

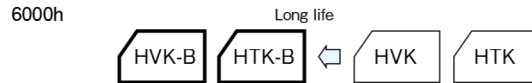
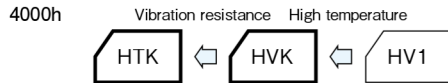
Conductive Polymer Hybrid Capacitors

GREEN CAP SMD Low ESR 125°C 4000hours 125°C 6000hours

- Low ESR and high ripple current are realized.
- HTK is resist to vibration. (30G guaranteed)
- Equivalent to conductive polymer type Aluminum Electrolytic Capacitor. (There are little characteristics change by temperature and frequency)



Marking color : Blue print



Specifications

Item	Performance																				
Category temperature range (°C)	-55~+125																				
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)																				
Leakage current (µA) (max.)	6.3V to 80V : 0.01CV or 3 whichever is larger (after 2 minutes) 100V : 0.05CV or 15 whichever is larger (after 2 minutes). : Rated capacitance (µF) ; V : Rated voltage (V) (20°C)																				
Tangent of loss angle (tanδ)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>tanδ (max.)</td> <td>0.20</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> <td>0.08</td> </tr> </tbody> </table> <p>(20°C, 120Hz)</p>	Rated voltage (V)	6.3	10	16	25	35	50	63	80	100	tanδ (max.)	0.20	0.18	0.16	0.14	0.12	0.10	0.08	0.08	0.08
Rated voltage (V)	6.3	10	16	25	35	50	63	80	100												
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Characteristics at high and low temperature	<table border="1"> <thead> <tr> <th>Impedance ratio (max.)</th> <th>Z-25°C/Z+20°C</th> <th>1.5</th> </tr> </thead> <tbody> <tr> <td></td> <th>Z-55°C/Z+20°C</th> <td>2.0</td> </tr> </tbody> </table> <p>(100kHz)</p>	Impedance ratio (max.)	Z-25°C/Z+20°C	1.5		Z-55°C/Z+20°C	2.0														
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Endurance (125°C) (Applied ripple current)	<table border="1"> <thead> <tr> <th>Test time</th> <th>4000 hours</th> <th>6000 hours (25V~63V : φ6.3 or more)</th> </tr> </thead> <tbody> <tr> <td>Leakage current</td> <td>The initial specified value or less</td> <td>The initial specified value or less</td> </tr> <tr> <td>Percentage of capacitance change</td> <td>Within ±30% of initial value</td> <td>Within ±30% of initial value</td> </tr> <tr> <td>Tangent of the loss angle</td> <td>200% or less of the initial specified value</td> <td>200% or less of the initial specified value</td> </tr> <tr> <td>ESR change</td> <td>200% or less of the initial specified value</td> <td>200% or less of the initial specified value</td> </tr> </tbody> </table>	Test time	4000 hours	6000 hours (25V~63V : φ6.3 or more)	Leakage current	The initial specified value or less	The initial specified value or less	Percentage of capacitance change	Within ±30% of initial value	Within ±30% of initial value	Tangent of the loss angle	200% or less of the initial specified value	200% or less of the initial specified value	ESR change	200% or less of the initial specified value	200% or less of the initial specified value					
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ESR change	200% or less of the initial specified value	200% or less of the initial specified value																			
Shelf life (125°C)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment : According to JIS C5101-4 4.1.																				

Outline Drawing

Unit : mm

Series HVK

Series HTK

φD	L	A	B	C	M	W	P	Size code
5	5.8±0.3	5.3	5.3	2.3	0.4±0.2	0.5 to 0.8	1.5	CC8
6.3	5.8±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	DC8
6.3	7.7±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	DE7
8	8.7±0.3	8.4	8.4	3.0	0.4±0.2	0.5 to 0.8	3.1	EF7
8	10±0.5	8.4	8.4	3.0	0.4±0.2	0.7 to 1.1	3.1	EH0
10	8.7±0.3	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FF7
10	10±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FH0
10	12.5±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FK5
12.5	13.5±0.5	13.0	13.0	4.9	0.7±0.3	1.0 to 1.4	4.6	GL5

φD	L	A	B	C	M	W	P	Size code
6.3	5.8±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	DC8
6.3	7.7±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	DE7
8	10±0.5	8.4	8.4	3.0	0.4±0.2	0.7 to 1.1	3.1	EH0
10	10±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FH0
10	12.5±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FK5
12.5	13.5±0.5	13.0	13.0	4.9	0.7±0.3	1.0 to 1.4	4.6	GL5

Refer to individual page.

(Soldering conditions, Land pattern size, The taping specifications)

Coefficient of Frequency for Rated Ripple Current

Rated voltage (V) \ Frequency (Hz)	120	1k	10k	100k or more
6.3 to 100	0.10	0.30	0.60	1

4000 hours guaranteed: Product code system (*For general product)

HVK (example : 16V470µF)

RS*	HVK	471	M	1E	FH0	□	E
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

HTK (example : 63V56µF)

RS*	HTK	560	M	4E	FH0	□	E
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

6000 hours guaranteed: Product code system (*For general product)

HVK-B (example : 25V100µF)

RS*	HVK	101	M	1T	DE7	□	B
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

HTK-B (example : 25V100µF)

RS*	HTK	101	M	1T	DE7	□	B
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

NOTE : Design, Specifications are subject to change without notice.
It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.

For details, refer to the various "Product Code System" pages.

HVK series Standard Ratings (●Marked: 6000 hours guaranteed)

Rated voltage (V)		6.3 (1J)			10 (1L)			16 (1E)			25 (1T)		
Case	Item	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)
5×5.8	—	—	—	—	—	—	—	47	70	600	33	80	550
6.3×5.8	220	45	950	100	45	950	82	45	950	● 56	50	900	
6.3×7.7	330	24	1450	220	24	1450	150	27	1450	● 100	30	1400	
8×8.7	—	—	—	—	—	—	—	—	—	● 150	27	1500	
8×10	560	22	1700	330	22	1700	270	22	1700	● 220	27	1600	
10×8.7	—	—	—	—	—	—	—	—	—	● 270	25	1700	
10×10	820	18	2100	470	18	2100	470	18	2100	● 330	20	2000	
10×12.5	—	—	—	—	—	—	—	—	—	● 560	18	3000	
12.5×13.5	—	—	—	—	—	—	—	—	—	● 820	15	3500	

Rated voltage (V)		35 (1G)			50 (1U)			63 (4E)		
Case	Item	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)
5×5.8	22	100	550	10	120	500	—	—	—	—
6.3×5.8	● 47	60	900	● 22	80	750	● 10	120	700	—
6.3×7.7	● 68	35	1400	● 33	40	1100	● 22	80	900	—
8×8.7	● 100	30	1500	● 47	35	1200	● 27	50	1000	—
8×10	● 150	27	1600	● 68	30	1250	● 33	40	1100	—
10×8.7	● 220	25	1700	● 82	28	1400	● 47	35	1200	—
10×10	● 270	20	2000	● 100	28	1600	● 56	30	1400	—
10×12.5	● 390	18	3000	● 150	24	2500	● 100	26	2000	—
12.5×13.5	● 560	15	3500	● 330	20	3000	● 120	22	2500	—

Rated voltage (V)		80 (1R)			100 (1H)		
Case	Item	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)
8×10	22	45	1100	—	—	—	—
10×10	33	36	1200	15	45	1000	—

(Note) Rated ripple current : 125°C , 100kHz ; ESR : 20°C , 100kHz

HTK series Standard Ratings (●Marked: 6000 hours guaranteed)

Rated voltage (V)		6.3 (1J)			10 (1L)			16 (1E)			25 (1T)		
Case	Item	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)
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8×10	560	22	1700	330	22	1700	270	22	1700	● 220	27	1600	
10×10	820	18	2100	470	18	2100	470	18	2100	● 330	20	2000	
10×12.5	—	—	—	—	—	—	—	—	—	● 560	18	3000	
12.5×13.5	—	—	—	—	—	—	—	—	—	● 820	15	3500	

Rated voltage (V)		35 (1G)			50 (1U)			63 (4E)		
Case	Item	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mAmps)
6.3×5.8	● 47	60	900	● 22	80	750	● 10	120	700	—
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