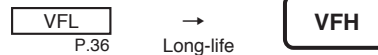


VFH Series Useful of 20,000 hours at 85°C

- Conform RoHS

Features

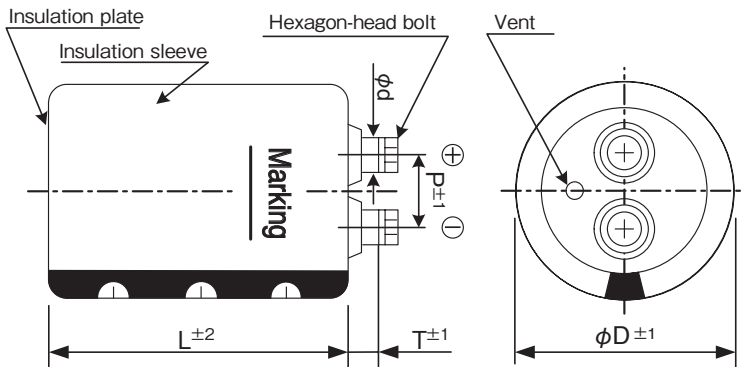
- High-reliability series with the warranty of 20,000 hours realized through improvement of the VFL series into longer-life series.



Product Specifications

Items	Specifications
Temperature range	-40°C ~ +85°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. (85°C, 120Hz)
Endurance	After the rated voltage with specified ripple current is applied at 85°C for 20,000 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 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)

φD	P	T	φd	Hexagon-head bolt	Cap material
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

Ripple current correction coefficient

Temperature (°C)	60	85		
Correction coefficient	2.16	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		

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

Product code

(Example) VFH type 400V 5,600 µF ±20%

VFH 2G 562 Y F 097

- VFH: Type of series
- 2G: Case height code
- 562: Case dia code
- Y: Type of bracket code
- F: Capacitance code
- 097: Rated voltage code

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).
- If bracket are not necessary, enter "N" for the type of bracket code.
- Bracket will be delivered separately.

SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

VFH Series

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	3,900	64×94	0.20	10.5	27	32	22	VFH2V392YD094
	4,700	64×107	0.20	11.9	22	23	22	VFH2V472YD107
	5,600	64×123	0.20	13.0	20	21	22	VFH2V562YD123
		77×95	0.20	14.6	20	21	24	VFH2V562YE095
	6,800	64×147	0.20	14.1	18	18	22	VFH2V682YD147
		77×108	0.20	16.0	18	18	24	VFH2V682YE108
		90×97	0.20	18.5	18	18	24	VFH2V682YF097
	8,200	64×187	0.20	15.9	15	17	22	VFH2V822YD187
		77×124	0.20	18.0	15	17	24	VFH2V822YE124
		90×110	0.20	20.2	15	17	24	VFH2V822YF110
	10,000	77×148	0.20	19.5	12	15	24	VFH2V103YE148
		90×126	0.20	22.1	12	15	24	VFH2V103YF126
	12,000	77×188	0.20	21.8	10	13	24	VFH2V123YE188
		90×150	0.20	24.1	10	13	24	VFH2V123YF150
	15,000	77×228	0.20	25.2	8	11	24	VFH2V153YE228
90×167		0.20	26.5	8	11	24	VFH2V153YF167	
18,000	90×190	0.20	29.3	6	9	24	VFH2V183YF190	
22,000	90×230	0.20	31.5	5	7	24	VFH2V223YF230	
400	3,300	64×94	0.20	9.7	30	35	22	VFH2G332YD094
	3,900	64×107	0.20	10.8	27	32	22	VFH2G392YD107
	4,700	64×123	0.20	11.9	22	23	22	VFH2G472YD123
		77×95	0.20	13.3	22	23	24	VFH2G472YE095
	5,600	64×147	0.20	12.8	20	21	22	VFH2G562YD147
		77×108	0.20	14.5	20	21	24	VFH2G562YE108
		90×97	0.20	16.8	20	21	24	VFH2G562YF097
	6,800	64×187	0.20	14.5	18	18	22	VFH2G682YD187
		77×124	0.20	16.4	18	18	24	VFH2G682YE124
		90×110	0.20	18.4	18	18	24	VFH2G682YF110
	8,200	77×165	0.20	18.0	15	17	24	VFH2G822YE165
		90×126	0.20	20.0	15	17	24	VFH2G822YF126
	10,000	77×188	0.20	19.9	12	15	24	VFH2G103YE188
		90×150	0.20	22.0	12	15	24	VFH2G103YF150
	12,000	90×167	0.20	23.7	10	13	24	VFH2G123YF167
15,000	90×190	0.20	26.7	8	11	24	VFH2G153YF190	
18,000	90×230	0.20	28.5	7	9	24	VFH2G183YF230	
450	2,200	64×94	0.20	8.1	46	48	22	VFH2W222YD094
	2,700	64×107	0.20	9.2	40	42	22	VFH2W272YD107
	3,300	64×123	0.20	10.2	35	35	22	VFH2W332YD123
		77×95	0.20	11.4	35	35	24	VFH2W332YE095
	3,900	64×147	0.20	10.9	27	32	22	VFH2W392YD147
		77×108	0.20	12.4	27	32	24	VFH2W392YE108
	4,700	64×164	0.20	12.2	24	27	22	VFH2W472YD164
		77×124	0.20	13.9	24	27	24	VFH2W472YE124
		90×97	0.20	15.8	24	27	24	VFH2W472YF097
	5,600	64×187	0.20	13.5	22	23	22	VFH2W562YD187
		77×148	0.20	14.9	22	23	24	VFH2W562YE148
		90×110	0.20	17.1	22	23	24	VFH2W562YF110
	6,800	77×165	0.20	16.8	20	20	24	VFH2W682YE165
		90×126	0.20	18.7	20	20	24	VFH2W682YF126
	8,200	77×188	0.20	18.5	18	18	24	VFH2W822YE188
90×150		0.20	20.4	18	18	24	VFH2W822YF150	
10,000	90×167	0.20	22.2	15	15	24	VFH2W103YF167	
12,000	90×190	0.20	24.5	13	12	24	VFH2W123YF190	
15,000	90×230	0.20	26.6	11	10	24	VFH2W153YF230	

ALUMINUM ELECTROLYTIC CAPACITORS

SCREW TERMINAL TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size $\phi D \times L$ (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current (Arms) 85°C, 120Hz	ESR(typ.) (m Ω) 20°C, 100Hz	Z max (m Ω) 20°C, 10kHz	ESL(typ.) (nH)	Product name
500	1,500	64 × 107	0.20	6.5	74	80	22	VFH2H152YD107
	1,800	64 × 123	0.20	7.2	62	50	22	VFH2H182YD123
		77 × 95	0.20	8.0	62	50	24	VFH2H182YE095
	2,200	64 × 147	0.20	7.8	53	50	22	VFH2H222YD147
		77 × 108	0.20	8.9	53	50	24	VFH2H222YE108
	2,700	64 × 164	0.20	8.8	40	35	22	VFH2H272YD164
		90 × 97	0.20	11.4	40	35	24	VFH2H272YF097
	3,300	64 × 187	0.20	9.8	38	32	22	VFH2H332YD187
		77 × 124	0.20	11.1	38	32	24	VFH2H332YE124
		90 × 110	0.20	12.5	38	32	24	VFH2H332YF110
	3,900	77 × 148	0.20	11.9	30	27	24	VFH2H392YE148
		90 × 126	0.20	13.5	30	27	24	VFH2H392YF126
	4,700	77 × 165	0.20	13.3	25	20	24	VFH2H472YE165
		90 × 150	0.20	14.7	25	20	24	VFH2H472YF150
	5,600	77 × 188	0.20	14.6	20	17	24	VFH2H562YE188
		90 × 167	0.20	15.8	20	17	24	VFH2H562YF167
6,800	90 × 190	0.20	17.5	17	17	24	VFH2H682YF190	
8,200	90 × 230	0.20	18.8	14	14	24	VFH2H822YF230	

ALUMINUM ELECTROLYTIC CAPACITORS

Life time graph

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

