

# SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

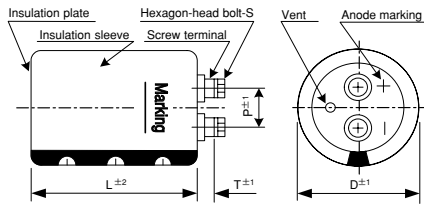
## HCGWA Series

Useful of 4,000 hours at 85°C (Warranty of 2,000 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 model (smallest model)
- The correspondence size has been expanded to  $\phi 121 \times 283L$ .



(unit : mm)

$\phi D$	P	S	T	Cap material
77	32.0	M5×10	5.0	Phenol
90	32.0	M5×10	5.0	Phenol
101	32.0	M6×12	3.0	PPS
121	41.5	M6×12	3.0	PPS

### 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 ( $\mu A$ ) or 7 mA, whichever is smaller or less (20°C, after 5 minutes) [ C=nominal capacitance ( $\mu F$ ), 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)
High-temperature load	After the rated voltage with specified ripple current is applied at 85°C for 2000 hours : Capacitance tolerance : ±15% or less of the initial value Dissipation factor : 175% or less of the specified initial value Leakage current : Specified initial value or less
Others	JIS C 5101-4.

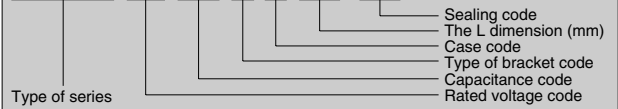
### Ripple current correction coefficient

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

Product code : (Example) HCGWA type 450V 22,000  $\mu F \pm 20\%$

**HCGWA 2W 223 Y F 236 (PH)**

F case ( $\phi D$ : 90 mm) product



### Bracket

- See page 21, 22 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 ( $\mu F$ )	Case size $\phi DXL$ (mm)	$\tan \delta$ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR (typ.) 20°C, 100Hz (m $\Omega$ )	Z max 20°C, 10kHz (m $\Omega$ )	ESL (typ.) (nH)	Product name
350	13000	77×155	0.70	20.7	25	26	26	HCGWA2V133YE155PH
	17000	90×157	0.70	25.4	19	20	26	HCGWA2V173YF157PH
	18000	77×195	0.70	26.8	18	20	26	HCGWA2V183YE195PH
	22000	77×235	0.70	32.1	17	18	26	HCGWA2V223YE235PH
	24000	101×175	0.70	33.8	16	18	36	HCGWA2V243YG175
	25000	90×196	0.70	33.6	15	16	26	HCGWA2V253YF196PH
	31000	90×236	0.70	40.4	12	13	26	HCGWA2V313YF236PH
		101×195	0.70	38.1	12	13	36	HCGWA2V313YG195
39000	101×237	0.70	46.2	10	12	36	HCGWA2V393YG237	
400V	11000	77×155	0.70	19.2	31	32	26	HCGWA2G1133YE155PH
	14000	77×195	0.70	23.9	24	25	26	HCGWA2G143YE195PH
	16000	77×235	0.70	28.0	21	22	26	HCGWA2G163YE235PH
		90×157	0.70	24.8	21	22	26	HCGWA2G163YF157PH
	20000	90×196	0.70	30.3	20	21	26	HCGWA2G203YF196PH
	22000	101×175	0.70	30.8	18	19	36	HCGWA2G223YG175
	25000	90×236	0.70	36.6	16	18	26	HCGWA2G253YF236PH
		101×195	0.70	34.5	16	18	36	HCGWA2G253YG195
	32000	101×237	0.70	41.8	12	13	36	HCGWA2G323YG237
	50000	121×283	0.70	63.2	9	11	36	HCGWA2G503XK283

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ALUMINUM ELECTROLYTIC CAPACITORS

Rated Voltage (V. DC)	Capacitance (μF)	Case size øDXL(mm)	tanδ 20°C, 120Hz	Ripple current 40°C, 120Hz (Arms)	ESR(typ.) 20°C, 100Hz (mΩ)	Z max 20°C, 10kHz (mΩ)	ESL(typ.) (nH)	Product name
450	9500	77×155	0.70	17.9	36	37	26	HCGWA2W952YE155PH
	12000	77×195	0.70	22.1	28	29	26	HCGWA2W123YE195PH
	13000	90×157	0.70	21.0	26	27	26	HCGWA2W133YF157PH
	15000	77×235	0.70	27.3	24	27	26	HCGWA2W153YE235PH
	17000	90×196	0.70	27.9	21	22	26	HCGWA2W173YF196PH
	18000	101×175	0.70	27.9	20	21	36	HCGWA2W183YG175
	22000	90×236	0.70	34.3	18	19	26	HCGWA2W223YF236PH
		101×195	0.70	32.2	18	19	36	HCGWA2W223YG195
	27000	101×237	0.70	38.4	15	17	36	HCGWA2W273YG237
42000	121×283	0.70	57.8	10	12	36	HCGWA2W423XK283	
500	5600	77×155	0.70	13.7	60	62	26	HCGWA2H562YE155PH
	8200	77×195	0.70	18.2	41	43	26	HCGWA2H822YE195PH
		90×157	0.70	17.7	41	43	26	HCGWA2H822YF157PH
	9500	77×235	0.70	21.7	36	37	26	HCGWA2H952YE235PH
	11000	90×196	0.70	22.4	32	33	26	HCGWA2H113YF196PH
	12000	101×175	0.70	22.7	30	33	36	HCGWA2H123YG175
	14000	90×236	0.70	27.4	29	30	26	HCGWA2H143YF236PH
		101×195	0.70	25.6	29	30	36	HCGWA2H143YG195
	16000	101×237	0.70	29.6	25	26	36	HCGWA2H163YG237

## Life time graph

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

