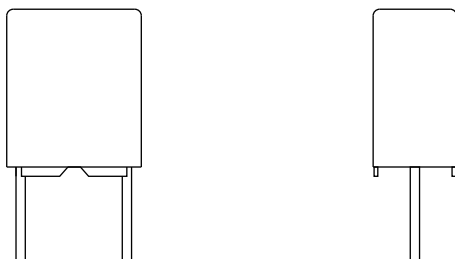




AC and Pulse Metallized Polypropylene Film Capacitors MKP Radial Potted Type



FEATURES

- 5 mm pitch
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912


**RoHS
COMPLIANT**

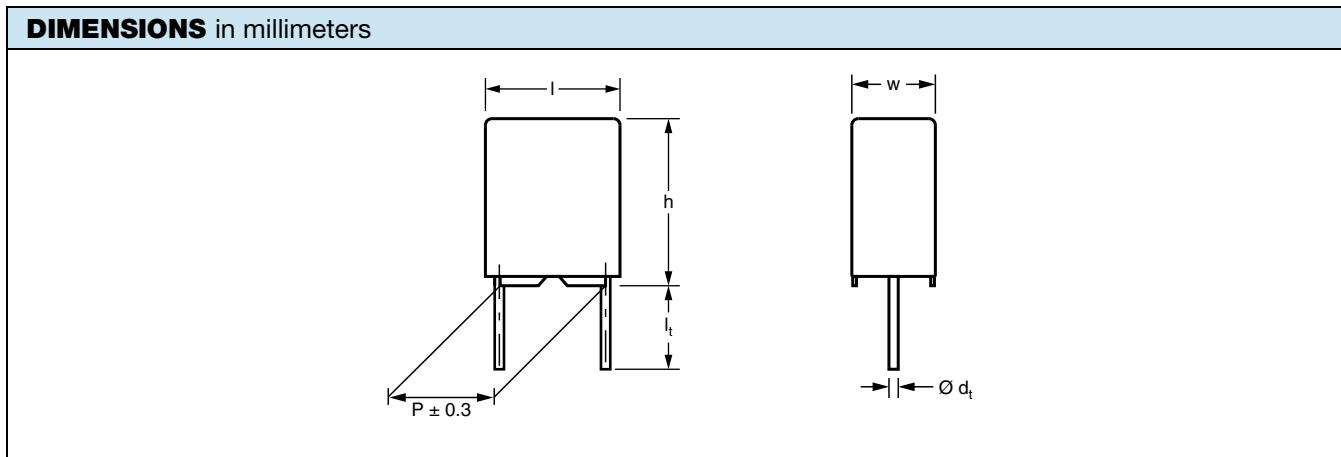
APPLICATIONS

Low losses due to low contact resistance and low loss dielectric make these products suitable for applications where high currents at high frequency occur or high stability is preferred.

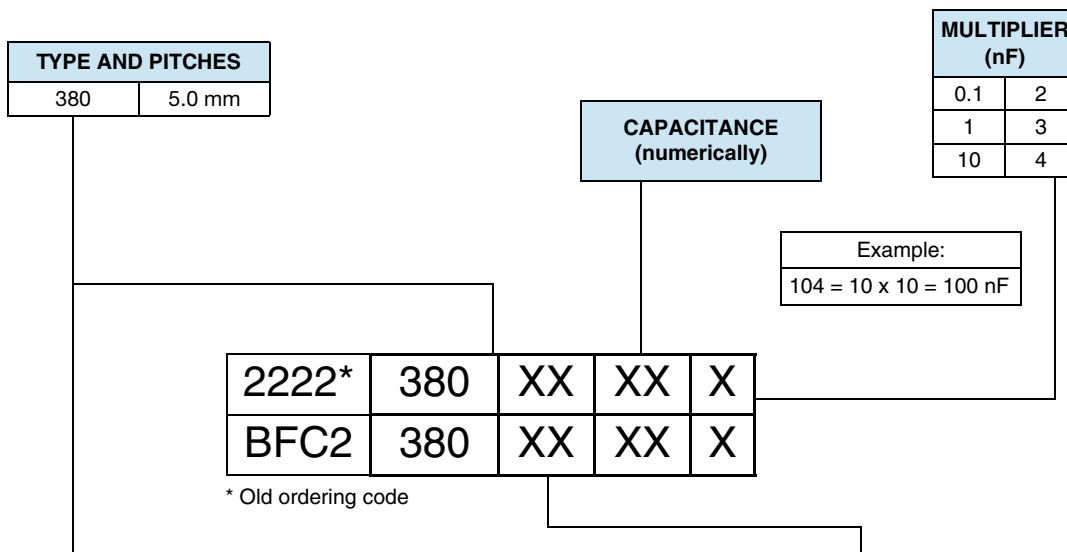
| QUICK REFERENCE DATA | |
|---------------------------------|---|
| Capacitance range (E24 series) | 0.0022 μ F to 0.1 μ F |
| Capacitance tolerance | $\pm 10\%$, $\pm 5\%$ |
| Climatic category | 55/085/56 |
| Maximum application temperature | 85 $^{\circ}$ C |
| Reference specifications | IEC 60384-17 |
| Dielectric | Polypropylene film |
| Electrodes | Metallized film |
| Construction | Wound mono construction |
| Encapsulation | Flame retardant plastic case and epoxy resin UL-class 94 V-0 |
| Leads | Tinned wire |
| Marking | C-value; tolerance; rated voltage; manufacturer's type designation; code for dielectric material; manufacturer's emblem; code for factory of origin; year and week of manufacture |
| Rated DC voltage | 100 V _{DC} ; 160 V _{DC} ; 250 V _{DC} ; 400 V _{DC} ; 630 V _{DC} |
| Rated AC voltage | 63 V _{AC} ; 100 V _{AC} ; 160 V _{AC} ; 200 V _{AC} |
| Rated peak-to-peak voltage | 180 V; 280 V; 450 V; 560 V |
| Rated temperature | 85 $^{\circ}$ C |
| Performance grade | Grade 1 (long life) |
| Stability grade | Grade 2 |

Note

- For more detailed data and test requirements contact: dc-film@vishay.com



COMPOSITION OF CATALOG NUMBER



| TYPE | PACKAGING | LEAD CONFIGURATION | PREFERRED TYPES | | | | | |
|------|--------------|---|-----------------|-------|-------|-------|-------|-------|
| | | | C-TOL. | 100 V | 160 V | 250 V | 400 V | 630 V |
| 380 | Ammopack | H = 18.5 mm; P ₀ = 12.7 mm | ± 10 % | 25 | 35 | 45 | 55 | 65 |
| TYPE | PACKAGING | LEAD CONFIGURATION | ON REQUEST | | | | | |
| 380 | Ammopack | H = 18.5 mm; P ₀ = 12.7 mm | ± 5 % | 26 | 36 | 46 | 56 | 66 |
| | Loose in box | Lead length 4.0 mm + 1.0 mm / - 0.5 mm | ± 10 % | 21 | 31 | 41 | 51 | 61 |
| | | | ± 5 % | 22 | 32 | 42 | 52 | 62 |



| SPECIFIC REFERENCE DATA - 100 V _{DC} | | |
|---|-------------------------|-------------------------|
| DESCRIPTION | VALUE | |
| Tangent of loss angle: | at 10 kHz | at 100 kHz |
| 0.018 μF ≤ C ≤ 0.027 μF | ≤ 10 x 10 ⁻⁴ | ≤ 15 x 10 ⁻⁴ |
| 0.027 μF < C ≤ 0.075 μF | ≤ 10 x 10 ⁻⁴ | ≤ 20 x 10 ⁻⁴ |
| 0.075 μF < C ≤ 0.1 μF | ≤ 10 x 10 ⁻⁴ | ≤ 25 x 10 ⁻⁴ |
| Rated voltage pulse slope (dU/dt) _R at 100 V (DC) | 80 V/μs | |
| R between leads for C ≤ 1.0 μF at 100 V; 1 min | > 100 000 MΩ | |
| R between interconnected leads and case; 100 V; 1 min | > 100 000 MΩ | |
| Withstanding (DC) voltage (cut off current 10 mA) ⁽¹⁾ ; rise time 1000 V/s | 160 V; 1 min | |
| Withstanding (DC) voltage between leads and case | 2840 V; 1 min | |

Note

⁽¹⁾ See "Voltage Proof Test for Metalized Film Capacitors": www.vishay.com/doc?28169

| ELECTRICAL DATA AND ORDERING CODE | | | | | | |
|--|--------------|---------------------------------|----------------------------|---|------|--|
| U _{RDC} (V) | CAP. (μF) | DIMENSIONS w x h x l (mm) | MASS ⁽²⁾ (g) | CATALOG NUMBER BFC2 380 AND PACKAGING | | |
| | | | | AMMOPACK ⁽¹⁾ | | LOOSE IN BOX |
| | | | | H = 18.5 mm, P ₀ = 12.7 mm | | I _t = 4.0 mm + 1.0 mm / - 0.5 mm |
| | | | | C-TOL. = ± 10 % | SPQ | SPQ |
| LAST 5 DIGITS OF CATALOG NUMBER | | | | | | |
| PITCH = 5.0 mm ± 0.3 mm; d _t = 0.50 mm ± 0.05 mm; U _{RAC} = 63 V; U _{p-p} = 180 V | | | | | | |
| 100 | 0.018 | 3.5 x 8.0 x 7.2 | 0.30 | 25183 | 1500 | 2000 |
| | 0.020 | | | 25203 | | |
| | 0.022 | | | 25223 | | |
| | 0.024 | | | 25243 | | |
| | 0.027 | | | 25273 | | |
| | 0.030 | | | 25303 | | |
| | 0.033 | 25333 | 1000 | | | |
| | 0.036 | 25363 | | | | |
| | 0.039 | 25393 | | | | |
| | 0.043 | 25433 | | | | |
| | 0.047 | 25473 | 750 | | | |
| | 0.051 | 25513 | | | | |
| | 0.056 | 25563 | | | | |
| | 0.062 | 25623 | | | | |
| 0.068 | 25683 | | | | | |
| 0.075 | 25753 | | | | | |
| 0.082 | 25823 | | | | | |
| 0.091 | 25913 | | | | | |
| 0.100 | 25104 | | | | | |

Notes

- ⁽¹⁾ H = in-tape height; P₀ = sprocket hole distance; for detailed specifications refer to packaging information
⁽²⁾ Weight for short lead product only
 • SPQ = Standard Packing Quantity



| SPECIFIC REFERENCE DATA - 160 V _{DC} | | |
|---|-------------------------|-------------------------|
| DESCRIPTION | VALUE | |
| Tangent of loss angle: | at 10 kHz | at 100 kHz |
| 0.013 μF ≤ C ≤ 0.027 μF | ≤ 10 × 10 ⁻⁴ | ≤ 15 × 10 ⁻⁴ |
| 0.027 μF < C ≤ 0.068 μF | ≤ 10 × 10 ⁻⁴ | ≤ 20 × 10 ⁻⁴ |
| Rated voltage pulse slope (dU/dt) _R at 160 V (DC) | 80 V/μs | |
| R between leads for C ≤ 1.0 μF at 100 V; 1 min | > 100 000 MΩ | |
| R between interconnected leads and case; 100 V; 1 min | > 100 000 MΩ | |
| Withstanding (DC) voltage (cut off current 10 mA) ⁽¹⁾ ; rise time 1000 V/s | 256 V; 1 min | |
| Withstanding (DC) voltage between leads and case | 2840 V; 1 min | |

Note

⁽¹⁾ See "Voltage Proof Test for Metalized Film Capacitors": www.vishay.com/doc?28169

| ELECTRICAL DATA AND ORDERING CODE | | | | | | | |
|---|--------------|---------------------------------|----------------------------|---|------|--|-----|
| U _{RDC} (V) | CAP. (μF) | DIMENSIONS w x h x l (mm) | MASS ⁽²⁾ (g) | CATALOG NUMBER BFC2 380 AND PACKAGING | | | |
| | | | | AMMOPACK ⁽¹⁾ | | LOOSE IN BOX | |
| | | | | H = 18.5 mm, P ₀ = 12.7 mm | | l _t = 4.0 mm + 1.0 mm / - 0.5 mm | |
| | | | | C-TOL. = ± 10 % | SPQ | SPQ | |
| | | | | LAST 5 DIGITS OF CATALOG NUMBER | | | |
| PITCH = 5.0 mm ± 0.3 mm; d _t = 0.50 mm ± 0.05 mm; U _{RAC} = 100 V; U _{p-p} = 280 V | | | | | | | |
| 160 | 0.013 | 3.5 x 8.0 x 7.2 | 0.30 | 35133 | 1500 | 2000 | |
| | 0.015 | | | 35153 | | | |
| | 0.016 | | | 35163 | | | |
| | 0.018 | | | 35183 | | | |
| | 0.020 | | | 35203 | | | |
| | 0.022 | | | 35223 | | | |
| | 0.024 | | | 35243 | 1000 | | |
| | 0.027 | | | 35273 | | | |
| | 0.030 | | | 35303 | | | |
| | 0.033 | | | 35333 | | | |
| | 0.036 | | | 35363 | | | 750 |
| | 0.039 | | | 35393 | | | |
| | 0.043 | 35433 | | | | | |
| | 0.047 | 35473 | | | | | |
| | 0.051 | 35513 | 750 | | | | |
| | 0.056 | 35563 | | | | | |
| | 0.062 | 35623 | | | | | |
| | 0.068 | 35683 | | | | | |
| | | 4.5 x 9.0 x 7.2 | 0.42 | | | | |

Notes

⁽¹⁾ H = in-tape height; P₀ = sprocket hole distance; for detailed specifications refer to packaging information

⁽²⁾ Weight for short lead product only

- SPQ = Standard Packing Quantity



| SPECIFIC REFERENCE DATA - 250 V _{DC} | | |
|--|--------------------------|--------------------------|
| DESCRIPTION | VALUE | |
| Tangent of loss angle: | at 10 kHz | at 100 kHz |
| 0.0091 $\mu\text{F} \leq C \leq 0.027 \mu\text{F}$ | $\leq 10 \times 10^{-4}$ | $\leq 15 \times 10^{-4}$ |
| 0.027 $\mu\text{F} < C \leq 0.043 \mu\text{F}$ | $\leq 10 \times 10^{-4}$ | $\leq 20 \times 10^{-4}$ |
| Rated voltage pulse slope (dU/dt) _R at 250 V (DC) | 90 V/ μs | |
| R between leads for $C \leq 1.0 \mu\text{F}$ at 100 V; 1 min | > 100 000 M Ω | |
| R between interconnected leads and case; 100 V; 1 min | > 100 000 M Ω | |
| Withstanding (DC) voltage (cut off current 10 mA) ⁽¹⁾ ; rise time 100 V/s | 400 V; 1 min | |
| Withstanding (DC) voltage between leads and case | 2840 V; 1 min | |

Note

⁽¹⁾ See "Voltage Proof Test for Metalized Film Capacitors": www.vishay.com/doc?28169

| ELECTRICAL DATA AND ORDERING CODE | | | | | | |
|---|---------------------------|---------------------------------|----------------------------|---|------|--|
| U _{RDC} (V) | CAP. (μF) | DIMENSIONS w x h x l (mm) | MASS ⁽²⁾ (g) | CATALOG NUMBER BFC2 380 AND PACKAGING | | |
| | | | | AMMOPACK ⁽¹⁾ | | LOOSE IN BOX |
| | | | | H = 18.5 mm, P ₀ = 12.7 mm | | l _t = 4.0 mm + 1.0 mm / - 0.5 mm |
| | | | | C-TOL. = $\pm 10 \%$ | SPQ | SPQ |
| | | | | LAST 5 DIGITS OF CATALOG NUMBER | | |
| PITCH = 5.0 mm \pm 0.3 mm; d _t = 0.50 mm \pm 0.05 mm; U _{RAC} = 160 V; U _{p-p} = 450 V | | | | | | |
| 250 | 0.0091 | 3.5 x 8.0 x 7.2 | 0.30 | 45912 | 1500 | 2000 |
| | 0.010 | | | 45103 | | |
| | 0.011 | | | 45113 | | |
| | 0.012 | | | 45123 | | |
| | 0.013 | | | 45133 | | |
| | 0.015 | | | 45153 | | |
| | 0.016 | | | 45163 | 1000 | 2000 |
| | 0.018 | | | 45183 | | |
| | 0.020 | | | 45203 | | |
| | 0.022 | | | 45223 | | |
| | 0.024 | | | 45243 | | |
| | 0.027 | | | 45273 | | |
| | 0.030 | 45303 | 750 | 2000 | | |
| | 0.033 | 45333 | | | | |
| | 0.036 | 45363 | | | | |
| | 0.039 | 45393 | | | | |
| | 0.043 | 45433 | | | | |
| | | | | | | |
| | 4.5 x 9.0 x 7.2 | 0.42 | 45433 | 750 | 2000 | |

Notes

⁽¹⁾ H = in-tape height; P₀ = sprocket hole distance; for detailed specifications refer to packaging information

⁽²⁾ Weight for short lead product only

- SPQ = Standard Packing Quantity



| SPECIFIC REFERENCE DATA - 400 V _{DC} | | |
|--|-------------------------|-------------------------|
| DESCRIPTION | VALUE | |
| Tangent of loss angle: | at 10 kHz | at 100 kHz |
| 0.0043 μF ≤ C ≤ 0.0091 μF | ≤ 10 × 10 ⁻⁴ | ≤ 15 × 10 ⁻⁴ |
| 0.0091 μF < C ≤ 0.02 μF | ≤ 10 × 10 ⁻⁴ | ≤ 20 × 10 ⁻⁴ |
| Rated voltage pulse slope (dU/dt) _R at 400 V (DC) | 100 V/μs | |
| R between leads for C ≤ 1.0 μF at 100 V; 1 min | > 100 000 MΩ | |
| R between interconnected leads and case; 100 V; 1 min | > 100 000 MΩ | |
| Withstanding (DC) voltage (cut off current 10 mA) ⁽¹⁾ ; rise time 100 V/s | 640 V; 1 min | |
| Withstanding (DC) voltage between leads and case | 2840 V; 1 min | |

Note

⁽¹⁾ See "Voltage Proof Test for Metalized Film Capacitors": www.vishay.com/doc?28169

| ELECTRICAL DATA AND ORDERING CODE | | | | | | |
|---|------------------|---------------------------------|----------------------------|---|------|--|
| U _{RDC} (V) | CAP. (μF) | DIMENSIONS w x h x l (mm) | MASS ⁽²⁾ (g) | CATALOG NUMBER BFC2 380 AND PACKAGING | | |
| | | | | AMMOPACK ⁽¹⁾ | | LOOSE IN BOX |
| | | | | H = 18.5 mm, P ₀ = 12.7 mm | | l _t = 4.0 mm + 1.0 mm / - 0.5 mm |
| | | | | C-TOL. = ± 10 % | SPQ | SPQ |
| | | | | LAST 5 DIGITS OF CATALOG NUMBER | | |
| PITCH = 5.0 mm ± 0.3 mm; d _t = 0.50 mm ± 0.05 mm; U _{RAC} = 200 V; U _{p-p} = 560 V | | | | | | |
| 400 | 0.0043 | 3.5 x 8.0 x 7.2 | 0.30 | 55432 | 1500 | 2000 |
| | 0.0047 | | | 55472 | | |
| | 0.0051 | | | 55512 | | |
| | 0.0056 | | | 55562 | | |
| | 0.0062 | | | 55622 | | |
| | 0.0068 | | | 55682 | | |
| | 0.0075 | | | 55752 | | |
| | 0.0082 | | | 55822 | | |
| | 0.0091 | 55912 | 1000 | | | |
| | 0.010 | 55103 | | | | |
| | 0.011 | 55113 | | | | |
| | 0.012 | 55123 | | | | |
| | 0.013 | 4.5 x 9.0 x 7.2 | 0.42 | 55133 | 750 | |
| | 0.015 | | | 55153 | | |
| 0.016 | 55163 | | | | | |
| 0.018 | 55183 | | | | | |
| 0.020 | 6.0 x 11.0 x 7.2 | 0.64 | 55203 | | | |

Notes

⁽¹⁾ H = in-tape height; P₀ = sprocket hole distance; for detailed specifications refer to packaging information

⁽²⁾ Weight for short lead product only

- SPQ = Standard Packing Quantity



| SPECIFIC REFERENCE DATA - 630 V _{DC} | | |
|---|-------------------------|-------------------------|
| DESCRIPTION | VALUE | |
| Tangent of loss angle: | at 10 kHz | at 100 kHz |
| 0.0015 μF ≤ C ≤ 0.0091 μF | ≤ 10 × 10 ⁻⁴ | ≤ 15 × 10 ⁻⁴ |
| 0.0091 μF < C ≤ 0.01 μF | ≤ 10 × 10 ⁻⁴ | ≤ 15 × 10 ⁻⁴ |
| Rated voltage pulse slope (dU/dt) _R at 630 V (DC) | 120 V/μs | |
| R between leads for C ≤ 1.0 μF at 500 V; 1 min | > 100 000 MΩ | |
| R between interconnected leads and case; 500 V; 1 min | > 100 000 MΩ | |
| Withstanding (DC) voltage (cut off current 10 mA) ⁽¹⁾ ; rise time 1000 V/s | 880 V; 1 min | |
| Withstanding (DC) voltage between leads and case | 2840 V; 1 min | |

Note

⁽¹⁾ See "Voltage Proof Test for Metalized Film Capacitors": www.vishay.com/doc?228169

| ELECTRICAL DATA AND ORDERING CODE | | | | | | |
|---|--------------|---------------------------------|----------------------------|---|------|--|
| U _{RDC} (V) | CAP. (μF) | DIMENSIONS w x h x l (mm) | MASS ⁽²⁾ (g) | CATALOG NUMBER BFC2 380 AND PACKAGING | | |
| | | | | AMMOPACK ⁽¹⁾ | | LOOSE IN BOX |
| | | | | H = 18.5 mm, P ₀ = 12.7 mm | | I _t = 4.0 mm + 1.0 mm / - 0.5 mm |
| | | | | C-TOL. = ± 10 % | SPQ | SPQ |
| LAST 5 DIGITS OF CATALOG NUMBER | | | | | | |
| PITCH = 5.0 ± 0.3 mm; d _t = 0.50 ± 0.05 mm; U _{RAC} = 200 V; U _{p-p} = 560 V | | | | | | |
| 630 | 0.0022 | 3.5 x 8.0 x 7.2 | 0.30 | 65222 | 1500 | 2000 |
| | 0.0024 | | | 65242 | | |
| | 0.0027 | | | 65272 | | |
| | 0.0030 | | | 65302 | | |
| | 0.0033 | | | 65332 | | |
| | 0.0036 | | | 65362 | | |
| | 0.0039 | | | 65392 | | |
| | 0.0043 | | | 65432 | | |
| | 0.0047 | 65472 | | | | |
| | 0.0051 | 65512 | | | | |
| | 0.0056 | 65562 | | | | |
| | 0.0062 | 65622 | 750 | | | |
| | 0.0068 | 65682 | | | | |
| | 0.0075 | 65752 | | | | |
| 0.0082 | 65822 | | | | | |
| 0.0091 | 65912 | | | | | |
| 0.010 | 65103 | | | | | |
| | | 4.5 x 9.0 x 7.2 | 0.42 | | | |

Notes

⁽¹⁾ H = in-tape height; P₀ = sprocket hole distance; for detailed specifications refer to packaging information

⁽²⁾ Weight for short lead product only

- SPQ = Standard Packing Quantity



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