



# ELECTRONIC EQUIPMENT FILM CAPACITOR

## HACD Series

- Maximum operating temperature 105°C.
- Allowable temperature rise 15K max.
- Downsizing of HACB series.



### ◆ SPECIFICATIONS

Items	Characteristics								
Category temperature range	-40 to +105°C								
Rated voltage range	630 to 4000V <sub>dc</sub>								
Capacitance tolerance	±5%(J)								
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 (V <sub>dc</sub> )	630	1000	1250	1600	2000	2500	3150	4000
	Measurement voltage (V <sub>dc</sub> )	500	1000	1000	1000	1000	1000	1000	1000
Endurance	The following specifications shall be satisfied, after 1000hrs with applying rated voltage×125% at 105°C.								
	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°C 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 (V <sub>dc</sub> )	Cap (μF)	Dimensions (mm)					Maximum ripple current (Arms)	WV (Vac)	Part Number	Previous Part Number (Just for your reference)
		W	H	T	F	φd				
630	0.047	17.7	9.8	9.3	12.5	0.8	2.65	250	FHACD631V473J0LGZ0	HACD2J473J
	0.056		10.4	10.0			2.89		FHACD631V563J0LGZ0	HACD2J563J
	0.068		11.0	10.5			3.19		FHACD631V683J0LGZ0	HACD2J683J
	0.082		11.6	11.1			3.50		FHACD631V823J0LGZ0	HACD2J823J
	0.1		12.3	11.7			3.86		FHACD631V104J0LGZ0	HACD2J104J
	0.12		13.1	12.5			4.23		FHACD631V124J0LGZ0	HACD2J124J
	0.15	14.1	13.5	4.73	FHACD631V154J0LGZ0	HACD2J154J				
	0.18	15.1	14.4	5.18	FHACD631V184J0LGZ0	HACD2J184J				
	0.22	13.8	13.2	4.31	FHACD631V224J1LHZ0	HACD2J224J				
	0.27	14.9	14.2	4.78	FHACD631V274J1LHZ0	HACD2J274J				
	0.33	16.1	15.3	5.28	FHACD631V334J1LHZ0	HACD2J334J				
	0.39	17.1	16.3	5.74	FHACD631V394J1LHZ0	HACD2J394J				
	0.47	18.5	17.6	6.30	FHACD631V474J1LHZ0	HACD2J474J				
	0.56	19.9	18.9	6.88	FHACD631V564J1LHZ0	HACD2J564J				
	0.68	19.0	18.1	6.19	FHACD631V684J2LEZ0	HACD2J684J				
	0.82	20.5	19.6	6.79	FHACD631V824J2LEZ0	HACD2J824J				
	1.0	22.3	21.3	7.50	FHACD631V105J2LEZ0	HACD2J105J				
	1.2	24.2	23.0	8.22	FHACD631V125J2LEZ0	HACD2J125J				
1.5	26.7	25.4	9.19	FHACD631V155J2LEZ0	HACD2J155J					
1000	0.033	17.7	10.0	9.6	12.5	0.8	2.43	270	FHACD102V333J0LGZ0	HACD3A333J
	0.039		10.4	10.0			2.64		FHACD102V393J0LGZ0	HACD3A393J
	0.047		11.0	10.5			2.90		FHACD102V473J0LGZ0	HACD3A473J
	0.056		11.5	11.0			3.17		FHACD102V563J0LGZ0	HACD3A563J
	0.068		12.2	11.7			3.49		FHACD102V683J0LGZ0	HACD3A683J
	0.082		13.0	12.4			3.83		FHACD102V823J0LGZ0	HACD3A823J
	0.1	13.9	13.3	4.23	FHACD102V104J0LGZ0	HACD3A104J				
	0.12	14.9	14.2	4.64	FHACD102V124J0LGZ0	HACD3A124J				
	0.15	13.7	13.1	3.90	FHACD102V154J1LHZ0	HACD3A154J				
	0.18	14.7	14.0	4.27	FHACD102V184J1LHZ0	HACD3A184J				
	0.22	15.8	15.1	4.72	FHACD102V224J1LHZ0	HACD3A224J				
	0.27	17.1	16.3	5.23	FHACD102V274J1LHZ0	HACD3A274J				
	0.33	18.6	17.7	5.79	FHACD102V334J1LHZ0	HACD3A334J				
	0.39	19.9	19.0	6.29	FHACD102V394J1LHZ0	HACD3A394J				

(1) The maximum ripple current : +85°C max., 100kHz, sine wave

(2) WV(V<sub>ac</sub>) : 50Hz or 60Hz, sine wave



# ELECTRONIC EQUIPMENT FILM CAPACITOR

## HACD 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	0.47	27.7	18.9	18.0	22.5	1.0	5.63	270	FHACD102V474J2LEZ0	HACD3A474J		
	0.56		20.4	19.4			6.15		FHACD102V564J2LEZ0	HACD3A564J		
	0.68		22.1	21.1			6.78		FHACD102V684J2LEZ0	HACD3A684J		
	0.82		24.0	22.9			7.44		FHACD102V824J2LEZ0	HACD3A824J		
	1.0		26.2	25.0			8.22		FHACD102V105J2LEZ0	HACD3A105J		
	1.2		28.5	27.1			9.00		FHACD102V125J2LEZ0	HACD3A125J		
1250	0.018	17.7	9.7	9.3	12.5	0.8	2.04	300	FHACD1C2V183J0LGZ0	HACD3B183J		
	0.022		10.4	9.9			2.25		FHACD1C2V223J0LGZ0	HACD3B223J		
	0.027		11.0	10.5			2.50		FHACD1C2V273J0LGZ0	HACD3B273J		
	0.033		11.6	11.1			2.76		FHACD1C2V333J0LGZ0	HACD3B333J		
	0.039		12.3	11.7			3.00		FHACD1C2V393J0LGZ0	HACD3B393J		
	0.047		13.0	12.4			3.29		FHACD1C2V473J0LGZ0	HACD3B473J		
	0.056	13.8	13.2	3.60	FHACD1C2V563J0LGZ0	HACD3B563J						
	0.068	14.8	14.2	3.96	FHACD1C2V683J0LGZ0	HACD3B683J						
	0.082	13.3	12.7	3.24	FHACD1C2V823J1LHZ0	HACD3B823J						
	0.1	14.3	13.6	3.57	FHACD1C2V104J1LHZ0	HACD3B104J						
	0.12	15.3	14.6	3.91	FHACD1C2V124J1LHZ0	HACD3B124J						
	0.15	16.7	15.9	4.38	FHACD1C2V154J1LHZ0	HACD3B154J						
	0.18	17.9	17.1	4.79	FHACD1C2V184J1LHZ0	HACD3B184J						
	0.22	19.5	18.6	5.30	FHACD1C2V224J1LHZ0	HACD3B224J						
	0.27	18.5	17.7	4.77	FHACD1C2V274J2LEZ0	HACD3B274J						
	0.33	20.1	19.2	5.28	FHACD1C2V334J2LEZ0	HACD3B334J						
	0.39	21.6	20.6	5.74	FHACD1C2V394J2LEZ0	HACD3B394J						
	0.47	23.4	22.3	6.30	FHACD1C2V474J2LEZ0	HACD3B474J						
	0.56	25.3	24.1	6.87	FHACD1C2V564J2LEZ0	HACD3B564J						
	0.68	27.6	26.3	7.58	FHACD1C2V684J2LEZ0	HACD3B684J						
	0.82	23.2	22.1	5.55	FHACD1C2V824J2LEZ0	HACD3B824J						
	1.0	25.4	24.2	6.13	FHACD1C2V105J2LEZ0	HACD3B105J						
	1.2	27.5	26.2	6.72	FHACD1C2V125J2LEZ0	HACD3B125J						
	1600	0.0068	19.7	10.0	9.5	15.0	0.8		1.72	350	FHACD162V682JKLDZ0	HACD3C682J
0.0082		10.6		10.1	1.89			FHACD162V822JKLDZ0	HACD3C822J			
0.01		11.2		10.6	2.09			FHACD162V103JKLDZ0	HACD3C103J			
0.012		11.8		11.2	2.29			FHACD162V123JKLDZ0	HACD3C123J			
0.015		12.6		12.0	2.56			FHACD162V153JKLDZ0	HACD3C153J			
0.018		13.4		12.8	2.80			FHACD162V183JKLDZ0	HACD3C183J			
0.022		14.4	13.7	3.10	FHACD162V223JKLDZ0	HACD3C223J						
0.027		15.0	14.3	3.43	FHACD162V273JKLDZ0	HACD3C273J						
0.033		16.3	15.5	3.80	FHACD162V333JKLDZ0	HACD3C333J						
0.039		13.0	12.4	2.60	FHACD162V393J1LHZ0	HACD3C393J						
0.047		13.8	13.2	2.85	FHACD162V473J1LHZ0	HACD3C473J						
0.056		14.7	14.0	3.11	FHACD162V563J1LHZ0	HACD3C563J						
0.068		15.8	15.1	3.43	FHACD162V683J1LHZ0	HACD3C683J						
0.082		17.0	16.2	3.77	FHACD162V823J1LHZ0	HACD3C823J						
0.1		18.4	17.6	4.16	FHACD162V104J1LHZ0	HACD3C104J						
0.12		17.2	16.4	3.68	FHACD162V124J2LEZ0	HACD3C124J						
0.15		18.9	18.0	4.12	FHACD162V154J2LEZ0	HACD3C154J						
0.18		20.4	19.4	4.51	FHACD162V184J2LEZ0	HACD3C184J						
0.22		22.2	21.1	4.99	FHACD162V224J2LEZ0	HACD3C224J						
0.27		24.2	23.1	5.53	FHACD162V274J2LEZ0	HACD3C274J						
0.33		26.5	25.3	6.11	FHACD162V334J2LEZ0	HACD3C334J						
2000		0.0033	19.7	9.3	8.9	15.0	0.8	1.39	350		FHACD202V332JKLDZ0	HACD3D332J
		0.0039		9.7	9.2			1.52			FHACD202V392JKLDZ0	HACD3D392J
		0.0047		10.2	9.7			1.66			FHACD202V472JKLDZ0	HACD3D472J
	0.0056	10.9		10.4	1.82			FHACD202V562JKLDZ0		HACD3D562J		
	0.0068	11.8		11.2	2.00			FHACD202V682JKLDZ0		HACD3D682J		
	0.0082	12.6		12.0	2.20			FHACD202V822JKLDZ0		HACD3D822J		
	0.01	13.5		12.9	2.43			FHACD202V103JKLDZ0		HACD3D103J		
	0.012	14.4		13.7	2.66			FHACD202V123JKLDZ0		HACD3D123J		
	0.015	15.6		14.9	2.97			FHACD202V153JKLDZ0		HACD3D153J		
	0.018	16.7		16.0	3.26			FHACD202V183JKLDZ0		HACD3D183J		

(1)The maximum ripple current : +85°C max., 100kHz, sine wave

(2)WV(Vac) : 50Hz or 60Hz, sine wave

◆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	0.022	22.7	13.1	12.5	17.5	0.8	2.27	350	FHACD202V223J1LHZ0	HACD3D223J
	0.027		14.0	13.4			2.51		FHACD202V273J1LHZ0	HACD3D273J
	0.033		15.1	14.4			2.78		FHACD202V333J1LHZ0	HACD3D333J
	0.039		16.1	15.3			3.02		FHACD202V393J1LHZ0	HACD3D393J
	0.047		17.3	16.5			3.32		FHACD202V473J1LHZ0	HACD3D473J
	0.056		18.6	17.7			3.62		FHACD202V563J1LHZ0	HACD3D563J
	0.068	27.7	17.5	16.6	22.5	1.0	3.22		FHACD202V683J2LEZ0	HACD3D683J
	0.082		18.8	18.0			3.54		FHACD202V823J2LEZ0	HACD3D823J
	0.1		20.5	19.5			3.91		FHACD202V104J2LEZ0	HACD3D104J
	0.12		22.1	21.1			4.28		FHACD202V124J2LEZ0	HACD3D124J
	0.15		24.4	23.2			4.79		FHACD202V154J2LEZ0	HACD3D154J
	0.18		26.4	25.2			5.24		FHACD202V184J2LEZ0	HACD3D184J
	0.22	42.7	22.6	21.5	37.5	1.0	3.93		FHACD202V224JTLJZ0	HACD3D224J
	0.27		24.7	23.5			4.35		FHACD202V274JTLJZ0	HACD3D274J
	0.33		27.0	25.7			4.81		FHACD202V334JTLJZ0	HACD3D334J
2500	0.015	34.7	11.7	11.2	30.0	1.0	2.11	500	FHACD252V153JRLQZ0	HACD3E153J
	0.018		12.6	12.0			2.31		FHACD252V183JRLQZ0	HACD3E183J
	0.022		13.7	13.0			2.55		FHACD252V223JRLQZ0	HACD3E223J
	0.027		14.9	14.2			2.83		FHACD252V273JRLQZ0	HACD3E273J
	0.033		16.2	15.4			3.13		FHACD252V333JRLQZ0	HACD3E333J
	0.039		17.4	16.6			3.40		FHACD252V393JRLQZ0	HACD3E393J
	0.047		18.9	18.0			3.73		FHACD252V473JRLQZ0	HACD3E473J
	0.056		20.4	19.5			4.07		FHACD252V563JRLQZ0	HACD3E563J
	0.068		22.3	21.3			4.49		FHACD252V683JRLQZ0	HACD3E683J
	0.082		24.3	23.1			4.93		FHACD252V823JRLQZ0	HACD3E823J
	0.1		26.6	25.4			5.44		FHACD252V104JRLQZ0	HACD3E104J
	3150		0.0068	34.7			11.5		11.0	30.0
0.0082		12.4	11.8		1.80	FHACD3B2V822JRLQZ0	HACD3F822J			
0.01		13.4	12.8		1.99	FHACD3B2V103JRLQZ0	HACD3F103J			
0.012		14.4	13.7		2.18	FHACD3B2V123JRLQZ0	HACD3F123J			
0.015		15.8	15.1		2.44	FHACD3B2V153JRLQZ0	HACD3F153J			
0.018		17.1	16.3		2.67	FHACD3B2V183JRLQZ0	HACD3F183J			
0.022		18.7	17.8		2.95	FHACD3B2V223JRLQZ0	HACD3F223J			
0.027		20.5	19.5		3.27	FHACD3B2V273JRLQZ0	HACD3F273J			
0.033		22.4	21.4		3.62	FHACD3B2V333JRLQZ0	HACD3F333J			
0.039		24.2	23.1		3.93	FHACD3B2V393JRLQZ0	HACD3F393J			
0.047		26.4	25.1		4.31	FHACD3B2V473JRLQZ0	HACD3F473J			
4000		0.0039	34.7		11.2	10.6	30.0	1.0	1.63	
	0.0047	12.0		11.4	1.79	FHACD402V472JRLQZ0			HACD3G472J	
	0.0056	12.8		12.2	1.95	FHACD402V562JRLQZ0			HACD3G562J	
	0.0068	13.9		13.2	2.15	FHACD402V682JRLQZ0			HACD3G682J	
	0.0082	15.0		14.3	2.36	FHACD402V822JRLQZ0			HACD3G822J	
	0.01	16.3		15.6	2.60	FHACD402V103JRLQZ0			HACD3G103J	
	0.012	17.7		16.8	2.85	FHACD402V123JRLQZ0			HACD3G123J	
	0.015	19.5		18.6	3.19	FHACD402V153JRLQZ0			HACD3G153J	
	0.018	21.2		20.2	3.49	FHACD402V183JRLQZ0			HACD3G183J	
	0.022	23.2		22.1	3.86	FHACD402V223JRLQZ0			HACD3G223J	
	0.027	25.5		24.2	4.28	FHACD402V273JRLQZ0			HACD3G273J	

(1)The maximum ripple current : +85°C max., 100kHz, sine wave

(2)WV(Vac) : 50Hz or 60Hz, sine wave

◆DIMENSIONS (mm)

