

X1 capacitors
Rated ac voltage 440 V, 50/60 Hz
Construction

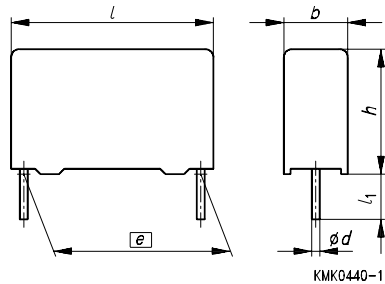
- Dielectric: polyester (MKT)
- Internal series connection
- Plastic case (UL 94 V-0)
- Epoxy resin sealing, flame-retardant

Features

- Self-healing properties

Terminals

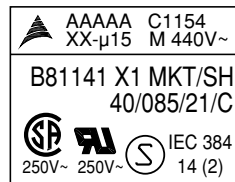
- Parallel wire leads, tinned
- Two standard lead lengths available:
6 mm and 26 mm
Other lead lengths available upon request.



| Lead spacing $e \pm 0,4$ | Lead diameter $\varnothing d$ (mm) | Lead length l_1 (mm) | |
|-----------------------------|---------------------------------------|---------------------------|------------|
| $\leq 27,5$ mm | 0,8 | 6 – 1 | 26 ± 2 |
| 37,5 mm | 1,0 | 6 – 1 | 26 ± 2 |

Marking

Manufacturer's logo, lot number, date code, rated capacitance (coded), capacitance tolerance (code letter), rated ac voltage, type number, interference suppression sub-class (X1), style (MKT), self-healing (SH), climatic category, awarded marks of conformity.



KMK0568-H




Delivery mode

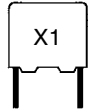
Bulk (untaped)

Taped (Ammo pack or reel)

For notes on taping, refer to chapter "Taping and packing", page 274.

Marks of conformity

| Marks of conformity | Standards | Certificate |
|---|--|-----------------------------------|
|    | EN 132 400, IEC 384-14, 2nd edition UL 1414 (250 V) CSA C22.2 No. 0; 8 (250 V) | 9547071-01 E 97863 LR 59709 |


Ordering codes and packing units

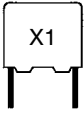
| Lead spacing $\square \varnothing \pm 0,4$ mm | C_R | Maximum dimensions $b \times h \times l$ (mm) | Ordering code ¹⁾ | Packing units (pcs) | | | |
|---|---------|---|-----------------------------|---------------------|------|---------------------|-------|
| | | | | Ammo pack | Reel | Untaped Lead length | |
| | | | | | | 6 mm | 26 mm |
| 15 | 10 nF | 5,0 × 10,5 × 18,0 | B81141-C1103-M*** | 1170 | 1300 | 1000 | 1000 |
| | 22 nF | 7,0 × 12,5 × 18,0 | B81141-C1223-M*** | 830 | 900 | 1000 | 800 |
| | 33 nF | 8,5 × 14,5 × 18,0 | B81141-C1333-M*** | 680 | 700 | 500 | 500 |
| | 47 nF | 9,0 × 17,5 × 18,0 | B81141-C1473-M*** | 640 | 700 | 500 | 500 |
| 22,5 | 68 nF | 8,5 × 16,5 × 26,5 | B81141-C1683-M*** | 480 | 500 | 510 | 450 |
| | 0,10 μF | 10,5 × 16,5 × 26,5 | B81141-C1104-M*** | 390 | 400 | 540 | 350 |
| | 0,15 μF | 11,0 × 20,5 × 26,5 | B81141-C1154-M*** | 370 | 350 | 510 | 300 |
| 27,5 | 0,22 μF | 12,5 × 21,5 × 31,5 | B81141-C1224-M*** | – | 300 | 280 | 200 |
| | 0,33 μF | 14,0 × 24,5 × 31,5 | B81141-C1334-M*** | – | – | 260 | 150 |
| | 0,47 μF | 18,0 × 27,5 × 31,5 | B81141-C1474-M*** | – | – | 200 | 100 |
| 37,5 | 0,68 μF | 16,0 × 28,5 × 41,5 | B81141-C1684-M*** | – | – | 100 | – |

Capacitance tolerance: $\pm 20 \% \hat{=} M$ (closer tolerances upon request)

Technical data

| | |
|---|---|
| Climatic category in accordance with IEC 60068-1 | 40/085/21 |
| Lower category temperature T_{\min} | – 40 °C |
| Upper category temperature T_{\max} | + 85 °C |
| Passive flammability category in accordance with IEC 40 (CO) 752 | C |
| Damp heat test | 21 days/40 °C/93 % relative humidity |
| Limit values after damp heat test | Capacitance change $ \Delta C/C \leq 5 \%$ Dissipation factor change $\Delta \tan \delta \leq 5 \cdot 10^{-3}$ (at 1 kHz) Insulation resistance $R_{is} \geq 50 \%$ of minimum or time constant $\tau = C_R \cdot R_{is}$ as-delivered values |
| Permissible continuous ac voltage | 440 V (50/60 Hz) |
| Permissible continuous dc voltage | 1000 V |
| DC test voltage | 2500 V, 2 s |

- 1) Replace the *** by the code number for the required lead length or packing.
 000 = lead length 6 mm (untaped)
 026 = lead length 26 mm (untaped)
 289 = taped, Ammo pack
 189 = taped, reel



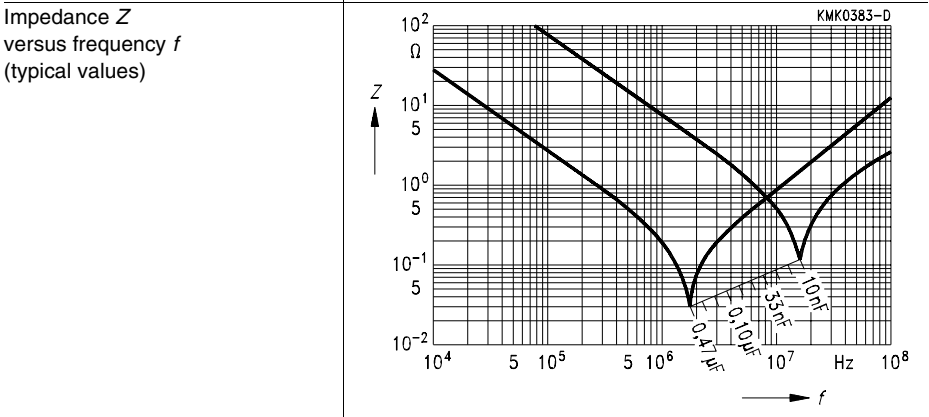
B 81 141

440 Vac

Technical data

| | | | | |
|--|----------|----------------------------|--|-----------------------|
| Dissipation factor $\tan \delta$ (in 10^{-3}) at 20 °C (upper limit values) | | $C_R \leq 0,1 \mu\text{F}$ | $0,1 \mu\text{F} < C_R \leq 1 \mu\text{F}$ | $C_R > 1 \mu\text{F}$ |
| | at 1 kHz | 8 | 8 | 10 |
| | 10 kHz | 15 | 15 | — |
| | 100 kHz | 30 | — | — |

| | | |
|--|-----------------------------|--------------------------|
| Insulation resistance R_{is} or time constant $\tau = C_R \cdot R_{is}$ at 20 °C, rel. humidity $\leq 65\%$ (minimum as-delivered values) | $C_R \leq 0,33 \mu\text{F}$ | $C_R > 0,33 \mu\text{F}$ |
| | 30 000 M Ω | 10 000 s |



Pulse handling capability

Maximum permissible voltage change per unit of time for non-sinusoidal voltages (pulse, sawtooth).

| | | | | |
|---------|---|---------|---------|---------|
| V_R | Max. rate of voltage rise V_{pp}/τ in V/ μs (for $V_{pp} = \hat{V}_R$) | | | |
| | Lead spacing | | | |
| | 15 mm | 22,5 mm | 27,5 mm | 37,5 mm |
| 440 Vac | 80 | 50 | 30 | 15 |

For $V_{pp} < \hat{V}_R$, the permissible voltage rise rate V_{pp}/τ may be multiplied by the factor \hat{V}_R/V_{pp} .
Also refer to the calculation example in chapter “General technical information”, page 302.

| | | | | |
|---------|---|---------|---------|---------|
| V_R | Pulse characteristic k_0 in $\text{V}^2/\mu\text{s}$ (for $V_{pp} \leq \hat{V}_R$) | | | |
| | Lead spacing | | | |
| | 15 mm | 22,5 mm | 27,5 mm | 37,5 mm |
| 440 Vac | 100 000 | 50 000 | 30 000 | 18 000 |

Herausgegeben von EPCOS AG

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Published by EPCOS AG

Marketing Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

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