

# 鋁電解電容器

ALUMINUM ELECTROLYTIC CAPACITOR(CD294 LH)

## ■ LH 型特性 FEATURE

- \* 壽命: 105°C 1000小時  
Life time: 105°C 1000 hours
- \* 小型化 Smaller size
- \* 適用於開關電源、通信設備及其它各種電子產品  
Ideally suited for switching power supplies ,  
telecommunication and other electronic products



## ■ 特性表 SPECIFICATIONS

項目Item	主要特性Performance Characteristics																																
額定工作電壓範圍 Rated Working Voltage Range	10V.DC ~ 100V.DC	160V.DC ~ 450V.DC																															
使用溫度範圍 Operating Temperature Range	-40°C ~ +105°C	-25°C ~ +105°C																															
標稱靜電容量範圍 Nominal Capacitance Range	680 µ F ~ 56000 µ F	47 µ F ~ 22000 µ F																															
靜電容量允許偏差 Capacitance Tolerance	± 20%(M, +20°C, 120Hz)																																
漏電流: Leakage current:	施加額定電壓5分鐘: $I \leq 3\sqrt{CV}$ (µ A) 20°C After application of rated voltage for 5 minutes: $I \leq 3\sqrt{CV}$ (µ A) at +20°C C: 標稱靜電容量 (µ F) C: Nominal Capacitance in µ F; V: 額定工作電壓 (V) V: Rated Working Voltage in V																																
損耗角正切值(tan δ) Dissipation Factor	<table border="1"> <thead> <tr> <th>額定工作電壓(V) Rated Working Voltage Range</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160~250</th> <th>350~450</th> </tr> </thead> <tbody> <tr> <td>tan δ (MAX) (20°C, 120Hz)</td> <td>0.55</td> <td>0.50</td> <td>0.45</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> </tr> </tbody> </table>											額定工作電壓(V) Rated Working Voltage Range	10	16	25	35	50	63	80	100	160~250	350~450	tan δ (MAX) (20°C, 120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.15
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高溫負荷特性 Load life	在+105°C環境中施加工作電壓和最大允許紋波電流1000小時後，電容器的性能符合下表要求： After applying rated voltage for 1000 hours at +105°C, Capacitors meet the characteristics requirements measured at +20°C listed below; <table border="1"> <tbody> <tr> <td>靜電容量變化 Capacitance Change</td> <td>初始值的±20%以內 Within ±20% of the initial measured value</td> </tr> <tr> <td>漏電流 Leakage Current</td> <td>不大于初期規定值 Less than the initial specified value</td> </tr> <tr> <td>損耗角正切值 Tan δ</td> <td>不大于初期規定值的200% Less than 200% the initial specified value</td> </tr> </tbody> </table>											靜電容量變化 Capacitance Change	初始值的±20%以內 Within ±20% of the initial measured value	漏電流 Leakage Current	不大于初期規定值 Less than the initial specified value	損耗角正切值 Tan δ	不大于初期規定值的200% Less than 200% the initial specified value																
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高溫貯存特性 Shelf Life	在+105°C環境中無負荷放置1000小時後，電容器的性能符合高溫負荷特性中所列的規定值 After leaving capacitors under no load at +105°C for 1000 hours, capacitors meet the characteristics listed above																																

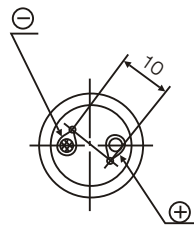
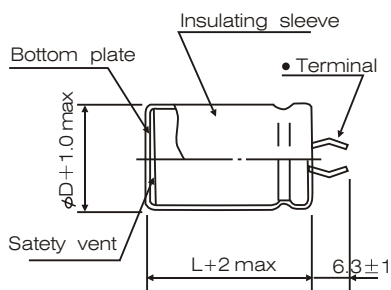
- \* 紋波倍乘因子MULTIPLIER FOR RIPPLE CURRENT
- \* 頻率因子Frequency coefficient

WV(V) \ Freq(Hz)	50	60	120	1k	≥100k
10~100	0.88	0.90	1.00	1.10	1.15
160~250	0.80	0.80	1.00	1.14	1.18
350~450	0.78	0.80	1.00	1.10	1.15

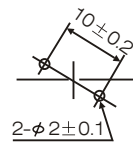
• 外形圖及尺寸表CASE SIZE TABLE

DRAWING

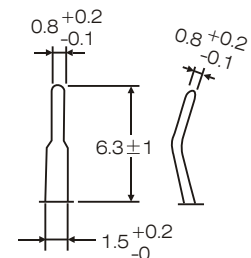
Unit:mm



PC Board Mounting Holes



Terminal



- \* There are two available dimensions, one is  $6.3 \pm 1.0$ mm Length Shorter terminal ( $4.5 \pm 0.5$ ) is also available upon request

# 鋁電解電容器

## ALUMINUM ELECTROLYTIC CAPACITOR(CD294 LH)

### ■ LH 尺寸、額定電壓及標稱容量 DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	10(LB)		16(LC)		25(LD)		35(LE)		50(LF)		63(LG)		80(LH)		100(MA)		
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	
680(681)															22×25	1.09	
820(821)															22×30	1.32	
1000(102)													22×25	1.19	22×30 25×25	1.45	
1200(122)												22×25	1.20	22×30	1.44	22×35 25×30	1.69
1500(152)												22×30	1.47	22×30 25×25	1.59	22×40 25×35	1.98
1800(182)									22×25	1.34	22×30 25×25	1.58	22×35 25×30	1.79 1.71	22×45 25×40 30×30	2.20	
2200(222)									22×30	1.60	22×35 25×30	1.82	22×40 25×35	2.03	25×45 30×35	2.55	
2700(272)									22×30 25×25	1.70	22×40 25×35	2.11	22×45 25×40 30×30	2.35	25×50 30×40 35×35	2.82	
3300(332)							22×25	1.45	22×35 25×30	1.88	22×45 25×35 30×30	2.27	25×45 30×35	2.64	30×45 35×35	3.30	
3900(392)							22×30	1.69	22×30 25×30	2.20	25×40 30×35	2.51	25×50 30×40	2.92	30×50 35×40	3.60	
4700(472)					22×25	1.61	22×35 25×25	2.02	22×45 25×35 30×30	2.43	25×50 30×40	2.97	30×45 35×35	3.34	35×45	3.80	
5600(562)					22×30	1.80	22×35 25×30	2.00	22×50 25×40 30×30	2.72	30×40 35×35	3.22	30×50 35×40	3.80	35×50	4.05	
6800(682)			22×25	1.75	22×35 25×25	2.09	22×40 25×35	2.41	25×45 30×35	3.30	30×50 35×40	3.65	35×45	3.90			
8200(822)			22×30	2.00	22×40 25×30	2.34	22×50 25×40 30×30	2.73	30×40 35×35	3.60	35×45	4.04	35×50	4.20			
10000(103)	22×25	1.77	22×30 25×25	2.10	22×45 25×35 30×30	2.65	25×45 30×35	3.05	30×50 35×40	4.05	35×50	4.48					
12000(123)	22×30 25×25	2.10	22×35 25×30	2.58	22×50 25×40 30×30	2.80	25×50 30×40	3.37	35×45	4.56							
15000(153)	22×35 25×30	2.23	22×40 25×35 30×30	2.58	25×45 30×35	3.27	30×45 35×35	3.72	35×50	4.77							
18000(183)	22×40 25×30	2.41	22×50 25×40 30×30	3.20	30×40 35×35	3.56	35×40	4.37									
22000(223)	22×45 25×35 30×30	2.50	25×45 30×35	3.30	30×45 35×35	4.04	35×45	4.92									
27000(273)	22×50 25×40 30×30	3.07	25×50 30×40 35×35	3.85	35×45	4.74											
33000(333)	25×45 30×35	3.39	30×45 35×35	4.30	35×50	5.50											
39000(393)	30×40 35×35	3.70	30×50 35×40	4.80													
47000(473)	30×45 35×40	4.22	35×45	5.53													
56000(563)	35×45	5.00															

WV(V) Cap(uF)	160(MB)		200(MC)		250(MD)		350(MF)		400(VA)		450(VA)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
47(470)									22×25	0.38	22×25	0.38
56(560)									22×25	0.42	22×25	0.42
68(680)									22×25	0.49	22×30 25×25	0.50
82(820)									22×30	0.56	22×35 25×30	0.56
100(101)							22×25	0.53	22×30 25×25	0.62	22×40 25×30	0.64
120(121)							22×30 25×25	0.62	22×35 25×30	0.73	22×45 25×35 30×30	0.725
150(151)							22×35 25×30	0.73	22×40 25×35	0.85	22×50 25×40 30×35	0.85
180(181)					22×25	0.84	22×40 25×30	0.80	22×45 25×35 30×30	0.95	25×45 30×35	0.93
220(221)					22×30 25×25	0.99	22×45 25×35 30×30	0.94	22×50 25×40 30×35	1.05	25×50 30×40	1.05
270(271)			22×25	0.99	22×35 25×30	1.15	22×50 25×40 30×30	1.05	25×50 30×40	1.30	30×45 35×35	1.25
330(331)	22×25	1.03	22×30 25×25	1.20	22×40 25×30	1.26	25×45 30×35	1.24	30×45 35×35	1.47	30×50 35×40	1.42
390(391)	22×30	1.17	22×35 25×30	1.30	22×45 25×35 30×30	1.42	25×50 30×40 35×35	1.39	30×50 35×40	1.59	35×45	1.61
470(471)	22×30 25×25	1.28	22×40 25×30	1.44	22×50 25×40 30×30	1.61	30×45 35×35	1.50	35×45	1.87	35×50	1.80
560(561)	22×35 25×30	1.45	22×45 25×35 30×30	1.60	25×45 30×35	1.80	30×50 35×40	1.70	35×50	2.09		
680(681)	22×40 25×35	1.65	22×50 25×40 30×30	1.75	25×50 30×40	2.03	35×45	1.96				
820(821)	22×45 25×40 30×30	1.90	25×45 30×35	2.10	30×45 35×35	2.35						
1000(102)	25×45 30×35	2.18	25×50 30×40 35×35	2.40	30×50 35×40	2.64						
1200(122)	25×50 30×40	2.45	30×45 35×35	2.60	35×45	2.88						
1500(152)	30×45 35×35	2.70	35×40	2.97								
1800(182)	30×50 35×40	3.10	35×50	3.45								
2200(222)	35×45	3.34										

→ 最大允許紋波電流 Max allowable ripple current (mA r.m.s./105°C.120Hz)  
 → 外形尺寸 Case Size D×L(mm)