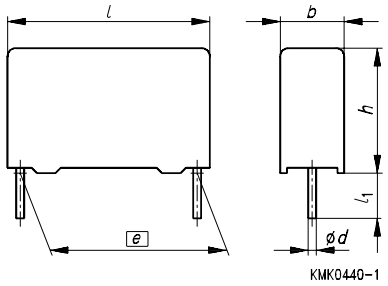
Not for new design

X2 capacitors with small dimensions
Rated ac voltage 275 V, 50/60 Hz[1)]



KMK0440-1

Construction

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

Features

- Self-healing properties

Terminals

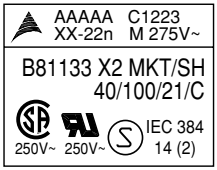
- Parallel wire leads, tinned
- Standard lead lengths see table.
  Other lead lengths available upon request.

Lead spacing e ±0,4	Lead diameter ød (mm)	Lead length l_1 (mm)	
≤ 27,5 mm	0,8	6 – 1	26 ±2
37,5 mm	1,0	6 – 1	30 +2

Marking

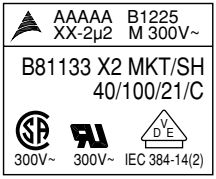
Manufacturer's logo, lot number,
date code, rated capacitance (coded),
capacitance tolerance (code letter),
rated ac voltage, type number,
interference suppression sub-class (X2),
style (MKT), self-healing (SH),
climatic category,
awarded marks of conformity.

Lead spacing ≤ 27,5 mm



KMK0569-Q

Lead spacing = 37,5 mm



KMK0627-L

Delivery mode

Bulk (untaped)
Taped (Ammo pack or reel)
or notes on taping, refer to chapter "Taping and packing", page 274.

Marks of conformity

Marks of conformity	Standards	Certificate
	EN 132400 / IEC 384-14, 2nd edition	9516010-01
	UL 1283 (250 V)	E157153
	UL 1414	E97863/95NK32316
	CSA C22.2 No. 0; 1 (250 V)	LR 59709
	CSA C22.2 No. 0; 8 (250 V)	LR 59709
for 300 V (lead spacing = 37,5 mm):		
	DIN EN 132400 / IEC 384-14, 2nd edition	18643-4670-0011/315A3 ZS/HV
	CSA C22.2 No. 0; 8	LR59709-35
	UL 1283	E157153

1) Rated ac voltage for lead spacing 37,5 mm = 300 V, 50/60 Hz

Ordering codes and packing units

Lead spacing e ±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	22 nF	5,0 × 10,5 × 18,0	B81133-C1223-M***	1170	1300	1000	1000
	33 nF	5,0 × 10,5 × 18,0	B81133-C1333-M***	1170	1300	1000	1000
	47 nF	6,0 × 11,0 × 18,0	B81133-C1473-M***	960	1100	1000	1000
	68 nF	7,0 × 12,5 × 18,0	B81133-C1683-M***	830	900	1000	800
	0,10 µF	8,5 × 14,5 × 18,0	B81133-D1104-M***	680	700	500	500
	0,15 µF	8,5 × 14,5 × 18,0	B81133-D1154-M***	680	700	500	500
22,5	0,10 µF	6,0 × 15,0 × 26,5	B81133-C1104-M***	680	700	720	500
	0,15 µF	7,0 × 16,0 × 26,5	B81133-C1154-M***	580	600	630	500
	0,22 µF	8,5 × 16,5 × 26,5	B81133-C1224-M***	480	500	510	450
	0,33 µF	10,5 × 16,5 × 26,5	B81133-D1334-M***	390	400	540	350
	0,47 µF	11,0 × 20,5 × 26,5	B81133-D1474-M***	370	350	510	300
27,5	0,33 µF	11,0 × 21,0 × 31,5	B81133-C1334-M***	—	350	320	200
	0,47 µF	11,0 × 21,0 × 31,5	B81133-C1474-M***	—	350	320	200
	0,68 µF	12,5 × 21,5 × 31,5	B81133-C1684-M***	—	300	280	200
	1,0 µF	14,0 × 24,5 × 31,5	B81133-C1105-M***	—	250	260	150
	1,5 µF	18,0 × 27,5 × 31,5	B81133-C1155-M***	—	—	200	100
37,5[2]	2,2 µF	18,0 × 32,5 × 41,5	B81133-B1225-M***	—	—	90	70

Capacitance tolerance: ± 20 % ≙ M (closer tolerances upon request)

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
2) Rated ac voltage for lead spacing 37,5 mm = 300 V, 50/60 Hz

X2

B 81 133

275 Vac

Not for new design

Technical data

Climatic category in accordance with IEC 60068-1	40/100/21
Lower category temperature T_{min} Upper category temperature T_{max}	– 40 °C + 100 °C
Passive flammability category in acc. with IEC 40 (CO) 752	C
Damp heat test	21 days/40 °C/93 % relative humidity
Limit values after damp heat test	Capacitance change $\lvert\Delta C/C\rvert$ ≤ 5 % Dissipation factor change $\Delta \tan \delta$ ≤ $5 \cdot 10^{-3}$ (at 1 kHz) Insulation resistance R_{is} ≥ 50 % of minimum or time constant $\tau = C_R \cdot R_{is}$ as-delivered values
Permissible continuous ac voltage	275 V (50/60 Hz)
Permissible continuous dc voltage	630 V
DC test voltage	1800 V, 2 s

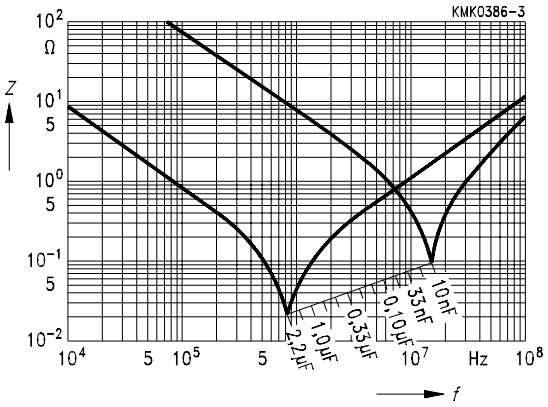
Dissipation factor tan δ (in 10^{-3}) at 20 °C (upper limit values)

	$C_R \leq 0{,}1$ µF	0,1 µF < $C_R \leq 1$ µF	$C_R > 1$ µF
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 ≤ 65 % (minimum as-delivered values)

$C_R \leq 0{,}33$ µF	$C_R > 0{,}33$ µF
30 000 MΩ	10 000 s

Impedance Z versus frequency f (typical values)



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
275 Vac	60	30	20	8

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 V²/µs (for $V_{pp} \leq \hat{V}_R$) Lead spacing			
	15 mm	22,5 mm	27,5 mm	37,5 mm
275 Vac	45 000	20 000	12 000	55 000

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