

☆UPGRADE

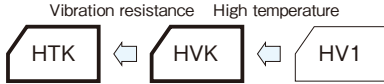
Code in front of series have been extracted from product code, which describes the segment of products, such as type and features.

- 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)
- Environmental : GREEN CAP™, RoHS compliance.

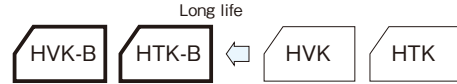


Marking color : Blue print

Guaranteed 4000h



Guaranteed 6000h

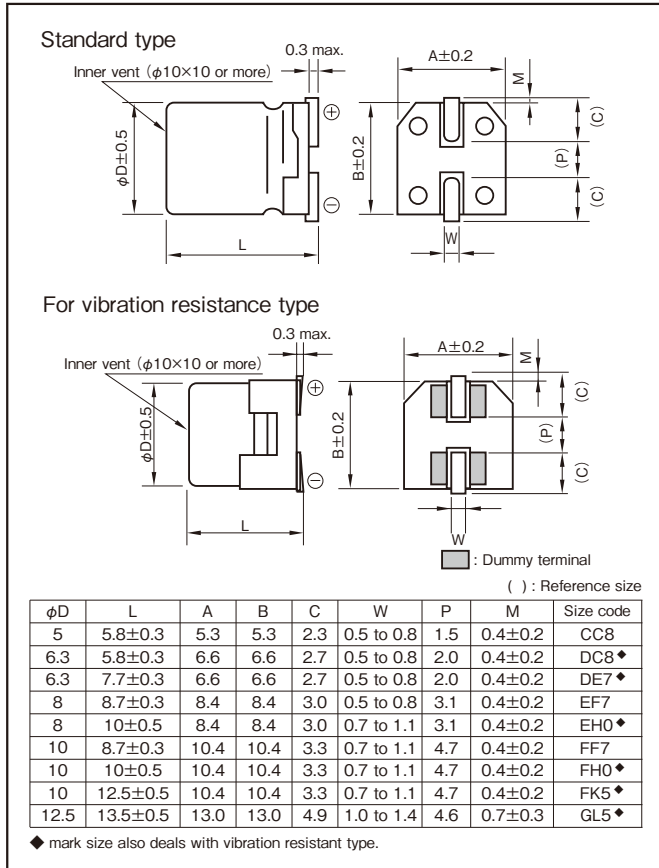


### Specifications

Item	Performance																				
Category temperature range (°C)	-55 to +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
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Characteristics at high and low temperature	<p>Impedance ratio (max.)</p> <table border="1"> <thead> <tr> <th>Z-25°C/Z+20°C</th> <th>1.5</th> </tr> </thead> <tbody> <tr> <th>Z-55°C/Z+20°C</th> <th>2.0</th> </tr> </tbody> </table> <p>(100kHz)</p>	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



Refer to individual page.

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

### Coefficient of Frequency for Rated Ripple Current

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

### Product code system (\*For general product)

φ10x8.7L or less (example : 35V150µF, Standard type)

RS*	HVK	151	M	1G	EH0	002	E
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

φ10x10L, φ10x12.5L (example : 35V270µF, Standard type)

RS*	HVK	271	M	1G	FH0	002	EX
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

φ12.5 (example : 35V560µF, Standard type)

RS*	HVK	561	M	1G	GL5	005	E
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

- For vibration resistance type should change Series code "HVK" into "HTK".
- 6000 hours guaranteed product should change additional code "E" into "B".
- For details, refer to the various "Product Code System" pages.

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.

Code in front of series have been extracted from product code, which describes the segment of products, such as type and features.

Standard ratings (◆Marked: It supports vibration resistance type / ●Marked: It also supports 6000 hours guaranteed)

Rated voltage (V) Rated capacitance (μF)	6.3 (1J)			10 (1L)			16 (1E)			25 (1T)		
	Item Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)	Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)	Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)	Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)
33	—	—	—	—	—	—	—	—	—	5×5.8	80	550
47	—	—	—	—	—	—	5×5.8	70	600	—	—	—
56	—	—	—	—	—	—	—	—	—	◆● 6.3×5.8	50	900
82	—	—	—	—	—	—	◆ 6.3×5.8	45	950	—	—	—
100	—	—	—	◆ 6.3×5.8	45	950	—	—	—	◆● 6.3×7.7	30	1400
150	—	—	—	—	—	—	◆ 6.3×7.7	27	1450	● 8×8.7	27	1500
220	◆ 6.3×5.8	45	950	◆ 6.3×7.7	24	1450	—	—	—	◆● 8×10	27	1600
270	—	—	—	—	—	—	◆ 8×10	22	1700	● 10×8.7	25	1700
330	◆ 6.3×7.7	24	1450	◆ 8×10	22	1700	—	—	—	◆● 10×10	20	2000
470	—	—	—	◆ 10×10	18	2100	◆ 10×10	18	2100	—	—	—
560	◆ 8×10	22	1700	—	—	—	—	—	—	◆● 10×12.5	18	3000
820	◆ 10×10	18	2100	—	—	—	—	—	—	◆● 12.5×13.5	15	4000

Rated voltage (V) Rated capacitance (μF)	35 (1G)			50 (1U)			63 (4E)			80 (1R)		
	Item Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)	Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)	Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)	Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)
10	—	—	—	5×5.8	120	500	◆● 6.3×5.8	120	700	—	—	—
22	5×5.8	100	550	◆● 6.3×5.8	80	750	◆● 6.3×7.7	80	900	◆ 8×10	45	1100
27	—	—	—	—	—	—	● 8×8.7	50	1000	—	—	—
33	—	—	—	◆● 6.3×7.7	40	1100	◆● 8×10	40	1100	◆ 10×10	36	1200
47	◆● 6.3×5.8	60	900	● 8×8.7	35	1200	● 10×8.7	35	1200	—	—	—
56	—	—	—	—	—	—	◆● 10×10	30	1400	—	—	—
68	◆● 6.3×7.7	35	1400	◆● 8×10	30	1250	—	—	—	—	—	—
82	—	—	—	● 10×8.7	28	1400	—	—	—	—	—	—
100	● 8×8.7	30	1500	◆● 10×10	28	1600	◆● 10×12.5	26	2000	—	—	—
120	—	—	—	—	—	—	◆● 12.5×13.5	22	3000	—	—	—
150	◆● 8×10	27	1600	◆● 10×12.5	24	2500	—	—	—	—	—	—
220	● 10×8.7	25	1700	—	—	—	—	—	—	—	—	—
270	◆● 10×10	20	2000	—	—	—	—	—	—	—	—	—
330	—	—	—	◆● 12.5×13.5	20	3500	—	—	—	—	—	—
390	◆● 10×12.5	18	3000	—	—	—	—	—	—	—	—	—
560	◆● 12.5×13.5	15	4000	—	—	—	—	—	—	—	—	—

Rated voltage (V) Rated capacitance (μF)	100 (1H)		
	Item Case φD×L(mm)	ESR (mΩ max.)	Rated ripple current (mA rms)
15	◆ 10×10	45	1000

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