

CL23 series / Metallized polyester film capacitor (Box type)

■ General Technical Characteristics 一般特性

High reliability

可靠性

Metallized polyester film, non-inductive wound construction

金属化聚酯膜, 无感卷绕结构

Plastic case (UL94 V-0), Epoxy resin sealing

塑料外壳(UL94 V-0), 阻燃环氧填充

■ Electrical Characteristics 电气特性

Reference Standard 引用标准:

IEC60384-2

Climatic Category 气候类别:

55/105/56

Rated Temperature 额定温度:

85°C

Operating Temperature Range:

-55°C ~ 105°C

工作温度范围:

(+85°C to +105°C: decreasing factor 1.25% per °C for U_R)

Rated Voltage 额定电压:

63VDC, 100VDC, 160VDC, 250VDC, 400VDC, 630VDC, 1000VDC

Capacitance Range 电容量范围:

0.0010 μ F ~ 47.0 μ F

Capacitance Tolerance 电容量偏差:

 $\pm 5\%$ (J), $\pm 10\%$ (K), $\pm 20\%$ (M)

Dissipation Factor 损耗角正切:

 $\leq 1.0\%$ Measured at 1KHz and 20°C.

Test Voltage 耐电压:

1.6 U_R for 5 sec.

Insulation Resistance 绝缘电阻:

 $U_R \leq 100V$: $\geq 3750M\Omega$, for $C_N \leq 0.33\mu F$ $\geq 1250s$, for $C_N > 0.33\mu F$ Measured at 20°C, 10V and 1 min. $U_R > 100V$: $\geq 30000M\Omega$, for $C_N \leq 0.33\mu F$ $\geq 10000s$, for $C_N > 0.33\mu F$ Measured at 20°C, 100V and 1 min.

Maximum Pulse Rise Time(dV/dt) 最大脉冲爬升速率:

U_R (V)	dV/dt [V/ μ s]				
	P=7.5	P=10.0	P=15.0	P=22.5	P=27.5
63	7.5	6	3	2	1
100	15	9	5	3	2
250	30	20	12	8	5
400	40	30	20	10	7
630	50	40	25	12	10
1000	70	60	30	15	12

■ Typical Applications 典型应用

By-pass, blocking, coupling, decoupling.

旁路、隔直、耦合、退耦

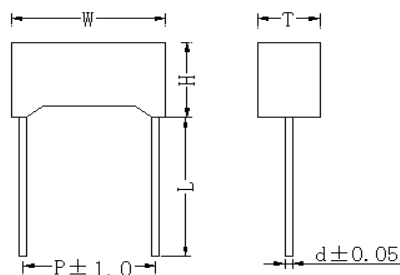
Pulse, logic, timing, oscillator circuits.

脉冲、逻辑、定时、振荡电路

If the working voltage (U) is lower than the rated voltage (U_R), the capacitor can be worked at a higher dV/dt. In this case, the maximum allowed dV/dt is obtain by multiplying the left value with U_R/U .

若实际工作电压 U 比额定电压 U_R 低, 电容器可工作在更高的 dV/dt 场合, 这样 dV/dt 允许值应为左表值乘以 U_R/U 。

■ Outline Drawing 外形图



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■ Part Number System 产品编码说明

K4B	2A	104	K	F	L	0	20	***
型号代码	额定电压	标称容量	容量偏差	引线间距 P	引线加工/包装代码	引线加工脚距	引线长度	内部编码
Series Code:	Voltage:	Capacitance:	Cap. Tol.:	Lead Space:	Lead form and	Lead form F:	Lead length:	Internal
K4B:	1H=50V	104=0.1μF	J=± 5%	E=7.5mm	packaging code:	0=none	05=5mm	code
CL23 Series	1J=63V	105=1.0μF	K=± 10%	F=10.0mm	L=straight lead	D=5.0mm	20=20mm	
	2A=100V		M=± 20%	H=15.0mm	K=lead kinked	E=7.5mm		
	2E=250V			J=22.5mm	T=ammo-pack	F=10.0mm		
	2G=400V			L=27.5mm		H=15.0mm		
	2J=630V							
	3A=1000V							

■ Electrical Specification & Part Numbers Reference 规格型号参考 (mm)

Cap. (μF)	63VDC (40VAC)					Part Number	Cap. (μF)	100VDC (63VAC)					Part Number
	W	H	T	P	d			W	H	T	P	d	
0.47	10.5	8.5	3.5	7.5	0.5	K4B1J474*****	0.22	10.5	8.5	3.5	7.5	0.5	K4B2A224*****
0.68	10.5	9.0	4.0	7.5	0.6	K4B1J684*****	0.33	10.5	9.0	4.0	7.5	0.6	K4B2A334*****
1.0	10.5	11.0	5.0	7.5	0.6	K4B1J105*****	0.39	10.5	9.0	4.0	7.5	0.6	K4B2A394*****
1.5	10.5	12.0	6.0	7.5	0.6	K4B1J155*****	0.47	10.5	9.0	4.0	7.5	0.6	K4B2A474*****
1.8	10.5	12.0	6.0	7.5	0.6	K4B1J185*****	0.68	10.5	11.0	5.0	7.5	0.6	K4B2A684*****
0.10	13.0	9.0	4.0	10.0	0.6	K4B1J104*****	1.0	10.5	12.0	6.0	7.5	0.6	K4B2A105*****
0.15	13.0	9.0	4.0	10.0	0.6	K4B1J154*****	0.10	13.0	9.0	4.0	10.0	0.6	K4B2A104*****
0.22	13.0	9.0	4.0	10.0	0.6	K4B1J224*****	0.15	13.0	9.0	4.0	10.0	0.6	K4B2A154*****
0.33	13.0	9.0	4.0	10.0	0.6	K4B1J334*****	0.22	13.0	9.0	4.0	10.0	0.6	K4B2A224*****
0.47	13.0	9.0	4.0	10.0	0.6	K4B1J474*****	0.33	13.0	9.0	4.0	10.0	0.6	K4B2A334*****
0.68	13.0	9.0	4.0	10.0	0.6	K4B1J684*****	0.47	13.0	9.0	4.0	10.0	0.6	K4B2A474*****
1.0	13.0	9.0	4.0	10.0	0.6	K4B1J105*****	0.68	13.0	9.0	4.0	10.0	0.6	K4B2A684*****
1.5	13.0	11.0	5.0	10.0	0.6	K4B1J155*****	1.0	13.0	11.0	5.0	10.0	0.6	K4B2A105*****
1.8	13.0	12.0	6.0	10.0	0.6	K4B1J185*****	1.5	13.0	12.0	6.0	10.0	0.6	K4B2A155*****
2.2	13.0	12.0	6.0	10.0	0.6	K4B1J225*****	0.33	17.5	11.0	5.0	15.0	0.8	K4B2A334*****
0.68	17.5	11.0	5.0	15.0	0.8	K4B1J684*****	0.47	17.5	11.0	5.0	15.0	0.8	K4B2A474*****
1.0	17.5	11.0	5.0	15.0	0.8	K4B1J105*****	0.68	17.5	11.0	5.0	15.0	0.8	K4B2A684*****
1.5	17.5	11.0	5.0	15.0	0.8	K4B1J155*****	1.0	17.5	11.0	5.0	15.0	0.8	K4B2A105*****
1.8	17.5	11.0	5.0	15.0	0.8	K4B1J185*****	1.5	17.5	12.0	6.0	15.0	0.8	K4B2A155*****
2.2	17.5	11.0	5.0	15.0	0.8	K4B1J225*****	1.8	17.5	12.0	6.0	15.0	0.8	K4B2A185*****
3.3	17.5	12.0	6.0	15.0	0.8	K4B1J335*****	2.2	17.5	12.0	6.0	15.0	0.8	K4B2A225*****
4.7	17.5	13.5	7.5	15.0	0.8	K4B1J475*****	3.3	17.5	13.5	7.5	15.0	0.8	K4B2A335*****
6.8	17.5	14.5	8.5	15.0	0.8	K4B1J685*****	4.7	17.5	14.5	8.5	15.0	0.8	K4B2A475*****
10.0	17.5	19.0	11.0	15.0	0.8	K4B1J106*****	1.5	26.5	15.0	6.0	22.5	0.8	K4B2A155*****
3.3	26.5	16.0	7.0	22.5	0.8	K4B1J335*****	1.8	26.5	15.0	6.0	22.5	0.8	K4B2A185*****
4.7	26.5	16.0	7.0	22.5	0.8	K4B1J475*****	2.2	26.5	15.0	6.0	22.5	0.8	K4B2A225*****
6.8	26.5	16.0	7.0	22.5	0.8	K4B1J685*****	3.3	26.5	15.0	6.0	22.5	0.8	K4B2A335*****
10.0	26.5	17.0	8.5	22.5	0.8	K4B1J106*****	4.7	26.5	16.0	7.0	22.5	0.8	K4B2A475*****
15.0	26.5	20.0	11.0	22.5	0.8	K4B1J156*****	6.8	26.5	18.5	10.0	22.5	0.8	K4B2A685*****
4.7	32.0	18.0	9.0	27.5	0.8	K4B1J475*****	10.0	26.5	22.0	12.0	22.5	0.8	K4B2A106*****
6.8	32.0	18.0	9.0	27.5	0.8	K4B1J685*****	4.7	32.0	18.0	9.0	27.5	0.8	K4B2A475*****
10.0	32.0	18.0	9.0	27.5	0.8	K4B1J106*****	6.8	32.0	18.0	9.0	27.5	0.8	K4B2A685*****
15.0	32.0	18.0	9.0	27.5	0.8	K4B1J156*****	10.0	32.0	20.0	11.0	27.5	0.8	K4B2A106*****
22.0	32.0	22.0	13.0	27.5	0.8	K4B1J226*****	15.0	32.0	20.0	11.0	27.5	0.8	K4B2A156*****
33.0	32.0	24.5	15.0	27.5	0.8	K4B1J336*****	22.0	32.0	25.0	13.0	27.5	0.8	K4B2A226*****
47.0	32.0	30.0	16.0	27.5	0.8	K4B1J476*****	33.0	32.0	30.0	16.0	27.5	0.8	K4B2A336*****

备注：1. "*****" = Capacitance tolerance code, Pitch, Lead form and packaging code, Lead form, Lead length, Internal code.

"*****" 表示容量偏差，引线间距，引线加工和包装代码，引线加工脚距，引线长度，内部编码。

2. Customization for special specification and requirement is available.

CL23 series / Metallized polyester film capacitor (Box type)

■ Electrical Specification & Part Numbers Reference 规格型号参考 (mm)

Cap. (μF)	250VDC (160VAC)					Part Number	Cap. (μF)	400VDC (200VAC)					Part Number
	W	H	T	P	d			W	H	T	P	d	
0.068	10.5	8.5	3.5	7.5	0.5	K4B2E683*****	0.022	10.5	8.5	3.5	7.5	0.5	K4B2G223*****
0.10	10.5	8.5	3.5	7.5	0.5	K4B2E104*****	0.033	10.5	8.5	3.5	7.5	0.5	K4B2G333*****
0.15	10.5	9.0	4.0	7.5	0.6	K4B2E154*****	0.047	10.5	9.0	4.0	7.5	0.6	K4B2G473*****
0.18	10.5	11.0	5.0	7.5	0.6	K4B2E184*****	0.068	10.5	11.0	5.0	7.5	0.6	K4B2G683*****
0.22	10.5	11.0	5.0	7.5	0.6	K4B2E224*****	0.082	10.5	12.0	6.0	7.5	0.6	K4B2G823*****
0.27	10.5	12.0	6.0	7.5	0.6	K4B2E274*****	0.10	10.5	12.0	6.0	7.5	0.6	K4B2G104*****
0.33	10.5	12.0	6.0	7.5	0.6	K4B2E334*****	0.010	13.0	9.0	4.0	10.0	0.6	K4B2G103*****
0.033	13.0	9.0	4.0	10.0	0.6	K4B2E333*****	0.015	13.0	9.0	4.0	10.0	0.6	K4B2G153*****
0.047	13.0	9.0	4.0	10.0	0.6	K4B2E473*****	0.022	13.0	9.0	4.0	10.0	0.6	K4B2G223*****
0.068	13.0	9.0	4.0	10.0	0.6	K4B2E683*****	0.033	13.0	9.0	4.0	10.0	0.6	K4B2G333*****
0.10	13.0	9.0	4.0	10.0	0.6	K4B2E104*****	0.047	13.0	9.0	4.0	10.0	0.6	K4B2G473*****
0.15	13.0	9.0	4.0	10.0	0.6	K4B2E154*****	0.056	13.0	9.0	4.0	10.0	0.6	K4B2G563*****
0.22	13.0	11.0	5.0	10.0	0.6	K4B2E224*****	0.068	13.0	11.0	5.0	10.0	0.6	K4B2G683*****
0.33	13.0	11.0	5.0	10.0	0.6	K4B2E334*****	0.10	13.0	11.0	5.0	10.0	0.6	K4B2G104*****
0.39	13.0	12.0	6.0	10.0	0.6	K4B2E394*****	0.15	13.0	12.0	6.0	10.0	0.6	K4B2G154*****
0.47	13.0	12.0	6.0	10.0	0.6	K4B2E474*****	0.047	17.5	11.0	5.0	15.0	0.8	K4B2G473*****
0.10	17.5	11.0	5.0	15.0	0.8	K4B2E104*****	0.068	17.5	11.0	5.0	15.0	0.8	K4B2G683*****
0.15	17.5	11.0	5.0	15.0	0.8	K4B2E154*****	0.10	17.5	11.0	5.0	15.0	0.8	K4B2G104*****
0.22	17.5	11.0	5.0	15.0	0.8	K4B2E224*****	0.15	17.5	11.0	5.0	15.0	0.8	K4B2G154*****
0.33	17.5	11.0	5.0	15.0	0.8	K4B2E334*****	0.22	17.5	12.0	6.0	15.0	0.8	K4B2G224*****
0.47	17.5	11.0	5.0	15.0	0.8	K4B2E474*****	0.33	17.5	13.5	7.5	15.0	0.8	K4B2G334*****
0.68	17.5	12.0	6.0	15.0	0.8	K4B2E684*****	0.47	17.5	14.5	8.5	15.0	0.8	K4B2G474*****
1.0	17.5	13.5	7.5	15.0	0.8	K4B2E105*****	0.56	17.5	16.0	10.0	15.0	0.8	K4B2G564*****
1.5	17.5	14.5	8.5	15.0	0.8	K4B2E155*****	0.68	17.5	16.0	10.0	15.0	0.8	K4B2G684*****
0.22	26.5	15.0	6.0	22.5	0.8	K4B2E224*****	0.22	26.5	15.0	6.0	22.5	0.8	K4B2G224*****
0.47	26.5	15.0	6.0	22.5	0.8	K4B2E474*****	0.33	26.5	15.0	6.0	22.5	0.8	K4B2G334*****
0.68	26.5	15.0	6.0	22.5	0.8	K4B2E684*****	0.47	26.5	15.0	6.0	22.5	0.8	K4B2G474*****
1.0	26.5	15.0	6.0	22.5	0.8	K4B2E105*****	0.68	26.5	16.0	7.0	22.5	0.8	K4B2G684*****
1.5	26.5	16.0	7.0	22.5	0.8	K4B2E155*****	1.0	26.5	18.50	10.0	22.5	0.8	K4B2G105*****
1.8	26.5	16.0	7.0	22.5	0.8	K4B2E185*****	1.5	26.5	22.0	12.0	22.5	0.8	K4B2G155*****
2.2	26.5	17.0	8.5	22.5	0.8	K4B2E225*****	0.68	32.0	18.0	9.0	27.5	0.8	K4B2G684*****
3.3	26.5	20.0	11.0	22.5	0.8	K4B2E335*****	1.0	32.0	18.0	9.0	27.5	0.8	K4B2G105*****
1.5	32.0	18.0	9.0	27.5	0.8	K4B2E155*****	1.5	32.0	20.0	11.0	27.5	0.8	K4B2G155*****
1.8	32.0	18.0	9.0	27.5	0.8	K4B2E185*****	1.8	32.0	20.0	11.0	27.5	0.8	K4B2G185*****
2.2	32.0	18.0	9.0	27.5	0.8	K4B2E225*****	2.2	32.0	22.0	13.0	27.5	0.8	K4B2G225*****
3.3	32.0	18.0	9.0	27.5	0.8	K4B2E335*****	3.3	32.0	24.5	15.0	27.5	0.8	K4B2G335*****
4.7	32.0	20.0	11.0	27.5	0.8	K4B2E475*****	4.7	32.0	30.0	16.0	27.5	0.8	K4B2G475*****
6.8	32.0	22.0	13.0	27.5	0.8	K4B2E685*****	6.8	32.0	33.0	18.0	27.5	0.8	K4B2G685*****
10.0	32.0	24.5	15.0	27.5	0.8	K4B2E106*****							

备注：1. "*****" = Capacitance tolerance code, Pitch, Lead form and packaging code, Lead form, Lead length, Internal code.

"*****" 表示容量偏差，引线脚距，引线加工和包装代码，引线加工脚距，引线长度，内部编码。

2. Customization for special specification and requirement is available.

CL23 series / Metallized polyester film capacitor (Box type)

■ Electrical Specification & Part Numbers Reference 规格型号参考 (mm)

Cap. (μ F)	630VDC (220VAC)					Part Number	Cap. (μ F)	1000VDC (300VAC)					Part Number
	W	H	T	P	d			W	H	T	P	d	
0.0022	10.5	8.5	3.5	7.5	0.5	K4B2J222*****	0.0010	10.5	8.5	3.5	7.5	0.5	K4B3A102*****
0.0047	10.5	8.5	3.5	7.5	0.5	K4B2J472*****	0.0015	10.5	8.5	3.5	7.5	0.5	K4B3A152*****
0.0068	10.5	8.5	3.5	7.5	0.5	K4B2J682*****	0.0022	10.5	8.5	3.5	7.5	0.5	K4B3A222*****
0.010	10.5	8.5	3.5	7.5	0.5	K4B2J103*****	0.0033	10.5	8.5	3.5	7.5	0.5	K4B3A332*****
0.015	10.5	9.0	4.0	7.5	0.6	K4B2J153*****	0.0047	10.5	8.5	3.5	7.5	0.5	K4B3A472*****
0.022	10.5	11.0	5.0	7.5	0.6	K4B2J223*****	0.0068	10.5	9.0	4.0	7.5	0.6	K4B3A682*****
0.033	10.5	12.0	6.0	7.5	0.6	K4B2J333*****	0.010	10.5	11.0	5.0	7.5	0.6	K4B3A103*****
0.047	10.5	12.0	6.0	7.5	0.6	K4B2J473*****	0.015	10.5	12.0	6.0	7.5	0.6	K4B3A153*****
0.0047	13.0	9.0	4.0	10.0	0.6	K4B2J472*****	0.0010	13.0	9.0	4.0	10.0	0.6	K4B3A102*****
0.0068	13.0	9.0	4.0	10.0	0.6	K4B2J682*****	0.0015	13.0	9.0	4.0	10.0	0.6	K4B3A152*****
0.010	13.0	9.0	4.0	10.0	0.6	K4B2J103*****	0.0022	13.0	9.0	4.0	10.0	0.6	K4B3A222*****
0.015	13.0	9.0	4.0	10.0	0.6	K4B2J153*****	0.0033	13.0	9.0	4.0	10.0	0.6	K4B3A332*****
0.022	13.0	9.0	4.0	10.0	0.6	K4B2J223*****	0.0047	13.0	9.0	4.0	10.0	0.6	K4B3A472*****
0.033	13.0	11.0	5.0	10.0	0.6	K4B2J333*****	0.0056	13.0	9.0	4.0	10.0	0.6	K4B3A562*****
0.047	13.0	11.0	5.0	10.0	0.6	K4B2J473*****	0.0068	13.0	9.0	4.0	10.0	0.6	K4B3A682*****
0.068	13.0	12.0	6.0	10.0	0.6	K4B2J683*****	0.010	13.0	9.0	4.0	10.0	0.6	K4B3A103*****
0.033	17.5	11.0	5.0	15.0	0.8	K4B2J333*****	0.015	13.0	11.0	5.0	10.0	0.6	K4B3A153*****
0.047	17.5	11.0	5.0	15.0	0.8	K4B2J473*****	0.022	13.0	11.0	5.0	10.0	0.6	K4B3A223*****
0.068	17.5	11.0	5.0	15.0	0.8	K4B2J683*****	0.010	17.5	11.0	5.0	15.0	0.8	K4B3A103*****
0.10	17.5	12.0	6.0	15.0	0.8	K4B2J104*****	0.015	17.5	11.0	5.0	15.0	0.8	K4B3A153*****
0.15	17.5	13.5	7.5	15.0	0.8	K4B2J154*****	0.022	17.5	11.0	5.0	15.0	0.8	K4B3A223*****
0.22	17.5	16.0	10.0	15.0	0.8	K4B2J224*****	0.033	17.5	12.0	6.0	15.0	0.8	K4B3A333*****
0.33	17.5	19.0	11.0	15.0	0.8	K4B2J334*****	0.047	17.5	12.0	6.0	15.0	0.8	K4B3A473*****
0.10	26.5	15.0	6.0	22.5	0.8	K4B2J104*****	0.068	17.5	13.5	7.5	15.0	0.8	K4B3A683*****
0.15	26.5	15.0	6.0	22.5	0.8	K4B2J154*****	0.10	17.5	14.5	8.5	15.0	0.8	K4B3A104*****
0.22	26.5	16.0	7.0	22.5	0.8	K4B2J224*****	0.033	26.5	15.0	6.0	22.5	0.8	K4B3A333*****
0.33	26.5	16.0	7.0	22.5	0.8	K4B2J334*****	0.047	26.5	15.0	6.0	22.5	0.8	K4B3A473*****
0.47	26.5	17.0	8.5	22.5	0.8	K4B2J474*****	0.068	26.5	15.0	6.0	22.5	0.8	K4B3A683*****
0.68	26.5	22.0	12.0	22.5	0.8	K4B2J684*****	0.10	26.5	15.0	6.0	22.5	0.8	K4B3A104*****
0.33	32.0	18.0	9.0	27.5	0.8	K4B2J334*****	0.15	26.5	16.0	7.0	22.5	0.8	K4B3A154*****
0.47	32.0	18.0	9.0	27.5	0.8	K4B2J474*****	0.22	26.5	17.0	8.5	22.5	0.8	K4B3A224*****
0.68	32.0	20.0	11.0	27.5	0.8	K4B2J684*****	0.33	26.5	20.0	11.0	22.5	0.8	K4B3A334*****
1.0	32.0	20.0	11.0	27.5	0.8	K4B2J105*****	0.15	32.0	18.0	9.0	27.5	0.8	K4B3A154*****
							0.22	32.0	18.0	9.0	27.5	0.8	K4B3A224*****
							0.33	32.0	20.0	11.0	27.5	0.8	K4B3A334*****
							0.47	32.0	20.0	11.0	27.5	0.8	K4B3A474*****
							0.68	32.0	28.0	14.0	27.5	0.8	K4B3A684*****
							1.0	32.0	30.0	16.0	27.5	0.8	K4B3A105*****
							1.5	32.0	37.0	22.0	27.5	0.8	K4B3A155*****

备注：1. "*****" = Capacitance tolerance code, Pitch, Lead form and packaging code, Lead form, Lead length, Internal code.

"*****" 表示容量偏差，引线脚距，引线加工和包装代码，引线加工脚距，引线长度，内部编码。

2. Customization for special specification and requirement is available.