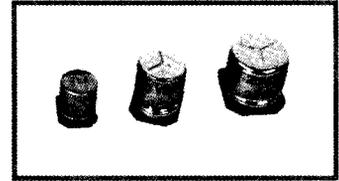


# V-CHIP ALUMINUM ELECTROLYTIC CAPACITORS 片式铝电解电容器

**KH** High Reliability Series



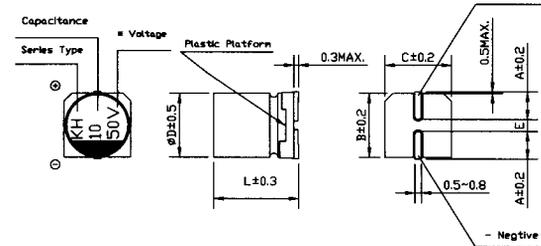
- Chip type, high temperature range, for +125°C use.
- Designed for surface mounting on high density circuit board.
- Emboss carrier tape packing system is available for automatic insertion.

◆ Specifications

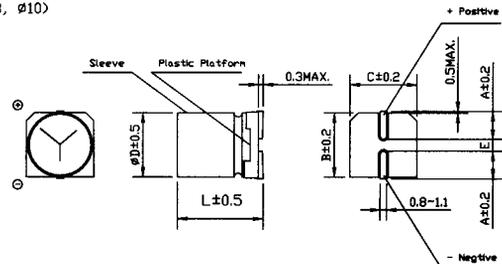
Items	Performance Characteristics													
Operating Temperature Range	-40~+125°C													
Voltage Range	10~50V													
Capacitance Range	10~330μF													
Capacitance Tolerance	± 20% at 120 Hz, 20°C													
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4μA, whichever is greater.													
Tan δ	Measurement frequency: 120Hz, Temperature: 20°C <table border="1"> <tr> <td>Rated voltage(V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Tan δ (max)</td> <td>0.32</td> <td>0.24</td> <td>0.21</td> <td>0.18</td> <td>0.18</td> </tr> </table>	Rated voltage(V)	10	16	25	35	50	Tan δ (max)	0.32	0.24	0.21	0.18	0.18	
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Tan δ (max)	0.32	0.24	0.21	0.18	0.18									
Stability at Low Temperature	Measurement frequency: 120Hz <table border="1"> <tr> <td>Rated voltage(V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Impedance ratio ZT/Z20(max)</td> <td>Z-40°C/Z+20°C</td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> </tr> </table>	Rated voltage(V)	10	16	25	35	50	Impedance ratio ZT/Z20(max)	Z-40°C/Z+20°C	12	8	6	4	4
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Impedance ratio ZT/Z20(max)	Z-40°C/Z+20°C	12	8	6	4	4								
Load Life	After 1000 hours' application of rated voltage at 125°C, capacitors meet the characteristics requirements listed at right <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ± 30% of initial value</td> </tr> <tr> <td>Tan δ</td> <td>300% or less of initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance Change	Within ± 30% of initial value	Tan δ	300% or less of initial specified value	Leakage Current	Initial specified value or less							
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Self Life	After leaving capacitors under no load at 125°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. <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ± 10% of initial value</td> </tr> <tr> <td>Tan δ</td> <td>Initial specified value or less</td> </tr> <tr> <td>Leakage Current</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance Change	Within ± 10% of initial value	Tan δ	Initial specified value or less	Leakage Current	Initial specified value or less							
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Leakage Current	Initial specified value or less													
Applicable Standards	JIS C-5141 and JIS C-5102													

◆ Chip Type

(ø6.3)



(ø8, ø10)



\* Voltage mark for 6.3V is [6V]

(mm)

ΦD×L	6.3 × 7.7	8 × 10.5	10 × 10.5
A	2.4	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	7.7	10.5	10.5

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**KH** Series

• Dimensions

Cap ( $\mu$ F)	WV	10		16		25		35		50	
		1A		1C		1E		1V		1H	
10	100									6.3×7.7	24
22	220									6.3×7.7	38
33	330							6.3×7.7	44	8×10.5	46
47	470					6.3×7.7	48	8×10.5	52	10×10.5	58
100	101	6.3×7.7	58	8×10.5	66	8×10.5	74	10×10.5	80		
220	221	8×10.5	90	10×10.5	102	10×10.5	116				
330	331	10×10.5	112							Case size	Allowable ripple

Allowable ripple (mA rms) at 125°C 120Hz

• Frequency coefficient of allowable ripple current

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