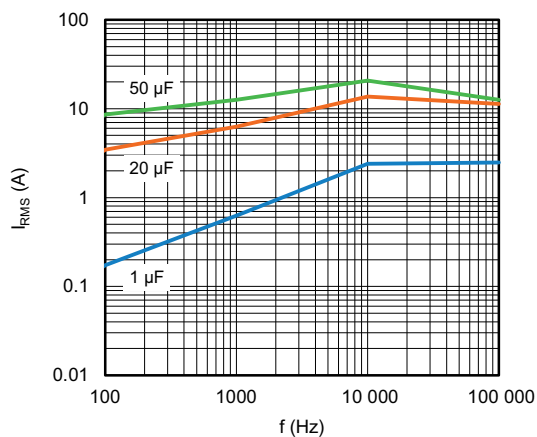
Maximum RMS current as function of frequency  
 $T_{amb} \leq 85^\circ\text{C}$ ;  $U_r = 350\text{ V}_{AC}$



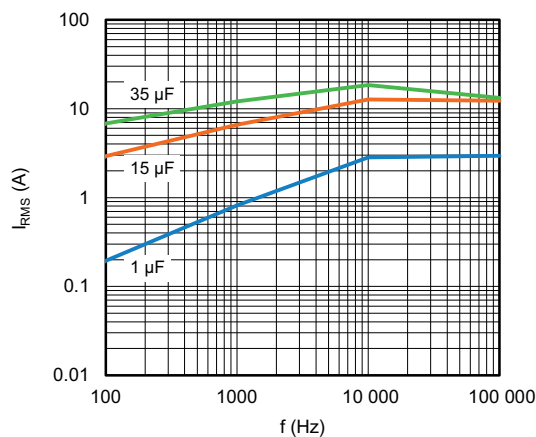
Maximum RMS current as function of frequency  
 $T_{amb} \leq 85^{\circ}\text{C}$ ;  $U_r = 230\text{ V}_{AC}$



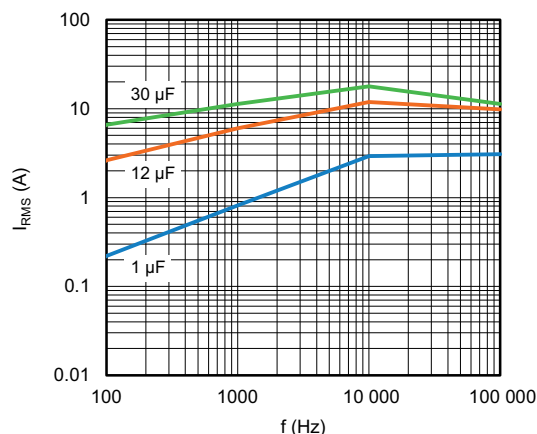
Maximum RMS current as function of frequency  
 $T_{amb} \leq 85^{\circ}\text{C}$ ;  $U_r = 250\text{ V}_{AC}$



Maximum RMS current as function of frequency  
 $T_{amb} \leq 85^{\circ}\text{C}$ ;  $U_r = 275\text{ V}_{AC}$



Maximum RMS current as function of frequency  
 $T_{amb} \leq 85^{\circ}\text{C}$ ;  $U_r = 310\text{ V}_{AC}$



Maximum RMS current as function of frequency  
 $T_{amb} \leq 85^{\circ}\text{C}$ ;  $U_r = 350\text{ V}_{AC}$

| HEAT CONDUCTIVITY |      |      |              |
|-------------------|------|------|--------------|
| DIMENSION (mm)    |      |      | G<br>(mW/°C) |
| w                 | h    | l    |              |
| 9.0               | 19.0 | 32.0 | 16           |
| 11.0              | 21.0 | 32.0 | 19           |
| 13.0              | 23.0 | 32.0 | 22           |
| 15.0              | 25.0 | 32.0 | 25           |
| 18.0              | 28.0 | 32.0 | 30           |
| 21.0              | 31.0 | 32.0 | 35           |
| 20.0              | 35.0 | 32.0 | 37           |
| 18.5              | 35.5 | 43.0 | 45           |
| 21.5              | 38.5 | 43.0 | 52           |
| 24.0              | 44.0 | 42.0 | 59           |
| 30.0              | 45.0 | 42.0 | 68           |
| 25.0              | 45.0 | 57.5 | 78           |
| 30.0              | 45.0 | 57.5 | 85           |
| 35.0              | 50.0 | 57.5 | 100          |
| 45.0              | 45.0 | 57.5 | 109          |

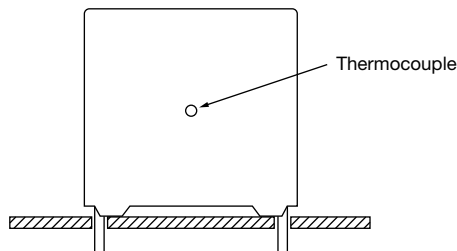
### POWER DISSIPATION AND MAXIMUM COMPONENT TEMPERATURE RISE

The power dissipation must be limited in order not to exceed the maximum allowed component temperature rise as a function of the free air ambient temperature.

The component temperature rise ( $\Delta T$ ) can be measured or calculated by  $\Delta T = P/G$ :

- $\Delta T$  = component temperature rise (°C) with a maximum of 15 °C
- P = power dissipation of the component (mW)
- G = heat conductivity of the component (mW/°C)

### MEASURING THE COMPONENT TEMPERATURE



The case temperature is measured in unloaded ( $T_{amb}$ ) and loaded condition ( $T_C$ ).

The temperature rise is given by  $\Delta T = T_C - T_{amb}$ .

To avoid thermal radiation or convection, the capacitor must be tested in a closed area from air circulation.

### APPLICATION NOTES AND LIMITING CONDITIONS

- These capacitors are not suitable for mains applications as across-the-line capacitors without additional protection
- These mains applications are strictly regulated in safety standards and therefore electromagnetic interference suppression capacitors conforming the standards must be used
- To ensure withstanding high humidity requirements in the application the epoxy adhesion at the leads shall not be damaged. Therefore the leads may not be damaged or not be bent before soldering
- To choose a component family please refer to Vishay application note: [www.vishay.com/doc?28245](http://www.vishay.com/doc?28245) and note additionally following conditions:
  - The peak voltage ( $U_{p+}$ ) shall not be greater than  $\sqrt{2} \times U_{RMS}$
  - The peak-to-peak ripple voltage ( $U_{pp}$ ) shall not be greater than  $2 \times \sqrt{2} \times U_{RMS}$
  - The voltage pulse slope ( $dU/dt$ ) shall not exceed the rated pulse slope at the DC voltage rating

If the pulse voltage is lower than the rated DC voltage, the rated voltage pulse slope may be multiplied by  $U_{NDC}$  and divided by the applied voltage.

$$2 \times \int_0^T \left( \frac{dU}{dt} \right)^2 \times dt < U_{NDC} \times \left( \frac{dU}{dt} \right)_{rated}$$

T is the pulse duration

- The maximum component surface temperature must be lower than 105 °C and maximum temperature rise between case and free air ambient shall be lower than 15 °C



| INSPECTION REQUIREMENTS                                    |                                                                                                                                                                          |                                                                                                                |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| SUB-CLAUSE NUMBER AND TEST                                 | CONDITIONS                                                                                                                                                               | PERFORMANCE REQUIREMENTS                                                                                       |
| <b>ROUTINE TEST - FINAL INSPECTION</b>                     |                                                                                                                                                                          |                                                                                                                |
| 5.14.2-1<br>External inspection, visual examination        |                                                                                                                                                                          | Legible marking as specified                                                                                   |
| 5.14.2-2<br>Dimensions                                     |                                                                                                                                                                          | See specification drawing                                                                                      |
| 5.3-1<br>Capacitance                                       | 1 kHz at room temperature                                                                                                                                                | See specific reference data                                                                                    |
| 5.3-2<br>tan $\delta$                                      | 10 kHz at room temperature                                                                                                                                               | See specific reference data                                                                                    |
| 5.5.1-2<br>DC voltage test between terminals               | 1.5 x $U_{NDC}$ at $T_{amb}$<br>Duration: 2 s                                                                                                                            | No visible damage or puncture<br>No flashover                                                                  |
| 5.7<br>Insulation resistance                               | Measuring voltage 500 V at room temperature<br>Duration: 1 min                                                                                                           | See specific reference data                                                                                    |
| <b>TYPE TESTS</b>                                          |                                                                                                                                                                          |                                                                                                                |
| 5.14.2<br>External inspection                              | Check for finish, marking, and overall dimensions                                                                                                                        | Legible marking and finish as specified<br>Dimensions: see specification drawing                               |
| 5.14.0<br>Initial measurements                             | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz                                                                                                                           |                                                                                                                |
| 5.14.1-1/4<br>Robustness of terminations<br>IEC 60068-2-21 | Tensile $U_{a1}$                                                                                                                                                         |                                                                                                                |
|                                                            | Wire diameter                                                                                                                                                            |                                                                                                                |
|                                                            | Section                                                                                                                                                                  |                                                                                                                |
|                                                            | Load                                                                                                                                                                     |                                                                                                                |
|                                                            | $d \leq 0.80$ mm                                                                                                                                                         |                                                                                                                |
|                                                            | $S \leq 0.5$ mm <sup>2</sup>                                                                                                                                             |                                                                                                                |
|                                                            | 10 N<br>( $\pm 10$ %)                                                                                                                                                    |                                                                                                                |
|                                                            | $d \leq 1.23$ mm                                                                                                                                                         |                                                                                                                |
|                                                            | $S \leq 1.2$ mm <sup>2</sup>                                                                                                                                             |                                                                                                                |
|                                                            | 20 N<br>( $\pm 10$ %)                                                                                                                                                    |                                                                                                                |
|                                                            | Duration: 10 s $\pm$ 1 s                                                                                                                                                 |                                                                                                                |
|                                                            | Bending, $U_b$ method 1                                                                                                                                                  |                                                                                                                |
|                                                            | Wire diameter                                                                                                                                                            |                                                                                                                |
|                                                            | Section modulus                                                                                                                                                          |                                                                                                                |
|                                                            | Load                                                                                                                                                                     |                                                                                                                |
|                                                            | $d \leq 0.80$ mm                                                                                                                                                         |                                                                                                                |
|                                                            | $Z_x \leq 0.050$ mm <sup>3</sup>                                                                                                                                         |                                                                                                                |
|                                                            | 5 N<br>( $\pm 10$ %)                                                                                                                                                     |                                                                                                                |
|                                                            | $d \leq 1.23$ mm                                                                                                                                                         |                                                                                                                |
|                                                            | $Z_x \leq 0.019$ mm <sup>3</sup>                                                                                                                                         |                                                                                                                |
|                                                            | 10 N<br>( $\pm 10$ %)                                                                                                                                                    |                                                                                                                |
|                                                            | 4 x 90°, duration: 2 s to 3 s/bend                                                                                                                                       |                                                                                                                |
| 5.14.1-6<br>Resistance to soldering heat<br>IEC 60068-2-20 | No pre-drying, method 1A<br>Solder bath: 280 °C $\pm$ 5 °C<br>Duration: 10 s $\pm$ 1 s                                                                                   |                                                                                                                |
| 5.14.4<br>Final measurements                               | Capacitance<br>tan $\delta$                                                                                                                                              | $ \Delta C/C  \leq 0.5$ %<br>Increase of tan $\delta \leq 0.0050$<br>compared to the values measured in 5.14.0 |
| 5.14.0<br>Initial measurements                             | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz                                                                                                                           | No visible damage                                                                                              |
| 5.14.3-1<br>Vibration<br>IEC 60068-2-6                     | 10 Hz to 55 Hz; $a = \pm 0.35$ mm or<br>acceleration 98 m/s <sup>2</sup><br>Test duration: 10 frequency cycles<br>(3 axes offset from each other by 90°)<br>1 octave/min |                                                                                                                |
| 5.14.3-2<br>Shock or impact<br>IEC 60068-2-6               | Visual examination                                                                                                                                                       |                                                                                                                |
|                                                            | Pulse shape: half sine<br>Acceleration: 490 m/s <sup>2</sup><br>Duration of pulse: 11 ms                                                                                 |                                                                                                                |
|                                                            | Visual examination                                                                                                                                                       |                                                                                                                |
|                                                            | Capacitance<br>tan $\delta$                                                                                                                                              |                                                                                                                |
|                                                            | Visual examination                                                                                                                                                       |                                                                                                                |
|                                                            | Capacitance<br>tan $\delta$                                                                                                                                              |                                                                                                                |
|                                                            | Visual examination                                                                                                                                                       |                                                                                                                |
|                                                            | Capacitance<br>tan $\delta$                                                                                                                                              |                                                                                                                |
|                                                            | Visual examination                                                                                                                                                       |                                                                                                                |
|                                                            | Capacitance<br>tan $\delta$                                                                                                                                              |                                                                                                                |
| 5.14.4<br>Final measurements                               | Capacitance<br>tan $\delta$                                                                                                                                              | $ \Delta C/C  \leq 0.5$ %<br>Increase of tan $\delta \leq 0.0050$<br>compared to the values measured in 5.14.0 |



| INSPECTION REQUIREMENTS                                         |                                                                                                                                                                                       |                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SUB-CLAUSE NUMBER AND TEST                                      | CONDITIONS                                                                                                                                                                            | PERFORMANCE REQUIREMENTS                                                                                                                                                                                                                                                 |
| 5.5.3-1<br>Initial measurements                                 | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz<br>Insulation resistance                                                                                                               | $ \Delta C/C  \leq 0.5 \%$<br>Increase of tan $\delta \leq 0.0050$<br>Insulation resistance $\geq 50 \%$ of specified values                                                                                                                                             |
| 5.5.3-2<br>DC voltage test between terminals                    | 1.5 x $U_{NDC}$ at $T_{amb}$<br>Duration: 10 s                                                                                                                                        |                                                                                                                                                                                                                                                                          |
| 5.5.3-3<br>Final measurements                                   | Capacitance<br>tan $\delta$<br>Insulation resistance                                                                                                                                  |                                                                                                                                                                                                                                                                          |
| 5.9-1<br>Initial measurements                                   | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz                                                                                                                                        | $ \Delta C/C  \leq 1.0 \%$<br>tan $\delta \leq 1.2 \times$ initial tan $\delta + 0.0001$<br>compared to the values measured in 5.9-1                                                                                                                                     |
| 5.9-2<br>Surge discharge test                                   | 1.1 x $U_{NDC}$<br>Number of discharges: 5<br>Time lapse: every 2 min (10 min total)                                                                                                  |                                                                                                                                                                                                                                                                          |
| 5.9-2<br>DC voltage test between terminals                      | Within 5 min after the surge discharge test<br>Duration: 10 s<br>1.5 x $U_{NDC}$ at $T_{amb}$                                                                                         |                                                                                                                                                                                                                                                                          |
| 5.9-3<br>Final measurements                                     | Capacitance<br>tan $\delta$                                                                                                                                                           |                                                                                                                                                                                                                                                                          |
| 5.11-1<br>Initial measurements                                  | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz                                                                                                                                        | Number of clearings $\leq 5$<br>Clearing = voltage drop of 5 %<br><br>$ \Delta C/C  \leq 0.5 \%$<br>tan $\delta \leq 1.2 \times$ initial tan $\delta + 0.0001$<br>compared to the values measured in 5.11-1                                                              |
| 5.11-2<br>Self healing test                                     | 1.5 x $U_{NDC}$ , duration: 10 s<br>Increase the voltage at 100 V/s till<br>5 clearings occur or until voltage reach<br>max. of 2.5 x $U_{NDC}$ for a duration of 10 s                |                                                                                                                                                                                                                                                                          |
| 5.11-3<br>Final measurements                                    | Capacitance<br>tan $\delta$                                                                                                                                                           |                                                                                                                                                                                                                                                                          |
| 5.13-0<br>Initial measurements                                  | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz                                                                                                                                        | No puncturing or flashover<br>Self healing punctures are permitted<br><br>$ \Delta C/C  \leq 2.0 \%$<br>Increase of tan $\delta \leq 0.0150$<br>compared to the values measured in 5.13-0                                                                                |
| 5.13-1<br>Change of temperature according to<br>IEC 60068-2-14  | Test Nb<br>$T_{max.} = +85 \text{ }^{\circ}\text{C}$<br>$T_{min.} = -40 \text{ }^{\circ}\text{C}$<br>Transition time: 1 h, equivalent to 1 $^{\circ}\text{C}/\text{min.}$<br>5 cycles |                                                                                                                                                                                                                                                                          |
| 5.13.2<br>Damp heat steady state according to<br>IEC 60068-2-78 | Test Ca<br>$T = 40 \text{ }^{\circ}\text{C} \pm 2 \text{ }^{\circ}\text{C}$<br>$RH = 93 \% \pm 3 \%$<br>Duration: 56 days                                                             |                                                                                                                                                                                                                                                                          |
| 5.5.3-2<br>DC voltage test between terminals                    | 1.5 x $U_{NDC}$ at ambient temperature<br>Duration: 10 s                                                                                                                              |                                                                                                                                                                                                                                                                          |
| 5.13-3<br>Final measurements                                    | Visual examination<br><br>Capacitance<br>tan $\delta$                                                                                                                                 |                                                                                                                                                                                                                                                                          |
| 5.13A-0<br>Initial measurements                                 | Capacitance at 1 kHz<br>tan $\delta$ at 1 kHz                                                                                                                                         | $ \Delta C/C  < 10 \%$<br>Increase of tan $\delta$ :<br>$\leq 0.008$ for: $C \leq 10 \text{ } \mu\text{F}$ or<br>$\leq 0.005$ for: $C > 10 \text{ } \mu\text{F}$<br>Compared to the values measured in 5.13A-0<br>Insulation resistance $\geq 50 \%$ of specified values |
| 5.13A.2<br>Damp heat steady state with load                     | $T = 40 \text{ }^{\circ}\text{C}$<br>$RH = 93 \%$ at $U_N$<br>Duration: 56 days                                                                                                       |                                                                                                                                                                                                                                                                          |
| 5.13.3<br>Final measurements                                    | Capacitance at 1 kHz<br>tan $\delta$<br><br>Insulation resistance                                                                                                                     |                                                                                                                                                                                                                                                                          |



| INSPECTION REQUIREMENTS                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                 |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| SUB-CLAUSE NUMBER AND TEST                                   | CONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | PERFORMANCE REQUIREMENTS                                                                                        |
| 5.10-0<br>Initial measurements                               | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |
| 5.10-1<br>Thermal stability test under overload conditions   | Natural cooling $T_{amb} \pm 5^\circ\text{C}$<br>$1.21 \times P_{max.} = 1.21 \times (I_{RMS}^2/w \times C) \times \tan \delta(f)$<br>with $w = 2 \times \pi \times f$<br>For $I_{RMS}$ see specific reference data<br>$f = 10\text{ kHz}$<br>Duration: 48 h                                                                                                                                                                                                                                                                                   |                                                                                                                 |
| 5.10-2<br>Final measurements                                 | Measure the temperature every 1.5 h during the last 6 h<br><br>Capacitance<br>tan $\delta$ at 10 kHz                                                                                                                                                                                                                                                                                                                                                                                                                                           | Temperature rise $< 1^\circ\text{C}$<br><br>$ \Delta C/C  \leq 2\%$<br>Increase of $\tan \delta \leq 0.0150$    |
| 5.12<br>Resonance frequency measurement                      | Impedance analyzer at $T_{amb}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | $> 0.9$ times the value as specified in typical curve "Resonant frequency" of this specification                |
| 5.15-0<br>Initial measurements                               | Capacitance at 1 kHz<br>tan $\delta$ at 10 kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                 |
| 5.15-1<br>Endurance test between terminals                   | Sequence:<br>$1.25 \times (U_{RMS} \text{ at } 85^\circ\text{C}) \text{ at } T_{max.} = 85^\circ\text{C}$<br>$1.25 \times (U_{RMS} \text{ at } 105^\circ\text{C}) \text{ at } T_{max.} = 105^\circ\text{C}$<br>Duration: 500 h<br><br>$1000 \times \text{discharge at } 1.4 \times \hat{I}$<br>(maximum peak current)<br><br>$1.25 \times (U_{RMS} \text{ at } 85^\circ\text{C}) \text{ at } T_{max.} = 85^\circ\text{C}$<br>$1.25 \times (U_{RMS} \text{ at } 105^\circ\text{C}) \text{ at } T_{max.} = 105^\circ\text{C}$<br>Duration: 500 h |                                                                                                                 |
| 5.15-2<br>Final measurement                                  | Capacitance<br>tan $\delta$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | $ \Delta C/C  \leq 3.0\%$<br>Increase of $\tan \delta \leq 0.0150$<br>compared to the values measured in 5.15-0 |
| 5.16.3-0<br>Initial measurements                             | Capacitance at 1 kHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                 |
| 5.16.3-1<br>Destruction test sequence for non-segmented film | The capacitors must be put in an oven at $T_{max.} = 85^\circ\text{C}$ product enveloped with cheese cloth                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                 |
| High DC voltage test                                         | $2 \times U_{NDC}$ or DC voltage until repetitive product healings occur<br>Duration: 15 min                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Audible healings or check healings with oscilloscope                                                            |
| High AC voltage test                                         | $AC_{RMS} \text{ voltage} = 1 \times U_{NAC}$ , with minimum of $250 V_{AC}$<br>Duration: 15 min<br>Repeat destruction sequence 3 x                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                 |
| 5.16.3-2<br>Final measurements                               | Visual examination                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No puncturing, flashover or burning of the cheese cloth.<br>Self-healing punctures are permitted                |

**Note**

- Sub-clause numbers of tests and performance requirements refer to the "Sectional Specification, Publication IEC 61071"





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