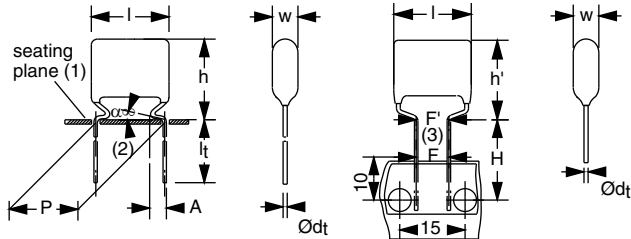
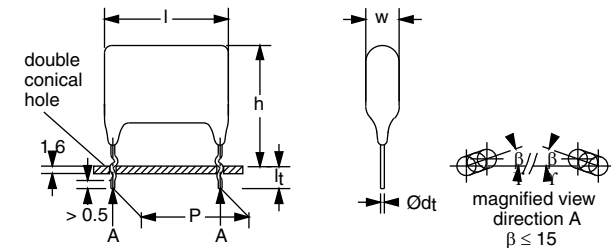


## AC and Pulse Polypropylene Film Capacitors MKP Radial Epoxy Lacquered Type



Dimensions in mm  
 Hole  $\varnothing$  1.0 for  $d_t = 0.6$  mm  
 Hole  $\varnothing$  1.3 for  $d_t = 0.8$  mm  
 $0 \leq \alpha < 50^\circ$   
 $|F - F'| < 0.3$  mm  
 $F = 7.5$  mm + 0.6 mm / - 0.1 mm  
 $A = 2.0$  mm + 1.0 mm / - 0.5 mm (pitch = 10.0 mm)  
 $A = 2.5$  mm + 1.4 mm / - 0.5 mm (pitch = 15.0 mm; 22.5 mm and 27.5 mm)



Dimensions in mm

### APPLICATIONS

Low losses due to low contact resistance and low loss dielectric result in applications where high currents at high frequency occur or high stability is preferred. Their small dimensions make them suitable for circuits with high packaging density.

### MARKING

Manufacturer's emblem; C-value; tolerance; rated voltage; manufacturer's type designation; code for dielectric material

### DIELECTRIC

Polypropylene film

### ELECTRODES

Metallized

### COATING

Flame retardant epoxy material (UL-class 94 V-0)

### LEADS

Tinned wire

### FEATURES

- 7.5 mm bent back pitch
- 10 mm to 27.5 mm lead pitch
- Low contact resistance
- Low loss dielectric
- Supplied loose in box (including lock lead versions) and taped on reel
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

### CONSTRUCTION

Wound mono construction

### CAPACITANCE RANGE (E24 SERIES)

0.01  $\mu$ F to 3.9  $\mu$ F

### CAPACITANCE TOLERANCE

$\pm 5\%$

### RATED (DC) VOLTAGE

160 V; 250 V; 400 V; 630 V

### RATED (AC) VOLTAGE

100 V; 160 V; 200 V

### RATED PEAK-TO-PEAK VOLTAGE

280 V; 450 V; 560 V

### CLIMATIC CATEGORY

55/105/56

### RATED TEMPERATURE

85 °C

### MAXIMUM APPLICATION TEMPERATURE

105 °C

### REFERENCE SPECIFICATIONS

IEC 60384-17

### PERFORMANCE GRADE

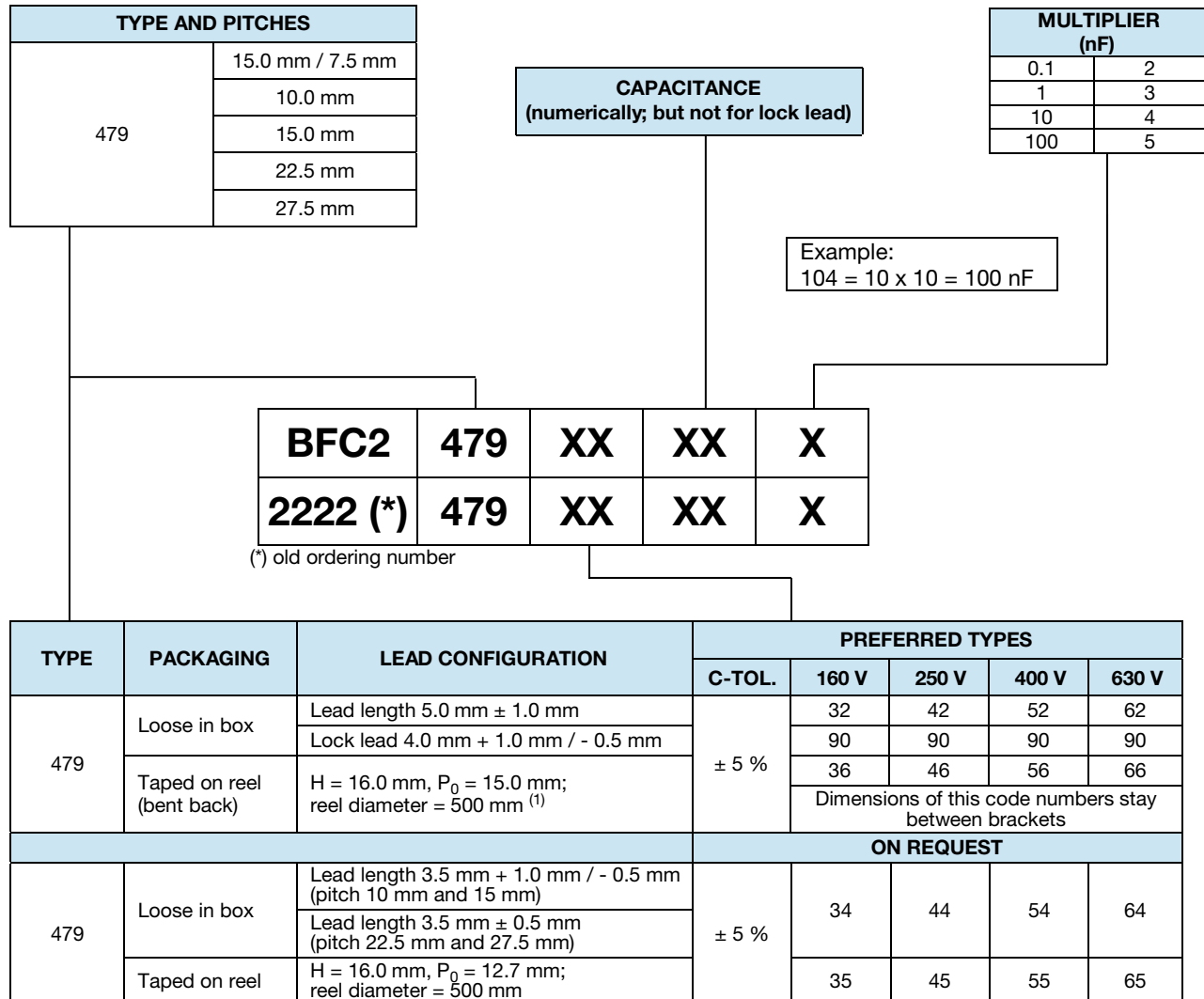
Grade 1 (long life)

### STABILITY GRADE

Grade 2

### DETAIL SPECIFICATION

For more detailed data and test requirements contact: [dc-film@vishay.com](mailto:dc-film@vishay.com)

**COMPOSITION OF CATALOG NUMBER**

**Notes**

- <sup>(1)</sup> Small reel diameter = 356 mm is available on request
- For detailed tape specifications refer to packaging information [www.vishay.com/doc?28139](http://www.vishay.com/doc?28139)



**SPECIFIC REFERENCE DATA (160 V<sub>DC</sub>)**

| DESCRIPTION   | VALUE                   |                          |
|---|-------------------------|--------------------------|
|   | at 10 kHz               | at 100 kHz               |
| Tangent of loss angle:  |                         |                          |
| C = 0.075 µF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 25 x 10 <sup>-4</sup>  |
| 0.075 µF < C ≤ 0.11 µF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 30 x 10 <sup>-4</sup>  |
| 0.11 µF < C ≤ 0.18 µF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 35 x 10 <sup>-4</sup>  |
| 0.18 µF < C ≤ 0.3 µF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 40 x 10 <sup>-4</sup>  |
| 0.3 µF < C ≤ 0.47 µF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 60 x 10 <sup>-4</sup>  |
| 0.47 µF < C ≤ 0.82 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 90 x 10 <sup>-4</sup>  |
| 0.82 µF < C ≤ 1.1 µF  | ≤ 15 x 10 <sup>-4</sup> | ≤ 100 x 10 <sup>-4</sup> |
| 1.1 µF < C ≤ 1.2 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 120 x 10 <sup>-4</sup> |
| 1.2 µF < C ≤ 1.3 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 125 x 10 <sup>-4</sup> |
| 1.3 µF < C ≤ 1.8 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 135 x 10 <sup>-4</sup> |
| 1.8 µF < C ≤ 2.4 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 145 x 10 <sup>-4</sup> |
| 2.4 µF < C ≤ 3.0 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 155 x 10 <sup>-4</sup> |
| 3.0 µF < C ≤ 3.3 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 165 x 10 <sup>-4</sup> |
| 3.3 µF < C ≤ 3.6 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 175 x 10 <sup>-4</sup> |
| 3.6 µF < C ≤ 3.9 µF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 185 x 10 <sup>-4</sup> |
| Rated voltage pulse slope (dU/dt) <sub>R</sub> at 160 V <sub>DC</sub> :             |                         |                          |
| P = 10 mm   | 60 V/µs                 |                          |
| P = 15 mm   | 50 V/µs                 |                          |
| P = 22.5 mm   | 25 V/µs                 |                          |
| P = 27.5 mm   | 15 V/µs                 |                          |
| R between leads, for C ≤ 1.0 µF at 100 V; 1 min                                     | > 100 000 MΩ            |                          |
| RC between leads, for C > 1 µF at 100 V; 1 min                                      | > 100 000 s             |                          |
| R between leads and case; 100 V; 1 min  | > 100 000 MΩ            |                          |
| Ionization (AC) voltage (typical value) at 50 pC peak discharge                     | > 220 V                 |                          |
| Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s <sup>(1)</sup> | 256 V; 1 min            |                          |
| Withstanding (DC) voltage between leads and case                                    | 2840 V; 1 min           |                          |

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

**U<sub>RDC</sub> = 160 V; U<sub>RAC</sub> = 100 V; U<sub>p-p</sub> = 280 V (standard); C-tol. = ± 5 %**

| C<br>(µF)  | DIMENSIONS<br>w <sub>max.</sub> x h (h') <sub>max.</sub> x l <sub>max.</sub><br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |           |                          |     |                |
|--|--|-------------|---|-----------|--------------------------|-----|----------------|
|  |  |             | LOOSE IN BOX                              |           | REEL                     |     |                |
|  |  |             | l <sub>t</sub> = 5.0 mm ± 1.0 mm          | ALL LEADS | PITCH 7.5 mm (BENT BACK) |     | ORIGINAL PITCH |
|  |  |             |   |           | SPQ                      | SPQ |                |
| Pitch = 10.0 mm ± 0.4 mm; d <sub>t</sub> = 0.60 mm ± 0.06 mm |  |             | Pitch = 7.5 mm (bent back)                |           | Pitch = 10.0 mm          |     |                |
| 0.075  | 6.0 x 15.0 x 12.5  | 0.9         | 32753                                     | 1000      |                          |     | 1000           |
| 0.082  |  |             | 32823                                     |           |                          |     |                |
| 0.091  |  |             | 32913                                     |           |                          |     |                |
| 0.10   |  |             | 32104                                     |           |                          |     |                |
| 0.11   |  |             | 32114                                     |           |                          |     |                |
| 0.12   |  |             | 32124                                     |           |                          |     |                |
| 0.13   |  |             | 32134                                     |           |                          |     |                |
| 0.15   | 6.5 x 15.5 x 12.5  | 1.0         | 32154                                     | 1000      |                          |     | 900            |
| 0.16   |  |             | 32164                                     |           |                          |     |                |



| C<br>( $\mu$ F)  | DIMENSIONS<br>$w_{max.} \times h (h')_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |           |                                   |     |                        |
|--|---|-------------|---|-----------|-----------------------------------|-----|------------------------|
|  |   |             | LOOSE IN BOX                              |           | REEL                              |     |                        |
|  |   |             | $l_t = 5.0 \text{ mm} \pm 1.0 \text{ mm}$ | ALL LEADS | PITCH 7.5 mm (BENT BACK)          |     | ORIGINAL PITCH         |
|  |   |             |   | SPQ       |                                   | SPQ | SPQ                    |
| <b>Pitch = 15.0 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 15.0 mm</b> |
| 0.18   | 6.0 x 15.0 (16.5) x 18.5  | 1.2         | 32184                                     | 2000      | 36184                             | 800 | 1000                   |
| 0.20   | 6.5 x 15.5 (17.0) x 18.5  | 1.3         | 32204                                     | 1500      | 36204                             | 750 | 900                    |
| 0.22   |   |             | 32224                                     |           | 36224                             |     |                        |
| 0.24   |   |             | 32244                                     |           | 36244                             |     |                        |
| 0.27   | 7.0 x 16.0 (17.5) x 18.5  | 1.4         | 32274                                     | 1250      | 36274                             | 700 | 800                    |
| 0.30   |   |             | 32304                                     |           | 36304                             |     |                        |
| 0.33   |   |             | 32334                                     |           | 36334                             |     |                        |
| 0.36   |   |             | 32364                                     |           | 36364                             |     |                        |
| 0.39   |   |             | 32394                                     |           | 36394                             |     |                        |
| 0.43   | 7.5 x 16.5 (18.0) x 18.5  | 1.5         | 32434                                     | 1250      | 36434                             | 650 | 800                    |
| 0.47   |   |             | 32474                                     |           | 36474                             |     |                        |
| 0.51   | 8.0 x 17.0 (18.5) x 18.5  | 1.6         | 32514                                     | 1250      | 36514                             | 600 | 700                    |
| 0.56   |   |             | 32564                                     |           | 36564                             |     |                        |
| 0.62   | 8.5 x 17.5 (19.0) x 18.5  | 1.7         | 32624                                     | 1000      | 36624                             | 550 | 700                    |
| 0.68   | 9.0 x 18.0 (19.5) x 18.5  | 1.8         | 32684                                     | 1000      | 36684                             | 550 | 600                    |
| 0.75   | 9.5 x 18.5 (20.0) x 18.5  | 1.9         | 32754                                     | 900       | 36754                             | 500 | 600                    |
| <b>Pitch = 22.5 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 22.5 mm</b> |
| 0.82   | 7.0 x 20.0 x 26.0   | 1.8         | 32824                                     | 650       |                                   |     | 550                    |
| 0.91   | 7.5 x 20.5 x 26.0   | 1.9         | 32914                                     | 600       |                                   |     | 500                    |
| 1.0  |   |             | 32105                                     |           |                                   |     | 500                    |
| 1.1  | 8.0 x 21.0 x 26.0   | 2.0         | 32115                                     | 550       |                                   |     | 500                    |
| 1.2  | 8.5 x 21.5 x 26.0   | 2.1         | 32125                                     | 500       |                                   |     | 450                    |
| 1.3  |   |             | 32135                                     |           |                                   |     | 450                    |
| 1.5  | 9.5 x 22.5 x 26.0   | 2.4         | 32155                                     | 450       |                                   |     | 400                    |
| 1.6  |   |             | 32165                                     |           |                                   |     | 400                    |
| 1.8  | 10.0 x 23.0 x 26.0  | 2.5         | 32185                                     | 400       | 400                               |     |                        |
| <b>Pitch = 27.5 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \pm 0.08 \text{ mm}</math></b>            |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 27.5 mm</b> |
| 2.0  | 10.0 x 23.0 x 30.0  | 5.0         | 32205                                     | 450       |                                   |     |                        |
| 2.2  | 10.5 x 23.5 x 30.0  | 5.0         | 32225                                     | 450       |                                   |     |                        |
| 2.4  | 11.0 x 24.0 x 30.0  | 5.5         | 32245                                     | 400       |                                   |     |                        |
| 2.7  | 11.5 x 24.5 x 30.0  | 5.5         | 32275                                     | 400       |                                   |     |                        |
| 3.0  | 12.0 x 25.0 x 30.0  | 6.0         | 32305                                     | 350       |                                   |     |                        |
| 3.3  | 13.0 x 26.0 x 30.0  | 6.5         | 32335                                     | 300       |                                   |     |                        |
| 3.6  | 13.5 x 26.5 x 30.0  | 7.0         | 32365                                     | 300       |                                   |     |                        |
| 3.9  | 14.0 x 27.0 x 30.0  | 7.0         | 32395                                     | 300       |                                   |     |                        |



$U_{RDC} = 160\text{ V}$ ;  $U_{RAC} = 100\text{ V}$ ;  $U_{p-p} = 280\text{ V}$  (lock lead); C-tol. =  $\pm 5\%$

| C<br>( $\mu\text{F}$ )   | DIMENSIONS<br>$W_{max.} \times h_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING               |      |
|--|--|-------------|---|------|
|  |  |             | LOOSE IN BOX  |      |
|  |  |             | $l_t = 4.0\text{ mm} + 1.0\text{ mm} / - 0.5\text{ mm}$ |      |
|  |  |             | SPQ   |      |
| <b>Pitch = 10.0 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.60\text{ mm} \pm 0.06\text{ mm}</math></b> |  |             |   |      |
| 0.075  | 6.0 x 18.0 x 12.5  | 0.9         | 90089   | 1400 |
| 0.082  |  |             | 90091   |      |
| 0.091  |  |             | 90092   |      |
| 0.10   |  |             | 90093   |      |
| 0.11   |  |             | 90094   |      |
| 0.12   |  |             | 90095   |      |
| 0.13   |  |             | 90096   |      |
| 0.15   | 6.5 x 18.5 x 12.5  | 1.0         | 90097   | 1250 |
| 0.16   |  |             | 90098   |      |
| <b>Pitch = 15.0 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80\text{ mm} \pm 0.08\text{ mm}</math></b> |  |             |   |      |
| 0.18   | 6.0 x 18.0 x 18.5  | 1.2         | 90099   | 1500 |
| 0.20   | 6.5 x 18.5 x 18.5  | 1.3         | 90101   | 1250 |
| 0.22   |  |             | 90102   |      |
| 0.24   | 7.0 x 19.0 x 18.5  | 1.4         | 90103   | 1250 |
| 0.27   |  |             | 90104   |      |
| 0.30   |  |             | 90105   |      |
| 0.33   |  |             | 90106   |      |
| 0.36   |  |             | 90107   |      |
| 0.39   |  |             | 90108   |      |
| 0.43   | 7.5 x 19.5 x 18.5  | 1.5         | 90109   | 1000 |
| 0.47   |  |             | 90111   |      |
| 0.51   | 8.0 x 20.0 x 18.5  | 1.6         | 90112   | 1000 |
| 0.56   |  |             | 90113   |      |
| 0.62   | 8.5 x 20.5 x 18.5  | 1.7         | 90114   | 900  |
| 0.68   | 9.0 x 21.0 x 18.5  | 1.8         | 90115   | 800  |
| 0.75   | 9.5 x 21.5 x 18.5  | 1.9         | 90116   | 800  |
| <b>Pitch = 22.5 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80\text{ mm} \pm 0.08\text{ mm}</math></b> |  |             |   |      |
| 0.82   | 7.0 x 23.0 x 26.0  | 1.8         | 90117   | 850  |
| 0.91   | 7.5 x 23.5 x 26.0  | 1.9         | 90118   | 750  |
| 1.0  |  |             | 90119   |      |
| 1.1  | 8.0 x 24.0 x 26.0  | 2.0         | 90121   | 700  |
| 1.2  | 8.5 x 24.5 x 26.0  | 2.1         | 90122   | 650  |
| 1.3  |  |             | 90036   |      |
| 1.5  | 9.5 x 25.5 x 26.0  | 2.4         | 90037   | 550  |
| 1.6  |  |             | 90038   |      |
| 1.8  | 10.0 x 26.0 x 26.0   | 2.5         | 90039   | 500  |
| <b>Pitch = 27.5 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80\text{ mm} \pm 0.08\text{ mm}</math></b> |  |             |   |      |
| 2.0  | 10.0 x 26.0 x 30.0   | 5.0         | 90041   | 400  |
| 2.2  | 10.5 x 26.5 x 30.0   | 5.0         | 90042   | 400  |
| 2.4  | 11.0 x 27.0 x 30.0   | 5.5         | 90123   | 350  |
| 2.7  | 11.5 x 27.5 x 30.0   | 5.5         | 90124   | 350  |
| 3.0  | 12.0 x 28.0 x 30.0   | 6.0         | 90125   | 350  |
| 3.3  | 13.0 x 29.0 x 30.0   | 6.5         | 90126   | 300  |
| 3.6  | 13.5 x 29.5 x 30.0   | 7.0         | 90127   | 250  |
| 3.9  | 14.0 x 30.0 x 30.0   | 7.0         | 90128   | 250  |



**SPECIFIC REFERENCE DATA (250 V<sub>DC</sub>)**

| DESCRIPTION   | VALUE                   |                          |
|---|-------------------------|--------------------------|
|   | at 10 kHz               | at 100 kHz               |
| Tangent of loss angle:  |                         |                          |
| 0.047 μF ≤ C ≤ 0.075 μF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 25 x 10 <sup>-4</sup>  |
| 0.075 μF < C ≤ 0.11 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 30 x 10 <sup>-4</sup>  |
| 0.11 μF < C ≤ 0.18 μF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 35 x 10 <sup>-4</sup>  |
| 0.18 μF < C ≤ 0.30 μF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 40 x 10 <sup>-4</sup>  |
| 0.30 μF < C ≤ 0.47 μF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 60 x 10 <sup>-4</sup>  |
| 0.47 μF < C ≤ 0.82 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 90 x 10 <sup>-4</sup>  |
| 0.82 μF < C ≤ 1.1 μF  | ≤ 15 x 10 <sup>-4</sup> | ≤ 100 x 10 <sup>-4</sup> |
| 1.1 μF < C ≤ 1.2 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 120 x 10 <sup>-4</sup> |
| 1.2 μF < C ≤ 1.3 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 125 x 10 <sup>-4</sup> |
| 1.3 μF < C ≤ 1.8 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 135 x 10 <sup>-4</sup> |
| 1.8 μF < C ≤ 2.4 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 145 x 10 <sup>-4</sup> |
| 2.4 μF < C ≤ 3.0 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 155 x 10 <sup>-4</sup> |
| Rated voltage pulse slope (dU/dt) <sub>R</sub> :                                    |                         |                          |
| P = 10.0 mm   |                         | 70 V/μs                  |
| P = 15.0 mm   |                         | 60 V/μs                  |
| P = 22.5 mm   |                         | 30 V/μs                  |
| P = 27.5 mm   |                         | 20 V/μs                  |
| R between leads, for C ≤ 1.0 μF at 100 V; 1 min                                     |                         | > 100 000 MΩ             |
| RC between leads, for C > 1 μF at 100 V; 1 min                                      |                         | > 100 000 s              |
| R between leads and case; 100 V; 1 min  |                         | > 100 000 MΩ             |
| Ionization (AC) voltage (typical value) at 50 pC peak discharge                     |                         | > 220 V                  |
| Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s <sup>(1)</sup> |                         | 400 V; 1 min             |
| Withstanding (DC) voltage between leads and case                                    |                         | 2840 V; 1 min            |

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

**U<sub>RDC</sub> = 250 V; U<sub>RAC</sub> = 160 V; U<sub>p-p</sub> = 450 V (standard); C-tol. = ± 5 %**

| C<br>(μF)  | DIMENSIONS<br>w <sub>max.</sub> x h (h' <sub>max.</sub> ) x l <sub>max.</sub><br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |                  |                                 |                       |
|--|---|-------------|---|------------------|---------------------------------|-----------------------|
|  |   |             | LOOSE IN BOX                              |                  | REEL                            |                       |
|  |   |             | l <sub>t</sub> = 5.0 mm ± 1.0 mm          | ALL LEADS<br>SPQ | PITCH 7.5 mm (BENT BACK)<br>SPQ | ORIGINAL PITCH<br>SPQ |
| Pitch = 10.0 mm ± 0.4 mm; d <sub>t</sub> = 0.60 mm ± 0.06 mm |   |             | Pitch = 7.5 mm (bent back)                |                  | Pitch = 10.0 mm                 |                       |
| 0.047  | 6.0 x 15.0 x 12.5   | 0.9         | 42473                                     | 1000             |                                 | 1000                  |
| 0.051  |   |             | 42513                                     |                  |                                 |                       |
| 0.056  |   |             | 42563                                     |                  |                                 |                       |
| 0.062  |   |             | 42623                                     |                  |                                 |                       |
| 0.068  |   |             | 42683                                     |                  |                                 |                       |
| 0.075  |   |             | 42753                                     |                  |                                 |                       |
| 0.082  |   |             | 42823                                     |                  |                                 |                       |
| 0.091  |   |             | 42913                                     |                  |                                 |                       |
| 0.10   | 6.5 x 15.5 x 12.5   | 1.0         | 42104                                     | 1000             |                                 | 900                   |



| C<br>( $\mu$ F)  | DIMENSIONS<br>$W_{max.} \times h (h')_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |           |                                   |     |                        |  |     |  |                        |
|--|---|-------------|---|-----------|-----------------------------------|-----|------------------------|--|-----|--|------------------------|
|  |   |             | LOOSE IN BOX                              |           | REEL                              |     |                        |  |     |  |                        |
|  |   |             | $l_t = 5.0 \text{ mm} \pm 1.0 \text{ mm}$ | ALL LEADS | PITCH 7.5 mm (BENT BACK)          |     | ORIGINAL PITCH         |  |     |  |                        |
|  |   |             |   | SPQ       |                                   | SPQ | SPQ                    |  |     |  |                        |
| <b>Pitch = 15.0 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 15.0 mm</b> |  |     |  |                        |
| 0.11   | 6.5 x 15.5 (17.0) x 18.5  | 1.3         | 42114                                     | 1500      | 46114                             | 750 | 900                    |  |     |  |                        |
| 0.12   |   |             | 42124                                     |           | 46124                             |     |                        |  |     |  |                        |
| 0.13   |   |             | 42134                                     |           | 46134                             |     |                        |  |     |  |                        |
| 0.15   |   |             | 42154                                     |           | 46154                             |     |                        |  |     |  |                        |
| 0.16   |   |             | 42164                                     |           | 46164                             |     |                        |  |     |  |                        |
| 0.18   |   |             | 42184                                     |           | 46184                             |     |                        |  |     |  |                        |
| 0.20   |   |             | 42204                                     |           | 46204                             |     |                        |  |     |  |                        |
| 0.22   |   |             | 42224                                     |           | 46224                             |     |                        |  |     |  |                        |
| 0.24   | 7.0 x 16.0 (17.5) x 18.5  | 1.4         | 42244                                     | 1250      | 46244                             | 700 | 800                    |  |     |  |                        |
| 0.27   | 7.5 x 16.5 (18.0) x 18.5  | 1.5         | 42274                                     | 1250      | 46274                             | 650 | 800                    |  |     |  |                        |
| 0.30   |   |             | 42304                                     |           | 46304                             |     |                        |  |     |  |                        |
| 0.33   | 8.0 x 17.0 (18.5) x 18.5  | 1.6         | 42334                                     | 150       | 46334                             | 600 | 700                    |  |     |  |                        |
| 0.36   | 8.5 x 17.5 (19.0) x 18.5  | 1.7         | 42364                                     | 1000      | 46364                             | 550 | 700                    |  |     |  |                        |
| 0.39   |   |             | 42394                                     |           | 46394                             |     |                        |  |     |  |                        |
| 0.43   | 9.0 x 18.0 (19.5) x 18.5  | 1.8         | 42434                                     | 1000      | 46434                             | 550 | 600                    |  |     |  |                        |
| 0.47   | 9.5 x 18.5 (20.0) x 18.5  | 1.9         | 42474                                     | 900       | 46474                             | 500 | 600                    |  |     |  |                        |
| <b>Pitch = 22.5 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 22.5 mm</b> |  |     |  |                        |
| 0.51   | 7.0 x 20.0 x 26.0   | 1.8         | 42514                                     | 650       |                                   |     | 550                    |  |     |  |                        |
| 0.56   |   |             | 42564                                     |           |                                   |     |                        |  |     |  |                        |
| 0.62   | 7.5 x 20.5 x 26.0   | 1.9         | 42624                                     | 600       |                                   |     |                        |  | 500 |  |                        |
| 0.68   |   |             | 42684                                     |           |                                   |     |                        |  |     |  |                        |
| 0.75   | 8.0 x 21.0 x 26.0   | 2.0         | 42754                                     | 550       |                                   |     |                        |  |     |  | 500                    |
| 0.82   | 8.5 x 21.5 x 26.0   | 2.1         | 42824                                     | 500       |                                   |     |                        |  |     |  | 450                    |
| 0.91   | 9.0 x 22.0 x 26.0   | 2.4         | 42914                                     | 450       |                                   |     |                        |  |     |  | 450                    |
| 1.0  | 9.5 x 22.5 x 26.0   | 2.5         | 42105                                     | 450       |                                   |     |                        |  |     |  | 400                    |
| 1.1  | 10.0 x 23.0 x 26.0  | 2.6         | 42115                                     | 400       |                                   |     |                        |  |     |  | 400                    |
| 1.2  | 10.5 x 23.5 x 26.0  | 2.7         | 42125                                     | 350       |                                   |     |                        |  |     |  | 350                    |
| <b>Pitch = 27.5 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     |                        |  |     |  | <b>Pitch = 27.5 mm</b> |
| 1.3  | 10.0 x 23.0 x 30.0  | 5.0         | 42135                                     | 450       |                                   |     |                        |  |     |  |                        |
| 1.5  | 10.5 x 23.5 x 30.0  | 5.0         | 42155                                     | 450       |                                   |     |                        |  |     |  |                        |
| 1.6  | 11.0 x 24.0 x 30.0  | 5.5         | 42165                                     | 400       |                                   |     |                        |  |     |  |                        |
| 1.8  | 11.5 x 24.5 x 30.0  | 5.5         | 42185                                     | 400       |                                   |     |                        |  |     |  |                        |
| 2.0  | 12.5 x 25.0 x 30.0  | 6.5         | 42205                                     | 350       |                                   |     |                        |  |     |  |                        |
| 2.2  | 13.0 x 26.0 x 30.0  | 6.5         | 42225                                     | 300       |                                   |     |                        |  |     |  |                        |
| 2.4  | 13.5 x 26.5 x 30.0  | 7.0         | 42245                                     | 300       |                                   |     |                        |  |     |  |                        |
| 2.7  | 14.0 x 27.0 x 30.0  | 7.0         | 42275                                     | 300       |                                   |     |                        |  |     |  |                        |
| 3.0  | 15.0 x 28.0 x 30.0  | 7.5         | 42305                                     | 250       |                                   |     |                        |  |     |  |                        |



$U_{Rdc} = 250 \text{ V}$ ;  $U_{Rac} = 160 \text{ V}$ ;  $U_{p-p} = 450 \text{ V}$  (lock lead); C-tol. =  $\pm 5 \%$

| C<br>( $\mu\text{F}$ )   | DIMENSIONS<br>$w_{max.} \times h_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING                  |      |
|--|--|-------------|--|------|
|  |  |             | LOOSE IN BOX   |      |
|  |  |             | $l_t = 4.0 \text{ mm} + 1.0 \text{ mm} / - 0.5 \text{ mm}$ |      |
|  |  |             | SPQ  |      |
| <b>Pitch = 10.0 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.60 \pm 0.06 \text{ mm}</math></b>            |  |             |  |      |
| 0.047  | 6.0 x 18.0 x 12.5  | 0.9         | 90052  | 1400 |
| 0.051  |  |             | 90129  |      |
| 0.056  |  |             | 90131  |      |
| 0.062  |  |             | 90132  |      |
| 0.068  |  |             | 90133  |      |
| 0.075  |  |             | 90134  |      |
| 0.082  |  |             | 90135  |      |
| 0.091  |  |             | 90136  |      |
| 0.10   | 6.5 x 18.5 x 12.5  | 1.0         | 90137  | 1250 |
| <b>Pitch = 15.0 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |  |             |  |      |
| 0.11   | 6.5 x 18.5 x 18.5  | 1.3         | 90138  | 1250 |
| 0.12   |  |             | 90051  |      |
| 0.13   |  |             | 90139  |      |
| 0.15   |  |             | 90141  |      |
| 0.16   |  |             | 90142  |      |
| 0.18   |  |             | 90012  |      |
| 0.20   |  |             | 90013  |      |
| 0.22   |  |             | 90014  |      |
| 0.24   | 7.0 x 19.0 x 18.5  | 1.4         | 90015  | 1250 |
| 0.27   | 7.5 x 19.5 x 18.5  | 1.5         | 90016  | 1000 |
| 0.30   |  |             | 90017  |      |
| 0.33   | 8.0 x 20.0 x 18.5  | 1.6         | 90018  | 1000 |
| 0.36   | 8.5 x 20.5 x 18.5  | 1.7         | 90019  | 900  |
| 0.39   |  |             | 90021  |      |
| 0.43   | 9.0 x 21.0 x 18.5  | 1.8         | 90022  | 800  |
| 0.47   | 9.5 x 21.5 x 18.5  | 1.9         | 90023  | 800  |
| <b>Pitch = 22.5 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |  |             |  |      |
| 0.51   | 7.0 x 23.0 x 26.0  | 1.8         | 90024  | 850  |
| 0.56   |  |             | 90025  |      |
| 0.62   | 7.5 x 23.5 x 26.0  | 1.9         | 90026  | 750  |
| 0.68   |  |             | 90027  |      |
| 0.75   | 8.0 x 24.0 x 26.0  | 2.0         | 90028  | 700  |
| 0.82   | 8.5 x 24.5 x 26.0  | 2.1         | 90029  | 650  |
| 0.91   | 9.0 x 25.0 x 26.0  | 2.4         | 90031  | 600  |
| 1.0  | 9.5 x 25.5 x 26.0  | 2.5         | 90032  | 550  |
| 1.1  | 10.0 x 26.0 x 26.0   | 2.6         | 90033  | 500  |
| 1.2  | 10.5 x 26.5 x 26.0   | 2.7         | 90034  | 500  |
| <b>Pitch = 27.5 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |  |             |  |      |
| 1.3  | 10.0 x 26.0 x 30.0   | 5.0         | 90143  | 400  |
| 1.5  | 10.5 x 26.5 x 30.0   | 5.0         | 90144  | 400  |
| 1.6  | 11.0 x 27.0 x 30.0   | 5.5         | 90145  | 350  |
| 1.8  | 11.5 x 27.5 x 30.0   | 5.5         | 90146  | 350  |
| 2.0  | 12.5 x 28.5 x 30.0   | 6.5         | 90147  | 300  |
| 2.2  | 13.0 x 29.0 x 30.0   | 6.5         | 90148  | 300  |
| 2.4  | 13.5 x 29.5 x 30.0   | 7.0         | 90149  | 250  |
| 2.7  | 14.0 x 30.0 x 30.0   | 7.0         | 90151  | 250  |
| 3.0  | 15.0 x 31.0 x 30.0   | 7.5         | 90152  | 200  |





**SPECIFIC REFERENCE DATA (400 V<sub>DC</sub>)**

| DESCRIPTION   | VALUE                   |                          |
|---|-------------------------|--------------------------|
|   | at 10 kHz               | at 100 kHz               |
| Tangent of loss angle:  |                         |                          |
| 0.022 ≤ C ≤ 0.027   | ≤ 10 x 10 <sup>-4</sup> | ≤ 20 x 10 <sup>-4</sup>  |
| 0.027 < C ≤ 0.075   | ≤ 10 x 10 <sup>-4</sup> | ≤ 25 x 10 <sup>-4</sup>  |
| 0.075 μF < C ≤ 0.11 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 30 x 10 <sup>-4</sup>  |
| 0.11 μF < C ≤ 0.18 μF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 35 x 10 <sup>-4</sup>  |
| 0.18 μF < C ≤ 0.3 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 40 x 10 <sup>-4</sup>  |
| 0.3 μF < C ≤ 0.47 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 60 x 10 <sup>-4</sup>  |
| 0.47 μF < C ≤ 0.82 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 90 x 10 <sup>-4</sup>  |
| 0.82 μF < C ≤ 1.1 μF  | ≤ 15 x 10 <sup>-4</sup> | ≤ 100 x 10 <sup>-4</sup> |
| 1.1 μF < C ≤ 1.2 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 120 x 10 <sup>-4</sup> |
| Rated voltage pulse slope (dU/dt) <sub>R</sub> at 400 V <sub>DC</sub> :             |                         |                          |
| P = 10.0 mm   |                         | 80 V/μs                  |
| P = 15.0 mm   |                         | 70 V/μs                  |
| P = 22.5 mm   |                         | 35 V/μs                  |
| P = 27.5 mm   |                         | 25 V/μs                  |
| R between leads, for C ≤ 1.0 μF at 100 V; 1 min                                     |                         | > 100 000 MΩ             |
| RC between leads, for C > 1.0 μF at 100 V; 1 min                                    |                         | > 100 000 s              |
| R between leads and case; 100 V; 1 min  |                         | > 100 000 MΩ             |
| Ionization (AC) voltage (typical value) at 50 pC peak discharge                     |                         | > 220 V                  |
| Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s <sup>(1)</sup> |                         | 640 V; 1 min             |
| Withstanding (DC) voltage between leads and case                                    |                         | 2840 V; 1 min            |

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

**U<sub>RDC</sub> = 400 V; U<sub>RAC</sub> = 200 V; U<sub>p-p</sub> = 560 V (standard); C-tol. = ± 5 %**

| C<br>(μF)  | DIMENSIONS<br>w <sub>max.</sub> x h (h <sup>1</sup> ) <sub>max.</sub> x l <sub>max.</sub><br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |           |                          |      |                |
|--|---|-------------|---|-----------|--------------------------|------|----------------|
|  |   |             | LOOSE IN BOX                              |           | REEL                     |      |                |
|  |   |             | l <sub>t</sub> = 5.0 mm ± 1.0 mm          | ALL LEADS | PITCH 7.5 mm (BENT BACK) |      | ORIGINAL PITCH |
|  |   |             |   | SPQ       |                          | SPQ  | SPQ            |
| Pitch = 10.0 mm ± 0.4 mm; d <sub>t</sub> = 0.60 mm ± 0.06 mm |   |             | Pitch = 7.5 mm (bent back)                |           | Pitch = 10.0 mm          |      |                |
| 0.022  | 6.0 x 15.0 x 12.5   | 0.9         | 52223                                     | 1000      |                          | 1000 |                |
| 0.024  |   |             | 52243                                     |           |                          |      |                |
| 0.027  |   |             | 52273                                     |           |                          |      |                |
| 0.030  |   |             | 52303                                     |           |                          |      |                |
| 0.033  |   |             | 52333                                     |           |                          |      |                |
| 0.036  |   |             | 52363                                     |           |                          |      |                |
| 0.039  |   |             | 52393                                     |           |                          |      |                |
| 0.043  |   |             | 52433                                     |           |                          |      |                |
| 0.047  |   |             | 52473                                     |           |                          |      |                |



| C<br>( $\mu$ F)  | DIMENSIONS<br>$W_{max.} \times h (h')_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |           |                                   |     |                        |
|--|---|-------------|---|-----------|-----------------------------------|-----|------------------------|
|  |   |             | LOOSE IN BOX                              |           | REEL                              |     |                        |
|  |   |             | $l_t = 5.0 \text{ mm} \pm 1.0 \text{ mm}$ | ALL LEADS | PITCH 7.5 mm (BENT BACK)          |     | ORIGINAL PITCH         |
|  |   |             |   | SPQ       |                                   | SPQ | SPQ                    |
| <b>Pitch = 15.0 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 15.0 mm</b> |
| 0.051  | 6.5 x 15.5 (17.0) x 18.5  | 1.3         | 52513                                     | 1500      | 56513                             | 750 | 900                    |
| 0.056  |   |             | 52563                                     |           | 56563                             |     |                        |
| 0.062  |   |             | 52623                                     |           | 56623                             |     |                        |
| 0.068  |   |             | 52683                                     |           | 56683                             |     |                        |
| 0.075  |   |             | 52753                                     |           | 56753                             |     |                        |
| 0.082  |   |             | 52823                                     |           | 56823                             |     |                        |
| 0.091  | 7.0 x 16.0 (17.5) x 18.5  | 1.4         | 52913                                     | 1250      | 56913                             | 700 | 800                    |
| 0.10   |   |             | 52104                                     |           | 56104                             |     |                        |
| 0.11   |   |             | 52114                                     |           | 56114                             |     |                        |
| 0.12   |   |             | 52124                                     |           | 56124                             |     |                        |
| 0.13   | 7.5 x 16.5 (18.0) x 18.5  | 1.5         | 52134                                     | 1250      | 56134                             | 650 | 800                    |
| 0.15   |   |             | 52154                                     |           | 56154                             |     |                        |
| 0.16   | 8.0 x 17.0 (18.5) x 18.5  | 1.6         | 52164                                     | 1250      | 56164                             | 600 | 700                    |
| 0.18   | 8.5 x 17.5 (19.0) x 18.5  | 1.7         | 52184                                     | 1000      | 56184                             | 550 | 700                    |
| 0.20   |   |             | 52204                                     |           | 56204                             |     |                        |
| 0.22   | 9.0 x 18.0 (19.5) x 18.5  | 1.8         | 52224                                     | 1000      | 56224                             | 550 | 600                    |
| <b>Pitch = 22.5 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 22.5 mm</b> |
| 0.24   | 6.5 x 19.5 x 26.0   | 1.7         | 52244                                     | 750       |                                   |     | 600                    |
| 0.27   | 7.0 x 20.0 x 26.0   | 1.8         | 52274                                     | 650       |                                   |     | 550                    |
| 0.30   | 7.5 x 20.5 x 26.0   | 1.9         | 52304                                     | 600       |                                   |     | 500                    |
| 0.33   |   |             | 52334                                     |           |                                   |     | 500                    |
| 0.36   | 8.0 x 21.0 x 26.0   | 2.0         | 52364                                     | 550       |                                   |     | 500                    |
| 0.39   | 8.5 x 21.5 x 26.0   | 2.1         | 52394                                     | 500       |                                   |     | 450                    |
| 0.43   |   |             | 52434                                     |           |                                   |     | 450                    |
| 0.47   | 9.0 x 22.0 x 26.0   | 2.4         | 52474                                     | 450       |                                   |     | 450                    |
| 0.51   | 9.5 x 22.5 x 26.0   | 2.5         | 52514                                     | 450       |                                   |     | 400                    |
| 0.56   | 10.0 x 23.0 x 26.0  | 2.6         | 52564                                     | 400       |                                   |     | 400                    |
| 0.62   | 10.5 x 23.5 x 26.0  | 2.7         | 52624                                     | 350       | 350                               |     |                        |
| <b>Pitch = 27.5 mm <math>\pm</math> 0.4 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |   |             |   |           | <b>Pitch = 7.5 mm (bent back)</b> |     | <b>Pitch = 27.5 mm</b> |
| 0.68   | 10.0 x 23.0 x 30.0  | 5.0         | 52684                                     | 450       |                                   |     |                        |
| 0.75   | 10.5 x 23.5 x 30.0  | 5.0         | 52754                                     | 450       |                                   |     |                        |
| 0.82   | 11.0 x 24.0 x 30.0  | 5.5         | 52824                                     | 400       |                                   |     |                        |
| 0.91   | 11.5 x 24.5 x 30.0  | 5.5         | 52914                                     | 400       |                                   |     |                        |
| 1.0  | 12.0 x 25.0 x 30.0  | 6.0         | 52105                                     | 350       |                                   |     |                        |
| 1.1  | 12.5 x 25.5 x 30.0  | 6.5         | 52115                                     | 350       |                                   |     |                        |
| 1.2  | 13.0 x 26.0 x 30.0  | 6.5         | 52125                                     | 300       |                                   |     |                        |



U<sub>RDC</sub> = 400 V; U<sub>RAC</sub> = 200 V; U<sub>p-p</sub> = 560 V (lock lead); C-tol. = ± 5 %

| C<br>(µF)  | DIMENSIONS<br>W <sub>max.</sub> x h <sub>max.</sub> x l <sub>max.</sub><br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING   |      |
|--|---|-------------|---|------|
|  |   |             | LOOSE IN BOX                                |      |
|  |   |             | l <sub>t</sub> = 4.0 mm + 1.0 mm / - 0.5 mm |      |
|  |   |             | SPQ   |      |
| <b>Pitch = 10.0 mm ± 1.0 mm; d<sub>t</sub> = 0.60 mm ± 0.06 mm</b> |   |             |   |      |
| 0.022  | 6.0 x 18.0 x 12.5   | 0.9         | 90153                                       | 1400 |
| 0.024  |   |             | 90154                                       |      |
| 0.027  |   |             | 90155                                       |      |
| 0.030  |   |             | 90156                                       |      |
| 0.033  |   |             | 90157                                       |      |
| 0.036  | 6.0 x 18.0 x 12.5   | 0.9         | 90158                                       | 1400 |
| 0.039  |   |             | 90159                                       |      |
| 0.043  |   |             | 90161                                       |      |
| 0.047  |   |             | 90162                                       |      |
|  |   |             |   |      |
| <b>Pitch = 15.0 mm ± 1.0 mm; d<sub>t</sub> = 0.80 mm ± 0.08 mm</b> |   |             |   |      |
| 0.051  | 6.5 x 18.5 x 18.5   | 1.3         | 90163                                       | 1250 |
| 0.056  |   |             | 90164                                       |      |
| 0.062  |   |             | 90165                                       |      |
| 0.068  |   |             | 90166                                       |      |
| 0.075  |   |             | 90167                                       |      |
| 0.082  |   |             | 90168                                       |      |
| 0.091  | 7.0 x 19.0 x 18.5   | 1.4         | 90169                                       | 1250 |
| 0.10   |   |             | 90171                                       |      |
| 0.11   |   |             | 90172                                       |      |
| 0.12   |   |             | 90173                                       |      |
| 0.13   | 7.5 x 19.5 x 18.5   | 1.5         | 90174                                       | 1000 |
| 0.15   |   |             | 90175                                       |      |
| 0.16   | 8.0 x 20.0 x 18.5   | 1.6         | 90176                                       | 1000 |
| 0.18   | 8.5 x 20.5 x 18.5   | 1.7         | 90177                                       | 900  |
| 0.20   |   |             | 90178                                       |      |
| 0.22   | 9.0 x 21.0 x 18.5   | 1.8         | 90179                                       | 800  |
| <b>Pitch = 22.5 mm ± 1.0 mm; d<sub>t</sub> = 0.80 mm ± 0.08 mm</b> |   |             |   |      |
| 0.24   | 6.5 x 22.5 x 26.0   | 1.7         | 90181                                       | 900  |
| 0.27   | 7.0 x 23.0 x 26.0   | 1.8         | 90182                                       | 850  |
| 0.30   | 7.5 x 23.5 x 26.0   | 1.9         | 90183                                       | 750  |
| 0.33   |   |             | 90184                                       |      |
| 0.36   | 8.0 x 24.0 x 26.0   | 2.0         | 90185                                       | 700  |
| 0.39   | 8.5 x 24.5 x 26.0   | 2.1         | 90186                                       | 650  |
| 0.43   |   |             | 90187                                       |      |
| 0.47   | 9.0 x 25.0 x 26.0   | 2.4         | 90188                                       | 600  |
| 0.51   | 9.5 x 25.5 x 26.0   | 2.5         | 90189                                       | 550  |
| 0.56   | 10.0 x 26.0 x 26.0  | 2.6         | 90191                                       | 500  |
| 0.62   | 10.5 x 26.5 x 26.0  | 2.7         | 90192                                       | 500  |
| <b>Pitch = 27.5 mm ± 1.0 mm; d<sub>t</sub> = 0.80 mm ± 0.08 mm</b> |   |             |   |      |
| 0.68   | 10.0 x 26.0 x 30.0  | 5.0         | 90193                                       | 400  |
| 0.75   | 10.5 x 26.5 x 30.0  | 5.0         | 90194                                       | 400  |
| 0.82   | 11.0 x 27.0 x 30.0  | 5.5         | 90195                                       | 350  |
| 0.91   | 11.5 x 27.5 x 30.0  | 5.5         | 90196                                       | 350  |
| 1.0  | 12.0 x 28.0 x 30.0  | 6.0         | 90086                                       | 350  |
| 1.1  | 12.5 x 28.5 x 30.0  | 6.5         | 90197                                       | 300  |
| 1.2  | 13.0 x 29.0 x 30.0  | 6.5         | 90198                                       | 300  |



**SPECIFIC REFERENCE DATA (630 V<sub>DC</sub>)**

| DESCRIPTION   | VALUE                   |                         |
|---|-------------------------|-------------------------|
|   | at 10 kHz               | at 100 kHz              |
| Tangent of loss angle:  |                         |                         |
| 0.01 μF < C ≤ 0.027 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 20 x 10 <sup>-4</sup> |
| 0.027 μF < C ≤ 0.075 μF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 25 x 10 <sup>-4</sup> |
| 0.075 μF < C ≤ 0.11 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 30 x 10 <sup>-4</sup> |
| 0.11 μF < C ≤ 0.18 μF   | ≤ 10 x 10 <sup>-4</sup> | ≤ 35 x 10 <sup>-4</sup> |
| 0.18 μF < C ≤ 0.3 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 40 x 10 <sup>-4</sup> |
| 0.3 μF < C ≤ 0.47 μF  | ≤ 10 x 10 <sup>-4</sup> | ≤ 60 x 10 <sup>-4</sup> |
| 0.47 μF < C ≤ 0.68 μF   | ≤ 15 x 10 <sup>-4</sup> | ≤ 90 x 10 <sup>-4</sup> |
| Rated voltage pulse slope (dU/dt) <sub>R</sub> at 630 V <sub>DC</sub> :             |                         |                         |
| P = 10.0 mm   | 100 V/μs                |                         |
| P = 15.0 mm   | 90 V/μs                 |                         |
| P = 22.5 mm   | 45 V/μs                 |                         |
| P = 27.5 mm   | 30 V/μs                 |                         |
| R between leads, for C ≤ 1.0 μF at 500 V; 1 min                                     | > 100 000 MΩ            |                         |
| R between leads and case; 500 V; 1 min  | > 100 000 MΩ            |                         |
| Ionization (AC) voltage (typical value) at 50 pC peak discharge                     | > 220 V                 |                         |
| Withstanding (DC) voltage (cut off current 10 mA); rise time 100 V/s <sup>(1)</sup> | 1008 V; 1 min           |                         |
| Withstanding (DC) voltage between leads and case                                    | 2840 V; 1 min           |                         |

**Note**

<sup>(1)</sup> See "Voltage Proof Test for Metalized Film Capacitors": [www.vishay.com/doc?28169](http://www.vishay.com/doc?28169)

**U<sub>RDC</sub> = 630 V; U<sub>RAC</sub> = 200 V; U<sub>p-p</sub> = 560 V (standard); C-tol. = ± 5 %**

| C (μF)   | DIMENSIONS<br>w <sub>max.</sub> x h (h <sub>max.</sub> ) x l <sub>max.</sub><br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |           |                          |     |                |     |       |      |       |     |     |
|--|--|-------------|---|-----------|--------------------------|-----|----------------|-----|-------|------|-------|-----|-----|
|  |  |             | LOOSE IN BOX                              |           | REEL                     |     |                |     |       |      |       |     |     |
|  |  |             | l <sub>t</sub> = 5.0 mm ± 1.0 mm          | ALL LEADS | PITCH 7.5 mm (BENT BACK) |     | ORIGINAL PITCH |     |       |      |       |     |     |
|  |  |             |   | SPQ       |                          | SPQ | SPQ            |     |       |      |       |     |     |
| <b>Pitch = 10.0 mm ± 0.4 mm; d<sub>t</sub> = 0.60 mm ± 0.06 mm</b> |  |             | <b>Pitch = 7.5 mm (bent back)</b>         |           | <b>Pitch = 10.0 mm</b>   |     |                |     |       |      |       |     |     |
| 0.010  | 6.0 x 15.0 x 12.5  | 0.9         | 62103                                     | 1000      |                          |     | 1000           |     |       |      |       |     |     |
| 0.011  |  |             | 62113                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.012  |  |             | 62123                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.013  |  |             | 62133                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.015  |  |             | 62153                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.016  |  |             | 62163                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.018  |  |             | 62183                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.020  |  |             | 62203                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.022  |  |             | 62223                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.024  |  |             | 62243                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.027  | 6.5 x 15.5 x 12.5  | 1.0         | 62273                                     | 1000      |                          |     | 900            |     |       |      |       |     |     |
| <b>Pitch = 15.0 mm ± 0.4 mm; d<sub>t</sub> = 0.80 mm ± 0.08 mm</b> |  |             | <b>Pitch = 7.5 mm (bent back)</b>         |           | <b>Pitch = 15.0 mm</b>   |     |                |     |       |      |       |     |     |
| 0.030  | 6.5 x 15.5 (17.0) x 18.5   | 1.3         | 62303                                     | 1500      |                          | 750 | 900            |     |       |      |       |     |     |
| 0.033  |  |             | 62333                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.036  |  |             | 62363                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.039  |  |             | 62393                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.043  |  |             | 62433                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.047  |  |             | 62473                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.051  |  |             | 62513                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.056  |  |             | 62563                                     |           |                          |     |                |     |       |      |       |     |     |
| 0.062  |  |             | 7.0 x 16.0 (17.5) x 18.5                  |           |                          |     |                | 1.4 | 62623 | 1250 | 66623 | 700 | 800 |
| 0.068  |  |             | 7.5 x 16.5 (18.0) x 18.5                  |           |                          |     |                | 1.5 | 62683 | 1250 | 66683 | 650 | 800 |
| 0.075  | 8.0 x 17.0 (18.5) x 18.5   | 1.6         | 62753                                     | 1250      | 66753                    | 600 | 700            |     |       |      |       |     |     |
| 0.082  |  |             | 62823                                     |           | 66823                    |     |                |     |       |      |       |     |     |
| 0.091  | 8.5 x 17.5 (19.0) x 18.5   | 1.7         | 62913                                     | 1000      | 66913                    | 550 | 700            |     |       |      |       |     |     |
| 0.10   | 9.0 x 18.0 (19.5) x 18.5   | 1.8         | 62104                                     | 1000      | 66104                    | 550 | 600            |     |       |      |       |     |     |
| 0.11   | 9.5 x 18.5 (20.0) x 18.5   | 1.9         | 62114                                     | 900       | 66114                    | 500 | 600            |     |       |      |       |     |     |



| C<br>( $\mu$ F)   | DIMENSIONS<br>$w_{max.} \times h (h')_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING |           |                            |                 |
|---|---|-------------|---|-----------|----------------------------|-----------------|
|   |   |             | LOOSE IN BOX                              |           | REEL                       |                 |
|   |   |             | $l_t = 5.0 \text{ mm} \pm 1.0 \text{ mm}$ | ALL LEADS | PITCH 7.5 mm (BENT BACK)   |                 |
| SPQ   |   | SPQ         |   | SPQ       |                            |                 |
| Pitch = 22.5 mm $\pm$ 0.4 mm; $d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}$ |   |             |   |           | Pitch = 7.5 mm (bent back) | Pitch = 10.0 mm |
| 0.12  | 6.5 x 19.5 x 26.0   | 1.7         | 62124                                     | 750       |                            | 600             |
| 0.13  | 7.0 x 20.0 x 26.0   | 1.8         | 62134                                     | 650       |                            | 550             |
| 0.15  | 7.5 x 20.5 x 26.0   | 1.9         | 62154                                     | 600       |                            | 500             |
| 0.16  |   |             | 62164                                     |           |                            | 500             |
| 0.18  | 8.0 x 21.0 x 26.0   | 2.0         | 62184                                     | 550       |                            | 500             |
| 0.20  | 8.5 x 21.5 x 26.0   | 2.1         | 62204                                     | 500       |                            | 450             |
| 0.22  | 9.0 x 22.0 x 26.0   | 2.4         | 62224                                     | 450       |                            | 450             |
| 0.24  |   |             | 62244                                     |           |                            | 400             |
| 0.27  | 9.5 x 22.5 x 26.0   | 2.5         | 62274                                     | 450       |                            | 400             |
| 0.30  | 10.0 x 23.0 x 26.0  | 2.7         | 62304                                     | 400       |                            | 400             |
| Pitch = 27.5 mm $\pm$ 0.4 mm; $d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}$ |   |             |   |           | Pitch = 7.5 mm (bent back) | Pitch = 10.0 mm |
| 0.33  | 9.5 x 22.5 x 30.0   | 5.0         | 62334                                     | 550       |                            |                 |
| 0.36  | 10.0 x 22.5 x 30.0  | 5.0         | 62364                                     | 500       |                            |                 |
| 0.39  | 10.5 x 23.0 x 30.0  | 5.0         | 62394                                     | 450       |                            |                 |
| 0.43  | 11.0 x 23.0 x 30.0  | 5.5         | 62434                                     | 450       |                            |                 |
| 0.47  | 11.5 x 24.5 x 30.0  | 5.5         | 62474                                     | 400       |                            |                 |
| 0.51  | 12.0 x 25.0 x 30.0  | 6.0         | 62514                                     | 350       |                            |                 |
| 0.56  | 13.0 x 26.0 x 30.0  | 6.5         | 62564                                     | 300       |                            |                 |
| 0.62  | 13.5 x 26.5 x 30.0  | 6.5         | 62624                                     | 300       |                            |                 |
| 0.68  | 14.0 x 27.0 x 30.0  | 7.0         | 62684                                     | 300       |                            |                 |

$U_{RDC} = 630 \text{ V}$ ;  $U_{RAC} = 200 \text{ V}$ ;  $U_{p-p} = 560 \text{ V}$  (lock lead); C-tol. =  $\pm 5 \%$

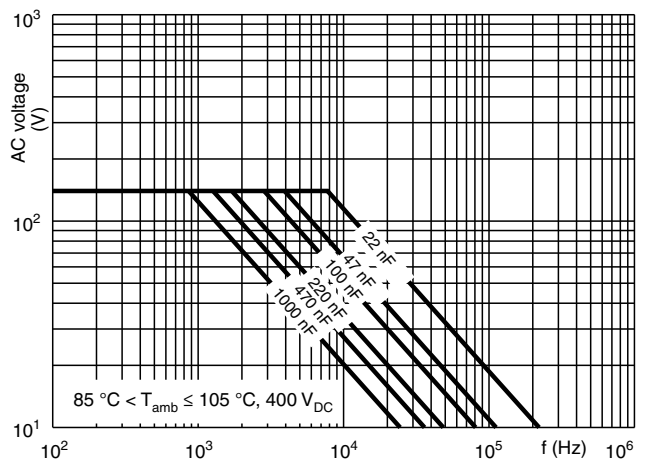
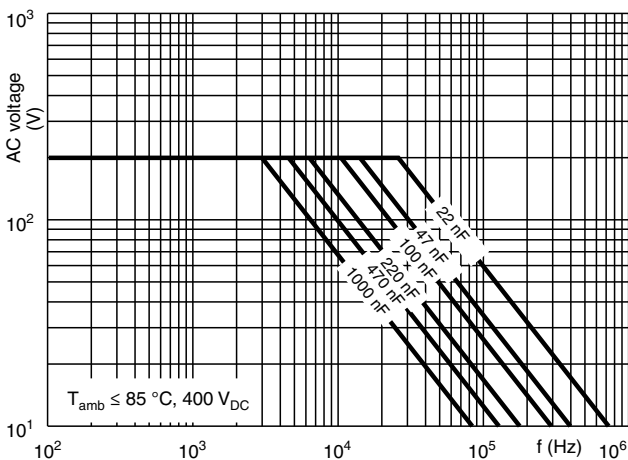
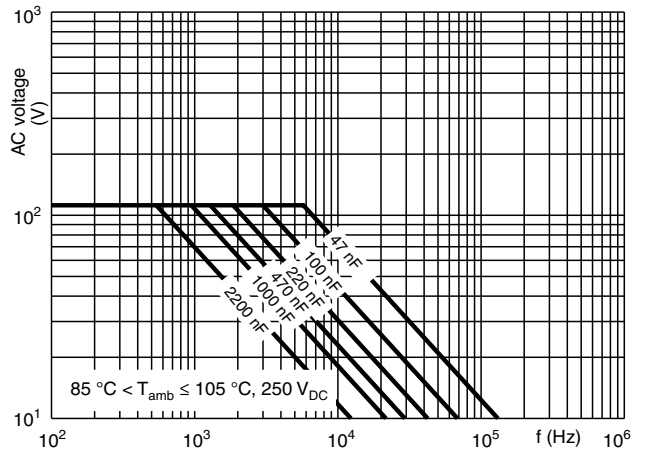
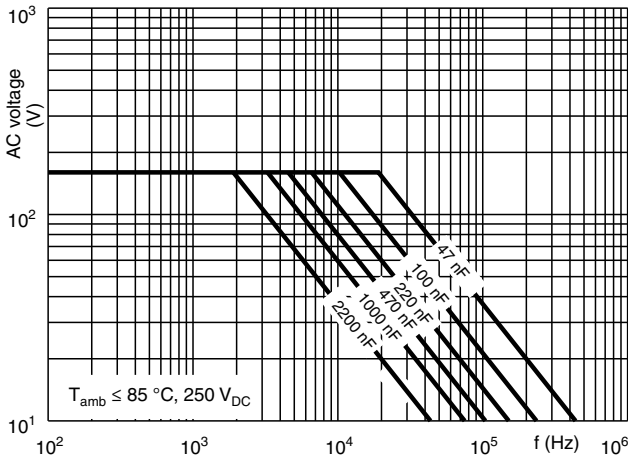
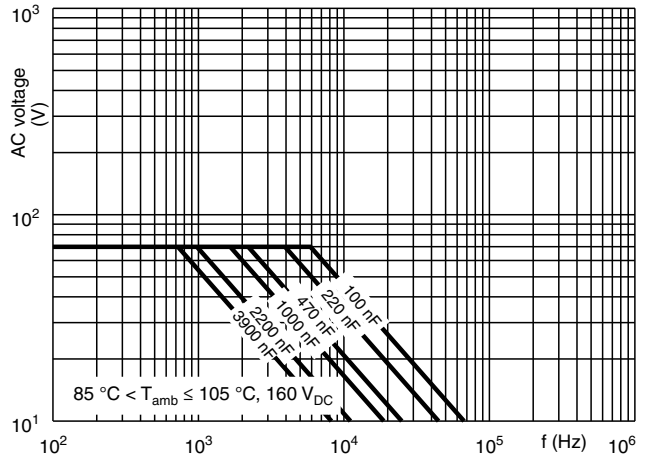
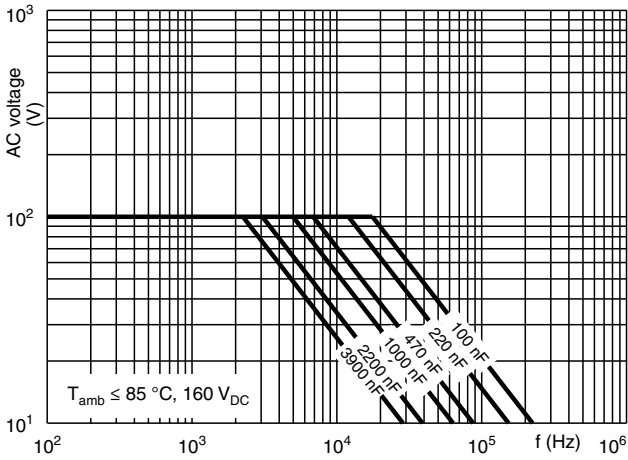
| C<br>( $\mu$ F)   | DIMENSIONS<br>$w_{max.} \times h_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING                  |      |
|---|--|-------------|--|------|
|   |  |             | LOOSE IN BOX   |      |
|   |  |             | $l_t = 4.0 \text{ mm} + 1.0 \text{ mm} / - 0.5 \text{ mm}$ |      |
| Pitch = 10.0 mm $\pm$ 1.0 mm; $d_t = 0.60 \text{ mm} \pm 0.06 \text{ mm}$ |  |             |  | SPQ  |
| 0.010   | 6.0 x 18.0 x 12.5  | 0.9         | 90199  | 1400 |
| 0.011   |  |             | 90201  |      |
| 0.012   |  |             | 90202  |      |
| 0.013   |  |             | 90203  |      |
| 0.015   |  |             | 90204  |      |
| 0.016   |  |             | 90205  |      |
| 0.018   |  |             | 90206  |      |
| 0.020   |  |             | 90207  |      |
| 0.022   |  |             | 90208  |      |
| 0.024   |  |             | 90209  |      |
| 0.027   | 6.5 x 18.5 x 12.5  | 1.0         | 90211  | 1250 |

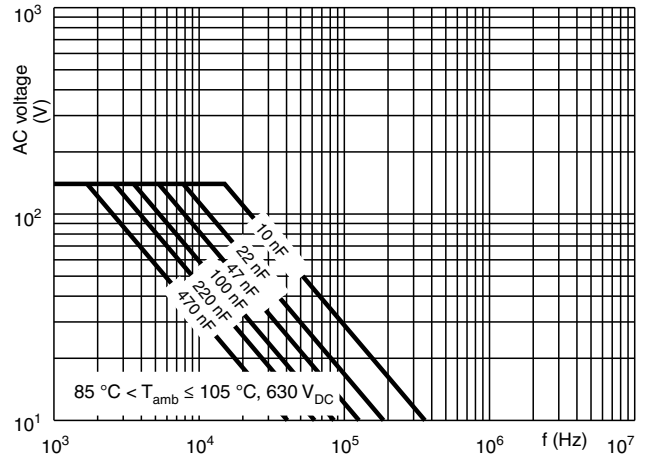
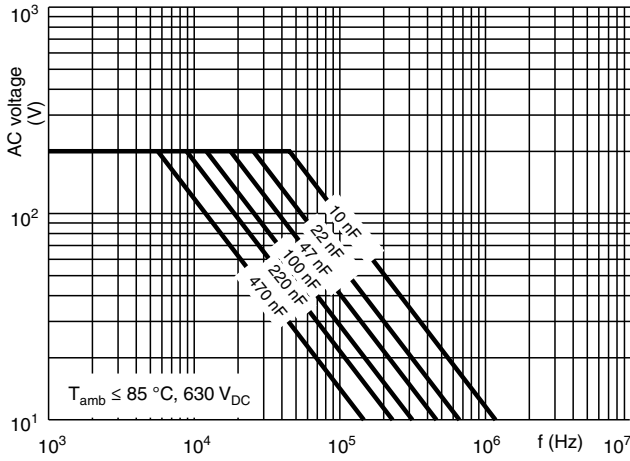


| C<br>( $\mu$ F)  | DIMENSIONS<br>$w_{max.} \times h_{max.} \times l_{max.}$<br>(mm) | MASS<br>(g) | CATALOG NUMBER BFC2479..... AND PACKAGING                  |      |
|--|--|-------------|--|------|
|  |  |             | LOOSE IN BOX   |      |
|  |  |             | $l_t = 4.0 \text{ mm} + 1.0 \text{ mm} / - 0.5 \text{ mm}$ |      |
|  |  |             | SPQ  |      |
| <b>Pitch = 15.0 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |  |             |  |      |
| 0.030  | 6.5 x 18.5 x 18.5  | 1.3         | 90212  | 1250 |
| 0.033  |  |             | 90213  |      |
| 0.036  |  |             | 90214  |      |
| 0.039  |  |             | 90215  |      |
| 0.043  |  |             | 90216  |      |
| 0.047  |  |             | 90217  |      |
| 0.051  |  |             | 90218  |      |
| 0.056  |  |             | 90219  |      |
| 0.062  |  |             | 7.0 x 19.0 x 18.5  |      |
| 0.068  | 7.5 x 19.5 x 18.5  | 1.5         | 90222  | 1000 |
| 0.075  | 8.0 x 20.0 x 18.5  | 1.6         | 90223  | 1000 |
| 0.082  |  |             | 90224  |      |
| 0.091  | 8.5 x 20.5 x 18.5  | 1.7         | 90225  | 900  |
| 0.10   | 9.0 x 21.0 x 18.5  | 1.8         | 90226  | 800  |
| 0.11   | 9.5 x 21.5 x 18.5  | 1.9         | 90227  | 800  |
| <b>Pitch = 22.5 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |  |             |  |      |
| 0.12   | 6.5 x 22.5 x 26.0  | 1.7         | 90228  | 900  |
| 0.13   | 7.0 x 23.0 x 26.0  | 1.8         | 90229  | 850  |
| 0.15   | 7.5 x 23.5 x 26.0  | 1.9         | 90231  | 750  |
| 0.16   |  |             | 90232  |      |
| 0.18   | 8.0 x 24.0 x 26.0  | 2.0         | 90233  | 700  |
| 0.20   | 8.5 x 24.5 x 26.0  | 2.1         | 90234  | 650  |
| 0.22   | 9.0 x 25.0 x 26.0  | 2.4         | 90235  | 600  |
| 0.24   |  |             | 90236  |      |
| 0.27   | 9.5 x 25.5 x 26.0  | 2.5         | 90237  | 550  |
| 0.30   | 10.0 x 26.0 x 26.0   | 2.7         | 90238  | 500  |
| <b>Pitch = 27.5 mm <math>\pm</math> 1.0 mm; <math>d_t = 0.80 \text{ mm} \pm 0.08 \text{ mm}</math></b> |  |             |  |      |
| 0.33   | 9.5 x 25.5 x 30.0  | 5.0         | 90239  | 450  |
| 0.36   | 10.0 x 25.5 x 30.0   | 5.0         | 90241  | 450  |
| 0.39   | 10.5 x 26.0 x 30.0   | 5.0         | 90242  | 400  |
| 0.43   | 11.0 x 26.0 x 30.0   | 5.5         | 90243  | 400  |
| 0.47   | 11.5 x 27.5 x 30.0   | 5.5         | 90244  | 350  |
| 0.51   | 12.0 x 28.0 x 30.0   | 6.0         | 90245  | 350  |
| 0.56   | 13.0 x 29.0 x 30.0   | 6.5         | 90246  | 300  |
| 0.62   | 13.5 x 29.5 x 30.0   | 6.5         | 90247  | 250  |
| 0.68   | 14.0 x 30.0 x 30.0   | 7.0         | 90248  | 250  |

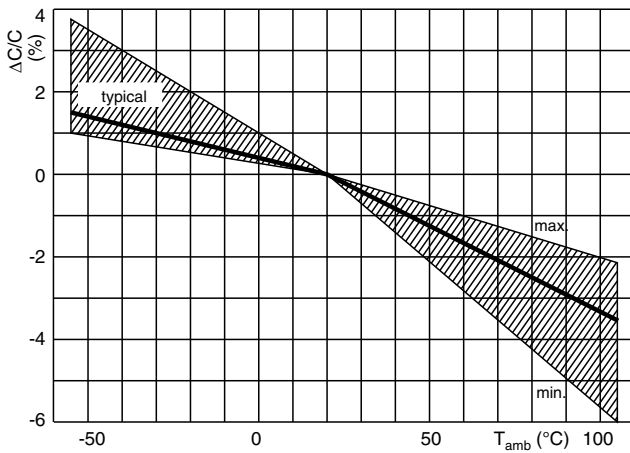


MAXIMUM RMS VOLTAGE (SINEWAVE) AS A FUNCTION OF FREQUENCY

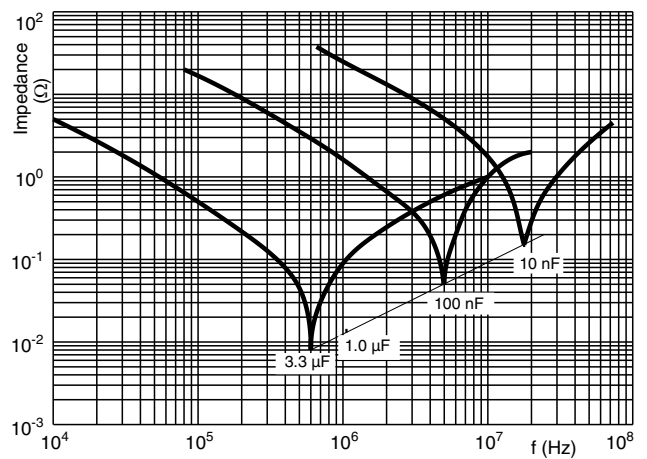




**CAPACITANCE**



**IMPEDANCE**







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