NIPPON CHEMI-CON

ELECTRONIC EQUIPMENT FILM CAPACITOR

HACB Series

- Maximum operating temperature 105℃.
- Allowable temperature rise 15K max.
- A little hum is produced when applied AC voltage.

◆SPECIFICATIONS

Items	Characteristics
Category temperature range	-40 to +105℃
Rated voltage range	630 to 4000Vdc
Capacitance tolerance	±3% (H) or ±5%(J) : Equal or less than 2000Vdc. ±5% (J) or ±10%(K) : Equal or more than 3150Vdc.
Voltage proof (Terminal - Terminal)	No degradation, at 150% of rated voltage shall be applied for 60 seconds.
Dissipation factor (tanδ)	No more than 0.05% : Equal or less than 1μF. No more than (c×0.015+0.05)% : More than 1μF.
Insulation resistance (Terminal - Terminal)	No less than 30000MΩ : Equal or less than 0.33μF. No less than 10000ΩF : More than 0.33μF.

Rated voltage (Vdc)	630	1000	1250	1650	2000	3150	4000
Measurement voltage (Vdc)	500	1000	1000	1000	1000	1000	1000

Endurance

The following specifications shall be satisfied, after 1000hrs with applying rated voltage×125% at 105℃.

Appearance	No serious degradation
Insulation resistance (Terminal - Terminal)	No less than 10000MΩ : Equal or less than 0.33μF. No less than 3000ΩF : More than 0.33μF.
Dissipation factor (tanδ)	Not more than initial specification at 1kHz.
Capacitance change	Within ±5% of initial value.

Loading under damp heat

The following specifications shall be satisfied, after 500hrs with applying rated voltage at 40℃ 90～95%RH.

Appearance	No serious degradation.
Insulation resistance (Terminal - Terminal)	No less than 10000MΩ : Equal or less than 0.33μF. No less than 3000ΩF : More than 0.33μF.
Dissipation factor (tanδ)	Not more than initial specification at 1kHz.
Capacitance change	Within ±5% of initial value.

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Dimensions (mm) W	H	T	F	φd	Maximum ripple current (Arms)	WV (Vac)	Part Number	Previous Part Number (Just for your reference)
630	0.033	17.7	8.7	8.3	12.5	0.8	2.54	300	FHACB631V333□0LGZ0	HACB2J333□
	0.039		9.3	8.8			2.76		FHACB631V393□0LGZ0	HACB2J393□
	0.047		9.8	9.3			3.04		FHACB631V473□0LGZ0	HACB2J473□
	0.056		10.4	10.0			3.31		FHACB631V563□0LGZ0	HACB2J563□
	0.068		11.3	10.8			3.65		FHACB631V683□0LGZ0	HACB2J683□
	0.082		12.1	11.6			4.01		FHACB631V823□0LGZ0	HACB2J823□
	0.1		13.1	12.5			4.42		FHACB631V104□0LGZ0	HACB2J104□
	0.12		14.0	13.4			4.84		FHACB631V124□0LGZ0	HACB2J124□
	0.15	22.7	12.9	12.3	17.5		3.83		FHACB631V154□1LHZ0	HACB2J154□
	0.18		13.8	13.2			4.19		FHACB631V184□1LHZ0	HACB2J184□
	0.22		15.1	14.4			4.64		FHACB631V224□1LHZ0	HACB2J224□
	0.27		16.5	15.7			5.14		FHACB631V274□1LHZ0	HACB2J274□
	0.33		18.0	17.1			5.68		FHACB631V334□1LHZ0	HACB2J334□
	0.39		19.3	18.4			6.17		FHACB631V394□1LHZ0	HACB2J394□
	0.47	27.7	18.4	17.5	22.5	1.0	5.26		FHACB631V474□2LEZ0	HACB2J474□
	0.56		19.9	18.9			5.74		FHACB631V564□2LEZ0	HACB2J564□
	0.68		21.7	20.6			6.33		FHACB631V684□2LEZ0	HACB2J684□
	0.82		23.6	22.5			6.95		FHACB631V824□2LEZ0	HACB2J824□
	1.0		25.8	24.6			7.67		FHACB631V105□2LEZ0	HACB2J105□
	1.2		28.1	26.8			8.41		FHACB631V125□2LEZ0	HACB2J125□
1000	0.018	17.7	8.6	8.3	12.5	0.8	2.18	350	FHACB102V183□0LGZ0	HACB3A183□
	0.022		9.3	8.8			2.41		FHACB102V223□0LGZ0	HACB3A223□
	0.027		9.8	9.5			2.66		FHACB102V273□0LGZ0	HACB3A273□
	0.033		10.7	10.2			2.95		FHACB102V333□0LGZ0	HACB3A333□
	0.039		11.3	10.8			3.21		FHACB102V393□0LGZ0	HACB3A393□
	0.047		12.1	11.6			3.52		FHACB102V473□0LGZ0	HACB3A473□
	0.056		13.0	12.4			3.84		FHACB102V563□0LGZ0	HACB3A563□
	0.068		14.0	13.4			4.23		FHACB102V683□0LGZ0	HACB3A683□
	0.082	22.7	12.5	11.9	17.5		3.23		FHACB102V823□1LHZ0	HACB3A823□
	0.1		13.5	12.9			3.56		FHACB102V104□1LHZ0	HACB3A104□
	0.12		14.6	13.9			3.91		FHACB102V124□1LHZ0	HACB3A124□
	0.15		16.1	15.3			4.36		FHACB102V154□1LHZ0	HACB3A154□
	0.18		17.3	16.5			4.79		FHACB102V184□1LHZ0	HACB3A184□
	0.22		18.9	18.0			5.29		FHACB102V224□1LHZ0	HACB3A224□

(1)The symbol "□" is Capacitance tolerance code. (J : ±5%, H : ±3%)
(2)The maximum ripple current : +85℃ max., 100kHz, sine wave
(3)WV(Vac) : 50Hz or 60Hz, sine wave

CAT. No. E1003E

ELECTRONIC EQUIPMENT FILM CAPACITOR

HACB Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Dimensions (mm)					Maximum ripple current (Arms)	WV (Vac)	Part Number	Previous Part Number (Just for your reference)
		W	H	T	F	φd				
1000	0.27	27.7	18.0	17.1	22.5	1.0	4.51	350	FHACB102V274□2LEZ0	HACB3A274□
	0.33		19.6	18.6			4.99		FHACB102V334□2LEZ0	HACB3A334□
	0.39		21.1	20.1			5.43		FHACB102V394□2LEZ0	HACB3A394□
	0.47		22.9	21.9			5.96		FHACB102V474□2LEZ0	HACB3A474□
	0.56		25.0	23.8			6.51		FHACB102V564□2LEZ0	HACB3A564□
	0.68		27.3	26.0			7.16		FHACB102V684□2LEZ0	HACB3A684□
	0.82	42.7	22.8	21.8	37.5		4.70		FHACB102V824□4LJZ0	HACB3A824□
	1.0		25.0	23.8			5.19		FHACB102V105□4LJZ0	HACB3A105□
	1.2		27.1	25.8			5.68		FHACB102V125□4LJZ0	HACB3A125□
1250	0.012	17.7	8.5	8.2	12.5	0.8	1.95	400	FHACB1C2V123□0LGZ0	HACB3B123□
	0.015		9.2	8.8			2.18		FHACB1C2V153□0LGZ0	HACB3B153□
	0.018		9.8	9.3			2.39		FHACB1C2V183□0LGZ0	HACB3B183□
	0.022		10.5	10.1			2.64		FHACB1C2V223□0LGZ0	HACB3B223□
	0.027		11.3	10.8			2.92		FHACB1C2V273□0LGZ0	HACB3B273□
	0.033		12.2	11.7			3.23		FHACB1C2V333□0LGZ0	HACB3B333□
	0.039		13.1	12.5			3.51		FHACB1C2V393□0LGZ0	HACB3B393□
	0.047		14.0	13.4			3.86		FHACB1C2V473□0LGZ0	HACB3B473□
	0.056	22.7	13.3	12.7	17.5		3.11		FHACB1C2V563□1LHZ0	HACB3B563□
	0.068		14.4	13.7			3.43		FHACB1C2V683□1LHZ0	HACB3B683□
	0.082		15.5	14.8			3.76		FHACB1C2V823□1LHZ0	HACB3B823□
	0.1		16.9	16.1			4.16		FHACB1C2V104□1LHZ0	HACB3B104□
	0.12		18.4	17.5			4.56		FHACB1C2V124□1LHZ0	HACB3B124□
	0.15	27.7	17.2	16.4	22.5	1.0	3.84		FHACB1C2V154□2LEZ0	HACB3B154□
	0.18		18.6	17.7			4.21		FHACB1C2V184□2LEZ0	HACB3B184□
	0.22		20.3	19.3			4.66		FHACB1C2V224□2LEZ0	HACB3B224□
	0.27		22.3	21.3			5.16		FHACB1C2V274□2LEZ0	HACB3B274□
	0.33		24.4	23.3			5.70		FHACB1C2V334□2LEZ0	HACB3B334□
	0.39		26.3	25.1			6.20		FHACB1C2V394□2LEZ0	HACB3B394□
	0.47	42.7	21.9	20.8	37.5		4.03		FHACB1C2V474□4LJZ0	HACB3B474□
	0.56		23.7	22.6			4.40		FHACB1C2V564□4LJZ0	HACB3B564□
	0.68		25.8	24.6			4.85		FHACB1C2V684□4LJZ0	HACB3B684□
	0.82		27.6	26.3			5.32		FHACB1C2V824□4LJZ0	HACB3B824□
	1.0	52.7	27.0	25.7	47.5		4.60		FHACB1C2V105□ULWZ0	HACB3B105□
1600	0.0047	19.7	8.8	8.5	15.0	0.8	1.32	450	FHACB162V472□KLDZ0	HACB3C472□
	0.0056		9.3	9.0			1.58		FHACB162V562□KLDZ0	HACB3C562□
	0.0068		10.0	9.6			1.93		FHACB162V682□KLDZ0	HACB3C682□
	0.0082		10.7	10.2			2.12		FHACB162V822□KLDZ0	HACB3C822□
	0.01		11.5	11.0			2.34		FHACB162V103□KLDZ0	HACB3C103□
	0.012		12.3	11.8			2.56		FHACB162V123□KLDZ0	HACB3C123□
	0.015		13.5	12.9			2.86		FHACB162V153□KLDZ0	HACB3C153□
	0.018		14.6	13.9			3.14		FHACB162V183□KLDZ0	HACB3C183□
	0.022		15.8	15.1			3.47		FHACB162V223□KLDZ0	HACB3C223□
	0.027	22.7	13.0	12.4	17.5		2.61		FHACB162V273□1LHZ0	HACB3C273□
	0.033		14.0	13.4			2.88		FHACB162V333□1LHZ0	HACB3C333□
	0.039		15.1	14.4			3.13		FHACB162V393□1LHZ0	HACB3C393□
	0.047		16.4	15.6			3.44		FHACB162V473□1LHZ0	HACB3C473□
	0.056		17.6	16.8			3.75		FHACB162V563□1LHZ0	HACB3C563□
	0.068		19.1	18.2			4.14		FHACB162V683□1LHZ0	HACB3C683□
	0.082	27.7	17.4	16.6	22.5	1.0	3.38		FHACB162V823□2LEZ0	HACB3C823□
	0.1		19.0	18.1			3.73		FHACB162V104□2LEZ0	HACB3C104□
	0.12		20.6	19.6			4.09		FHACB162V124□2LEZ0	HACB3C124□
	0.15		22.8	21.8			4.56		FHACB162V154□2LEZ0	HACB3C154□
	0.18		24.7	23.6			5.00		FHACB162V184□2LEZ0	HACB3C184□
	0.22		27.2	25.9			5.53		FHACB162V224□2LEZ0	HACB3C224□
	0.27	42.7	23.4	22.3	37.5		3.62		FHACB162V274□4LJZ0	HACB3C274□
	0.33		25.9	24.7			4.41		FHACB162V334□4LJZ0	HACB3C334□
	0.39		27.9	26.6			4.84		FHACB162V394□4LJZ0	HACB3C394□

(1)The symbol "□" is Capacitance tolerance code. (J : ±5%, H : ±3%)
(2)The maximum ripple current : +85℃ max., 100kHz, sine wave
(3)WV(Vac) : 50Hz or 60Hz, sine wave

ELECTRONIC EQUIPMENT FILM CAPACITOR

HACB Series

◆STANDARD RATINGS

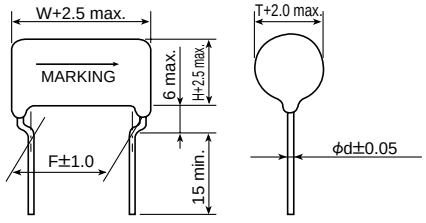
WV (Vdc)	Cap (μF)	Dimensions (mm)					Maximum ripple current (Arms)	WV (Vac)	Part Number	Previous Part Number (Just for your reference)
		W	H	T	F	φd				
2000	0.001	19.7	8.3	8.1	15.0	0.8	0.28	450	FHACB202V102□KLDZ0	HACB3D102□
	0.0012		9.0	8.6			0.34		FHACB202V122□KLDZ0	HACB3D122□
	0.0015		9.6	9.2			0.42		FHACB202V152□KLDZ0	HACB3D152□
	0.0018		9.3	9.0			0.51		FHACB202V182□KLDZ0	HACB3D182□
	0.0022		10.0	9.6			0.62		FHACB202V222□KLDZ0	HACB3D222□
	0.0027		8.5	8.2			0.76		FHACB202V272□KLDZ0	HACB3D272□
	0.0033		9.1	8.7			0.93		FHACB202V332□KLDZ0	HACB3D332□
	0.0039		9.6	9.2			1.10		FHACB202V392□KLDZ0	HACB3D392□
	0.0047		10.2	9.8			1.33		FHACB202V472□KLDZ0	HACB3D472□
	0.0056		11.0	10.5			1.53		FHACB202V562□KLDZ0	HACB3D562□
	0.0068		11.8	11.3			1.92		FHACB202V682□KLDZ0	HACB3D682□
	0.0082		12.7	12.1			2.32		FHACB202V822□KLDZ0	HACB3D822□
	0.01		13.7	13.1			2.61		FHACB202V103□KLDZ0	HACB3D103□
	0.012		14.8	14.1			2.86		FHACB202V123□KLDZ0	HACB3D123□
	0.015		16.3	15.5			3.21		FHACB202V153□KLDZ0	HACB3D153□
	0.018	22.7	13.2	12.6	17.5		2.38		FHACB202V183□1LHZ0	HACB3D183□
	0.022		14.3	13.6			2.63		FHACB202V223□1LHZ0	HACB3D223□
	0.027		15.5	14.8			2.91		FHACB202V273□1LHZ0	HACB3D273□
	0.033		17.0	16.2			3.22		FHACB202V333□1LHZ0	HACB3D333□
	0.039		18.3	17.4			3.50		FHACB202V393□1LHZ0	HACB3D393□
	0.047		19.8	18.8			3.84		FHACB202V473□1LHZ0	HACB3D473□
	0.056	27.7	17.9	17.0	22.5	1.0	3.12		FHACB202V563□2LEZ0	HACB3D563□
	0.068		19.4	18.5			3.44		FHACB202V683□2LEZ0	HACB3D683□
	0.082		21.2	20.2			3.78		FHACB202V823□2LEZ0	HACB3D823□
	0.1		23.2	22.1			4.17		FHACB202V104□2LEZ0	HACB3D104□
	0.12		25.3	24.1			4.56		FHACB202V124□2LEZ0	HACB3D124□
	0.15		27.9	26.6			5.11		FHACB202V154□2LEZ0	HACB3D154□
	0.18	42.7	22.1	21.1	37.5		3.17		FHACB202V184□4LJZ0	HACB3D184□
	0.22		24.5	23.4			3.56		FHACB202V224□4LJZ0	HACB3D224□
	0.27		26.5	25.3			3.89		FHACB202V274□4LJZ0	HACB3D274□

(1)The symbol "□" is Capacitance tolerance code. (J : ±5%, H : ±3%)

WV (Vdc)	Cap (μF)	Dimensions (mm)					Maximum ripple current (Arms)	WV (Vac)	Part Number	Previous Part Number (Just for your reference)
		W	H	T	F	φd				
3150	0.0047	34.7	12.0	11.5	30.0	1.0	1.68	920	FHACB3B2V472□LLQZ0	HACB3F472□
	0.0056		12.9	12.3			1.84		FHACB3B2V562□LLQZ0	HACB3F562□
	0.0068		13.9	13.3			2.02		FHACB3B2V682□LLQZ0	HACB3F682□
	0.0082		15.0	14.3			2.22		FHACB3B2V822□LLQZ0	HACB3F822□
	0.01		16.3	15.5			2.45		FHACB3B2V103□LLQZ0	HACB3F103□
	0.012		17.5	16.7			2.69		FHACB3B2V123□LLQZ0	HACB3F123□
	0.015		19.3	18.4			3.00		FHACB3B2V153□LLQZ0	HACB3F153□
	0.018		20.9	19.9			3.29		FHACB3B2V183□LLQZ0	HACB3F183□
	0.022		22.9	21.9			3.64		FHACB3B2V223□LLQZ0	HACB3F223□
	0.027		25.2	24.0			4.03		FHACB3B2V273□LLQZ0	HACB3F273□
	0.033		27.5	26.2			4.46		FHACB3B2V333□LLQZ0	HACB3F333□
4000	0.0027	34.7	12.7	12.1	30.0	1.0	1.51	920	FHACB402V272□LLQZ0	HACB3G272□
	0.0033		13.7	13.1			1.67		FHACB402V332□LLQZ0	HACB3G332□
	0.0039		14.6	13.9			1.81		FHACB402V392□LLQZ0	HACB3G392□
	0.0047		15.7	15.0			1.99		FHACB402V472□LLQZ0	HACB3G472□
	0.0056		17.0	16.2			2.17		FHACB402V562□LLQZ0	HACB3G562□
	0.0068		18.4	17.5			2.39		FHACB402V682□LLQZ0	HACB3G682□
	0.0082		20.0	19.0			2.63		FHACB402V822□LLQZ0	HACB3G822□
	0.01		21.8	20.7			2.90		FHACB402V103□LLQZ0	HACB3G103□
	0.012		23.7	22.6			3.18		FHACB402V123□LLQZ0	HACB3G123□
	0.015		26.2	25.0			3.55		FHACB402V153□LLQZ0	HACB3G153□
	0.018		28.5	27.1			3.89		FHACB402V183□LLQZ0	HACB3G183□

(1)The symbol "□" is Capacitance tolerance code. (J : ±5%, K : ±10%)
(2)The maximum ripple current : +85℃ max., 100kHz, sine wave
(3)WV(Vac) : 50Hz or 60Hz, sine wave

◆DIMENSIONS (mm)



CAT. No. E1003E