



Film Capacitors

EMI Suppression Capacitors (MKP)

Series/Type: B81123
Date: June 2006

Typical applications

- Y1 class for interference suppression
- "Line to ground" applications

Climatic

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

Construction

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

Features

- 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 (Y1), dielectric code (MKP), climatic category, passive flammability category, approvals.

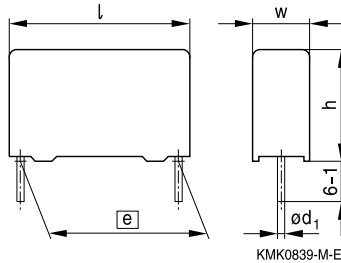
Delivery mode

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

Approvals

Marks of conformity	Standards	Certificate
	EN 132400, IEC 60384-14	138584
	UL 1414 (double protection)	E97863

Dimensional drawing



Dimensions in mm

Lead spacing	Lead diameter d ₁
$e \pm 0.4$	
15 mm, 22.5 mm	0.8

Marking example



KMK1169-9

Overview of available types

Lead spacing	15 mm	22.5 mm
C_R (μF)		
0.0010		
0.0015		
0.0022		
0.0033		
0.0047		
0.0056		
0.0068		
0.010		

Ordering codes and packing units

Lead spacing	C_R	Max. dimensions $w \times h \times l$ mm	Ordering code (composition see below)	Ammo pack pcs./unit	Reel pcs./unit	Untaped pcs./unit
mm	μF					
15	0.0010	$5.0 \times 10.5 \times 18.0$	B81123C1102M***	1170	1300	1000
	0.0015	$6.0 \times 11.0 \times 18.0$	B81123C1152M***	960	1100	1000
	0.0022	$7.0 \times 12.5 \times 18.0$	B81123C1222M***	830	900	1000
	0.0033	$8.5 \times 14.5 \times 18.0$	B81123C1332M***	680	700	500
	0.0047	$9.0 \times 17.5 \times 18.0$	B81123C1472M***	640	700	500
22.5	0.0056	$7.0 \times 16.0 \times 26.5$	B81123C1562M***	580	600	630
	0.0068	$8.5 \times 16.5 \times 26.5$	B81123C1682M***	480	500	510
	0.010	$10.5 \times 16.5 \times 26.5$	B81123C1103M***	390	400	540

Further E series and intermediate capacitance values on request.

Composition of ordering code

+ = Capacitance tolerance code:

M = $\pm 20\%$

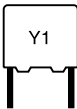
*** = Packaging code:

289 = Ammo pack

189 = Reel

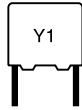
000 = Untaped (lead length 6 – 1 mm)

(Closer tolerances on request)


B81123
Y1 / 250 VAC

Technical data

Max. operating temperature $T_{op,max}$	+100 °C	
Dissipation factor $\tan \delta$ (in 10^{-3}) at 20 °C (upper limit values)	at 1 kHz 100 kHz	1 5
Insulation resistance R_{ins} or time constant $\tau = C_R \cdot R_{ins}$ at 20 °C, rel. humidity $\leq 65\%$ (minimum as-delivered values)	30 000 M Ω	
DC test voltage	4800 V, 2 s	
Passive flammability category to IEC 40 (CO) 752	C	
Maximum continuous AC voltage V_{AC}	750 V (50/60 Hz)	
Rated AC voltage (IEC 60384-14)	250 V (50/60 Hz)	
Maximum continuous DC voltage V_{DC}	3000 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	21 days / 40 °C / 93% relative humidity	
Limit values after damp heat test	Capacitance change $ \Delta C/C \leq 5\%$	
	Dissipation factor change $\Delta \tan \delta \leq 0.5 \cdot 10^{-3}$ (at 1 kHz)	
	Insulation resistance $R_{ins} \leq 1.0 \cdot 10^{-3}$ (at 100 kHz)	
	or time constant $\tau = C_R \cdot R_{ins} \geq 50\%$ of minimum as-delivered values	



Pulse handling capability

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

"k₀" represents the maximum permissible pulse characteristic of the waveform applied to the capacitor, expressed in V²/ μ s.

Note:

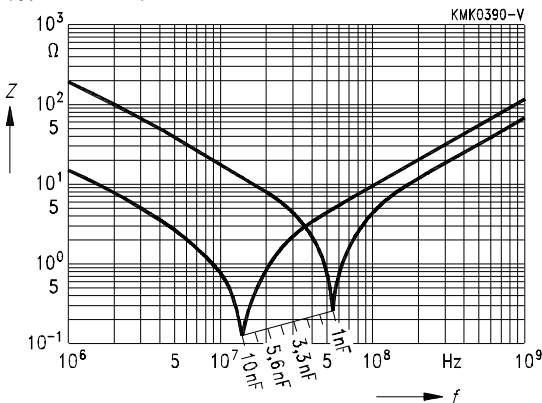
The values of dV/dt and k₀ provided below must not be exceeded in order to avoid damaging the capacitor.

dV/dt and k₀ values

Lead spacing	15 mm	22.5 mm
dV/dt in V/ μ s	3 000	1 000
k ₀ in V ² / μ s	2 100 000	700 000

Impedance Z versus frequency f

(typical values)



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