

☆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.
- HTX is resist to vibration. (30G guaranteed)
- Equivalent to conductive polymer type Aluminum Electrolytic Capacitor.
(There are little characteristics change by temperature and frequency)
- Guaranteed 135°C, 4000 hours.(φ6.3: 2000 hours)
- Environmental : GREEN CAP™, RoHS compliance.



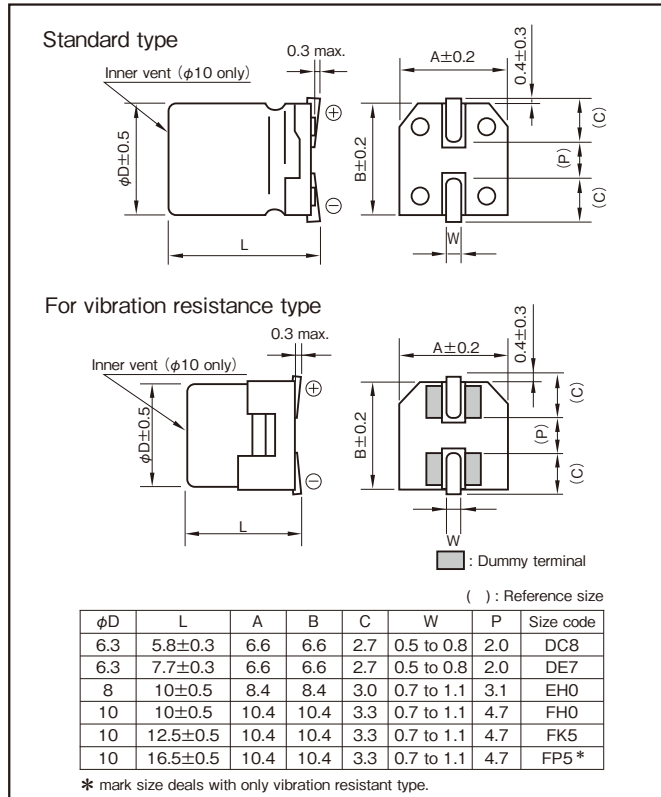
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Specifications

Item	Performance																													
Category temperature range (°C)	-55 to +135																													
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)																													
Leakage current (μA) (max.)	0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance (μF) , V : Rated voltage (V) (20°C)																													
Tangent of loss angle (tanδ)	<table><tr><td>Rated voltage (V)</td><td>25</td><td>35</td><td>50</td><td>63</td></tr><tr><td>tanδ (max.)</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td></tr></table> (20°C, 120Hz)					Rated voltage (V)	25	35	50	63	tanδ (max.)	0.14	0.12	0.10	0.08															
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Characteristics at high and low temperature	Impedance ratio (max.)	<table><tr><td>Z-25°C/Z+20°C</td><td>1.5</td></tr><tr><td>Z-55°C/Z+20°C</td><td>2.0</td></tr></table> (100kHz)			Z-25°C/Z+20°C	1.5	Z-55°C/Z+20°C	2.0																						
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Endurance (135°C) (Applied ripple current)	<table><tr><td>Test time</td><td colspan="4">4000 hours(φ6.3: 2000 hours)</td></tr><tr><td>Leakage current</td><td colspan="4">The initial specified value or less</td></tr><tr><td>Percentage of capacitance change</td><td colspan="4">Within ±30% of initial value</td></tr><tr><td>Tangent of the loss angle</td><td colspan="4">200% or less of the initial specified value</td></tr><tr><td>ESR change</td><td colspan="4">200% or less of the initial specified value</td></tr></table>					Test time	4000 hours(φ6.3: 2000 hours)				Leakage current	The initial specified value or less				Percentage of capacitance change	Within ±30% of initial value				Tangent of the loss angle	200% or less of the initial specified value				ESR change	200% or less of the initial specified value			
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ESR change	200% or less of the initial specified value																													
Shelf life (135°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



Coefficient of Frequency for Rated Ripple Current

Frequency (Hz)	120	1k	10k	100k or more
Rated voltage (V)				
25 to 63	0.10	0.30	0.60	1

Product code system (*For general product)

φ6.3, φ8 (example : 25V220μF, Standard type)

RS*	HVX	221	M	1T	EH0	002	
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

φ10 (example : 35V270μF, Standard type)

RS*	HVX	271	M	1G	FH0	002	X
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 "HVX" into "HTX".
- For details, refer to the various "Product Code System" pages.

Refer to individual page.

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

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Standard Ratings (●Marked: 2000 hours guaranteed)

Rated voltage (V) Rated capacitance (μF)	Item	25 (1T)			35 (1G)			50 (1U)			63 (4E)		
		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	—	—	—	—	—	—	—	—	—	—	● 6.3×5.8	120	700
22	—	—	—	—	—	—	—	● 6.3×5.8	80	750	● 6.3×7.7	80	900
33	—	—	—	—	—	—	—	● 6.3×7.7	40	1100	8×10	40	1100
47	—	—	—	—	● 6.3×5.8	60	900	—	—	—	—	—	—
56	● 6.3×5.8	50	900	—	—	—	—	—	—	—	10×10	30	1400
68	—	—	—	—	● 6.3×7.7	35	1400	8×10	30	1250	—	—	—
100	● 6.3×7.7	30	1400	—	—	—	—	10×10	28	1600	10×12.5	26	2000
150	—	—	—	—	8×10	22	1600	10×12.5	24	2500	10×16.5	15	3500
220	8×10	22	1600	—	—	—	—	—	—	—	—	—	—
270	—	—	—	—	10×10	20	2000	—	—	—	—	—	—
330	10×10	20	2000	—	—	—	—	—	—	—	—	—	—
390	—	—	—	—	10×12.5	18	3000	—	—	—	—	—	—
560	10×12.5	18	3000	—	—	—	—	—	—	—	—	—	—
680	—	—	—	—	10×16.5	11	3800	—	—	—	—	—	—
1000	10×16.5	11	4000	—	—	—	—	—	—	—	—	—	—

(Note) Rated ripple current : 135°C , 100kHz ; ESR : 20°C , 100kHz