HITANO
ENTERPRISE CORP. ®

Data Sheet

Customer :

Product : Conductive Polymer Aluminum Solid Electrolytic Capacitor

Radial Type, Long Life, 105℃ 20,000 hours – HPE Series

Size : 6.3x6mm ~ 10x20mm

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℃ Long Life 20,000 hours

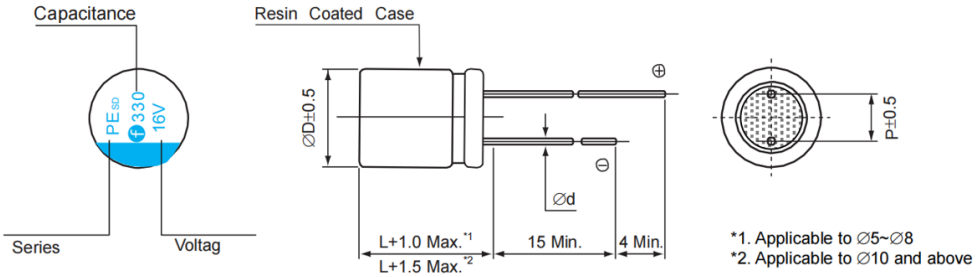
- Low ESR & high ripple current capability
- Endurance: 20,000 hours at 105℃
- Rated Voltage：2.5V ~ 50V
- Rated capacitance：22 ~ 2,700 μF

■SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature range	-55 + 105℃	
Rated Voltage Range	2.5V ~ 50V	
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 20,000 hours at 105℃.	
	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℃ 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 105℃ 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℃)	

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

■ Dimension



Unit : mm

ØD	6.3	8	10
Ød ± 0.05	0.6	0.6	0.6
P	2.5	3.5	5.0
α (max)	1.0	1.0	1.5

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■ Part Numbering (example: 330 µF 10V 6.3x8mm)

H P E	3 3 1	M	1 A	R	B	C	0 8 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 (mArms/105℃,100KHz)
2.5 (0E)	680	6.3 x 8	0.12	340	10	3,800
	1000	8 x 8	0.10	500	10	5,200
	1200	8 x 12	0.12	600	9	5,400
	1500	10 x 12	0.12	750	10	5,500
	2700	10 x 12	0.12	1,350	9	5,600
4 (0G)	470	6.3 x 8	0.12	376	15	3,800
	820	8 x 8	0.12	656	13	4,000
	1000	8 x 12	0.12	800	11	4,300
	1500	10 x 12	0.12	1,200	10	5,000
	2200	10 x 12	0.12	1,760	10	5,300
6.3 (0J)	470	6.3 x 8	0.12	592	13	4,000
	560	8 x 8	0.12	706	11	4,600
	680	8 x 12	0.12	857	12	4,500
	820	8 x 12	0.12	1,033	11	4,800
	1000	10 x 12	0.12	1,260	12	5,000
	1500	10 x 12	0.12	1,890	10	5,400
10 (1A)	330	6.3 x 8	0.12	660	15	3,400
	390	8 x 8	0.12	780	15	3,700
	470	8 x 12	0.12	940	13	3,800
	680	8 x 12	0.12	1,360	14	4,200
	820	10 x 12	0.12	1,640	15	4,300
	1000	10 x 12	0.12	2,000	13	4,800
16 (1C)	220	6.3 x 6	0.12	704	20	3,200
	270	6.3x 8	0.12	864	15	3,800
	330	6.3x 8	0.12	1,056	15	3,800
		6.3 x 11	0.12	1,056	10	5,080
	470	8 x 8	0.12	1,504	16	4,000
		8 x 12	0.12	1,504	8	5,400
	560	8 x 8	0.12	1,792	16	5,400
		8 x 12	0.12	1,792	8	6,100
	680	8 x 12	0.12	2,176	12	5,400
	820	8 x 16	0.12	2,624	8	7,000
		10 x 12	0.12	2,624	12	5,400
	1000	8 x 16	0.12	3,200	10	7,000
		8 x 20	0.12	3,200	8	7,500
		10 x 12	0.12	3,200	12	5,200
	1200	8 x 20	0.12	3,840	8	7,500
		10 x 12	0.12	3,840	12	5,400
	1500	8 x 20	0.12	4,800	8	7,500
		10 x 16	0.12	4,800	8	7,700
	1800	10 x 16	0.12	5,760	8	7,700
		10 x 20	0.12	5,760	8	8,100
	2200	10 x 20	0.12	7,040	8	8,100
	2700	10 x 20	0.12	8,640	8	8,100

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

■ 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 (mArms/105℃,100KHz)
25 (1E)	68	6.3 x 6	0.12	340	35	2,200
	100	6.3 x 8	0.12	500	28	2,780
	150	6.3 x 8	0.12	750	28	2,780
	180	6.3 x 11	0.12	900	26	2,900
		8 x 8	0.12	900	18	3,770
		8 x 12	0.12	900	16	4,650
	220	8 x 8	0.12	1,100	18	3,770
		8 x 12	0.12	1,100	16	4,650
	270	8 x 8	0.12	1,350	18	3,770
		8 x 12	0.12	1,350	16	4,650
	330	8 x 12	0.12	1,650	16	4,650
		10 x 12	0.12	1,650	14	5,000
	390	8 x 12	0.12	1,950	16	4,650
		10 x 12	0.12	1,950	14	5,000
	470	10 x 12	0.12	2,350	14	5,000
	560	8 x 16	0.12	2,800	14	5,400
		10 x 12	0.12	2,800	14	5,000
	680	10 x 12	0.12	3,400	14	5,000
35 (1V)	47	6.3 x 6	0.12	329	85	800
	68	6.3 x 8	0.12	476	60	1,100
	82	6.3 x 11	0.12	574	45	1,800
	100	8 x 8	0.12	700	30	2,600
	120	8 x 12	0.12	840	25	3,800
	220	10 x 12	0.12	1,540	22	4,100
50 (1H)	22	6.3 x 8	0.12	220	70	1,000
	33	8 x 8	0.12	330	55	1,800
	47	8 x 12	0.12	470	24	3,900
	100	10 x 12	0.12	1,000	20	4,300

■ 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