

PHLA 系列 技术参数



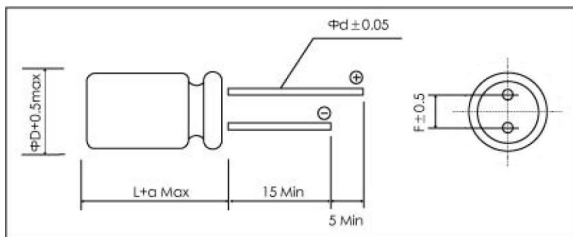
- Conductive Polymer Hybrid Aluminum Electrolytic Capacitors
- Low ESR, high ripple current capability, Large Capacitance 105°C, 5,000 hours.
- AEC-Q200 Compliant
- RoHS Compliant

Specifications

Items	Characteristics		
Category Temperature Range	-55 to +105°C		
Rated Voltage Range	25 to 80Vdc		
Capacitance Range	22 to 680μF		
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)		
Surge Voltage	Rated Voltage(V) × 1.15		
Dissipation Factor (tanδ)	Please see the attached ratings list (at 20°C, 120Hz)		
Leakage Current*1	Please see the attached ratings list Rated voltage applied, after 2 minutes.		
Equivalent Series Resistance (ESR)	Please see the attached ratings list (at 20°C, 100kHz)		
Temperature Characteristics (Max. Impedance Ratio)	$Z(-55^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 2.0$ $Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 1.5$ (at 100kHz)		
Endurance	105°C, 5,000h AC+DC ≤ Rated voltage applied	Δ C/C	≤ ±30% of the initial value
		DF (tanδ)	≤ 200% of the initial specified value
		ESR	≤ 200% of the initial specified value
		LC	≤ The initial specified value
Damp heat(Steady state)	85°C, 85 to 90%RH 2,000h Rated voltage applied	Δ C/C	≤ ±30% of the initial value
		DF (tanδ)	≤ 200% of the initial specified value
		ESR	≤ 200% of the initial specified value
		LC	≤ The initial specified value(after voltage processing)
Resistance to soldering heat	Flow method (260 ± 5°C × 10s)	Δ C/C	≤ ±5% of the initial value
		DF (tanδ)	≤ The initial specified value
		ESR	≤ The initial specified value
		LC	≤ The initial specified value(after voltage processing)

※1 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C.

Dimensions



(unit: mm)

Size Code	ΦD±0.5	L	αmax	F±0.5	Φd±0.05
F08	6.3	8	1.0	2.5	0.5
B09	8.0	9	1.5	3.5	0.6
BAB	8.0	11.5	1.5	3.5	0.6
CAC	10.0	12.5	1.5	5.0	0.6

Size list

R.V[S.V](V)	25 [29]	35 [40]	50 [58]	63 [72]	80 [92]
Cap.(μF)					
22					B09
33			F08	B09	BAB
47		F08	F08	B09	CAC
56	F08	F08		BAB	
68		F08	B09	CAC	
82				CAC	
100	F08	B09	BAB	CAC	
120			CAC		
150	F08	B09	CAC		
220	B09	BAB			
270		CAC			
330	BAB	CAC			
470	BAB				
680	CAC				

Ratings for PHLA Series

U _R Code	Rated Capacitance 20°C, 120Hz	ESR (max) 20°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Dissipation Factor (Tanδ) (max) 20°C, 120Hz	Leakage Current (max) 20°C, 2min	Size ΦD×L	Part Number
(V)	(μF)	(mΩ)	(mA _{rms})	(%)	(μA)	(mm)	
25 1E	56	50	1500	14	14	6.3×8	PHR1ELA560MF08□□
	100	30	2000	14	25	6.3×8	PHR1ELA101MF08□□
	150	30	2000	14	37.5	6.3×8	PHR1ELA151MF08□□
	220	27	2100	14	55	8×9	PHR1ELA221MB09□□
	330	25	2300	14	82.5	8×11.5	PHR1ELA331MBAB□□
	470	25	2300	14	117.5	8×11.5	PHR1ELA471MBAB□□
	680	20	2600	14	170	10×12.5	PHR1ELA681MCAC□□
35 1V	47	50	1500	12	16.5	6.3×8	PHR1VLA470MF08□□
	56	40	1700	12	19.6	6.3×8	PHR1VLA560MF08□□
	68	35	1800	12	23.8	6.3×8	PHR1VLA680MF08□□
	100	25	2200	12	35	8×9	PHR1VLA101MB09□□
	150	25	2200	12	52.5	8×9	PHR1VLA151MB09□□
	220	25	2300	12	52.5	8×11.5	PHR1VLA221MBAB□□
	270	20	2600	12	94.5	10×12.5	PHR1VLA271MCAC□□
50 1H	330	20	2600	12	115.5	10×12.5	PHR1VLA331MCAC□□
	33	70	1300	10	16.5	6.3×8	PHR1HLA330MF08□□
	47	50	1500	10	23.5	6.3×8	PHR1HLA470MF08□□
	68	30	1900	10	34	8×9	PHR1HLA680MB09□□
	100	28	2100	10	50	8×11.5	PHR1HLA101MBAB□□
	120	25	2300	10	60	10×12.5	PHR1HLA121MCAC□□
63 1J	150	25	2300	10	75	10×12.5	PHR1HLA151MCAC□□
	33	40	1600	8	20.8	8×9	PHR1JLA330MB09□□
	47	40	1600	8	29.6	8×9	PHR1JLA470MB09□□
	56	30	2100	8	35.3	8×11.5	PHR1JLA560MBAB□□
	68	35	1900	8	42.8	10×12.5	PHR1JLA680MCAC□□
	82	35	1900	8	51.7	10×12.5	PHR1JLA820MCAC□□
80 1K	100	30	2100	8	63	10×12.5	PHR1JLA101MCAC□□
	22	45	1500	8	17.6	8×9	PHR1KLA220MB09□□
	33	40	1700	8	26.4	8×11.5	PHR1KLA330MBAB□□
	47	35	1800	8	37.6	10×12.5	PHR1KLA470MCAC□□

Customer products are available on request.

Frequency coefficient for ripple current

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f ≤ 500kHz
Coefficient	0.1	0.4	0.75	1