

Data Sheet

Customer : _____

Product : Conductive Polymer Aluminum Solid Electrolytic Capacitor
Radial Type, Standard, 105°C 5,000Hours – HPV Series

Size : 6.3x6mm ~ 10x12mm

Issued Date : 01-Sep.-2025

Edition : Ver.1

Record of change

Date	Ver.	Description	Page

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01-Sep.-2025	01-Sep.-2025	01-Sep.-2025	
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CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

Radial Lead, 105°C Standard

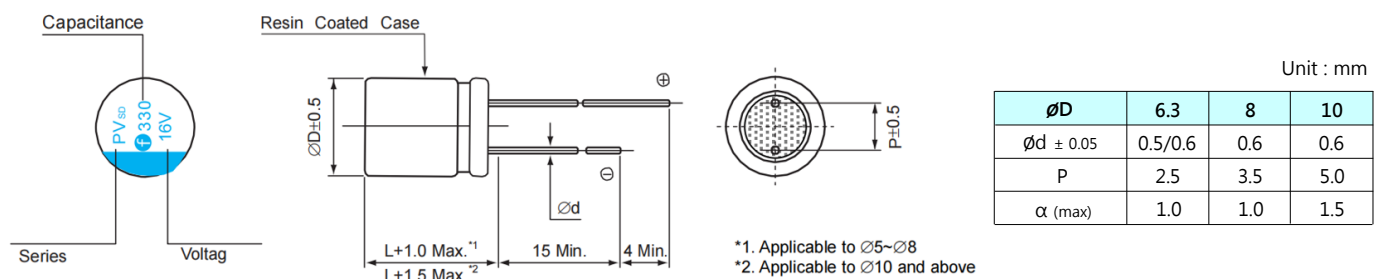
- Low ESR & high ripple current capability
- Endurance: 5,000 hours at 105°C
- Rated Voltage : 2.5V ~ 50V
- Rated capacitance : 15 ~ 3,900 μ F

SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature range	-55 + 105°C	
Rated Voltage Range	2.5V ~ 50V	
Capacitance Tolerance	± 20% (at 120 Hz/ 20°C)	
Surge Voltage	Rated Voltage x 1.15	
Leakage Current	Within the specified value as in standard rating	
Dissipation Factor (tan δ)	0.12 or less, less than or equal to the specified value at 20°C and 120Hz	
Temperature Characteristics (Impedance ratio at 100 KHz)	Z (-25°C) / Z (+20°C)	≤ 1.15
	Z (-55°C) / Z (+20°C)	≤ 1.25
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 5,000 hours at 105°C.	
	Capacitance change	≤ ± 20% of the initial value
	D. F. (Tan δ)	≤ 150% of initial specified value
	ESR	≤ 150% of initial specified value
	Leakage current	Initial specified value or less
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them at 60°C, 90 to 95% RH for 1,000 hours.	
	Capacitance change	≤ ± 20% of the initial value
	D. F. (Tan δ)	≤ 150% of initial specified value
	ESR	≤ 150% of initial specified value
	Leakage current	Initial specified value or less
Surge Voltage Test	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltage specified At 105°C for 30 seconds through a protective resistor (R=1KΩ) and discharge for 5 minutes 30 seconds.	
	Capacitance change	≤ ± 20% of the initial value
	D. F. (Tan δ)	≤ 150% of initial specified value
	ESR	≤ 150% of initial specified value
	Leakage current	Initial specified value or less
Failure Rate	0.5% per 1,000 hours maximum (Confidence level 60% at 105°C)	

※ In case of any doubt arises, measure the leakage current after voltage applied for 120 minutes at 105°C.

Dimension



CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

■ Part Numbering (example: 100 μ F 16V 6.3x6mm)

HPV 101 M 1C R B C 060 B P 00
 SERIES CAPACITANCE TOL. W.V. TYPE LEAD DIA. LENGTH PRINTING COLOR RUBBER LEAD PROCESS

■ Standard Products Table

Rated voltage (V.DC)	Rated Capacitance (μ F)	Case Size D x L (mm)	$\tan \delta$	Leakage Current (μ A)	ESR (m Ω max./ 20°C 100KHz to 300KHz)	Rated ripple current (mA rms/105°C, 100KHz)
2.5 (0E)	560	6.3 x 6	0.12	280	17	2,740
	680	6.3 x 8	0.12	340	10	4,100
	820	6.3 x 11	0.12	410	9	4,300
	1000	8 x 8	0.12	500	7	6100
	1200	8 x 12	0.12	600	8	5,830
	1500	8 x 12	0.12	750	8	5,720
	2700	10 x 12	0.12	1,350	9	5,420
	3900	10 x 12	0.12	1,950	8	6,260
4 (0G)	390	6.3 x 6	0.12	312	18	2,980
	470	6.3 x 8	0.12	376	12	3,740
	560	6.3 x 11	0.12	448	10	4,100
	680	8 x 8	0.12	544	7	6,100
	820	8 x 12	0.12	656	9	5,000
	1200	8 x 12	0.12	960	8	5,700
	2200	10 x 12	0.12	1,760	8	5,700
	3300	10 x 12	0.12	2,640	9	5,960
6.3 (0J)	220	6.3 x 6	0.12	277	18	2,980
	330	6.3 x 6	0.12	416	19	2,860
	470	6.3 x 8	0.12	592	11	3,910
	680	6.3 x 8	0.12	857	15	3,650
		6.3 x 11	0.12	857	10	4,300
	820	8 x 8	0.12	1033	10	5,220
		8 x 12	0.12	1,260	8	5,750
	1000	8 x 8	0.12	1,260	7	5,700
		8 x 12	0.12	1,890	9	6,100
		10 x 12	0.12	1,890	9	5,600
	1500	8 x 12	0.12	2,772	9	5,500
		10 x 12	0.12	2,772	9	5,500
10 (1A)	220	6.3 x 6	0.12	440	17	2,920
	270	6.3 x 8	0.12	540	15	3,400
	330	6.3 x 11	0.12	660	10	4,300
		8 x 8	0.12	660	8	4,500
	470	8 x 8	0.12	940	10	4,300
	560	8 x 8	0.12	1,120	14	4,400
	680	8 x 12	0.12	1,350	20	5,700
	820	8 x 12	0.12	1,640	11	4,510
	1200	10 x 12	0.12	2,400	11	5,200
16 (1C)	100	6.3 x 6	0.12	320	24	2,490
	150	6.3 x 6	0.12	480	25	2,630
	220	6.3 x 8	0.12	704	19	3,100
	270	6.3 x 8	0.12	864	13	4,300
	330	6.3 x 11	0.12	1,056	9	4,800
		8 x 8	0.12	1,056	11	4,520
	470	8 x 8	0.12	1,504	13	4,300
		8 x 12	0.12	1,504	11	5,400
	680	8 x 12	0.12	2,176	11	5,400
	820	8 x 12	0.12	2,624	13	4,450
		10 x 12	0.12	2,624	16	4,200
	1000	10 x 12	0.12	3,200	14	4,800
	1200	10 x 12	0.12	3,840	11	6,100

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■ Standard Products Table

Rated voltage (V.DC)	Rated Capacitance (μF)	Case Size D x L (mm)	tan δ	Leakage Current (μA)	ESR (mΩ max./ 20°C 100KHz to 300KHz)	Rated ripple current (mA rms/105°C, 100KHz)
25 (1E)	47	6.3 x 6	0.12	235	30	2,800
	68	6.3 x 6	0.12	340	30	2,800
	100	6.3 x 8	0.12	500	28	3,200
	120	6.3 x 11	0.12	600	25	3,500
		8 x 8	0.12	600	30	2,500
	150	8 x 12	0.12	750	16	4,650
	220	8 x 12	0.12	1,100	16	4,650
	330	8 x 12	0.12	1,650	17	4,650
		10 x 12	0.12	1,650	15	4,800
35 (1V)	470	10 x 12	0.12	2,350	14	5,000
	680	10 x 12	0.12	3,400	14	5,000
	47	6.3 x 6	0.12	329	35	2,600
	68	6.3 x 8	0.12	476	32	2,800
	100	6.3 x 11	0.12	700	30	3,100
		8 x 8	0.12	700	35	2,800
	150	8 x 12	0.12	1,050	19	4,200
	220	10 x 12	0.12	1,540	21	4,500
	330	10 x 12	0.12	2,310	18	4,800
50 (1H)	15	6.3 x 6	0.12	150	40	2,100
	22	6.3 x 8	0.12	220	35	2,500
	47	8 x 8	0.12	470	40	2,400
	68	8 x 12	0.12	680	23	3,600
	82	10 x 12	0.12	820	20	4,100
	100	10 x 12	0.12	1,000	20	4,100

■ Frequency coefficient of allowable ripple current

Frequency	120 Hz ≤ f < 1 KHz	1 KHz ≤ f < 10 KHz	10 KHz ≤ f < 100 KHz	100 KHz ≤ f ≤ 300 KHz
Coefficient	0.05	0.30	0.70	1.00