

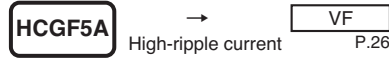
HCGF5A Series

Useful of 4,000 hours at 85°C

- Conform RoHS

Features

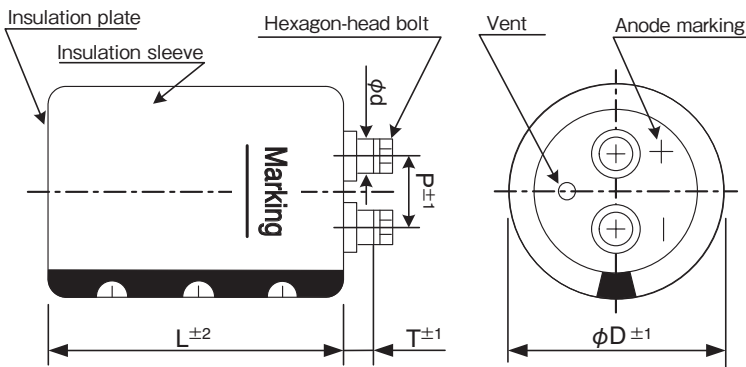
- Standard products.



Product Specifications

Items	Specifications
Temperature range	-25°C ~ +85°C
Rated voltage	160 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (μA) or 5 mA, 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
Endurance	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)

φ D	P	T	φ d	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
90	31.5	5.0	10.0	M5×10	Phenol resin

Ripple current correction coefficient

Temperature (°C)	40	60	70	85	
Correction coefficient	1.0	0.75	0.62	0.37	
Frequency (Hz)	50/60	120	300	1K	≥10K
Correction coefficient	0.7	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

(Example) HCG5A Series 400V 10,000μF±20%

HCGF5A 2G 103 Y F 157 PH

- Sealing code
- Case height code
- Case dia code
- Type of brcket code
- Capacitance code
- Rated voltage code

Type of series

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 φ 36 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

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size φD×L(mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 40°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Z max (mΩ) 20°C, 10kHz	ESL(typ.) (nH)	Product name
160	3,300	36×121	0.25	14.0	40	35	18	HCGF5A2C332IA121PH
	3,900	51×75	0.25	14.4	37	28	21	HCGF5A2C392YC075PH
	4,700	51×75	0.25	15.8	30	25	21	HCGF5A2C472YC075PH
	5,600	51×96	0.25	19.0	26	23	21	HCGF5A2C562YC096PH
	6,800	51×96	0.25	21.0	22	22	21	HCGF5A2C682YC096PH
	8,200	51×115	0.25	24.7	18	19	21	HCGF5A2C822YC115PH
	10,000	64×96	0.25	28.0	15	16	22	HCGF5A2C103YD096PH
	12,000	64×96	0.25	30.6	12	15	22	HCGF5A2C123YD096PH
	15,000	64×130	0.25	38.6	11	12	22	HCGF5A2C153YD130PH
	18,000	64×130	0.25	42.2	9	11	22	HCGF5A2C183YD130PH
	22,000	77×130	0.25	49.4	8	8	24	HCGF5A2C223YE130PH
	27,000	77×130	0.25	54.7	7	8	24	HCGF5A2C273YE130PH
33,000	90×131	0.25	64.2	6	7	24	HCGF5A2C333YF131PH	
39,000	90×157	0.25	75.3	5	7	24	HCGF5A2C393YF157PH	
200	2,200	36×100	0.25	10.6	68	60	18	HCGF5A2D222IA100PH
	2,700	36×121	0.25	12.7	48	39	18	HCGF5A2D272IA121PH
	3,300	51×75	0.25	13.3	45	35	21	HCGF5A2D332YC075PH
	3,900	51×75	0.25	14.4	37	30	21	HCGF5A2D392YC075PH
	4,700	51×96	0.25	17.4	30	27	21	HCGF5A2D472YC096PH
	5,600	51×115	0.25	20.4	26	25	21	HCGF5A2D562YC115PH
	6,800	51×130	0.25	23.7	21	20	21	HCGF5A2D682YC130PH
	8,200	64×96	0.25	25.4	17	18	22	HCGF5A2D822YD096PH
	10,000	64×96	0.25	28.0	14	14	22	HCGF5A2D103YD096PH
	12,000	77×96	0.25	32.6	12	14	24	HCGF5A2D123YE096PH
	15,000	77×96	0.25	39.0	10	13	24	HCGF5A2D153YE096PH
	18,000	77×130	0.25	44.6	8	12	24	HCGF5A2D183YE130PH
	22,000	77×155	0.25	53.0	7	7	24	HCGF5A2D223YE155PH
	27,000	90×131	0.25	58.2	6	7	24	HCGF5A2D273YF131PH
33,000	90×157	0.25	69.0	5	7	24	HCGF5A2D333YF157PH	
250	1,500	36×100	0.25	8.7	56	50	18	HCGF5A2E152IA100PH
	1,800	36×100	0.25	9.5	52	44	18	HCGF5A2E182IA100PH
	2,200	51×75	0.25	10.8	50	40	21	HCGF5A2E222YC075PH
	2,700	51×75	0.25	12.0	41	36	21	HCGF5A2E272YC075PH
	3,300	51×96	0.25	14.6	36	35	21	HCGF5A2E332YC096PH
	3,900	51×115	0.25	17.0	31	30	21	HCGF5A2E392YC115PH
	4,700	64×96	0.25	19.2	25	23	22	HCGF5A2E472YD096PH
	5,600	64×96	0.25	21.0	21	21	22	HCGF5A2E562YD096PH
	6,800	64×115	0.25	24.7	18	18	22	HCGF5A2E682YD115PH
	8,200	64×115	0.25	27.1	15	16	22	HCGF5A2E822YD115PH
	10,000	64×130	0.25	31.5	12	14	22	HCGF5A2E103YD130PH
	12,000	77×115	0.25	34.8	10	11	24	HCGF5A2E123YE115PH
	15,000	77×130	0.25	40.8	8	11	24	HCGF5A2E153YE130PH
	18,000	77×155	0.25	47.8	7	10	24	HCGF5A2E183YE155PH
22,000	90×157	0.25	56.5	6	8	24	HCGF5A2E223YF157PH	
350	390	36×53	0.20	4.5	287	296	18	HCGF5A2V391IA053PH
	470	36×83	0.20	5.8	238	245	18	HCGF5A2V471IA083PH
	560	36×83	0.20	6.4	216	222	18	HCGF5A2V561IA083PH
	680	36×83	0.20	7.0	192	197	18	HCGF5A2V681IA083PH
	820	36×100	0.20	8.3	170	174	18	HCGF5A2V821IA100PH
	1,000	36×100	0.20	9.2	131	135	18	HCGF5A2V102IA100PH
	1,200	51×75	0.20	10.3	117	120	21	HCGF5A2V122YC075PH
	1,500	51×75	0.20	11.5	93	100	21	HCGF5A2V152YC075PH
	1,800	51×96	0.20	13.9	78	80	21	HCGF5A2V182YC096PH
	2,200	51×96	0.20	15.4	64	70	21	HCGF5A2V222YC096PH
	2,700	51×130	0.20	19.3	53	58	21	HCGF5A2V272YC130PH
	3,300	51×130	0.20	21.4	48	51	21	HCGF5A2V332YC130PH
	3,900	64×115	0.20	24.2	43	47	22	HCGF5A2V392YD115PH
	4,700	64×130	0.20	27.9	36	40	22	HCGF5A2V472YD130PH
	5,600	77×115	0.20	30.7	34	35	24	HCGF5A2V562YE115PH
	6,800	77×130	0.20	35.4	28	29	24	HCGF5A2V682YE130PH
	8,200	77×155	0.20	41.7	23	25	24	HCGF5A2V822YE155PH
	10,000	90×157	0.20	49.0	19	23	24	HCGF5A2V103YF157PH
	12,000	90×157	0.20	54.1	16	21	24	HCGF5A2V123YF157PH
	15,000	90×196	0.20	66.2	13	20	24	HCGF5A2V153YF196PH
18,000	90×236	0.20	77.9	10	20	24	HCGF5A2V183YF236PH	

ALUMINUM ELECTROLYTIC CAPACITORS

SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μ F)	Case size ϕ D \times L(mm)	tan δ 20°C, 120Hz	Ripple current (Arms)		Z max (m Ω) 20°C, 10kHz	ESL(typ.) (nH)	Product name
				40°C, 120Hz	20°C, 100Hz			
400	330	36 \times 53	0.20	4.1	428	440	18	HCGF5A2G331IA053PH
	390	36 \times 83	0.20	5.3	362	372	18	HCGF5A2G391IA083PH
	470	36 \times 83	0.20	5.8	301	310	18	HCGF5A2G471IA083PH
	560	36 \times 83	0.20	6.4	253	260	18	HCGF5A2G561IA083PH
	680	36 \times 100	0.20	7.6	209	214	18	HCGF5A2G681IA100PH
	820	36 \times 100	0.20	8.3	173	177	18	HCGF5A2G821IA100PH
	1,000	51 \times 75	0.20	9.4	140	150	21	HCGF5A2G102YC075PH
	1,200	51 \times 75	0.20	10.3	117	125	21	HCGF5A2G122YC075PH
	1,500	51 \times 96	0.20	12.7	100	108	21	HCGF5A2G152YC096PH
	1,800	51 \times 96	0.20	13.9	88	90	21	HCGF5A2G182YC096PH
	2,200	51 \times 130	0.20	17.4	68	75	21	HCGF5A2G222YC130PH
	2,700	64 \times 96	0.20	18.8	59	66	22	HCGF5A2G272YD096PH
	3,300	64 \times 115	0.20	22.2	48	53	22	HCGF5A2G332YD115PH
	3,900	64 \times 130	0.20	25.4	43	48	22	HCGF5A2G392YD130PH
	4,700	77 \times 115	0.20	28.2	36	41	24	HCGF5A2G472YE115PH
	5,600	77 \times 130	0.20	32.2	32	37	24	HCGF5A2G562YE130PH
	6,800	77 \times 155	0.20	38.0	26	30	24	HCGF5A2G682YF155PH
8,200	90 \times 157	0.20	44.4	22	26	24	HCGF5A2G822YF157PH	
10,000	90 \times 157	0.20	49.4	19	23	24	HCGF5A2G103YF157PH	
12,000	90 \times 196	0.20	59.1	16	21	24	HCGF5A2G123YF196PH	
15,000	90 \times 236	0.20	71.1	15	21	24	HCGF5A2G153YF236PH	
450	270	36 \times 53	0.20	3.7	482	496	18	HCGF5A2W271IA053PH
	330	36 \times 83	0.20	4.9	395	406	18	HCGF5A2W331IA083PH
	390	36 \times 83	0.20	5.3	334	343	18	HCGF5A2W391IA083PH
	470	36 \times 83	0.20	5.8	277	284	18	HCGF5A2W471IA083PH
	560	36 \times 100	0.20	6.9	232	238	18	HCGF5A2W561IA100PH
	680	36 \times 100	0.20	7.6	191	196	18	HCGF5A2W681IA100PH
	820	51 \times 75	0.20	8.6	182	187	21	HCGF5A2W821YC075PH
	1,000	51 \times 75	0.20	9.4	149	154	21	HCGF5A2W102YC075PH
	1,200	51 \times 96	0.20	11.4	124	129	21	HCGF5A2W122YC096PH
	1,500	51 \times 115	0.20	13.7	107	108	21	HCGF5A2W152YC115PH
	1,800	51 \times 130	0.20	15.8	93	100	21	HCGF5A2W182YC130PH
	2,200	64 \times 96	0.20	17.0	77	84	22	HCGF5A2W222YD096PH
	2,700	64 \times 115	0.20	20.2	62	69	22	HCGF5A2W272YD115PH
	3,300	64 \times 130	0.20	23.4	54	61	22	HCGF5A2W332YD130PH
	3,900	77 \times 115	0.20	25.6	46	51	24	HCGF5A2W392YE115PH
	4,700	77 \times 130	0.20	29.4	38	43	24	HCGF5A2W472YE130PH
	5,600	77 \times 155	0.20	34.6	32	37	24	HCGF5A2W562YE155PH
6,800	90 \times 157	0.20	40.5	28	33	24	HCGF5A2W682YF157PH	
8,200	90 \times 157	0.20	44.6	25	30	24	HCGF5A2W822YF157PH	
10,000	90 \times 196	0.20	53.9	20	25	24	HCGF5A2W103YF196PH	
12,000	90 \times 236	0.20	63.8	16	22	24	HCGF5A2W123YF236PH	

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

