

SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

UPGRADE!

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

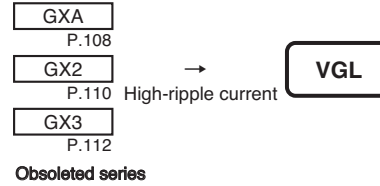
Standard



• Conform RoHS

Features

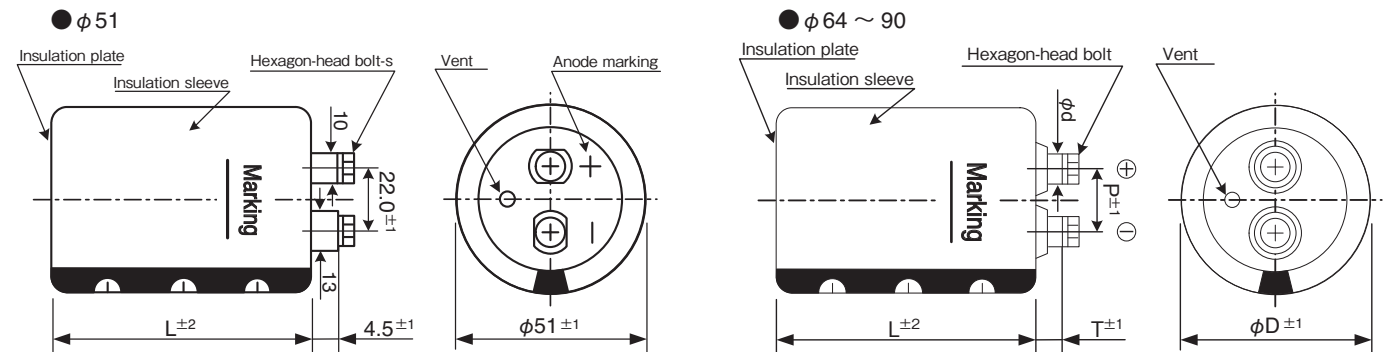
- About 10% ripple current has improved to GX2 series by radiation structure.



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



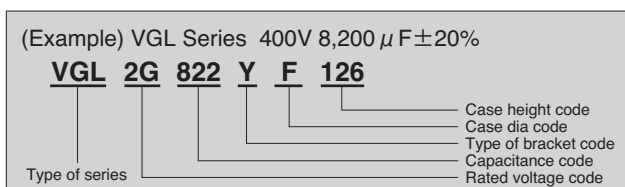
Ripple current correction coefficient

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)

φD	P	T	φd	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

Product code



Terminal permissible currents: 60Arms for M5.

Please use this type of capacitor at a terminal current below the permissible.

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.

SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

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×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	560	51×75	0.20	3.0	199	215	21	VGL2H561YC075
	680	51×96	0.20	3.6	164	177	21	VGL2H681YC096
	820	51×109	0.20	4.0	136	147	21	VGL2H821YC109
	1,000	51×125	0.20	4.6	111	120	21	VGL2H102YC125
	1,500	64×107	0.20	6.5	74	80	22	VGL2H152YD107
	1,800	64×123	0.20	7.2	62	50	22	VGL2H182YD123
		77×95	0.20	8.0	62	50	24	VGL2H182YE095
	2,200	64×147	0.20	7.8	53	50	22	VGL2H222YD147
		77×108	0.20	8.9	53	50	24	VGL2H222YE108
	2,700	64×164	0.20	8.8	40	35	22	VGL2H272YD164
		90×97	0.20	11.4	40	35	24	VGL2H272YF097
	3,300	64×187	0.20	9.8	38	32	22	VGL2H332YD187
		77×124	0.20	11.1	38	32	24	VGL2H332YE124
		90×110	0.20	12.5	38	32	24	VGL2H332YF110
	3,900	77×148	0.20	11.9	30	27	24	VGL2H392YE148
		90×126	0.20	13.5	30	27	24	VGL2H392YF126
	4,700	77×165	0.20	13.3	25	20	24	VGL2H472YE165
		90×150	0.20	14.7	25	20	24	VGL2H472YF150
	5,600	77×188	0.20	14.6	20	17	24	VGL2H562YE188
		90×167	0.20	15.8	20	17	24	VGL2H562YF167
6,800	90×190	0.20	17.5	17	17	24	VGL2H682YF190	
8,200	90×230	0.20	18.8	14	14	24	VGL2H822YF230	
10,000	90×268	0.20	19.6	12	12	24	VGL2H103YF268	

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 105°C, 120Hz

