

Metallized Polyester Film Capacitors MKT Radial Type



FEATURES

- 10.0 mm to 27.5 mm lead pitch
- Self-healing properties
- Flame retardant case
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

APPLICATIONS

Blocking, bypassing, filtering, timing, coupling and decoupling circuits, interference suppression in low voltage applications.

| QUICK REFERENCE DATA | |
|--|---|
| Capacitance range (E12 series) | 1000 pF to 15 μ F (preferred values according to E6) |
| Capacitance tolerance | $\pm 20\%$ (M), $\pm 10\%$ (K), $\pm 5\%$ (J) (on request) |
| Climatic testing class according to IEC 60068 | 55/100/56 |
| Reference standards | IEC 60384-2 |
| Dielectric | Polyester film |
| Electrodes | Vacuum deposited aluminum |
| Construction | Extended metallized film |
| Encapsulation | Flame retardant plastic case UL-class 94 V-0 |
| Leads | Tinned wire |
| Marking | Manufacturer's logo; type; C-value; rated voltage; tolerance; date of manufacture |
| Temperature range | $-55\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$ |
| Rated DC voltage | 63 V _{DC} , 100 V _{DC} , 250 V _{DC} , 400 V _{DC} , 630 V _{DC} , 1000 V _{DC} |
| Permissible AC voltages (RMS) up to 60 Hz | 40 V _{AC} , 63 V _{AC} , 160 V _{AC} , 200 V _{AC} , 220 V _{AC} |
| Capacitance drift | Up to $+40\text{ }^{\circ}\text{C}$, $\pm 1.5\%$ for a period of two years |
| Derating for DC and AC category voltage U _C | At $+85\text{ }^{\circ}\text{C}$: U _C = 1.0 U _R At $+100\text{ }^{\circ}\text{C}$: U _C = 0.8 U _R |
| Self inductance | $\sim 6\text{ nH}$ measured with 2 mm long leads |
| Pull test on leads | $\geq 30\text{ N}$ in direction of leads according to IEC 60068-2-21 |

Note

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

| DIMENSIONS in millimeters |
|---------------------------|
| |

COMPOSITION OF CATALOG NUMBER

Note

- For detailed tape specifications refer to packaging information www.vishay.com/docs?28139 or "Recommended Packaging" table

| SPECIFIC REFERENCE DATA | | | | | | |
|---|---|---------------------|---------------------|-------------------------------------|---------------------|----------------------|
| DESCRIPTION | | | | MAX. VALUE | | |
| Tangent of loss angle: $C \leq 0.1 \mu\text{F}$ $0.1 \mu\text{F} < C \leq 1.0 \mu\text{F}$ $C > 1.0 \mu\text{F}$ | | | | at 1 kHz | at 10 kHz | at 100 kHz |
| | | | | 8×10^{-3} | 15×10^{-3} | 25×10^{-3} |
| | | | | 8×10^{-3} | 15×10^{-3} | - |
| | | | 10×10^{-3} | - | - | - |
| PCM (mm) | MAXIMUM PULSE RISE TIME (dV/dt) [V/ μs] | | | | | |
| | 63 V _{DC} | 100 V _{DC} | 250 V _{DC} | 400 V _{DC} | 630 V _{DC} | 1000 V _{DC} |
| 10 | 11 | 13 | 22 | 37 | 60 | 130 |
| 15 | 7 | 8 | 13 | 21 | 33 | 65 |
| 22.5 | 4 | 5 | 8 | 13 | 19 | 34 |
| 27.5 | 3 | 4 | 6 | 10 | 14 | 25 |
| If the maximum pulse voltage is less than the rated voltage higher dV/dt values can be permitted. | | | | | | |
| R between leads, for $C \leq 0.33 \mu\text{F}$ and $U_R \leq 100 \text{ V}$ | | | | > 15 000 M Ω | | |
| R between leads, for $C \leq 0.33 \mu\text{F}$ and $U_R > 100 \text{ V}$ | | | | > 30 000 M Ω | | |
| RC between leads, for $C > 0.33 \mu\text{F}$ and $U_R \leq 100 \text{ V}$ | | | | > 5000 s | | |
| RC between leads, for $C > 0.33 \mu\text{F}$ and $U_R > 100 \text{ V}$ | | | | > 10 000 s | | |
| R between leads and case, 100 V; (foil method) | | | | > 30 000 M Ω | | |
| Withstanding (DC) voltage (cut off current 10 mA); rise time < 1000 V/s | | | | $1.6 \times U_{\text{RDC}}$, 1 min | | |
| Withstanding (DC) voltage between leads and case | | | | $2 \times U_{\text{RDC}}$, 1 min | | |
| Maximum application temperature | | | | 100 °C | | |



| ELECTRICAL DATA | | | | | | |
|-------------------------|--------------|---------------------|-----------------|-----------------|-------------------------|------|
| U _{RDC} (V) | CAP. (μF) | CAPACITANCE CODE | VOLTAGE CODE | V _{AC} | DIMENSIONS W x H x L | PCM |
| 63 | 0.22 | -422 | 06 | 40 | 4.0 x 9.0 x 13.0 | 10 |
| | 0.33 | -433 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.47 | -447 | | | 5.5 x 10.5 x 13.0 | 10 |
| | 0.68 | -468 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 1.0 | -510 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 1.5 | -515 | | | 6.5 x 12.5 x 18.0 | 15 |
| | 2.2 | -522 | | | 7.5 x 13.5 x 18.0 | 15 |
| | 3.3 | -533 | | | 7.5 x 15.5 x 26.5 | 22.5 |
| | 4.7 | -547 | | | 8.5 x 16.5 x 26.5 | 22.5 |
| | 6.8 | -568 | | | 10.5 x 18.5 x 26.5 | 22.5 |
| | 10.0 | -610 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| 15.0 | -615 | 13.5 x 23.5 x 31.5 | 27.5 | | | |
| 100 | 0.068 | -368 | 01 | 63 | 4.0 x 9.0 x 13.0 | 10 |
| | 0.10 | -410 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.15 | -415 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.22 | -422 | | | 4.5 x 9.5 x 13.0 | 10 |
| | 0.33 | -433 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.47 | -447 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.68 | -468 | | | 6.5 x 12.5 x 18.0 | 15 |
| | 1.0 | -510 | | | 7.5 x 13.5 x 18.0 | 15 |
| | 1.5 | -515 | | | 7.5 x 15.5 x 26.5 | 22.5 |
| | 2.2 | -522 | | | 8.5 x 16.5 x 26.5 | 22.5 |
| | 3.3 | -533 | | | 10.5 x 18.5 x 26.5 | 22.5 |
| | 4.7 | -547 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| | 6.8 | -568 | | | 13.5 x 23.5 x 31.5 | 27.5 |
| | 10.0 | -610 | | | 15.0 x 24.5 x 31.5 | 27.5 |
| 15.0 | -615 | 16.5 x 29.5 x 31.5 | 27.5 | | | |
| 250 | 0.033 | -333 | 25 | 160 | 4.0 x 9.0 x 13.0 | 10 |
| | 0.047 | -347 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.068 | -368 | | | 4.5 x 9.5 x 13.0 | 10 |
| | 0.10 | -410 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.15 | -415 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.22 | -422 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.33 | -433 | | | 6.5 x 12.5 x 18.0 | 15 |
| | 0.47 | -447 | | | 6.5 x 14.5 x 26.5 | 22.5 |
| | 0.68 | -468 | | | 7.5 x 15.5 x 26.5 | 22.5 |
| | 1.0 | -510 | | | 8.5 x 16.5 x 26.5 | 22.5 |
| | 1.5 | -515 | | | 9.0 x 18.5 x 31.5 | 27.5 |
| | 2.2 | -522 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| | 3.3 | -533 | | | 13.5 x 23.5 x 31.5 | 27.5 |
| 400 | 0.0010 | -210 | 40 | 200 | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0015 | -215 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0022 | -222 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0033 | -233 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0047 | -247 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0068 | -268 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.010 | -310 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.015 | -315 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.022 | -322 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.033 | -333 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.047 | -347 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.068 | -368 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.10 | -410 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.15 | -415 | | | 6.5 x 12.5 x 18.0 | 15 |
| | 0.22 | -422 | | | 7.5 x 15.5 x 26.5 | 22.5 |
| | 0.33 | -433 | | | 8.5 x 16.5 x 26.5 | 22.5 |
| | 0.47 | -447 | | | 10.5 x 18.5 x 26.5 | 22.5 |
| | 0.68 | -468 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| | 1.0 | -510 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| | 1.5 | -515 | | | 13.5 x 23.5 x 31.5 | 27.5 |



| ELECTRICAL DATA | | | | | | |
|-------------------------|--------------|---------------------|-------------------|-----------------|-------------------------|------|
| U _{RDC} (V) | CAP. (µF) | CAPACITANCE CODE | VOLTAGE CODE | V _{AC} | DIMENSIONS W x H x L | PCM |
| 630 | 0.0010 | -210 | 63 ⁽¹⁾ | 220 | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0015 | -215 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0022 | -222 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0033 | -233 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0047 | -247 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0068 | -268 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.010 | -310 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.015 | -315 | | | 5.5 x 10.5 x 13.0 | 10 |
| | 0.022 | -322 | | | 6.5 x 11.5 x 13.0 | 10 |
| | 0.033 | -333 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.047 | -347 | | | 6.5 x 12.5 x 18.0 | 15 |
| | 0.068 | -368 | | | 7.5 x 13.5 x 18.0 | 15 |
| | 0.10 | -410 | | | 6.5 x 14.5 x 26.5 | 22.5 |
| | 0.15 | -415 | | | 7.5 x 15.5 x 26.5 | 22.5 |
| | 0.22 | -422 | | | 8.5 x 16.5 x 26.5 | 22.5 |
| | 0.33 | -433 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| | 0.47 | -447 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| | 0.68 | -468 | | | 13.5 x 23.5 x 31.5 | 27.5 |
| 1.0 | -510 | 15.0 x 24.5 x 31.5 | 27.5 | | | |
| 1000 | 0.0010 | -210 | 10 ⁽¹⁾ | 220 | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0015 | -215 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0022 | -222 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0033 | -233 | | | 4.0 x 9.0 x 13.0 | 10 |
| | 0.0047 | -247 | | | 5.5 x 10.5 x 13.0 | 10 |
| | 0.0068 | -268 | | | 6.5 x 11.5 x 13.0 | 10 |
| | 0.010 | -310 | | | 5.5 x 10.5 x 18.0 | 15 |
| | 0.015 | -315 | | | 6.5 x 12.5 x 18.0 | 15 |
| | 0.022 | -322 | | | 7.5 x 13.5 x 18.0 | 15 |
| | 0.033 | -333 | | | 6.5 x 14.5 x 26.5 | 22.5 |
| | 0.047 | -347 | | | 7.5 x 15.5 x 26.5 | 22.5 |
| | 0.068 | -368 | | | 8.5 x 16.5 x 26.5 | 22.5 |
| | 0.10 | -410 | | | 10.5 x 18.5 x 26.5 | 22.5 |
| | 0.15 | -415 | | | 11.5 x 20.5 x 31.5 | 27.5 |
| | 0.22 | -422 | | | 13.5 x 23.5 x 31.5 | 27.5 |
| | 0.33 | -433 | | | 16.5 x 29.5 x 31.5 | 27.5 |
| | 0.47 | -447 | | | 20.0 x 35.0 x 31.5 | 27.5 |

Note

⁽¹⁾ Not suitable for mains applications.

| RECOMMENDED PACKAGING | | | | | | | |
|-----------------------|----------------------|-----------------------|--------------------------|---------------------------|-----------|-----------|---------------------|
| LETTER CODE | TYPE OF PACKAGING | HEIGHT (H) (mm) | REEL DIAMETER (mm) | ORDERING CODE EXAMPLES | PCM 10 | PCM 15 | PCM 22.5 TO 27.5 |
| D | Ammo | 16.5 | S ⁽¹⁾ | MKT1822-422-065-D | X | X | - |
| G | Ammo | 18.5 | S ⁽¹⁾ | MKT1822-422-065-G | X | X | - |
| F | Reel | 16.5 | 350 | MKT1822-422-065-F | X | X | - |
| W | Reel | 18.5 | 350 | MKT1822-422-065-W | X | X | - |
| V | Reel | 18.5 | 500 | MKT1822-510-255-V | - | X | X |
| G | Ammo | 18.5 | L ⁽²⁾ | MKT1822-510-255-G | - | - | X |
| - | Bulk | - | - | MKT1822-510-255 | X | X | X |
| - | Bulk | - | - | MKT1822-522-255 | X | - | X |

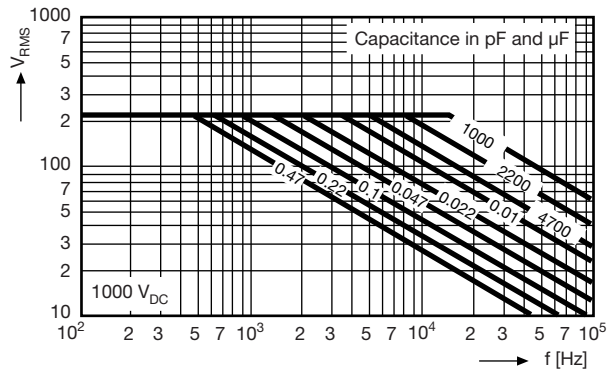
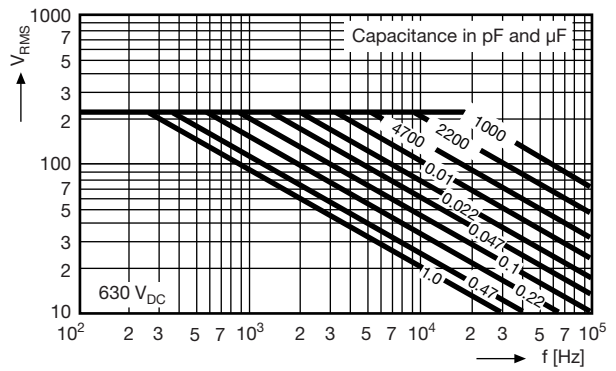
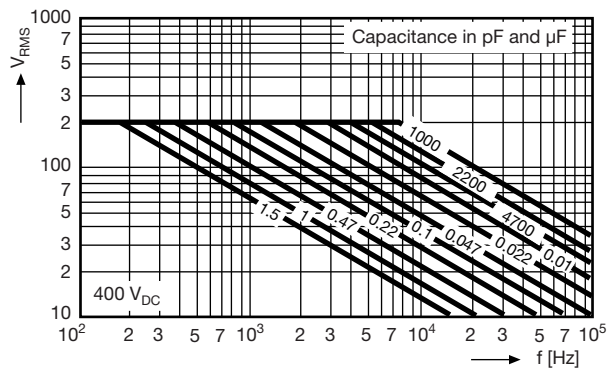
Notes

⁽¹⁾ S = Box size 55 mm x 210 mm x 340 mm (W x H x L)

⁽²⁾ L = Box size 60 mm x 360 mm x 510 mm (W x H x L)



PERMISSIBLE AC VOLTAGE VS. FREQUENCY





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- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
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JONHON

«JONHON» (основан в 1970 г.)

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(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

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