

# Screw terminal type aluminum electrolytic capacitors VFHR Series — Useful of 20,000 hours at 85°C



## Features

- High-reliability series with the warranty of 20,000 hours realized through improvement of the VFLR series into a longer-life series.
- The standard use of materials that meet the UL94-V0 and UL224VW1 standard.

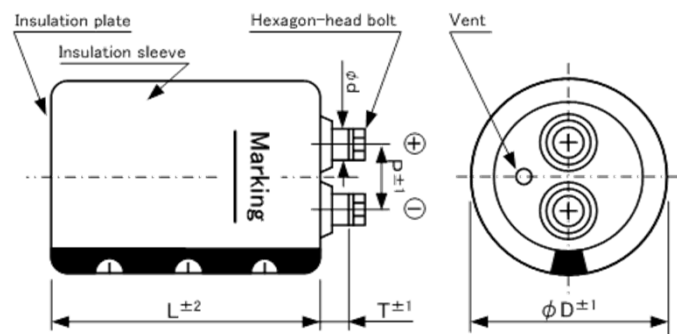
## Product Specifications

Items	Specifications
Temperature range	-40~+85°C
Rated voltage	350~500V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.01CV(µA) or 5(mA), whichever is smaller or less (20°C, 120Hz) C=nominal capacitance(µF)、V=rated voltage(V)
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 measures Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified

## Dimensions

(unit : mm)

φD	P	T	φd	Hexagon-Heat bolt	Cap materials
64	28.6	8.0	11.0	M5 × 10	Phenol resin
77	31.5	9.0	12.0	M6 × 12	
90	31.5	8.0	12.0	M6 × 12	



## Ripple current correction coefficient

### ■ Forced wind

Forced wind (m/s)	0.5>	0.5≤
Correction coefficient	1.0	1.1

### ■ Frequency

Frequency (Hz)	120	300	1K	10K≤
Correction coefficient	1.0	1.1	1.3	1.4

### ■ Temperature

Temperature (°C)	40	60	85	
Correction coefficient	350~450WV	1.90	1.75	1.00
	500WV	2.10	1.90	1.00

## Contact us

<http://www.hitachi-chem.co.jp>

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※The contents described are subject to change for improvement without notice.

# Screw terminal type aluminum electrolytic capacitors VFHR Series — Useful of 20,000 hours at 85°C

## Standard Products Table

Rated Voltage (V. DC)	Capacitance ( $\mu$ F)	Case size $\phi$ D $\times$ L (mm)	$\tan\delta$ 20°C, 120Hz	Ripple current 85°C, 120Hz (Arms)	ESR (typ.) 20°C, 100Hz (m $\Omega$ )	Z max 20°C, 10kHz (m $\Omega$ )	ESL (typ.) (nH)	Product name
350	3,300	64 $\times$ 108	0.20	15.1	29	30	22	VFHR2V332YD108
	3,900	64 $\times$ 124	0.20	16.8	24	26	22	VFHR2V392YD124
	4,700	64 $\times$ 148	0.20	18.2	20	21	22	VFHR2V472YD148
		77 $\times$ 108	0.20	20.6	20	21	24	VFHR2V472YE108
	5,600	64 $\times$ 165	0.20	20.3	17	18	22	VFHR2V562YD165
		77 $\times$ 124	0.20	23.1	17	18	24	VFHR2V562YE124
	6,800	64 $\times$ 188	0.20	22.6	14	15	22	VFHR2V682YD188
		77 $\times$ 148	0.20	24.9	14	15	24	VFHR2V682YE148
		90 $\times$ 110	0.20	28.6	14	15	24	VFHR2V682YF110
	8,200	77 $\times$ 165	0.20	27.9	12	12	24	VFHR2V822YE165
		90 $\times$ 150	0.20	31.0	12	12	24	VFHR2V822YF150
	10,000	77 $\times$ 188	0.20	31.0	9	10	24	VFHR2V103YE188
		90 $\times$ 150	0.20	34.2	9	10	24	VFHR2V103YF150
	12,000	77 $\times$ 228	0.20	35.1	8	8	24	VFHR2V123YE228
		90 $\times$ 167	0.20	36.8	8	8	24	VFHR2V123YF167
	15,000	90 $\times$ 190	0.20	41.5	6	7	24	VFHR2V153YF190
18,000	90 $\times$ 230	0.20	44.3	5	6	24	VFHR2V183YF230	
400	2,700	64 $\times$ 108	0.20	13.6	35	37	22	VFHR2G272YD108
	3,300	64 $\times$ 124	0.20	15.5	29	30	22	VFHR2G332YD124
	3,900	64 $\times$ 148	0.20	16.5	24	26	22	VFHR2G392YD148
		77 $\times$ 108	0.20	18.8	24	26	24	VFHR2G392YE108
	4,700	64 $\times$ 165	0.20	18.6	20	21	22	VFHR2G472YD165
		77 $\times$ 124	0.20	21.2	20	21	24	VFHR2G472YE124
	5,600	64 $\times$ 188	0.20	20.5	17	18	22	VFHR2G562YD188
		77 $\times$ 148	0.20	22.6	17	18	24	VFHR2G562YE148
		90 $\times$ 110	0.20	26.0	17	18	24	VFHR2G562YF110
	6,800	77 $\times$ 165	0.20	25.4	14	15	24	VFHR2G682YE165
		90 $\times$ 150	0.20	28.2	14	15	24	VFHR2G682YF150
	8,200	77 $\times$ 188	0.20	28.1	12	12	24	VFHR2G822YE188
		90 $\times$ 150	0.20	31.0	12	12	24	VFHR2G822YF150
	10,000	77 $\times$ 228	0.20	32.0	9	10	24	VFHR2G103YE228
		90 $\times$ 167	0.20	33.6	9	10	24	VFHR2G103YF167
	12,000	90 $\times$ 190	0.20	37.1	8	8	24	VFHR2G123YF190
15,000	90 $\times$ 230	0.20	40.4	6	7	24	VFHR2G153YF230	

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450	2,200	64 $\times$ 108	0.20	12.6	43	45	22	VFHR2W222YD108
		64 $\times$ 124	0.20	14.4	35	37	22	VFHR2W272YD124
	2,700	77 $\times$ 108	0.20	16.1	35	37	24	VFHR2W272YE108
		64 $\times$ 148	0.20	15.6	29	30	22	VFHR2W332YD148
	3,300	77 $\times$ 124	0.20	18.2	29	30	24	VFHR2W332YE124
		64 $\times$ 165	0.20	17.5	24	26	22	VFHR2W392YD165
		77 $\times$ 148	0.20	19.4	24	26	24	VFHR2W392YE148
	3,900	90 $\times$ 110	0.20	22.3	24	26	24	VFHR2W392YF110
		64 $\times$ 188	0.20	19.3	20	21	22	VFHR2W472YD188
		77 $\times$ 148	0.20	21.3	20	21	24	VFHR2W472YE148
	4,700	90 $\times$ 126	0.20	24.2	20	21	24	VFHR2W472YF126
		77 $\times$ 165	0.20	23.7	17	18	24	VFHR2W562YE165
		90 $\times$ 150	0.20	26.3	17	18	24	VFHR2W562YF150
	5,600	77 $\times$ 188	0.20	26.3	14	15	24	VFHR2W682YE188
		90 $\times$ 167	0.20	28.5	14	15	24	VFHR2W682YF167
	6,800	77 $\times$ 228	0.20	29.8	12	12	24	VFHR2W822YE228
90 $\times$ 190		0.20	31.5	12	12	24	VFHR2W822YF190	
8,200	90 $\times$ 230	0.20	33.9	9	10	24	VFHR2W103YF230	
	10,000	90 $\times$ 230	0.20	33.9	9	10	24	VFHR2W103YF230
500	1,500	64 $\times$ 108	0.20	8.4	69	73	22	VFHR2H152YD108
	1,800	64 $\times$ 124	0.20	9.5	58	61	22	VFHR2H182YD124
	2,200	64 $\times$ 148	0.20	10.3	47	50	22	VFHR2H222YD148
		77 $\times$ 108	0.20	11.7	47	50	24	VFHR2H222YE108
	2,700	64 $\times$ 188	0.20	11.8	39	41	22	VFHR2H272YD188
		77 $\times$ 124	0.20	13.3	39	41	24	VFHR2H272YE124
	3,300	77 $\times$ 148	0.20	14.4	32	33	24	VFHR2H332YE148
		90 $\times$ 110	0.20	16.5	32	33	24	VFHR2H332YF110
	3,900	77 $\times$ 165	0.20	15.9	27	28	24	VFHR2H392YE165
		90 $\times$ 126	0.20	17.8	27	28	24	VFHR2H392YF126
	4,700	77 $\times$ 188	0.20	17.6	22	23	24	VFHR2H472YE188
		90 $\times$ 150	0.20	19.4	22	23	24	VFHR2H472YF150
	5,600	77 $\times$ 228	0.20	19.8	19	20	24	VFHR2H562YE228
		90 $\times$ 167	0.20	20.8	19	20	24	VFHR2H562YF167
	6,800	90 $\times$ 190	0.20	23.1	15	16	24	VFHR2H682YF190
	8,200	90 $\times$ 230	0.20	24.7	13	13	24	VFHR2H822YF230