

EMI Capacitors

Series/Type: **B81122**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B81122C1682M289	B32021A3682*	2008-11-21	2009-09-30	2009-12-31
B81122C1682M189	B32021A3682*	2008-11-21	2009-09-30	2009-12-31
B81122C1682M000	B32021A3682*	2008-11-21	2009-09-30	2009-12-31



Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B81122C1562M289	B32021A3562*	2008-11-21	2009-09-30	2009-12-31
B81122C1562M189	B32021A3562*	2008-11-21	2009-09-30	2009-12-31
B81122C1562M000	B32021A3562*	2008-11-21	2009-09-30	2009-12-31
B81122C1472M289	B32021A3472*	2008-11-21	2009-09-30	2009-12-31
B81122C1472M189	B32021A3472*	2008-11-21	2009-09-30	2009-12-31
B81122C1472M000	B32021A3472*	2008-11-21	2009-09-30	2009-12-31
B81122C1332M289	B32021A3332*	2008-11-21	2009-09-30	2009-12-31
B81122C1332M189	B32021A3332*	2008-11-21	2009-09-30	2009-12-31
B81122C1332M000	B32021A3332*	2008-11-21	2009-09-30	2009-12-31
B81122C1222M289	B32021A3222*	2008-11-21	2009-09-30	2009-12-31
B81122C1222M189	B32021A3222*	2008-11-21	2009-09-30	2009-12-31
B81122C1222M000	B32021A3222*	2008-11-21	2009-09-30	2009-12-31
B81122C1152M289	B32021A3152*	2008-11-21	2009-09-30	2009-12-31
B81122C1152M189	B32021A3152*	2008-11-21	2009-09-30	2009-12-31
B81122C1152M000	B32021A3152*	2008-11-21	2009-09-30	2009-12-31
B81122C1102M289	B32021A3102*	2008-11-21	2009-09-30	2009-12-31
B81122C1102M189	B32021A3102*	2008-11-21	2009-09-30	2009-12-31
B81122C1102M000	B32021A3102*	2008-11-21	2009-09-30	2009-12-31
B81122A1683M289	B32023A3683*	2008-11-21	2009-09-30	2009-12-31
B81122A1683M189	B32023A3683*	2008-11-21	2009-09-30	2009-12-31
B81122A1683M000	B32023A3683*	2008-11-21	2009-09-30	2009-12-31
B81122A1563M289	B32023A3563M*	2008-11-21	2009-09-30	2009-12-31
B81122A1563M189	B32023A3563M*	2008-11-21	2009-09-30	2009-12-31
B81122A1563M000	B32023A3563M*	2008-11-21	2009-09-30	2009-12-31
B81122A1473M289	B32023A3473*	2008-11-21	2009-09-30	2009-12-31
B81122A1473M189	B32023A3473*	2008-11-21	2009-09-30	2009-12-31
B81122A1473M000	B32023A3473*	2008-11-21	2009-09-30	2009-12-31
B81122A1334M000	B32024A3334M*	2008-11-21	2009-09-30	2009-12-31
B81122A1333M289	B32022A3333*	2008-11-21	2009-09-30	2009-12-31
B81122A1333M189	B32022A3333*	2008-11-21	2009-09-30	2009-12-31
B81122A1333M000	B32022A3333*	2008-11-21	2009-09-30	2009-12-31
B81122A1273M289	B32022A3273K*	2008-11-21	2009-09-30	2009-12-31
B81122A1273M189	B32022A3273K*	2008-11-21	2009-09-30	2009-12-31
B81122A1273M000	B32022A3273K*	2008-11-21	2009-09-30	2009-12-31
B81122A1224M189	B32024A3224M*	2009-11-21	2009-09-30	2009-12-31
B81122A1224M000	B32024A3224M*	2008-11-21	2009-09-30	2009-12-31
B81122A1223M289	B32022A3223M*	2008-11-21	2009-09-30	2009-12-31
B81122A1223M189	B32022A3223M*	2008-11-21	2009-09-30	2009-12-31



Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B81122A1223M000	B32022A3223M*	2008-11-21	2009-09-30	2009-12-31
B81122A1154M189	B32024A3154*	2008-11-21	2009-09-30	2009-12-31
B81122A1154M000	B32024A3154*	2008-11-21	2009-09-30	2009-12-31
B81122A1153M289	B32022A3153*	2008-11-21	2009-09-30	2009-12-31
B81122A1153M189	B32022A3153*	2008-11-21	2009-09-30	2009-12-31
B81122A1153M000	B32022A3153*	2008-11-21	2009-09-30	2009-12-31
B81122A1104M289	B32023A3104M*	2008-11-21	2009-09-30	2009-12-31
B81122A1104M189	B32023A3104M*	2008-11-21	2009-09-30	2009-12-31
B81122A1104M000	B32023A3104M*	2008-11-21	2009-09-30	2009-12-31
B81122A1103M289	B32022A3103*	2008-11-21	2009-09-30	2009-12-31
B81122A1103M189	B32022A3103*	2008-11-21	2009-09-30	2009-12-31
B81122A1103M000	B32022A3103*	2008-11-21	2009-09-30	2009-12-31

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.

Typical applications

- Y2 class for interference suppression
- "Line to ground" applications

Climatic

- Max. operating temperature: 100 °C
- Climatic category (IEC 60068-1):
40/100/21 (e) = 10 mm
40/085/21 (e) ≥ 15 mm

Construction

- Dielectric: polypropylene (MKP)
- Internal series connection (for (e) ≥ 15 mm)
- Plastic case (UL 94 V-0)
- Epoxy resin sealing (UL 94 V-0)

Features

- Very 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

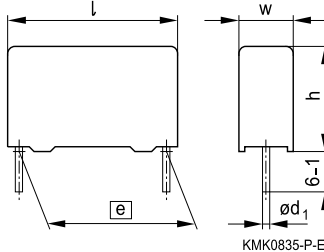
Manufacturer's logo, lot number, date code, rated capacitance (coded), cap. tolerance (code letter), rated AC voltage, series number, sub-class (Y2), dielectric code (MKP), climatic category, passive flammability category, approvals.

Delivery mode

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

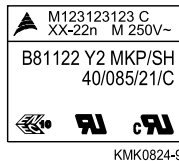
Approvals

Marks of conformity	Standards	Certificate
	EN 132400, IEC 60384-14	138600 (e) = 10 mm 138603 (e) ≥ 15 mm
	UL 1414 CSA C22.2 No.1	E97863 E97863

Dimensional drawing


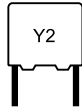
Dimensions in mm

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

Marking example


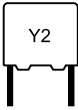
B81122

Y2 / 250 VAC



Overview of available types

Lead spacing	10 mm	15 mm	22.5 mm	27.5 mm
C_R (μF)				
0.0010				
0.0015				
0.0022				
0.0033				
0.0047				
0.0056				
0.0068				
0.010				
0.015				
0.022				
0.027				
0.033				
0.047				
0.056				
0.068				
0.10				
0.15				
0.22				
0.33				


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Y2 / 250 VAC
Ordering codes and packing units

Lead spacing mm	C _R μF	Max. dimensions w × h × l mm	Ordering code (composition see below)	Ammo pack pcs./unit	Reel pcs./unit	Untaped pcs./unit
10	0.0010	4.0 × 9.0 × 13.0	B81122C1102M***	1000	1700	1000
	0.0015	4.0 × 9.0 × 13.0	B81122C1152M***	1000	1700	1000
	0.0022	5.0 × 11.0 × 13.0	B81122C1222M***	830	1300	1000
	0.0033	5.0 × 11.0 × 13.0	B81122C1332M***	830	1300	1000
	0.0047	6.0 × 12.0 × 13.0	B81122C1472M***	680	1100	1000
	0.0056	6.0 × 12.0 × 13.0	B81122C1562M***	680	1100	1000
	0.0068	6.0 × 12.0 × 13.0	B81122C1682M***	680	1100	1000
15	0.010	6.0 × 11.0 × 18.0	B81122A1103M***	960	1100	1000
	0.015	7.0 × 12.5 × 18.0	B81122A1153M***	830	900	1000
	0.022	8.5 × 14.5 × 18.0	B81122A1223M***	680	700	500
	0.027	8.5 × 14.5 × 18.0	B81122A1273M***	680	700	500
	0.033	9.0 × 17.5 × 18.0	B81122A1333M***	640	700	500
22.5	0.047	7.0 × 16.0 × 26.5	B81122A1473M***	580	600	630
	0.056	8.5 × 16.5 × 26.5	B81122A1563M***	480	500	510
	0.068	10.5 × 16.5 × 26.5	B81122A1683M***	390	400	540
	0.10	10.5 × 20.5 × 26.5	B81122A1104M***	390	400	540
27.5	0.15	11.0 × 21.0 × 31.5	B81122A1154M***	–	350	320
	0.22	13.5 × 23.0 × 31.5	B81122A1224M***	–	250	260
	0.33	18.0 × 27.5 × 31.5	B81122A1334M***	–	–	200

Further E series and intermediate capacitance values on request.

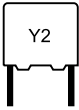
Composition of ordering code

+ = Capacitance tolerance code:
M = ±20%

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

Technical data

Max. operating temperature $T_{op,max}$	+100 °C		
Dissipation factor $\tan \delta$ (in 10^{-3}) at 20 °C (upper limit values)		$C_R \leq 0.1 \mu F$	$C_R > 0.1 \mu F$
	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 $\leq 65\%$ (minimum as-delivered values)	30 000 M Ω		
DC test voltage	2700 V, 2 s (\square{e} ≥ 15 mm) 2500 V, 2 s (\square{e} = 10 mm)		
Passive flammability category to IEC 40 (CO) 752	C		
Maximum continuous AC voltage (V_{AC})	405 V (50/60 Hz) (\square{e} ≥ 15 mm) 305 V (50/60 Hz) (\square{e} = 10 mm)		
Rated AC voltage (IEC 60384-14)	250 V (50/60 Hz)		
Maximum continuous DC voltage (V_{DC})	1000 V (\square{e} ≥ 15 mm) 1200 V (\square{e} = 10 mm)		
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 10 kHz) or time constant $\tau = C_R \cdot R_{ins} \geq 50\%$ of minimum as-delivered values		



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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/ μ s.

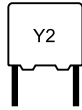
"k₀" represents the maximum permissible pulse characteristic of the waveform applied to the capacitor, expressed in V²/ μ s.

Note:

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

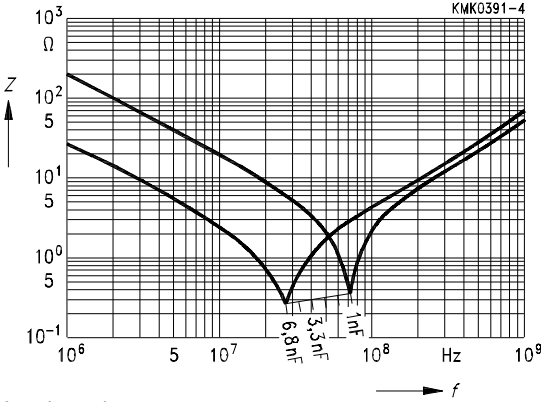
dV/dt and k₀ values

Lead spacing	10 mm	15 mm	22.5 mm	27.5 mm
dV/dt in V/ μ s	550	400	200	150
k ₀ in V ² / μ s	388 000	282 000	141 000	106 000



Impedance Z versus frequency f
(typical values)

Lead spacing = 10 mm



Lead spacing ≥ 15 mm

