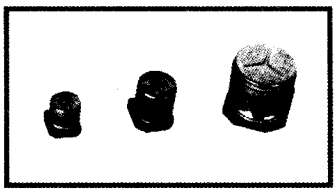
V-CHIP ALUMINUM ELECTROLYTIC CAPACITORS 片式铝电解电容器

JOEMASTER

KL 5000 Hours Load Life Series



- Chip type, with load life of 5000 hours, temperature range up to +105°C.
- Designed for surface mounting on high density circuit board.
- Emboss carrier tape packing system is available for automatic insertion.

◆ Specifications

Items	Performance Characteristics
Operating Temperature Range	-40~+105°C
Voltage Range	4~50V
Capacitance Range	0.1~1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3μA, whichever is greater.
Tan δ	Measurement frequency: 120Hz, Temperature: 20°C

Rated voltage(V)	4	6.3	10	16	25	35	50
Tan δ (max)	0.37	0.28	0.24	0.20	0.16	0.13	0.12

Stability at Low Temperature — Measurement frequency:120Hz

Rated voltage(V)		4	6.3	10	16	25	35	50
Impedance ratio ZT/Z20(max)	Z-25°C/Z+20°C	8	4	3	2	2	2	2
	Z-40°C/Z+20°C	14	10	7	5	3	3	3

Load Life — After 5000 hours' application of rated voltage at 105°C, capacitors meet the characteristics requirements listed at right

Capacitance Change	Within ± 30% of initial value
Leakage Current	Initial specified value or less
Tan δ	300% or less of initial specified value

Self Life	After leaving capacitors under no load at 105°C for 1000 hours, they meet the specified value for load life characteristics listed above.

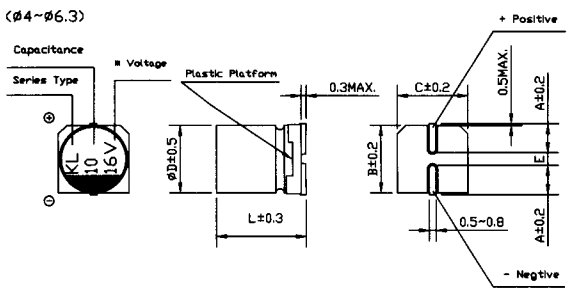
Resistance to Soldering Heat — The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the characteristics requirements listed at right.

Capacitance Change	Within ± 10% of initial value
Tan δ	Initial specified value or less
Leakage Current	Initial specified value or less

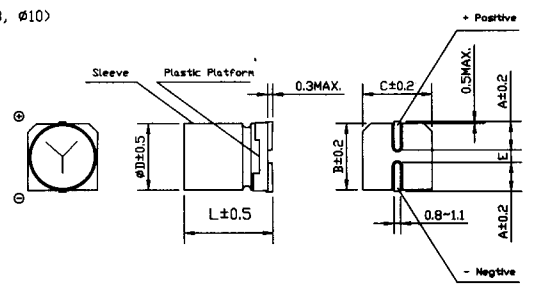
Applicable Standards	JIS C-5141 and JIS C-5102

◆ Chip Type

(ø4~ø6.3)



(ø8, ø10)



* Voltage mark for 6.3V is [6V]

(mm)

φD×L	4×5.8	5×5.8	6.3×5.8	6.3×7.7	8×10.5	10×10.5
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10.5	10.5

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KL Series

• Dimensions

Cap. (μF) \ WV		4		6.3		10		16	
		0G		0J		1A		1C	
10	100							4×5.8	18
22	220	4×5.8	22	4×5.8	22	5×5.8	25	5×5.8	27
33	330	5×5.8	27	5×5.8	27	5×5.8	30	6.3×5.8	40
47	470	5×5.8	33	5×5.8	33	6.3×5.8	41	6.3×5.8	48
100	101	6.3×5.8	50	6.3×5.8	50	6.3×5.8	53	6.3×7.7	95
150	151	6.3×5.8	55	6.3×5.8	55	6.3×7.7	105	6.3×7.7	95
220	221	6.3×7.7	100	6.3×7.7	100	6.3×7.7	105	8×10.5	196
330	331	6.3×7.7	100	8×10.5	196	8×10.5	196	8×10.5	196
470	471	8×10.5	210	8×10.5	210	8×10.5	210	10×10.5	315
680	681	8×10.5	210	8×10.5	210	10×10.5	315		
1000	102	10×10.5	315	10×10.5	315				

Cap. (μF) \ WV		25		35		50	
		1E		1V		1H	
0.1	0R1					4×5.8	0.7
0.22	R22					4×5.8	1.6
0.33	R33					4×5.8	2.5
0.47	R47					4×5.8	3.5
1	010					4×5.8	7
2.2	2R2					4×5.8	11
3.3	3R3					4×5.8	13
4.7	4R7	4×5.8	13	4×5.8	14	5×5.8	16
10	100	5×5.8	20	5×5.8	21	6.3×5.8	24
22	220	6.3×5.8	36	6.3×5.8	38	6.3×7.7	60
33	330	6.3×5.8	44	6.3×5.8	42	6.3×7.7	60
47	470	6.3×5.8	48	6.3×7.7	63	8×10.5	140
100	101	8×10.5	140	8×10.5	130	10×10.5	315
150	151	8×10.5	140	10×10.5	315		
220	221	10×10.5	315			Case size	Allowable ripple

Allowable ripple (mA rms) at 105℃ 120Hz

• Frequency coefficient of allowable ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz~
Coefficient	0.70	1.00	1.17	1.36	1.50