

Conductive Polymer Hybrid Capacitors

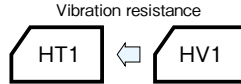
GREEN
CAP

SMD

Low
ESR

105°C
10000hours

- Low ESR and high ripple current are realized.
- HT1 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.)	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><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="2">Z-25°C/Z+20°C</td><td colspan="2">1.5</td></tr><tr><td colspan="2">Z-55°C/Z+20°C</td><td colspan="2">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

HV1 series										HT1 series									
() : Reference size										() : Reference size									
φD	L	A	B	C	M	W	P	Size code		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	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	
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	
8	8.7±0.3	8.4	8.4	3.0	0.4±0.2	0.5 to 0.8	3.1	EF7		10	10±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FH0	
8	10±0.5	8.4	8.4	3.0	0.4±0.2	0.7 to 1.1	3.1	EH0		10	12.5±0.5	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FK5	
10	8.7±0.3	10.4	10.4	3.3	0.4±0.2	0.7 to 1.1	4.7	FF7		12.5	13.5±0.5	13.0	13.0	4.9	0.7±0.3	1.0 to 1.4	4.6	GL5	
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

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)

HV1 (example : 35V270μF)

RS*	HV1	271	M	1G	FH0		E
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

HT1 (example : 35V270μF)

RS*	HT1	271	M	1G	FH0		E
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Taping and packing code	Additional code

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.

HV1 series Standard Ratings

Rated voltage (V) Case φ D×L (mm)	Item	6.3 (1J)			10 (1L)			16 (1E)			25 (1T)		
		Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
5×5.8		—	—	—	—	—	—	47	80	900	33	80	900
6.3×5.8		220	45	1600	100	45	1600	82	45	1600	56	50	1300
6.3×7.7		330	24	2300	220	24	2300	150	27	2200	100	30	2000
8×8.7		—	—	—	—	—	—	—	—	—	150	27	2100
8×10		560	22	2500	330	22	2500	270	22	2500	220	27	2300
10×8.7		—	—	—	—	—	—	—	—	—	270	25	2400
10×10		820	18	2600	470	18	2600	470	18	2600	330	20	2500
10×12.5		—	—	—	—	—	—	—	—	—	560	18	3500
12.5×13.5		—	—	—	—	—	—	—	—	—	820	15	4000

Rated voltage (V) Case φ D×L (mm)	Item	35 (1G)			50 (1U)			63 (4E)		
		Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
5×5.8		22	100	900	10	120	750	—	—	—
6.3×5.8		47	60	1300	22	80	1100	10	120	1000
6.3×7.7		68	35	2000	33	40	1600	22	80	1500
8×8.7		100	30	2100	47	35	1700	27	50	1600
8×10		150	27	2300	68	30	1800	33	40	1600
10×8.7		220	25	2400	82	28	1900	47	35	1700
10×10		270	20	2500	100	28	2000	56	30	1800
10×12.5		390	18	3500	150	24	3000	100	26	2500
12.5×13.5		560	15	4000	330	20	3600	120	22	3000

Rated voltage (V) Case φ D×L (mm)	Item	80 (1R)			100 (1H)		
		Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
8×10		22	45	1550	—	—	—
10×10		33	36	1700	15	45	1600

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

HT1 series Standard Ratings

Rated voltage (V) Case φ D×L (mm)	Item	6.3 (1J)			10 (1L)			16 (1E)			25 (1T)		
		Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
6.3×5.8		220	45	1600	100	45	1600	82	45	1600	56	50	1300
6.3×7.7		330	24	2300	220	24	2300	150	27	2200	100	30	2000
8×10		560	22	2500	330	22	2500	270	22	2500	220	27	2300
10×10		820	18	2600	470	18	2600	470	18	2600	330	20	2500
10×12.5		—	—	—	—	—	—	—	—	—	560	18	3500
12.5×13.5		—	—	—	—	—	—	—	—	—	820	15	4000

Rated voltage (V) Case φ D×L (mm)	Item	35 (1G)			50 (1U)			63 (4E)		
		Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
6.3×5.8		47	60	1300	22	80	1100	10	120	1000
6.3×7.7		68	35	2000	33	40	1600	22	80	1500
8×10		150	27	2300	68	30	1800	33	40	1600
10×10		270	20	2500	100	28	2000	56	30	1800
10×12.5		390	18	3500	150	24	3000	100	26	2500
12.5×13.5		560	15	4000	330	20	3600	120	22	3000

Rated voltage (V) Case φ D×L (mm)	Item	80 (1R)			100 (1H)		
		Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})	Rated capacitance (μF)	ESR (mΩ max.)	Rated ripple current (mA _{rms})
8×10		22	45	1550	—	—	—
10×10		33	36	1700	15	45	1600

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

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It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.

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