EMI Suppression Capacitors (MKP)

Series/Type: **B81130***

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B81130*	B3292*	2007-08-10	2008-09-30	2008-12-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

Not for new design

Typical applications

- X2 class for interference suppression
- "Across the line" applications

Climatic

- Max. operating temperature: 100 °C
- Climatic category (IEC 60068-1): 40/100/21

Construction

- Dielectric: polypropylene (MKP)
- Plastic case (UL 94 V-0)
- Epoxy resin sealing (UL 94 V-0)

Features

- Small dimensions
- Self-healing properties

Terminals

- Parallel wire leads, lead-free tinned
- Standard lead lengths: 6 −1 mm
- Special lead lengths available on request

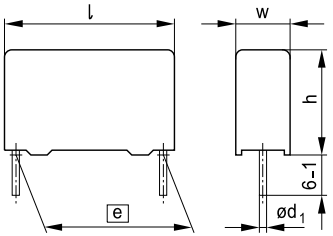
Marking

Manufacturer's logo, lot number,
date code, rated capacitance (coded),
cap. tolerance (code letter),
rated AC voltage,
series number, sub-class (X2),
dielectric code (MKP), climatic category,
passive flammability category, approvals.

Delivery mode

Bulk (untaped)
Taped (Ammo pack or reel)
For taping details, refer to chapter
"Taping and packing".

Dimensional drawing



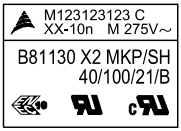
KMK0835-P-E

Dimensions in mm

Lead spacing e ±0.4	Lead diameter d_1
10 mm	0.6
15 ... 27.5 mm	0.8

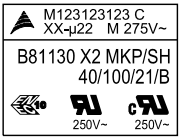
Marking examples

e = 10 mm



KMK0817-R

e ≥15 mm/C_R≤1 µF



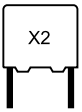
KMK0818-Z

e = 27.5 mm/C_R>1 µF

KMK0819-8

Approvals

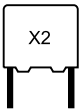
Marks of conformity	Standards	Certificate
	EN 132400, IEC 60384-14	138554
	UL 1414 / UL 1283	E97863 / E157153
	CSA C22.2 No.1	E97863
	CQC (GB/T 14472-1998)	CQC02001001667



Not for new design

Overview of available types

Lead spacing	10 mm	15 mm	22.5 mm	27.5 mm
C_R (µF)				
0.010				
0.015				
0.022				
0.033				
0.047				
0.056				
0.068				
0.10				
0.15				
0.22				
0.33				
0.47				
0.68				
1.0				
1.5				
2.2				



B81130

X2 / 275 VAC

Not for new design

Ordering codes and packing units

Lead spacing	C_R	Max. dimensions w × h × l	Ordering code (composition see	Ammo pack	Reel	Untaped
mm	µF	mm	below)	pcs./unit	pcs./unit	pcs./unit
10	0.010	4.0 × 9.0 × 13.0	B81130C1103+***	1000	1700	1000
	0.015	4.0 × 9.0 × 13.0	B81130C1153+***	1000	1700	1000
	0.022	5.0 × 11.0 × 13.0	B81130C1223+***	830	1300	1000
	0.033	5.0 × 11.0 × 13.0	B81130C1333M***	830	1300	1000
	0.033	6.0 × 12.0 × 13.0	B81130A1333+***	680	1100	1000
	0.047	6.0 × 12.0 × 13.0	B81130C1473+***	680	1100	1000
15	0.022	5.0 × 10.5 × 18.0	B81130B1223+***	1170	1300	1000
	0.033	5.0 × 10.5 × 18.0	B81130B1333+***	1170	1300	1000
	0.047	5.0 × 10.5 × 18.0	B81130B1473+***	1170	1300	1000
	0.056	5.0 × 10.5 × 18.0	B81130C1563M***	1170	1300	1000
	0.068	6.0 × 11.0 × 18.0	B81130C1683+***	960	1100	1000
	0.10	6.0 × 12.0 × 18.0	B81130C1104M***	960	1100	1000
	0.10	7.0 × 12.5 × 18.0	B81130A1104+***	830	900	1000
	0.15	8.5 × 14.5 × 18.0	B81130C1154+***	680	700	500
	0.22	9.0 × 17.5 × 18.0	B81130C1224+***	640	700	500
22.5	0.15	6.0 × 15.0 × 26.5	B81130B1154+***	680	700	720
	0.22	7.0 × 16.0 × 26.5	B81130B1224+***	580	600	630
	0.33	8.5 × 16.5 × 26.5	B81130C1334+***	480	500	510
	0.47	10.5 × 16.5 × 26.5	B81130C1474M***	390	400	540
	0.47	10.5 × 18.5 × 26.5	B81130A1474+***	390	400	540
	0.68	11.0 × 20.5 × 26.5	B81130C1684+***	370	350	510
27.5	0.47	11.0 × 21.0 × 31.5	B81130B1474+***	–	350	320
	0.68	11.0 × 21.0 × 31.5	B81130B1684+***	–	350	320
	1.0	12.5 × 21.5 × 31.5	B81130C1105M***	–	300	280
	1.0	13.5 × 23.0 × 31.5	B81130A1105+***	–	250	260
	1.5	15.0 × 24.5 × 31.5	B81130C1155M***	–	–	240
	1.5	18.0 × 27.5 × 31.5	B81130A1155+***	–	–	200
	2.2	18.0 × 27.5 × 31.5	B81130C1225M***	–	–	200
	2.2	19.0 × 30.0 × 31.5	B81130A1225+***	–	–	180

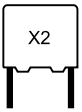
Further E series and intermediate capacitance values on request.

Composition of ordering code

+ = Capacitance tolerance code:
M = ±20%
K = ±10%

(Closer tolerances on request)

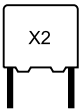
*** = Packaging code:
289 = Ammo pack
189 = Reel
000 = Untaped (lead length 6 −1 mm)



Not for new design

Technical data

Max. operating temperature $T_{op,max}$	+100 °C		
Dissipation factor tan δ (in 10^{-3}) at 20 °C (upper limit values)		$C_R \leq 0.1$ µF	$C_R > 0.1$ µF
	at 1 kHz	1.0	1.0
	100 kHz	5.0	–
Insulation resistance R_{ins} or time constant $\tau = C_R \cdot R_{ins}$ at 20 °C, rel. humidity ≤ 65% (minimum as-delivered values)	$C_R \leq 0.33$ µF	$C_R > 0.33$ µF	
	100 000 MΩ	30 000 s	
DC test voltage	2121 V, 2 s		
Passive flammability category to IEC 40 (CO) 752	B		
Maximum continuous AC voltage (V_{AC})	310 V (50/60 Hz)		
Rated AC voltage (IEC 60384-14)	275 V (50/60 Hz)		
Maximum continuous DC voltage (V_{DC})	760 V		
Operating AC voltage V_{op} at high temperature	$T_A \leq 100$ °C	$V_{op} = V_{AC}$	(continuously)
	$T_A \leq 100$ °C	$V_{op} = 1.25 \cdot V_{AC}$	(1000 h)
Damp heat test Limit values after damp heat test	21 days / 40 °C / 93% relative humidity Capacitance change $\lvert\Delta C/C\rvert$ ≤ 5% Dissipation factor change $\Delta \tan \delta$ ≤ $0.5 \cdot 10^{-3}$ (at 1 kHz) Insulation resistance R_{ins} ≤ $1.0 \cdot 10^{-3}$ (at 10 kHz) or time constant $\tau = C_R \cdot R_{ins}$ ≥ 50% of minimum as-delivered values		



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X2 / 275 VAC

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Pulse handling capability

"dV/dt" represents the maximum permissible voltage change per unit of time for non-sinusoidal voltages, expressed in V/µs.

"k_0" represents the maximum permissible pulse characteristic of the waveform applied to the capacitor, expressed in $V^2/\mu s$.

Note:
The values of dV/dt and k_0 provided below must not be exceeded in order to avoid damaging the capacitor.

dV/dt and k_0 values

Lead spacing	10 mm	15 mm	22.5 mm	27.5 mm
dV/dt in V/µs	550	400	200	150
k_0 in $V^2/\mu s$	429 000	312 000	156 000	117 000

Impedance Z versus frequency f

(typical values)