



Film Capacitors

EMI Suppression Capacitors (MKP)

Series/Type: B81123
Date: June 2006

www.DataSheet4U.com

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

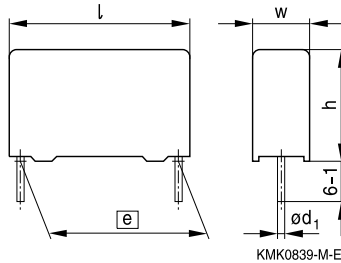
Manufacturer's logo, lot number, date code, rated capacitance (coded), cap. tolerance (code letter), rated AC voltage, series number, sub-class (Y1), dielectric code (MKP), climatic category, passive flammability category, approvals.

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

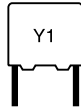
Dimensional drawing


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 $w \times h \times l$	Ordering code (composition see below)	Ammo pack	Reel	Untaped
mm	μF	mm		pcs./unit	pcs./unit	pcs./unit
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

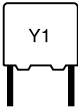
Further E series and intermediate capacitance values on request.

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)

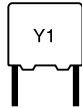


B81123

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	1
	100 kHz	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 Limit values after damp heat test	21 days / 40 °C / 93% relative humidity 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/μs.

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

Note:

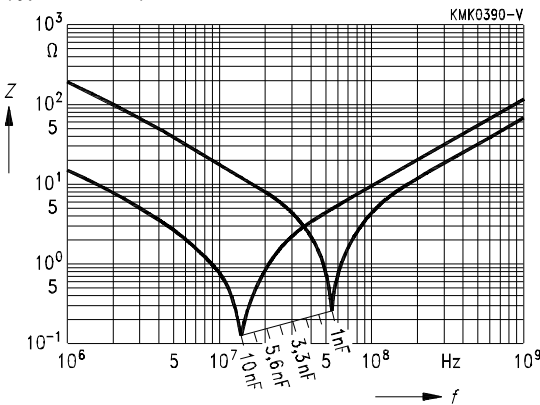
The values of dV/dt and k₀ provided below must not be exceeded in order to avoid damaging the capacitor.

dV/dt and k₀ values

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

Impedance Z versus frequency f

(typical values)



Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of passive electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of a passive electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of a passive electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as “hazardous”)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order. We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the “General Terms of Delivery for Products and Services in the Electrical Industry” published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, EPCOS-JONES, Baoke, CeraDiode, CSSP, MLSC, PhaseCap, PhaseMod, SIFI, SIKOREL, SilverCap, SIMID, SIOV, SIP5D, SIP5K, UltraCap, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.