

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) (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>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>80</td><td>100</td></tr><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></table> (20°C, 120Hz)										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	<table><tr><td rowspan="2">Impedance ratio (max.)</td><td colspan="5">Z-25°C/Z+20°C</td><td colspan="4">1.5</td></tr><tr><td colspan="5">Z-55°C/Z+20°C</td><td colspan="4">2.0</td></tr></table> (100kHz)										Impedance ratio (max.)	Z-25°C/Z+20°C					1.5				Z-55°C/Z+20°C					2.0																																		
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Endurance (105°C) (Applied ripple current)	<table><tr><td>Test time</td><td colspan="9">10000 hours</td></tr><tr><td>Leakage current</td><td colspan="9">The initial specified value or less</td></tr><tr><td>Percentage of capacitance change</td><td colspan="9">Within ±30% of initial value</td></tr><tr><td>Tangent of the loss angle</td><td colspan="9">200% or less of the initial specified value</td></tr><tr><td>ESR change</td><td colspan="9">200% or less of the initial specified value</td></tr></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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Shelf life (105°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 HV									Series HT								
() : Reference size									() : Reference size								
ϕD	L	A	B	C	M	W	P	Casing symbol	ϕD	L	A	B	C	M	W	P	Casing symbol
5	5.8±0.3	5.3	5.3	2.3	0.4±0.2	0.5 to 0.8	1.5	E61	8	10±0.5	8.4	8.4	3.0	0.4±0.2	0.7 to 1.1	3.1	G10
6.3	5.8±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	F61	10	10±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	H10
6.3	7.7±0.3	6.6	6.6	2.7	0.4±0.2	0.5 to 0.8	2.0	F80	10	12.5±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	HC5
8	8.7±0.3	8.4	8.4	3.0	0.4±0.2	0.5 to 0.8	3.1	G90	12.5	13.5±0.5	13.0	13.0	4.9	0.7±0.3	1.0 to 1.4	4.6	IE
8	10±0.5	8.4	8.4	3.0	0.4±0.2	0.7 to 1.1	3.1	G10									
10	8.7±0.3	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	H90									
10	10±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	H10									
10	12.5±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	HC5									
12.5	13.5±0.5	13.0	13.0	4.9	0.7±0.3	1.0 to 1.4	4.6	IE									

- 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) Rated voltage (V)	120	1k	10k	100k or more
6.3 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

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.

Standard Ratings

Rated voltage (V) Rated capacitance (μF) Item	6.3			10			16			25		
	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
33	—	—	—	—	—	—	—	—	—	5×5.8	80	900
47	—	—	—	—	—	—	5×5.8	70	900	—	—	—
56	—	—	—	—	—	—	—	—	—	6.3×5.8	50	1300
82	—	—	—	—	—	—	6.3×5.8	45	1600	—	—	—
100	—	—	—	6.3×5.8	45	1600	—	—	—	6.3×7.7	30	2000
150	—	—	—	—	—	—	6.3×7.7	27	2200	8×8.7	27	2100
220	6.3×5.8	45	1600	6.3×7.7	24	2300	—	—	—	8×10	27	2300
270	—	—	—	—	—	—	8×10	22	2500	10×8.7	25	2400
330	6.3×7.7	24	2300	8×10	22	2500	—	—	—	10×10	20	2500
470	—	—	—	10×10	18	2600	10×10	18	2600	—	—	—
560	8×10	22	2500	—	—	—	—	—	—	10×12.5	18	3500
820	10×10	18	2600	—	—	—	—	—	—	12.5×13.5	15	4000

Rated voltage (V) Rated capacitance (μF) Item	35			50			63		
	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
10	—	—	—	5×5.8	120	750	6.3×5.8	120	1000
22	5×5.8	100	900	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	—	—	—	—	—	—	10×10	30	1800
68	6.3×7.7	35	2000	8×10	30	1800	—	—	—
82	—	—	—	10×8.7	28	1900	—	—	—
100	8×8.7	30	2100	10×10	28	2000	10×12.5	26	2500
120	—	—	—	—	—	—	12.5×13.5	22	3000
150	8×10	27	2300	10×12.5	24	3000	—	—	—
220	10×8.7	25	2400	—	—	—	—	—	—
270	10×10	20	2500	—	—	—	—	—	—
330	—	—	—	12.5×13.5	20	3600	—	—	—
390	10×12.5	18	3500	—	—	—	—	—	—
560	12.5×13.5	15	4000	—	—	—	—	—	—

Rated voltage (V) Rated capacitance (μF) Item	80			100		
	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Case φ D×L (mm)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
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

Mouser Electronics

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