

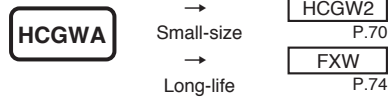
HCGWA Series

Useful of 4,000 hours at 85°C

- Conform RoHS

Features

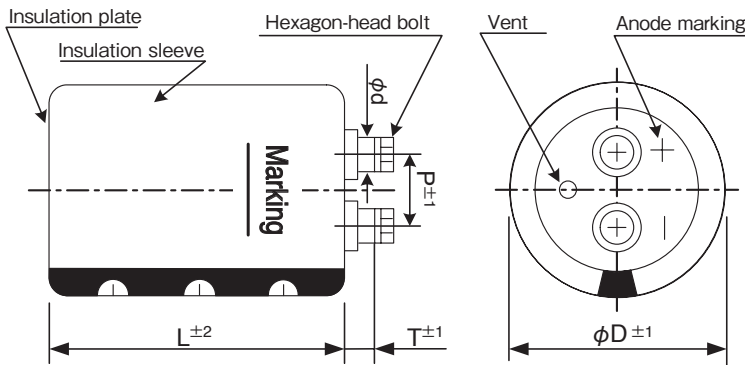
- Product primarily designed for circuits requiring large energy momentarily like those for the uninterruptible power supply (UPS) and X-ray power supply.
- Capacitance improved by 40%, comparison with the HCGF6A series (smallest series)
- The correspondence size has been expanded to $\phi 121 \times 283L$.



Product Specifications

Items	Specifications
Temperature range	-10°C ~ +85°C
Rated voltage	350 ~ 500V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV (μA) or 7mA, 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. (85°C, 120Hz)
Endurance	After the rated voltage with specified ripple current is applied at 85°C for 2,000 hours : Capacitance change : Within $\pm 15\%$ 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 $\pm 15\%$ 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
77	31.5	5.0	10.0	M5×10	Phenol resin
90	31.5	5.0	10.0	M5×10	Phenol resin
101	31.5	3.0	14.0	M6×12	Phenol resin
121	41.5	3.0	14.0	M6×12	PPS resin

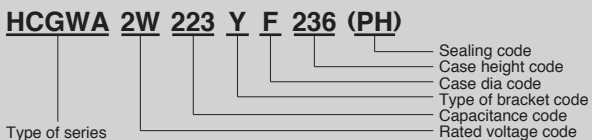
Ripple current correction coefficient

Temperature (°C)	40	60	70	85
Correction coefficient	2.2	1.9	1.6	1.0
Frequency (Hz)	120	300	1k	$\geq 10k$
Correction coefficient	1.0	1.1	1.3	1.4

Terminal allowance current : 60Arms for M5 ; 100Arms for M6
Please use this type of capacitor at a terminal current below the permissible.

Product code

(Example) HCGWA Series 450V 22,000 $\mu F \pm 20\%$



Refer to page 19 for product code.

Bracket

- Refer to page 20-21 for shapes and dimensions.
- Product names in the Standard Products Table correspond to the bracket for Type Y, but Type I bracket may be used (Type of bracket code = I).
- $\phi 121$ products become correspondence only of Type X.
- If bracket are not necessary, enter "N" for the type of bracket code.
- Bracket will be delivered separately.

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size φD×L(mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 85°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Z max (mΩ) 20°C, 10kHz	ESL(typ.) (nH)	Product name
350	13,000	77×155	0.70	12.8	25	26	26	HCGWA2V133YE155PH
	17,000	90×157	0.70	15.6	19	20	26	HCGWA2V173YF157PH
	18,000	77×195	0.70	16.6	18	20	26	HCGWA2V183YE195PH
	22,000	77×235	0.70	19.8	17	18	26	HCGWA2V223YE235PH
	25,000	90×196	0.70	20.7	15	16	26	HCGWA2V253YF196PH
	31,000	90×236	0.70	24.9	12	13	26	HCGWA2V313YF236PH
		101×195	0.70	23.9	12	13	36	HCGWA2V313YG195PH
	36,000	90×283	0.70	29.0	11	13	26	HCGWA2V363YF283PH
	39,000	101×237	0.70	29.0	10	12	36	HCGWA2V393YG237PH
44,000	101×283	0.70	33.2	9	11	36	HCGWA2V443YG283PH	
57,000	121×283	0.70	40.7	7	8	36	HCGWA2V573XK283	
400	11,000	77×155	0.70	11.8	31	32	26	HCGWA2G113YE155PH
	14,000	77×195	0.70	14.6	24	25	26	HCGWA2G143YE195PH
	16,000	77×235	0.70	16.9	21	22	26	HCGWA2G163YE235PH
		90×157	0.70	15.2	21	22	26	HCGWA2G163YF157PH
	20,000	90×196	0.70	18.5	20	21	26	HCGWA2G203YF196PH
	25,000	90×236	0.70	22.4	16	18	26	HCGWA2G253YF236PH
		101×195	0.70	21.4	16	18	36	HCGWA2G253YG195PH
	32,000	90×283	0.70	27.3	12	13	26	HCGWA2G323YF283PH
		101×237	0.70	26.3	12	13	36	HCGWA2G323YG237PH
38,000	101×283	0.70	30.8	10	11	36	HCGWA2G383YG283PH	
50,000	121×283	0.70	38.1	9	11	36	HCGWA2G503XK283	
450	9,500	77×155	0.70	10.9	36	37	26	HCGWA2W952YE155PH
	12,000	77×195	0.70	13.5	28	29	26	HCGWA2W123YE195PH
	13,000	90×157	0.70	13.7	26	27	26	HCGWA2W133YF157PH
	15,000	77×235	0.70	16.4	24	27	26	HCGWA2W153YE235PH
	17,000	90×196	0.70	17.1	21	22	26	HCGWA2W173YF196PH
	22,000	90×236	0.70	21.0	18	19	26	HCGWA2W223YF236PH
		101×195	0.70	20.1	18	19	36	HCGWA2W223YG195PH
	27,000	90×283	0.70	25.1	15	17	26	HCGWA2W273YF283PH
		101×237	0.70	24.1	15	17	36	HCGWA2W273YG237PH
33,000	101×283	0.70	28.7	13	15	36	HCGWA2W333YG283PH	
42,000	121×283	0.70	34.9	10	12	36	HCGWA2W423XK283	
500	5,600	77×155	0.70	8.4	60	62	26	HCGWA2H562YE155PH
	8,200	77×195	0.70	11.2	41	43	26	HCGWA2H822YE195PH
		90×157	0.70	10.8	41	43	26	HCGWA2H822YF157PH
	9,500	77×235	0.70	13.0	36	37	26	HCGWA2H952YE235PH
	11,000	90×196	0.70	13.7	32	33	26	HCGWA2H113YF196PH
		90×236	0.70	16.7	29	30	26	HCGWA2H143YF236PH
	14,000	101×195	0.70	16.0	29	30	36	HCGWA2H143YG195PH
		90×283	0.70	19.3	25	27	26	HCGWA2H163YF283PH
	16,000	101×237	0.70	18.6	25	26	36	HCGWA2H163YG237PH

ALUMINUM ELECTROLYTIC CAPACITORS

Life time graph

Useful life depending on ambient temperature T_a and ripple current operating conditions I versus rated ripple current at 85°C, 120Hz

