

## Conductive Polymer Hybrid Capacitors

GREEN CAP

SMD

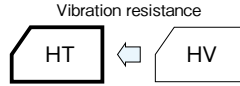
Low ESR

105°C  
10000hours

- Low ESR and high ripple current are realized.
- HT is resist to vibration. (30G guaranteed)
- Equivalent to conductive polymer type Aluminum Electrolytic Capacitor. (There are little characteristics change by temperature and frequency)
- Guaranteed 105°C, 10000 hours.



Marking color : Blue print



### Specifications

Item	Performance														
Category temperature range (°C)	-55~+105														
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)														
Leakage current (µA)	Less than 0.01CV or 3(µA) whichever is larger (after 2 minutes) C : 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>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>0.14</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)	25	35	50	63	80	100	tanδ (max.)	0.14	0.12	0.10	0.08	0.08	0.08
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Endurance (105°C) (Applied ripple current)	<table border="1"> <tbody> <tr> <td>Test time</td> <td>10000 hours</td> </tr> <tr> <td>Leakage current</td> <td>The initial specified value or less</td> </tr> <tr> <td>Percentage of capacitance change</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> </tr> <tr> <td>ESR change</td> <td>200% or less of the initial specified value</td> </tr> </tbody> </table>	Test time	10000 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 (105°C)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment														

### Outline Drawing

Unit : mm

#### Series HV

( ) : Reference size

φD	L	A	B	C	W	P	Casing symbol
6.3	5.8±0.3	6.6	6.6	2.7	0.5 to 0.8	2.0	F61
6.3	7.7±0.3	6.6	6.6	2.7	0.5 to 0.8	2.0	F80
8	8.7±0.3	8.4	8.4	3.0	0.5 to 0.8	3.1	G90
8	10±0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	G10
10	8.7±0.3	10.4	10.4	3.3	0.7 to 1.1	4.7	H90
10	10±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	H10
10	12.5±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	HC5

#### Series HT

□ : Dummy terminal  
( ) : Reference size

φD	L	A	B	C	W	P	Casing symbol
8	10±0.5	8.4	8.4	3.0	0.7 to 1.1	3.1	G10
10	10±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	H10
10	12.5±0.5	10.4	10.4	3.3	0.7 to 1.1	4.7	HC5

- Soldering conditions are described on page 15.
- Land pattern size are described on page 13.
- The taping specifications are described on page 16.

### Coefficient of Frequency for Rated Ripple Current

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

### Part numbering system

HV (example : 35V270µF)

HV	—	35	V	271	M	H10	E	□
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol		Taping symbol

HT (example : 35V270µF)

HT	—	35	V	271	M	H10	E	□
Series code		Rated voltage symbol		Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol		Taping symbol

Standard Ratings

Rated voltage (V) Rated capacitance (µF)	Item	25			35			50			63		
		Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current
		φD×L (mm)	(mΩ max.)	(mA <sub>rms</sub> )	φD×L (mm)	(mΩ max.)	(mA <sub>rms</sub> )	φD×L (mm)	(mΩ max.)	(mA <sub>rms</sub> )	φD×L (mm)	(mΩ max.)	(mA <sub>rms</sub> )
10	—	—	—	—	—	—	—	—	—	6.3×5.8	120	1000	
22	—	—	—	—	—	—	6.3×5.8	80	1100	6.3×7.7	80	1500	
27	—	—	—	—	—	—	—	—	—	8×8.7	50	1600	
33	—	—	—	—	—	—	6.3×7.7	40	1600	8×10	40	1600	
47	—	—	—	6.3×5.8	60	1300	8×8.7	35	1700	10×8.7	35	1700	
56	6.3×5.8	50	1300	—	—	—	—	—	—	10×10	30	1800	
68	—	—	—	6.3×7.7	35	2000	8×10	30	1800	—	—	—	
82	—	—	—	—	—	—	10×8.7	28	1900	—	—	—	
100	6.3×7.7	30	2000	8×8.7	30	2100	10×10	28	2000	10×12.5	26	2500	
150	8×8.7	27	2100	8×10	27	2300	10×12.5	24	3000	—	—	—	
220	8×10	27	2300	10×8.7	25	2400	—	—	—	—	—	—	
270	10×8.7	25	2400	10×10	20	2500	—	—	—	—	—	—	
330	10×10	20	2500	—	—	—	—	—	—	—	—	—	
390	—	—	—	10×12.5	18	3500	—	—	—	—	—	—	
560	10×12.5	18	3500	—	—	—	—	—	—	—	—	—	

Rated voltage (V) Rated capacitance (µF)	Item	80			100		
		Case	ESR	Rated ripple current	Case	ESR	Rated ripple current
		φD×L (mm)	(mΩ max.)	(mA <sub>rms</sub> )	φD×L (mm)	(mΩ max.)	(mA <sub>rms</sub> )
15	—	—	—	10×10	45	1600	
22	8×10	45	1550	—	—	—	
33	10×10	36	1700	—	—	—	

(Note) Rated ripple current : 105°C , 100kHz ; ESR : 20°C , 100kHz