

SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

UPGRADE!

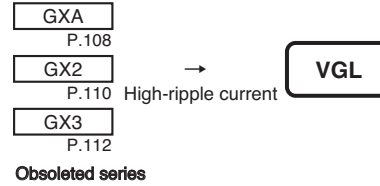
VGL Series Useful of 8,000 hours at 105°C



• Conform RoHS

Features

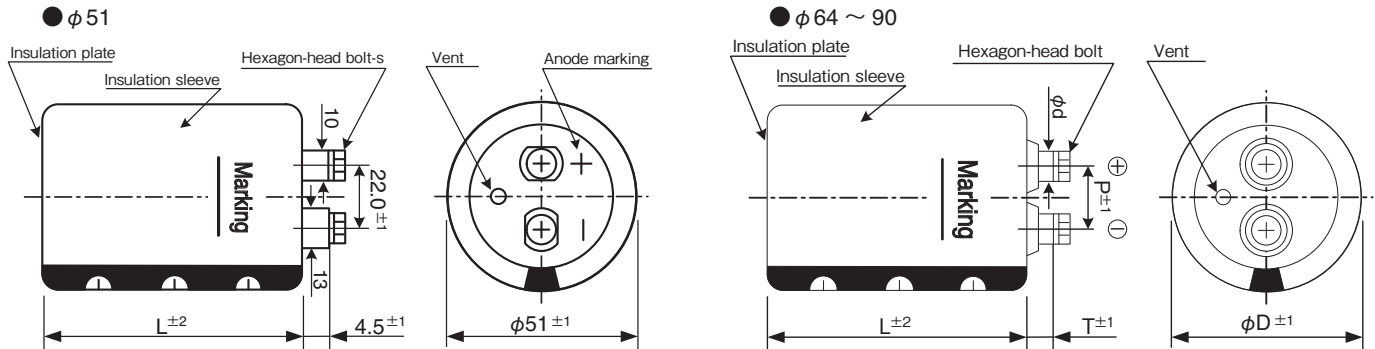
• About 10% ripple current has improved to GX2 series by radiation structure.



Product Specifications

Items	Specifications
Temperature range	-40°C ~ +105°C
Rated voltage	350 ~ 500V.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 product table. (105°C, 120Hz)
Endurance	After the rated voltage with specified ripple current is applied at 105°C for 5,000 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 105°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



Ripple current correction coefficient

Temperature (°C)	60	85	105	
Correction coefficient	2.16	2.00	1.00	
Frequency (Hz)	120	300	1K	≥10K
Correction coefficient	1.0	1.1	1.3	1.4
Forced wind (m/s)	<0.5	0.5 ≤		
Correction coefficient	1.0	1.1		

(unit : mm)

φ D	P	T	φ d	Hexagon-head bolt	Cap material
51	22.0	4.5	—	M5 × 10	Phenol resin
64	28.6	8.0	11.0	M5 × 10	Phenol resin
77	31.5	8.0	11.0	M5 × 10	Phenol resin
90	31.5	7.0	11.0	M5 × 10	Phenol resin

Terminal permissible current is limited to 60Arms. (Even if calculated the permissible ripple current with the correction coefficient exceeds 60Arms) Please consult us when the ripple voltage exceeds 50 Vp-p.

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, 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.

Product code

(Example) VGL Series 400V 8,200 μF ±20%

VGL 2G 822 Y F 126

- VGL: Type of series
- 2G: Case dia code
- 822: Capacitance code
- Y: Type of bracket code
- F: Case height code
- 126: Rated voltage code

ALUMINUM ELECTROLYTIC CAPACITORS

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VGL Series

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size φD×L(mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Z max (mΩ) 20°C, 10kHz	ESL(typ.) (nH)	Product name
350	1,800	51×75	0.20	5.6	59	70	21	VGL2V182YC075
	2,200	51×96	0.20	6.5	48	57	21	VGL2V222YC096
	2,700	51×109	0.20	7.5	39	47	21	VGL2V272YC109
	3,300	51×125	0.20	8.6	32	38	21	VGL2V332YC125
	3,900	64×94	0.20	10.5	27	32	22	VGL2V392YD094
	4,700	64×107	0.20	11.9	22	23	22	VGL2V472YD107
	5,600	64×123	0.20	13.0	20	21	22	VGL2V562YD123
		77×95	0.20	14.6	20	21	24	VGL2V562YE095
	6,800	64×147	0.20	14.1	18	18	22	VGL2V682YD147
		77×108	0.20	16.0	18	18	24	VGL2V682YE108
		90×97	0.20	18.5	18	18	24	VGL2V682YF097
	8,200	64×187	0.20	15.9	15	17	22	VGL2V822YD187
		77×124	0.20	18.0	15	17	24	VGL2V822YE124
		90×110	0.20	20.2	15	17	24	VGL2V822YF110
	10,000	77×148	0.20	19.5	12	15	24	VGL2V103YE148
		90×126	0.20	22.1	12	15	24	VGL2V103YF126
	12,000	77×188	0.20	21.8	10	13	24	VGL2V123YE188
		90×150	0.20	24.1	10	13	24	VGL2V123YF150
	15,000	77×228	0.20	25.2	8	11	24	VGL2V153YE228
		90×167	0.20	26.5	8	11	24	VGL2V153YF167
18,000	90×190	0.20	29.3	6	9	24	VGL2V183YF190	
22,000	90×230	0.20	31.5	5	7	24	VGL2V223YF230	
27,000	90×268	0.20	33.0	4	6	24	VGL2V273YF268	
400	1,200	51×75	0.20	4.7	83	97	21	VGL2G122YC075
	1,500	51×96	0.20	5.6	66	77	21	VGL2G152YC096
	1,800	51×109	0.20	6.2	55	65	21	VGL2G182YC109
	2,200	51×125	0.20	7.0	45	53	21	VGL2G222YC125
	3,300	64×94	0.20	9.7	30	35	22	VGL2G332YD094
	3,900	64×107	0.20	10.8	27	32	22	VGL2G392YD107
	4,700	64×123	0.20	11.9	22	23	22	VGL2G472YD123
		77×95	0.20	13.3	22	23	24	VGL2G472YE095
	5,600	64×147	0.20	12.8	20	21	22	VGL2G562YD147
		77×108	0.20	14.5	20	21	24	VGL2G562YE108
		90×97	0.20	16.8	20	21	24	VGL2G562YF097
	6,800	64×187	0.20	14.5	18	18	22	VGL2G682YD187
		77×124	0.20	16.4	18	18	24	VGL2G682YE124
		90×110	0.20	18.4	18	18	24	VGL2G682YF110
	8,200	77×165	0.20	18.0	15	17	24	VGL2G822YE165
		90×126	0.20	20.0	15	17	24	VGL2G822YF126
	10,000	77×188	0.20	19.9	12	15	24	VGL2G103YE188
		90×150	0.20	22.0	12	15	24	VGL2G103YF150
	12,000	90×167	0.20	23.7	10	13	24	VGL2G123YF167
	15,000	90×190	0.20	26.7	8	11	24	VGL2G153YF190
18,000	90×230	0.20	28.5	7	9	24	VGL2G183YF230	
22,000	90×268	0.20	29.8	6	7	24	VGL2G223YF268	
450	1,000	51×75	0.20	4.2	93	93	21	VGL2W102YC075
	1,200	51×96	0.20	5.0	77	77	21	VGL2W122YC096
	1,500	51×109	0.20	5.9	62	62	21	VGL2W152YC109
	1,800	51×125	0.20	6.6	52	52	21	VGL2W182YC125
	2,200	64×94	0.20	8.1	46	48	22	VGL2W222YD094
	2,700	64×107	0.20	9.2	40	42	22	VGL2W272YD107
	3,300	64×123	0.20	10.2	35	35	22	VGL2W332YD123
		77×95	0.20	11.4	35	35	24	VGL2W332YE095
	3,900	64×147	0.20	10.9	27	32	22	VGL2W392YD147
		77×108	0.20	12.4	27	32	24	VGL2W392YE108
	4,700	64×164	0.20	12.2	24	27	22	VGL2W472YD164
		77×124	0.20	13.9	24	27	24	VGL2W472YE124
		90×97	0.20	15.8	24	27	24	VGL2W472YF097
	5,600	64×187	0.20	13.5	22	23	22	VGL2W562YD187
		77×148	0.20	14.9	22	23	24	VGL2W562YE148
		90×110	0.20	17.1	22	23	24	VGL2W562YF110
	6,800	77×165	0.20	16.8	20	20	24	VGL2W682YE165
		90×126	0.20	18.7	20	20	24	VGL2W682YF126
	8,200	77×188	0.20	18.5	18	18	24	VGL2W822YE188
		90×150	0.20	20.4	18	18	24	VGL2W822YF150
10,000	90×167	0.20	22.2	15	15	24	VGL2W103YF167	
12,000	90×190	0.20	24.5	13	12	24	VGL2W123YF190	
15,000	90×230	0.20	26.6	11	10	24	VGL2W153YF230	
18,000	90×268	0.20	27.7	9	8	24	VGL2W183YF268	

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Standard Products Table

Rated Voltage (V. DC)	Capacitance (μ F)	Case size ϕ D \times L(mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 105°C, 120Hz	ESR(typ.) (m Ω) 20°C, 100Hz	Z max (m Ω) 20°C, 10kHz	ESL(typ.) (nH)	Product name
500	680	51 \times 75	0.20	3.3	164	177	21	VGL2H681YC075
	820	51 \times 96	0.20	3.9	136	147	21	VGL2H821YC096
	1,000	51 \times 109	0.20	4.4	111	120	21	VGL2H102YC109
	1,200	51 \times 125	0.20	5.0	93	100	21	VGL2H122YC125
	1,800	64 \times 107	0.20	7.1	62	50	22	VGL2H182YD107
	2,200	64 \times 123	0.20	7.9	53	50	22	VGL2H222YD123
		77 \times 95	0.20	8.9	53	50	24	VGL2H222YE095
	2,700	64 \times 147	0.20	8.6	40	35	22	VGL2H272YD147
		77 \times 108	0.20	9.8	40	35	24	VGL2H272YE108
	3,300	64 \times 164	0.20	9.8	38	32	22	VGL2H332YD164
		90 \times 97	0.20	12.6	38	32	24	VGL2H332YF097
	3,900	64 \times 187	0.20	10.7	30	27	22	VGL2H392YD187
		77 \times 124	0.20	12.1	30	27	24	VGL2H392YE124
		90 \times 110	0.20	13.6	30	27	24	VGL2H392YF110
	4,700	77 \times 148	0.20	13.0	25	20	24	VGL2H472YE148
		90 \times 126	0.20	14.8	25	20	24	VGL2H472YF126
	5,600	77 \times 165	0.20	14.5	20	17	24	VGL2H562YE165
		90 \times 150	0.20	16.1	20	17	24	VGL2H562YF150
6,800	77 \times 188	0.20	16.1	17	17	24	VGL2H682YE188	
	90 \times 167	0.20	17.4	17	17	24	VGL2H682YF167	
8,200	90 \times 190	0.20	19.3	14	14	24	VGL2H822YF190	
10,000	90 \times 230	0.20	20.7	12	12	24	VGL2H103YF230	
12,000	90 \times 268	0.20	21.5	10	10	24	VGL2H123YF268	

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Life time graph

Useful life depending on ambient temperature T_a and ripple current operating conditions I versus rated ripple current at 105°C, 120Hz

