

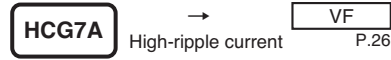
# HCG7A Series

Useful of 4,000 hours at 85°C

- Conform RoHS

## Features

- Low voltage standard product.

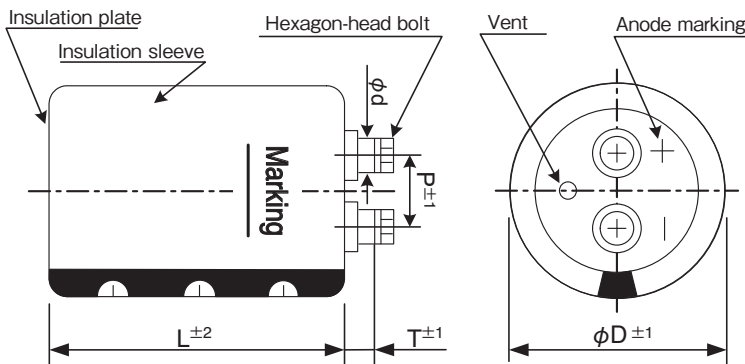


ALUMINUM ELECTROLYTIC CAPACITORS

## Product Specifications

Items	Specifications
Temperature range	-25°C ~ +85°C
Rated voltage	6.3 ~ 100V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (µA) or 5mA, whichever is smaller or less (20°C, after 5 minutes) [C = nominal capacitance (µF), V = rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table. (20°C, 120Hz)
Permissible ripple current	As specified in the standard products table. (40°C, 120Hz)
Endurance	After the rated voltage with specified ripple current is applied at 85°C for 2,000 hours : Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Shelf life	The following specification shall be meet when the capacitor are restored to 20°C after storage of 500 hours at 85°C with no voltage applied. Before the measurement, the capacitor shall be preconditioned by applying the voltage treatment according to Item 4.1 of JIS C 5101-4. Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Others	JIS C 5101-4

## Dimensions



(unit : mm)

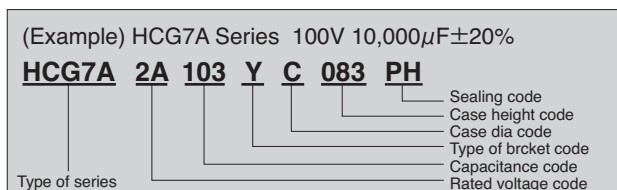
φD	P	T	φd	Hexagon-head bolt	Cap material
36	12.7	6.5	8.0	M5×10	Phenol resin
51	22.0	5.5	10.0	M5×10	Phenol resin
64	28.6	5.5	10.0	M5×10	Phenol resin
77	31.5	5.0	10.0	M5×10	Phenol resin

## Ripple current correction coefficient

Temperature (°C)	40	60	70	85	
Correction coefficient	1.0	0.81	0.62	0.37	
Frequency (Hz)	50/60	120	300	1K	≥10K
Correction coefficient	0.8	1.0	1.1	1.3	1.4

Terminal permissible currents: 60Arms for M5.  
Please use this type of capacitor at a terminal current below the permissible.

## Product code



Refer to page 21 for product code.

## Bracket

- Refer to page 22-23 for shapes and dimensions.
- Product names in the Standard Products Table correspond to the bracket for Type Y (Type I for φ36 only), but Type I bracket may be used (Type of bracket code = I).
- If bracket are not necessary, enter "N" for the type of bracket code.
- Bracket will be delivered separately.

# SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

## HCG7A Series

Standard Products Table

Rated Voltage (V. DC)	Capacitance ( $\mu$ F)	Case size $\phi$ D $\times$ L(mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 40°C, 120Hz	ESR(typ.) (m $\Omega$ ) 20°C, 100Hz	Z max (m $\Omega$ ) 20°C, 10kHz	ESL(typ.) (nH)	Product name
6.3	47,000	36 $\times$ 53	1.00	13.4	47	40	18	HCG7A0J473IA053PH
	68,000	36 $\times$ 65	1.20	14.8	33	30	18	HCG7A0J683IA065PH
	100,000	36 $\times$ 83	1.20	19.7	22	22	18	HCG7A0J104IA083PH
	150,000	51 $\times$ 83	1.40	25.6	15	16	21	HCG7A0J154YC083PH
	220,000	51 $\times$ 100	1.40	33.5	11	12	21	HCG7A0J224YC100PH
	330,000	64 $\times$ 100	1.50	43.6	8	9	22	HCG7A0J334YD100PH
	470,000	64 $\times$ 121	1.80	50.8	7	8	22	HCG7A0J474YD121PH
680,000	77 $\times$ 121	2.90	54.4	5	7	24	HCG7A0J684YE121PH	
10	33,000	36 $\times$ 53	0.90	11.9	25	26	18	HCG7A1A333IA053PH
	47,000	36 $\times$ 65	0.90	15.2	18	19	18	HCG7A1A473IA065PH
	68,000	36 $\times$ 83	1.20	20.3	13	14	18	HCG7A1A683IA083PH
	100,000	36 $\times$ 121	1.20	25.0	11	12	18	HCG7A1A104IA121PH
	150,000	51 $\times$ 83	1.40	27.6	7	7	21	HCG7A1A154YC083PH
	220,000	51 $\times$ 121	1.50	37.6	5	6	21	HCG7A1A224YC121PH
	330,000	64 $\times$ 121	1.80	46.5	5	6	22	HCG7A1A334YD121PH
470,000	77 $\times$ 121	2.30	52.0	4	6	24	HCG7A1A474YE121PH	
16	22,000	36 $\times$ 53	0.80	11.2	25	26	18	HCG7A1C223IA053PH
	33,000	36 $\times$ 65	0.80	14.8	17	18	18	HCG7A1C333IA065PH
	47,000	36 $\times$ 83	0.80	19.6	12	13	18	HCG7A1C473IA083PH
	68,000	36 $\times$ 121	1.10	27.7	11	12	18	HCG7A1C683IA121PH
	100,000	51 $\times$ 83	1.10	29.4	8	8	21	HCG7A1C104YC083PH
	150,000	51 $\times$ 121	1.20	34.0	5	6	21	HCG7A1C154YC121PH
	220,000	64 $\times$ 100	1.40	39.7	4	6	22	HCG7A1C224YD100PH
330,000	77 $\times$ 121	1.80	49.2	4	6	24	HCG7A1C334YE121PH	
25	22,000	36 $\times$ 65	0.50	12.1	22	23	18	HCG7A1E223IA065PH
	33,000	36 $\times$ 83	0.90	14.2	15	16	18	HCG7A1E333IA083PH
	47,000	36 $\times$ 121	0.90	19.8	10	11	18	HCG7A1E473IA121PH
	68,000	51 $\times$ 100	0.90	25.1	7	8	21	HCG7A1E683YC100PH
	100,000	51 $\times$ 121	0.90	28.5	6	6	21	HCG7A1E104YC121PH
	150,000	64 $\times$ 100	1.20	34.7	5	6	22	HCG7A1E154YD100PH
	220,000	64 $\times$ 144	1.20	48.9	4	5	22	HCG7A1E224YD144PH
330,000	77 $\times$ 144	1.40	52.7	4	5	24	HCG7A1E334YE144PH	
35	10,000	36 $\times$ 53	0.40	9.6	29	31	18	HCG7A1V103IA053PH
	15,000	36 $\times$ 65	0.45	10.7	19	20	18	HCG7A1V153IA065PH
	22,000	36 $\times$ 83	0.45	13.4	14	15	18	HCG7A1V223IA083PH
	33,000	36 $\times$ 121	0.50	19.4	12	13	18	HCG7A1V333IA121PH
	47,000	51 $\times$ 83	0.50	22.5	8	9	21	HCG7A1V473YC083PH
	68,000	51 $\times$ 100	0.70	27.6	7	8	21	HCG7A1V683YC100PH
	100,000	64 $\times$ 100	1.00	29.5	6	7	22	HCG7A1V104YD100PH
150,000	64 $\times$ 144	1.00	41.4	5	7	22	HCG7A1V154YD144PH	
220,000	77 $\times$ 144	1.20	46.8	5	7	24	HCG7A1V224YE144PH	
50	6,800	36 $\times$ 53	0.35	8.8	44	39	18	HCG7A1H682IA053PH
	10,000	36 $\times$ 65	0.35	11.6	30	28	18	HCG7A1H103IA065PH
	15,000	36 $\times$ 83	0.35	12.7	20	20	18	HCG7A1H153IA083PH
	22,000	36 $\times$ 121	0.40	18.2	14	15	18	HCG7A1H223IA121PH
	33,000	51 $\times$ 83	0.40	20.3	13	14	21	HCG7A1H333YC083PH
	47,000	51 $\times$ 100	0.50	25.9	11	12	21	HCG7A1H473YC100PH
	68,000	64 $\times$ 100	0.70	32.2	8	9	22	HCG7A1H683YD100PH
100,000	64 $\times$ 144	0.70	36.8	6	7	22	HCG7A1H104YD144PH	
150,000	77 $\times$ 144	0.90	37.8	5	7	24	HCG7A1H154YE144PH	
63	6,800	36 $\times$ 53	0.20	10.2	38	35	18	HCG7A1J682IA053PH
	10,000	36 $\times$ 83	0.30	12.8	28	28	18	HCG7A1J103IA083PH
	15,000	36 $\times$ 100	0.35	15.1	21	22	18	HCG7A1J153IA100PH
	22,000	51 $\times$ 83	0.40	20.9	13	14	21	HCG7A1J223YC083PH
	33,000	51 $\times$ 100	0.40	23.6	10	11	21	HCG7A1J333YC100PH
	47,000	64 $\times$ 100	0.40	32.1	8	9	22	HCG7A1J473YD100PH
	68,000	64 $\times$ 144	0.50	37.2	7	8	22	HCG7A1J683YD144PH
100,000	77 $\times$ 144	0.70	41.1	7	8	24	HCG7A1J104YE144PH	
80	4,700	36 $\times$ 53	0.15	10.4	32	30	18	HCG7A1K472IA053PH
	6,800	36 $\times$ 83	0.22	12.1	22	23	18	HCG7A1K682IA083PH
	10,000	36 $\times$ 100	0.22	16.0	15	16	18	HCG7A1K103IA100PH
	15,000	51 $\times$ 83	0.30	20.7	10	11	21	HCG7A1K153YC083PH
	22,000	51 $\times$ 100	0.30	23.5	9	10	21	HCG7A1K223YC100PH
	33,000	64 $\times$ 100	0.35	28.5	7	7	22	HCG7A1K333YD100PH
	47,000	64 $\times$ 144	0.35	39.0	6	7	22	HCG7A1K473YD144PH
68,000	77 $\times$ 144	0.40	45.3	4	7	24	HCG7A1K683YE144PH	

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Standard Products Table

Rated Voltage (V. DC)	Capacitance ( $\mu F$ )	Case size $\phi D \times L$ (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 40°C, 120Hz	ESR(typ.) (m $\Omega$ ) 20°C, 100Hz	Z max (m $\Omega$ ) 20°C, 10kHz	ESL(typ.) (nH)	Product name
100	3,300	36 × 53	0.15	8.7	34	32	18	HCG7A2A332IA053PH
	4,700	36 × 83	0.15	12.4	24	24	18	HCG7A2A472IA083PH
	6,800	36 × 100	0.20	13.2	19	20	18	HCG7A2A682IA100PH
	10,000	51 × 83	0.20	16.9	13	14	21	HCG7A2A103YC083PH
	15,000	51 × 121	0.20	24.1	11	12	21	HCG7A2A153YC121PH
	22,000	64 × 100	0.20	25.9	8	9	22	HCG7A2A223YD100PH
	33,000	64 × 144	0.25	33.0	6	7	22	HCG7A2A333YD144PH
	47,000	77 × 144	0.30	37.6	5	7	24	HCG7A2A473YE144PH

### Life time graph

Useful life depending on ambient temperature  $T_a$  and ripple current operating conditions  $I$  versus rated ripple current at 40°C, 120Hz

