HITANO
ENTERPRISE CORP. ®

Data Sheet

Customer :

Product : Conductive Polymer Aluminum Solid Electrolytic Capacitor
Radial Type, Ultra Low ESR, 125℃ 2,000hours – HPH Series

Size : 8x8mm ~ 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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HITANO ENTERPRISE CORP. ®

HPH SERIES

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

Radial Lead, Ultra Low ESR

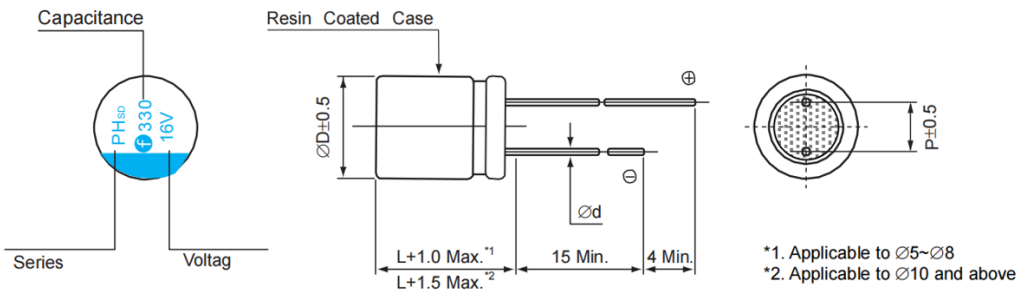
- Ultra Low ESR & high ripple current capability
- Endurance: 2,000 hours at 125℃
- Rated Voltage：16V ~ 63V
- Rated capacitance：47 ~ 1,500 μF

■SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature range	-55 + 125℃	
Rated Voltage Range	16V ~ 63V	
Capacitance Tolerance	± 20% (at 120 Hz/ 20℃)	
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℃ and 120Hz	
Temperature Characteristics (Impedance ratio at 100 KHz)	Z (-25℃) / Z (+20℃)	≤ 1.15
	Z (-55℃) / Z (+20℃)	≤ 1.25
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 16~25V 2,000 or ≥35V 1,500 hours at 125℃.	
	Capacitance change	≤ ±30 % 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℃ after subjecting them at 60℃, 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 125℃ 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 125℃)	

※ In case of any doubt arises, measure the leakage current after voltage applied for 120 minutes at 125℃.

■ Dimension



Unit : mm

ØD	8	10
Ød ± 0.05	0.6	0.6
P	3.5	5.0
α (max)	1.0	1.5

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

■ Part Numbering (example: 100 µF 50V 8x12mm)

H P H	1 0 1	M	1 H	R	B	D	1 2 0	B	P	0 0
SERIES	CAPACITANCE	TOL.	W.V.	TYPE	LEAD	DIA.	LENGTH	PRINTING COLOR	RUBBER	LEAD PROCESS

■ 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℃ 100KHz to 300KHz)	Rated ripple current (mA rms, 100KHz)	
						Tx ≤ 105℃	105℃<Tx≤ 125℃
16 (1C)	330	8 x 8	0.12	1,050	13	4,700	1,570
	470	8 x 12	0.12	1,504	11	5,400	2,040
	820	8 x 12	0.12	2,624	11	5,400	2,040
	1200	10 x 12	0.12	3,840	11	6,100	2,240
	1500	10 x 12	0.12	4,800	11	6,100	2,240
25 (1E)	220	8 x 12	0.12	1,350	16	4,750	1,900
	470	8 x 12	0.12	2,350	16	4,750	1,900
	470	10 x 12	0.12	2,350	14	5,050	2,020
	680	10 x 12	0.12	3,400	14	5,050	2,020
35 (1V)	100	8 x 12	0.12	700	23	3,400	1,360
	150	8 x 12	0.12	1,050	23	3,400	1,360
	220	8 x 12	0.12	1,540	23	3,400	1,360
	220	10 x 12	0.12	1,540	21	3,900	1,560
	330	10 x 12	0.12	2,310	21	3,900	1,560
50 (1H)	47	8 x 12	0.12	470	27	2,700	1,080
	82	8 x 12	0.12	820	27	2,700	1,080
	100	8 x 12	0.12	1,000	27	2,700	1,080
	150	10 x 12	0.12	1,500	25	3,100	1,240
	220	10 x 12	0.12	2,200	25	3,100	1,240
63 (1J)	47	8 x 12	0.12	592	27	2,700	1,080
	100	8 x 12	0.12	1260	27	2,700	1,080
	120	10 x 12	0.12	1,512	25	2,900	1,160
	150	10 x 12	0.12	1,890	25	2,900	1,160

■ 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