

# ALUMINUM ELECTROLYTIC CAPACITOR(CD294 LH)

## LH 型特性 FEATURE

- \* 寿命: 105 1000小时  
Life time:105 1000 hours
- \* 小型化 Smaller size
- \* 适用于开关电源、通信设备及其它各种电子产品  
Ideally suited for switching power supplies ,  
telecommunication and other electronic products



## 特性表 SPECIFICATIONS

项目 Item	主要特性 Performance Characteristics								
额定工作电压范围 Rated Working Voltage Range	10V.DC ~ 100V.DC	160V.DC ~ 450V.DC							
使用温度范围 Operating Temperature Range	-40 ~ +105	-25 ~ +105							
标称静电容容量范围 Nominal Capacitance Range	680 µF ~ 56000 µF	47 µF ~ 22000 µF							
静电容容量允许偏差 Capacitance Tolerance	± 20%(M, +20 ,120Hz)								
漏电流: Leakage current:	施加额定电压5分钟: $I \leq 3 \sqrt{CV} (\mu A) 20$ After application of rated voltage for 5 minutes: $I \leq 3 \sqrt{CV} (\mu A) \text{ at } +20$ C: 标称静电容容量 (µF) C: Nominal Capacitance in µF; V: 额定工作电压 (V) V: Rated Working Voltage in V								
损耗角正切值 (tan δ) Dissipation Factor	额定工作电压 (V) Rated Working Voltage Range	10 16 25 35 50 63 80 100 160-250 350-450							
	tan δ (MAX) (20 ,120Hz)	0.55 0.50 0.45 0.40 0.35 0.30 0.25 0.20 0.15 0.15							
温度特性 Temperature Stability	额定工作电压 (V) Rated Working Voltage	10-100 160-250 350-450							
	阻抗比 (120Hz) Impedance Ratio	<table border="1"> <tr> <td>Z-25 /Z+20</td> <td>3</td> <td>3</td> <td>8</td> </tr> <tr> <td>Z-40 /Z+20</td> <td>12</td> <td>—</td> <td>—</td> </tr> </table>	Z-25 /Z+20	3	3	8	Z-40 /Z+20	12	—
Z-25 /Z+20	3	3	8						
Z-40 /Z+20	12	—	—						
高温负荷特性 Load Life	在+105 环境中施加工作电压和最大允许纹波电流1000小时后, 电容器的性能符合下表要求: After applying rated voltage for 1000 hours at +105 , Capacitors meet the characteristics requirements measured at +20 listed below;								
	静电容容量变化 Capacitance Change	初始值的 ±20%以内 Within ±20% of the initial measured value							
	漏电流 Leakage Current	不大于初期规定值 Less than the initial specified value							
损耗角正切值 Tan	不大于初期规定值的200% Less than 200% the initial specified value								
高温贮存特性 Shelf Life	在+105 环境中无负荷放置1000小时后, 电容器的性能符合高温负荷特性中所列的规定值 After leaving capacitors under no load at +105 for 1000 hours, capacitors meet the characteristics listed above								



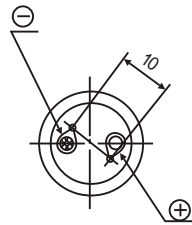
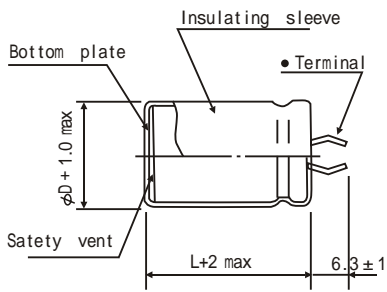
- \* 纹波倍乘因子MULTIPLIER FOR RIPPLE CURRENT
- \* 频率因子Frequency coefficient

WV(V) \ Freq(Hz)	50	60	120	1k	10k
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

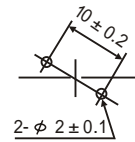
• 外形图及尺寸表CASE SIZE TABLE

DRAWING

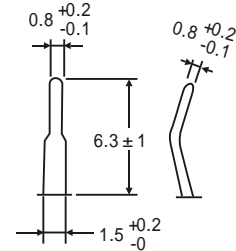
Unit:mm



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

ALUMINUM ELECTROLYTIC CAPACITOR(CD294 LH)

■ LH 尺寸、额定电压及标称容量  
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 × 30	1.58	22 × 30 25 × 25	1.79 2.03	22 × 45 25 × 40 30 × 30	2.20	
2200(222)									22 × 25	1.34	22 × 30 25 × 25	1.82	22 × 35 25 × 30	2.11	22 × 40 25 × 35	2.35	25 × 45 30 × 35	2.55
2700(272)									22 × 30	1.60	22 × 35 25 × 30	2.27	22 × 40 25 × 35	2.64	22 × 45 25 × 40 30 × 30	2.92	25 × 50 30 × 40 35 × 35	2.82
3300(332)									22 × 30 25 × 25	1.70	22 × 40 25 × 35	2.11	22 × 45 25 × 40 30 × 30	2.64	25 × 50 30 × 40 35 × 35	3.30	30 × 45 35 × 35	3.30
3900(392)							22 × 25	1.45	22 × 35 25 × 30	1.88	22 × 45 25 × 35 30 × 30	2.51	25 × 45 30 × 35	2.92	30 × 45 35 × 35	3.60		3.60
4700(472)							22 × 30	1.69	22 × 30 25 × 30	2.20	25 × 40 30 × 35	2.97	25 × 50 30 × 40	3.34	30 × 50 35 × 40	4.05		3.80
5600(562)							22 × 30	1.69	22 × 30 25 × 30	2.43	25 × 40 30 × 35	2.97	25 × 50 30 × 40	3.34	30 × 50 35 × 40	4.05		4.05
6800(682)					22 × 25	1.61	22 × 35 25 × 25	2.02	22 × 45 25 × 35 30 × 30	2.72	25 × 50 30 × 40	3.22	30 × 45 35 × 35	3.80	35 × 45			
8200(822)					22 × 30	1.80	22 × 35 25 × 30	2.00	22 × 50 25 × 40 30 × 30	3.30	30 × 40 35 × 35	3.65	30 × 50 35 × 40	4.20	35 × 50			
10000(103)			22 × 25	1.75	22 × 35 25 × 25	2.09	22 × 40 25 × 35	2.73	25 × 45 30 × 35	3.60	30 × 50 35 × 40	4.48	35 × 45					
12000(123)			22 × 30	2.00	22 × 40 25 × 30	2.34	22 × 50 25 × 40 30 × 30	3.05	30 × 40 35 × 35	4.05	35 × 45		35 × 50					
15000(153)			22 × 30	2.10	22 × 45 25 × 35 30 × 30	2.65	25 × 45 30 × 35	3.37	30 × 50 35 × 40	4.56	35 × 50							
18000(183)	22 × 25	1.77	22 × 30 25 × 25	2.10	22 × 45 25 × 35 30 × 30	2.80	25 × 45 30 × 35	3.37	30 × 50 35 × 40	4.77	35 × 50							
22000(223)	22 × 30 25 × 25	2.10	22 × 35 25 × 30	2.58	22 × 50 25 × 40 30 × 30	3.27	25 × 50 30 × 40	3.72	35 × 45									
27000(273)	22 × 25 25 × 30	2.23	22 × 40 25 × 35 30 × 30	3.20	25 × 45 30 × 35	3.56	30 × 45 35 × 35	4.37	35 × 50									
33000(333)	22 × 40 25 × 30	2.41	22 × 50 25 × 40 30 × 30	3.30	30 × 40 35 × 35	4.04	35 × 40	4.92										
39000(393)	22 × 45 25 × 35 30 × 30	3.07	25 × 45 30 × 35	3.85	30 × 45 35 × 35	4.74	35 × 45											
47000(473)	22 × 50 25 × 40 30 × 30	3.39	25 × 50 30 × 40 35 × 35	4.30	35 × 45	5.50												
56000(563)	25 × 45 30 × 35	3.70	30 × 45 35 × 35	4.80	35 × 50													
	30 × 40 35 × 35	4.22	30 × 50 35 × 40	5.53														
	30 × 45 35 × 40	5.00	35 × 45															
	35 × 45																	



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)										0.56		0.56
100(101)									22 × 30	0.62	22 × 35 25 × 30	0.64
120(121)							22 × 25	0.53	22 × 30 25 × 25	0.73	22 × 40 25 × 30	0.725
150(151)							22 × 30 25 × 25	0.62	22 × 35 25 × 30	0.85	22 × 45 25 × 35 30 × 30	0.85
180(181)							22 × 35 25 × 30	0.73	22 × 40 25 × 35	0.95	22 × 50 25 × 40 30 × 35	0.93
220(221)					22 × 25	0.84	22 × 40 25 × 30	0.80	22 × 45 25 × 35 30 × 30	1.05	25 × 45 30 × 35	1.05
270(271)					22 × 30 25 × 25	0.99	22 × 45 25 × 35 30 × 30	0.94	22 × 50 25 × 40 30 × 35	1.30	25 × 50 30 × 40	1.25
330(331)					22 × 35 25 × 30	1.15	22 × 50 25 × 40 30 × 30	1.05	25 × 50 30 × 40	1.47	30 × 45 35 × 35	1.42
390(391)			22 × 25	0.99	22 × 35 25 × 30	1.26		1.24	25 × 50 30 × 40	1.59	30 × 45 35 × 35	1.61
470(471)	22 × 25	1.03	22 × 30 25 × 25	1.20	22 × 40 25 × 30	1.42	25 × 45 30 × 35	1.39	30 × 45 35 × 35	1.87	30 × 50 35 × 40	1.80
560(561)	22 × 30	1.17	22 × 35 25 × 30	1.30	22 × 45 25 × 35 30 × 30	1.61	25 × 50 30 × 40 35 × 35	1.50	30 × 50 35 × 40	2.09	35 × 45	
680(681)	22 × 30 25 × 25	1.28	22 × 40 25 × 30	1.44	22 × 50 25 × 40 30 × 30	1.80	30 × 45 35 × 35	1.70	35 × 45		35 × 50	
820(821)	22 × 35 25 × 30	1.45	22 × 45 25 × 35 30 × 30	1.60	25 × 45 30 × 35	2.03	30 × 50 35 × 40	1.96	35 × 50			
1000(102)	22 × 40 25 × 35	1.65	22 × 50 25 × 40 30 × 30	1.75	25 × 50 30 × 40	2.35	35 × 45					
1200(122)	22 × 45 25 × 40 30 × 30	1.90	25 × 45 30 × 35	2.10	30 × 45 35 × 35	2.64						
1500(152)	25 × 45 30 × 35	2.45	25 × 50 30 × 40 35 × 35	2.60	30 × 50 35 × 40	2.88						
1800(182)	25 × 50 30 × 40	2.70	30 × 45 35 × 35	2.97	35 × 45							
2200(222)	30 × 45 35 × 35	3.10	35 × 40	3.45								
	30 × 50 35 × 40	3.34	35 × 50									
	35 × 45											

→ 最大允许纹波电流 Max allowable ripple current (mA r.m.s./105 .120Hz)  
 → 外形尺寸 Case Size D×L(mm)

# ALUMINUM ELECTROLYTIC CAPACITOR(CD295 LK)

## LK型特性 FEATURES

- \* 寿命: 85 2000小时 Life time:85 2000 hours
- \* 小型化 Smaller size
- \* 适用于开关电源、通信设备及其它各种电子产品  
Ideally suited for switching power supplies , telecommunication and other electronic products



## 特性表SPECIFICATIONS

项目Item	主要特性Performance Characteristics																																
额定工作电压范围 Rated Working Voltage Range	10V.DC~100V.DC	160V.DC~450V.DC																															
使用温度范围 Operating Temperature Range	-40 ~+85	-25 ~+85																															
标称静电容量范围 Nominal Capacitance Range	820 µF-820000 µF	47 µF~2700 µF																															
静电容量允许偏差 Capacitance Tolerance	±20%(M,+20 ,120Hz)																																
漏电流 Leakage Current	施加额定电压5分钟: $I \leq 3 \sqrt{CV} (\mu A) 20$ After application of rated voltage for 5 minutes: $I \leq 3 \sqrt{CV} (\mu A) at +20$ C: 标称静电容量 (µF) C: Nominal Capacitance in µF; V: 额定工作电压 (V) V: Rated Working Voltage in V																																
损耗角正切值(tan δ) Dissipation Factor	<table border="1"> <thead> <tr> <th>额定工作电压(V) Rated Working voltage</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 (MAX) (20 ,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>0.20</td> </tr> </tbody> </table>											额定工作电压(V) Rated Working voltage	10	16	25	35	50	63	80	100	160-250	350-450	tan (MAX) (20 ,120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.20
额定工作电压(V) Rated Working voltage	10	16	25	35	50	63	80	100	160-250	350-450																							
tan (MAX) (20 ,120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.20																							
温度特性 Temperature Stability	<table border="1"> <thead> <tr> <th>额定工作电压 Rated Working Voltage in V</th> <th>10-100</th> <th>10-100</th> <th>160-250</th> <th>350-450</th> </tr> </thead> <tbody> <tr> <td>阻抗比(120Hz) Impedance Ratio</td> <td>Z-25 /Z+20</td> <td>3</td> <td>4</td> <td>12</td> </tr> <tr> <td></td> <td>Z-40 /Z+20</td> <td>12</td> <td></td> <td></td> </tr> </tbody> </table>											额定工作电压 Rated Working Voltage in V	10-100	10-100	160-250	350-450	阻抗比(120Hz) Impedance Ratio	Z-25 /Z+20	3	4	12		Z-40 /Z+20	12									
额定工作电压 Rated Working Voltage in V	10-100	10-100	160-250	350-450																													
阻抗比(120Hz) Impedance Ratio	Z-25 /Z+20	3	4	12																													
	Z-40 /Z+20	12																															
高温负荷特性 Load Life	在+85 环境中施加工作电压和最大允许纹波电流2000小时后, 电容器的性能符合下表要求: After application of rated working voltage and maximum permissible current specified at +85 for 2000hours, capacitors meet the characteristics requirements at +20 listed below <table border="1"> <tbody> <tr> <td>静电容量变化 Capacitance change</td> <td>初始值的±20%以内 Within ±20% of the initial measured value</td> </tr> <tr> <td>漏电流 Leakage Current</td> <td>不大于初期规定值 Less than the initial specified value</td> </tr> <tr> <td>损耗角正切值(tan δ)</td> <td>不大于初期规定值的150% Less than 150% the initial specified value</td> </tr> </tbody> </table>											静电容量变化 Capacitance change	初始值的±20%以内 Within ±20% of the initial measured value	漏电流 Leakage Current	不大于初期规定值 Less than the initial specified value	损耗角正切值(tan δ)	不大于初期规定值的150% Less than 150% the initial specified value																
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高温贮存特性 Shelf Life	在+85 环境中无负荷放置1000小时后, 电容器的性能符合高温负荷特性中所列的规定值: After leaving capacitors under no load at +85 for 1000 hours ,capacitors meet the characteristics listed above																																

- \* 纹波倍乘因子MULTIPLIER FOR RIPPLE CURRENT
- \* 频率因子Frequency coefficient

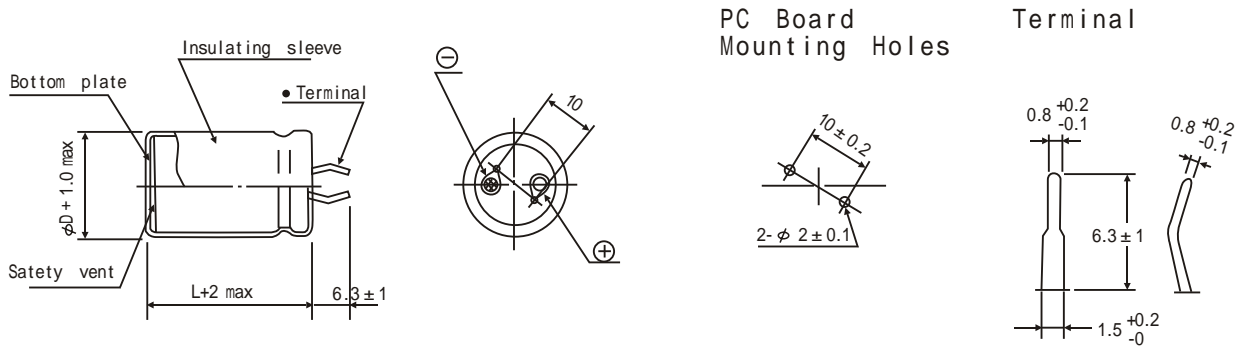
WV(V) \ Freq(Hz)	50	60	120	1k	10k
10-100	0.88	0.90	1.10	1.10	1.15
160-250	0.80	0.80	1.00	1.14	1.18
350-450	0.78	0.80	1.00	1.10	1.15



• 外形图及尺寸表CASE SIZE TABLE

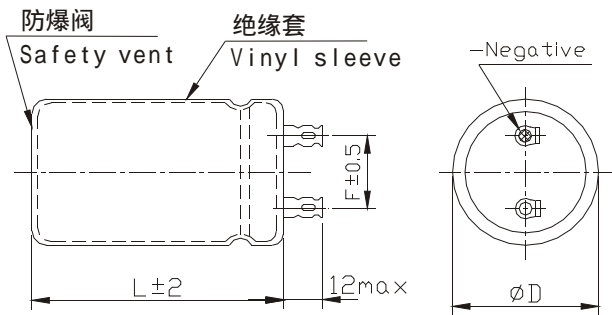
DRAWING

Unit:mm

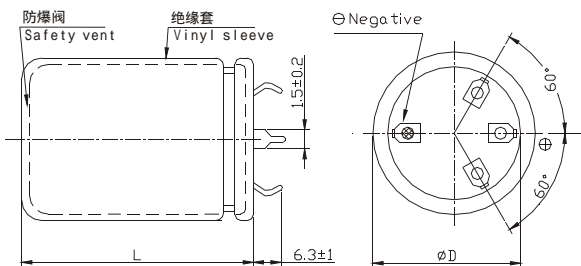


\* There are two available dimensions, one is  $6.3 \pm 1.0 \text{ mm}$  Length Shorter terminal ( $4.5 \pm 0.5$ ) is also available upon request

• 焊片(LP)外形图及尺寸表CASE SIZE TABLE( D 25)



• 四焊针(LQ)外形图及尺寸表CASE SIZE TABLE( D 35)



ALUMINUM ELECTROLYTIC CAPACITOR(CD295 LK)

■ LK 尺寸、额定电压及标称容量  
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)	
820(821)															22 × 25	1.80	
1000(102)															22 × 30	2.00	
1200(122)													22 × 25	1.70	22 × 35 25 × 30	2.10	
1500(152)													22 × 30	2.00	25 × 35 30 × 30	2.40	
1800(182)												22 × 25	1.90	22 × 35 25 × 25	2.20	22 × 40 25 × 35	2.70
2200(222)									22 × 25	1.90	22 × 30 25 × 25	2.30	22 × 40 25 × 30	2.50	22 × 45 25 × 40 30 × 35	3.20	
2700(272)									22 × 30	2.20	22 × 35 25 × 30	2.50	22 × 45 25 × 35 30 × 30	2.90	25 × 45 30 × 35	3.60	
3300(332)									22 × 30	2.40	22 × 40 25 × 35	2.60	22 × 50 25 × 45 30 × 35	3.20	30 × 45 35 × 40	4.00	
3900(392)									22 × 30	2.20	22 × 35 25 × 30	2.70	22 × 45 25 × 35 30 × 30	3.10	25 × 45 30 × 35	3.60	
4700(472)							22 × 25	2.20	22 × 35 25 × 30	2.70	22 × 40 25 × 35	3.00	22 × 50 25 × 40 30 × 30	3.30	25 × 50 35 × 40	4.20	
5600(562)							22 × 30	2.40	22 × 40 25 × 30	3.00	22 × 45 25 × 35	3.30	25 × 50 25 × 40 30 × 30	3.30	25 × 50 35 × 40	4.20	
6800(682)							22 × 30	2.40	22 × 40 25 × 30	3.00	22 × 45 25 × 35	3.30	25 × 50 25 × 40 30 × 30	3.30	25 × 50 35 × 40	4.20	
8200(822)					22 × 25	2.30	22 × 35 25 × 30	2.70	22 × 45 25 × 35 30 × 30	3.40	25 × 45 30 × 35	3.80	30 × 45 35 × 35	4.50	35 × 50	5.70	
10000(103)					22 × 30	2.50	22 × 40 25 × 30	2.80	22 × 50 25 × 40 30 × 35	3.80	25 × 50 30 × 40 35 × 35	4.40	30 × 50 35 × 40	5.10	35 × 60	6.00	
12000(123)			22 × 25	2.50	22 × 35 25 × 25	2.80	22 × 45 25 × 35 30 × 30	3.30	25 × 45 30 × 35	4.40	30 × 45 35 × 35	4.90	35 × 50	5.80			
15000(153)	22 × 25	1.87	22 × 30	2.80	22 × 35 25 × 30	3.10	22 × 50 25 × 40 30 × 30	3.50	30 × 40 35 × 35	5.00	30 × 50 35 × 40	5.40	35 × 60	6.50			
18000(183)																	
22000(223)	22 × 25	2.40	22 × 30 25 × 25	3.10	22 × 40 25 × 35	3.50	25 × 45 30 × 35	4.00	30 × 50 35 × 40	5.60	35 × 50	6.30					
27000(273)	22 × 30 25 × 25	2.80	22 × 35 25 × 30	3.60	22 × 50 25 × 40 30 × 30	4.00	30 × 40 35 × 35	4.80	35 × 45	6.40							
33000(333)	22 × 35 25 × 30	3.20	22 × 40 25 × 35 30 × 30	3.90	25 × 45 30 × 35	4.60	30 × 45 35 × 40	5.70	35 × 50	6.70							
39000(393)	22 × 40 25 × 30	3.60	22 × 50 25 × 40 30 × 30	4.50	30 × 40 35 × 35	5.20	35 × 45	6.30									
47000(473)	22 × 45 25 × 35 30 × 30	4.00	25 × 45 30 × 35	4.80	30 × 45 35 × 40	6.00	35 × 50	6.90									
56000(563)	22 × 50 25 × 40 30 × 30	4.50	25 × 50 30 × 40 35 × 35	5.30	35 × 45	6.70	35 × 60	7.80									
68000(683)																	
82000(823)	25 × 45 30 × 35	5.20	30 × 45 35 × 35	6.10	35 × 50	7.50	35 × 60	8.10									
	25 × 50 30 × 40 35 × 35	5.70	30 × 50 35 × 40	6.80													
	30 × 45 35 × 35	6.40	35 × 45	7.60													
	30 × 50 35 × 40	7.50															
	35 × 50	8.50															



Cap(μF)	160(MB)		200(MC)		250(MD)		350(MF)		400(VA)		450(VB)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
47(470)									22 × 25	0.50	22 × 25	0.50
68(680)									22 × 25	0.68	22 × 25	0.68
82(820)									22 × 25	0.80	22 × 30	0.80
100(101)									22 × 30	0.90	22 × 35 25 × 25	0.90
120(121)												
150(151)							22 × 25	0.99	22 × 30 25 × 25	1.08	22 × 35 25 × 30	1.00
180(181)							22 × 30 25 × 25	1.10	22 × 35 25 × 35	1.20	22 × 40 25 × 35 30 × 30	1.10
220(221)							22 × 35 25 × 30	1.30	22 × 40 25 × 35	1.30	22 × 50 25 × 40 30 × 30	1.30
270(271)					22 × 30 25 × 25	1.10	22 × 40 25 × 35	1.40	22 × 45 25 × 40 30 × 35	1.50	25 × 45 30 × 35	1.50
330(331)			22 × 25	1.30	25 × 30	1.40	22 × 45 25 × 40 30 × 35	1.60	25 × 40 30 × 35	1.70	25 × 50 30 × 40 35 × 35	1.80
390(391)												
470(471)	22 × 30 25 × 25	1.30	22 × 30 25 × 25	1.40	22 × 35 25 × 30	1.50	22 × 50 25 × 40 30 × 35	1.80	25 × 50 30 × 40	1.90	30 × 45 35 × 35	2.00
560(561)	25 × 30	1.50	22 × 30 25 × 30	1.60	22 × 40 25 × 30	1.70	25 × 45 30 × 35	2.10	30 × 40 35 × 35	2.10	30 × 50 35 × 40	2.20
680(681)	22 × 35 25 × 30	1.70	22 × 40 25 × 30	1.80	25 × 40 30 × 30	2.00	30 × 40 35 × 35	2.40	30 × 50 35 × 40	2.40	35 × 45	2.50
820(821)	22 × 35 25 × 30	2.00	22 × 45 25 × 35	2.00	22 × 50 25 × 40 30 × 35	2.30	30 × 45 35 × 35	2.60	35 × 45	2.70	35 × 60	3.10
1000(102)	22 × 40 25 × 40	2.20	22 × 45 25 × 40 30 × 30	2.30	25 × 45 30 × 40	2.50	35 × 40	3.00	35 × 50	2.90		
1200(122)												
1500(152)	22 × 45 25 × 40 30 × 35	2.50	22 × 50 25 × 40 30 × 35	2.60	25 × 50 30 × 40	2.80	35 × 50	3.30				
1800(182)	22 × 50 25 × 45 30 × 35	2.80	25 × 50 30 × 40	3.00	30 × 50 35 × 40	3.30	35 × 60	3.50				
2200(222)	25 × 50 30 × 40	3.20	25 × 50 30 × 40 35 × 35	3.40	30 × 50 35 × 40	3.80						
2700(272)	30 × 45 35 × 40	3.70	30 × 50 35 × 40	3.90	35 × 50	4.10						
	30 × 50 35 × 40	4.10	35 × 45 30 × 50	4.30	35 × 50	4.30						
	35 × 45	4.70	35 × 50	5.00								
	35 × 50	5.30										

→ 最大允许纹波电流 Max allowable ripple current (A r.m.s./85 .120Hz )  
 → 外形尺寸 Case Size DXL(mm)



# ALUMINUM ELECTROLYTIC CAPACITOR(CD296 LT)

## LT 特性 FEATURE

- \* 寿命: 105 2000小时  
Life time: 105 2000 hours
- \* 宽温度范围  
Wide operating temperature range
- \* 适用于开关电源、通信设备及其它各种电子产品  
Ideally suited for switching power supplies, telecommunication and other electronic products



## 特性表 SPECIFICATIONS

项目 Item	主要特性 Performance Characteristics																															
额定工作电压范围 Rated Working Voltage Range	10V.DC~100V.DC	160V.DC~450V.DC																														
使用温度范围 Operating Temperature Range	-40 ~+105	-25 ~+105																														
标称静电容量范围 Nominal Capacitance Range	470 µF~100000 µF	47 µF~2200 µF																														
静电容量允许偏差 Capacitance Tolerance	±20%(M, +20%, 120Hz)																															
漏电流 Leakage Current	施加额定电压5分钟: $I \leq 3 \sqrt{CV} (\mu A) 20$ After application of rated voltage for 5 minutes: $I \leq 3 \sqrt{CV} (\mu A) \text{ at } +20$ C: 标称静电容量 (µF) C: Nominal Capacitance in µF; V: 额定工作电压 (V) V: Rated Working Voltage in V																															
损耗角正切值(tan δ) Dissipation Factor	<table border="1"> <thead> <tr> <th>额定工作电压(V) Rated Working Voltage</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, 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>										额定工作电压(V) Rated Working Voltage	10	16	25	35	50	63	80	100	160-250	350-450	tan δ (MAX) (20, 120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.15
额定工作电压(V) Rated Working Voltage	10	16	25	35	50	63	80	100	160-250	350-450																						
tan δ (MAX) (20, 120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.15																						
温度特性 Temperature Stability	<table border="1"> <thead> <tr> <th colspan="2">额定工作电压(V) Rated Working Voltage</th> <th>10-100</th> <th>160-250</th> <th>350-450</th> </tr> </thead> <tbody> <tr> <td rowspan="2">阻抗比(120Hz) Impedance Ratio</td> <td>Z-25 /Z+20</td> <td>3</td> <td>3</td> <td>8</td> </tr> <tr> <td>Z-40 /Z+20</td> <td>12</td> <td></td> <td></td> </tr> </tbody> </table>										额定工作电压(V) Rated Working Voltage		10-100	160-250	350-450	阻抗比(120Hz) Impedance Ratio	Z-25 /Z+20	3	3	8	Z-40 /Z+20	12										
额定工作电压(V) Rated Working Voltage		10-100	160-250	350-450																												
阻抗比(120Hz) Impedance Ratio	Z-25 /Z+20	3	3	8																												
	Z-40 /Z+20	12																														
高温负荷特性 Load Life	在+105 环境中施加工作电压和最大允许纹波电流2000小时后，电容器的性能符合下表要求： After application of rated working voltage and maximum permissible ripple current specified at +105 for 2000 hours, capacitors meet the characteristics requirements measured at +20 listed below																															
	<table border="1"> <tbody> <tr> <td>静电容量变化 Capacitance Change</td> <td>初始值的 ±20%以内 Within ±20% of the initial measured value</td> </tr> <tr> <td>漏电流: Leakage current</td> <td>不大于初期规定值 Less than the initial specified value</td> </tr> <tr> <td>损耗角正切值 Tan</td> <td>不大于初期规定值的200% Less than 200% the initial specified value</td> </tr> </tbody> </table>		静电容量变化 Capacitance Change	初始值的 ±20%以内 Within ±20% of the initial measured value	漏电流: Leakage current	不大于初期规定值 Less than the initial specified value	损耗角正切值 Tan	不大于初期规定值的200% Less than 200% the initial specified value																								
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损耗角正切值 Tan	不大于初期规定值的200% Less than 200% the initial specified value																															
高温贮存特性 Shelf Life	在+105 环境中无负荷放置500小时后，电容器的性能符合高温负荷特性中所列的规定值 After leaving capacitors under no load at +105 for 500 hours, capacitors meet the characteristics listed above																															



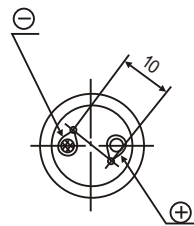
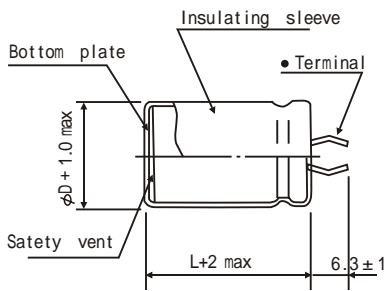
\* 纹波倍乘因子MULTIPLIER FOR RIPPLE CURRENT  
 \* 频率因子Frequency coefficient

WV(V)	Freq(Hz)	50	60	120	1k	10k
10-100		0.88	0.90	1.10	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

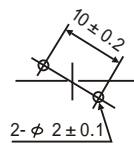
• 外形图及尺寸表CASE SIZE TABLE

DRAWING

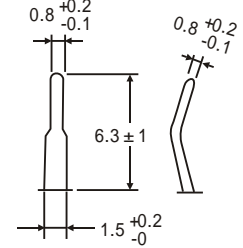
Unit:mm



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

ALUMINUM ELECTROLYTIC CAPACITOR(CD296 LT)

■ LT 尺寸、额定电压及标称容量

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(uF)	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)	
470(471)															22X25	0.95	
560(561)															22X30	1.00	
680(681)															22X30 25X25	1.09	
820(821)															25X30	1.20	
1000(102)												22X25	1.10	22X25	1.19	25X30	1.47
1200(122)												22X30	1.20	25X25	1.30	22X40	1.50
1500(152)												22X30 25X25	1.38	22X30 25X25	1.59	22X45 25X40	1.89
1800(182)												25X30	1.50	25X30	1.80	25X45	2.10
2200(222)									22X30 25X25	1.46	22X35 25X30	1.66	22X40 25X35	2.01	25X50 30X40	2.48	
2700(272)									22X35	1.50	25X35	1.80	25X40	2.20	30X45	2.70	
3300(332)							22X25	1.54	22X35 25X30	1.72	25X35 30X30	2.15	25X45 30X35	2.50	30X50 35X45	3.25	
3900(392)							22X30	1.60	25X30	1.80	30X35	2.40	30X40	2.80	35X50	3.50	
4700(472)							22X35 25X25	1.87	25X35 30X30	2.25	25X50 30X40	2.77	30X45 35X35	3.30	30X60 35X50	3.80	
5600(562)							25X30	2.00	30X35	2.50	30X45	3.10	35X40	3.60	35X60	4.10	
6800(682)			22X25	1.66	22X35 25X25	1.88	22X40 25X35	2.28	25X45 30X35	2.91	30X50 35X40	3.61	30X50 35X45	3.90			
8200(820)			25X25	1.80	25X40	2.00	25X40	2.40	30X45	3.10	35X50	3.80	35X50	4.10			
10000(103)	22X25	1.65	22X30 25X30	2.07	25X35 30X30	2.38	25X45 30X35	2.78	30X50 35X40	3.57	30X60 35X50	4.69	35X60	4.30			
12000(123)	22X30	1.80	25X35	2.20	25X40	2.50	30X40	3.00	35X50	4.10							
15000(153)	22X35 25X30	2.01	25X35 30X30	2.54	25X45 30X35	3.00	30X45 35X35	3.70	35X50	4.76							
18000(183)	25X35	2.20	30X35	2.81	30X40	3.40	35X40	4.00									
22000(223)	25X35 30X30	2.59	25X45 30X35	3.31	30X45 35X35	3.92	30X50 35X45	4.90									
27000(273)	30X35	2.80	30X40	3.60	35X45	4.10	35X50	5.10									
33000(333)	25X45 30X35	3.43	30X45 35X40	4.33	30X60 35X50	5.13	35X60	6.30									
39000(393)	30X40	3.80	35X45	4.50	35X50	5.20											
47000(473)	30X45 35X40	4.20	30X50 35X45	5.49	35X60	6.65											
56000(563)	35X45	4.50	35X50	5.60													
68000(683)	30X60 35X50	5.50	35X60	7.00													
82000(823)	35X60	5.80															
100000(104)	35X60	7.10															



WV(V) Cap(uF)	160 ( MB )		200 ( MC )		250 ( MD )		350(MF)		400 ( VA )		450 ( VB )	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
47(470)									22X25	0.37	22X25	0.40
56(560)									22X30	0.42	22X30	0.46
68(680)							22X30	0.47	25X25	0.56	22X30 25X25	0.53
82(820)							22X35	0.50	22X30	0.60	22X30	0.60
100(101)							22X35 25X25	0.70	22X35 25X30	0.69	22X40 25X30	0.64
120(121)							25X30	0.80	25X35	0.75	25X35	0.70
150(151)					22X25	0.70	25X30	0.82	22X40 25X35	0.82	25X40 30X30	0.79
180(181)					22X30	0.80	25X35	1.00	22X45	0.90	30X35	0.85
220(221)	22X25	0.75	22X25	1.00	22X35 25X30	1.00	25X35 30X30	1.03	25X40 30X35	1.00	25X50 30X40	1.00
270(271)	22X25	0.80	22X30	1.10	25X35	1.20	30X35	1.10	30X40	1.10	30X45	1.10
330(331)	25X25	1.00	22X35 25X30	1.20	25X35 30X30	1.20	25X45 30X35	1.30	30X45 35X35	1.20	30X50 35X40	1.38
390(391)	22X30	1.10	25X35	1.30	30X35	1.30	30X40	1.40	35X40	1.30	35X45	1.40
470(471)	22X35 25X30	1.30	22X40 25X35	1.40	25X50 30X40	1.40	30X45 35X35	1.65	35X45	1.40	35X50	1.50
560(561)	30X30	1.50	30X35	1.50	30X45	1.50	35X45	1.80	35X50	1.50		
680(681)	25X40 30X30	1.60	30X40 35X35	1.70	30X45 35X40	1.70	35X50	2.00	35X60	1.80		
820(821)	30X35	1.80	35X40	1.80	35X45	1.80						
1000(102)	30X40 35X35	2.20	30X45 35X40	2.20	35X50	2.20						
1200(122)	35X40	2.30	35X45	2.30	35X60	2.40						
1500(152)	30X50 35X40	2.50	30X60 35X50	2.70								
1800(182)	35X50	2.80	35X60	2.80								
2200(222)	35X60	3.30										

→ 最大允许纹波电流 Max allowable ripple current (A r.m.s./105 .120Hz )  
 → 外形尺寸 Case Size DXL (mm)

# ALUMINUM ELECTROLYTIC CAPACITOR(CD296H LS)

## LS 特性 FEATURE

- \* 寿命: 105 5000小时 Life time:105 5000 hours
- \* 宽温度范围  
Wide operating temperature range
- \* 适用于开关电源、通信设备及其它各种电子产品  
Ideally suited for switching power supplies , telecommunication and other electronic products



## 特性表 SPECIFICATIONS

项目Item	主要特性Performance Characteristics																															
额定工作电压范围 Rated Working Voltage Range	10V.DC~100V.DC	160V.DC~450V.DC																														
使用温度范围 Operating Temperature Range	-40 ~+105	-25 ~+105																														
标称静容量范围 Nominal Capacitance Range	560 µF~56000 µF	47 µF~1800 µF																														
静容量允许偏差 Capacitance Tolerance	±20%(M, +20%, 120Hz)																															
漏电流 Leakage Current	施加额定电压5分钟: $I \leq 3 \sqrt{CV} (\mu A) 20$ After application of rated voltage for 5 minutes: $I \leq 3 \sqrt{CV} (\mu A) \text{ at } +20$ C: 标称静容量 (µF) C: Nominal Capacitance in µF; V: 额定工作电压 (V) V: Rated Working Voltage in V																															
损耗角正切值(tan δ) Dissipation Factor	<table border="1"> <thead> <tr> <th>额定工作电压(V) Rated Working Voltage</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, 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>										额定工作电压(V) Rated Working Voltage	10	16	25	35	50	63	80	100	160-250	350-450	tan δ (MAX) (20, 120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.15
额定工作电压(V) Rated Working Voltage	10	16	25	35	50	63	80	100	160-250	350-450																						
tan δ (MAX) (20, 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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额定工作电压(V) Rated Working Voltage	10-100	160-250	350-450																													
阻抗比(120Hz) Impedance Ratio	Z-25 /Z+20	3	3	8																												
	Z-40 /Z+20	12	—																													
高温负荷特性 Load Life	在+105 环境中施加工作电压和最大允许纹波电流5000小时后，电容器的性能符合下表要求： After application of rated working voltage and maximum permissible ripple current specified at +105 for 5000 hours, capacitors meet the characteristics requirements measured at +20 listed below																															
	<table border="1"> <tbody> <tr> <td>静容量变化 Capacitance Change</td> <td>初始值的 ±20%以内 Within ±20% of the initial measured value</td> </tr> <tr> <td>漏电流 Leakage current</td> <td>不大于初期规定值 Less than the initial specified value</td> </tr> <tr> <td>损耗角正切值 Tan</td> <td>不大于初期规定值的200% Less than 200% the initial specified value</td> </tr> </tbody> </table>		静容量变化 Capacitance Change	初始值的 ±20%以内 Within ±20% of the initial measured value	漏电流 Leakage current	不大于初期规定值 Less than the initial specified value	损耗角正切值 Tan	不大于初期规定值的200% Less than 200% the initial specified value																								
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损耗角正切值 Tan	不大于初期规定值的200% Less than 200% the initial specified value																															
高温贮存特性 Shelf Life	在+105 环境中无负荷放置1000小时后，电容器的性能符合高温负荷特性中所列的规定值 After leaving capacitors under no load at +105 for 1000 hours, capacitors meet the characteristics listed above																															



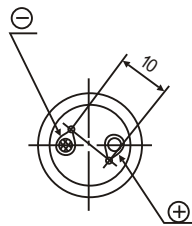
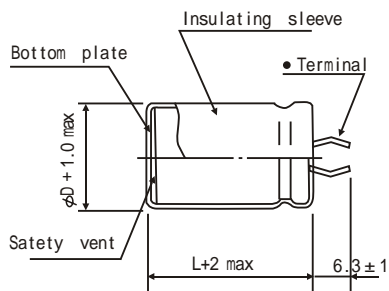
\* 纹波倍乘因子MULTIPLIER FOR RIPPLE CURRENT  
 \* 频率因子Frequency coefficient

WV(V)	Freq(Hz)	50	60	120	1k	10k
10-100		0.88	0.90	1.10	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

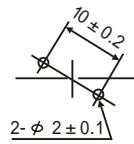
• 外形图及尺寸表CASE SIZE TABLE

DRAWING

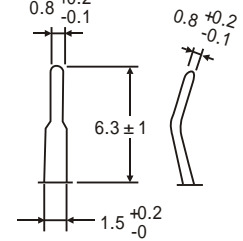
Unit:mm



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

ALUMINUM ELECTROLYTIC CAPACITOR(CD296H LS)

■ LS 尺寸、额定电压及标称容量

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)	
560(561)															22X25	1.00	
680(681)															22X30	1.20	
820(821)													22X25	1.00	22X35 25X25	1.20	
1000(102)												22X25	1.10	22X30	1.20	22X40 25X30	1.50
1200(122)												22X25	1.10	22X35 25X25	1.30	22X45 25X35 30X30	1.70
1500(152)										22X25	1.20	22X30 25X25	1.40	22X40 25X30	1.70	22X50 25X40 30X30	2.00
1800(182)										22X25	1.30	22X35 25X30	1.60	22X45 25X35	1.90	25X45 30X35	2.20
2200(222)										22X30 25X25	1.50	22X40 25X30	1.85	22X45 30X30	2.20	30X40 35X35	2.50
2700(272)										22X25	1.20	22X35 25X30	1.70	22X45 25X35 30X30	2.10	30X45 35X40	2.80
3300(332)								22X30	1.50	22X40 25X30	2.00	25X40 30X30	2.20	30X40 35X35	2.60	35X45	3.20
3900(392)										22X25	1.30	22X35 25X25	1.60	22X45 25X35 30X30	1.90	25X45 30X35	2.50
4700(472)					22X25	1.30	22X35 25X25	1.60	22X45 25X35 30X30	2.20	25X45 30X35	2.50	30X45 35X40	3.00	35X50	3.50	
5600(562)					22X30	1.50	22X40 25X30	2.00	25X40 30X30	2.40	30X40 35X35	2.80	35X45	3.40			
6800(682)					22X25	1.40	22X35 25X25	1.60	22X45 25X35	2.25	25X45 30X35	2.00	30X45 35X40	3.20	35X50	3.70	
8200(822)			22X25	1.40	22X30	1.60	22X40 25X30	2.00	22X50 25X40 30X30	2.45	30X40 35X35	3.00	35X45	3.60			
10000(103)			22X30	1.60	22X45	2.20	25X45 30X35	2.80	30X50 35X40	3.60	35X50	3.90					
12000(123)	22X25	1.30	22X30 25X25	1.70	22X40 25X30	2.20	22X45 25X35	2.80	30X45 35X40	3.80							
15000(153)			22X35 25X30	2.08	22X50 25X40 30X30	2.50	30X40	3.00	35X45	3.80							
18000(183)	22X30	1.65	22X40 25X35	2.35	22X45 25X40 30X30	2.70	25X45 30X35	3.30	30X45 35X35	4.00							
22000(223)	22X35 25X25	1.85	22X40 25X35	2.70	22X45 25X40 30X30	3.10	30X40	3.80									
27000(273)	22X40 25X30	2.10	22X45 25X40 30X30	2.70	30X45 35X35	3.50	35X45	4.40									
33000(333)	22X45 25X35 30X30	2.40	25X45 30X35	3.00	30X45 35X35	3.50	35X45										
39000(393)	25X40 30X30	2.70	25X50 30X40	3.40	30X50 35X40	3.95											
47000(473)																	
56000(563)	25X45 30X35	3.00	30X45 35X35	3.85	35X50	4.70											
	25X50 30X40 35X35	3.50	30X50 35X40	4.30													
	30X45 35X40	3.80	35X45	4.90													
	30X50 35X45	4.60	35X50	5.40													
	35X50	5.00															



WV(V) Cap(μF)	160 ( MB )		200 ( MC )		250 ( MD )		350(MF)		400 ( VA )		450 ( VB )	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
47(470)									22X25	0.30	22X25	0.35
68(680)							22X25	0.34	22X30	0.35	22X30	0.40
82(820)							22X30	0.40	22X30 25X25	0.40	25X30	0.45
100(101)							22X30 25X25	0.46	22X35 25X30	0.45	22X40 25X35	0.50
120(121)							22X35 25X30	0.52	22X40 25X35 30X30	0.55	22X45 25X40	0.60
150(151)					22X25	0.52	22X40 25X35	0.60	22X50 25X40 30X30	0.65	25X45 30X35	0.70
180(181)			22X25	0.55	22X30 25X25	0.62	22X45 25X40 30X30	0.70	25X45 30X35	0.70	25X50 30X40	0.80
220(221)	22X25	0.60	22X30	0.70	22X35 25X30	0.76	22X50 25X45 30X35	0.82	25X50 30X40	0.80	30X45 35X40	0.90
270(271)	22X30	0.75	22X35 25X25	0.80	22X40 25X35	0.90	25X50 30X40	0.95	30X45 35X35	1.00	30X50 35X40	1.05
330(331)	22X35 25X25	0.90	22X40 25X30	0.90	22X45 25X35 30X30	1.00	30X45 35X35	1.05	30X50 35X40	1.10	35X45	1.20
390(391)	22X35 25X30	0.95	22X40 25X35	1.05	22X50 25X40 30X35	1.15	30X50 35X40	1.10	35X45	1.20	35X50 30X60	1.30
470(471)	22X40 25X35 30X30	1.10	22X45 25X40 30X30	1.20	25X45 30X35	1.30	35X45	1.25	35X50	1.30	35X60	1.40
560(561)	22X45 25X35 30X30	1.25	25X45 30X35	1.40	25X50 30X40 35X35	1.45	35X50	1.40	35X60	1.50		
680(681)	22X50 25X40 30X35	1.50	25X50 30X40	1.60	30X45 35X40	1.70						
820(821)	25X45 30X40	1.60	30X45 35X35	1.85	30X50 35X40	1.90						
1000(102)	30X45 35X35	1.89	30X50 35X40	2.10	35X45	2.20						
1200(122)	30X50 35X40	2.20	35X45	2.40								
1500(152)	35X45	2.60	35X50	2.70								
1800(182)	35X50	2.90										

→ 最大允许纹波电流 Max allowable ripple current (A r.m.s./105 .120Hz )  
 → 外形尺寸 Case Size DXL (mm)



# ALUMINUM ELECTROLYTIC CAPACITOR(CD138H GH)

## GH 型特性 GT FEATURES

- \* 寿命: 105 2000小时 Life time:105 2000 hours
- \* 宽温度范围 Wide operating temperature range
- \* 适用于UPS不间断电源、空调逆变器电子设备  
Suited for smoothing circuits for general purpose inverter control for F.A. machine designed for use as input filter capacitor for current



## 特性表 SPECIFICATIONS

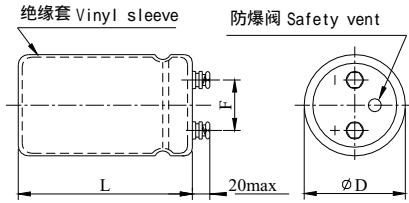
项目Item	主要特性Performance Characteristics																																																																	
额定工作电压范围 Rated Working Voltage Range	10V.DC ~ 100V.DC	160V.DC ~ 400V.DC																																																																
使用温度范围 Operating Temperature Range	-40 ~ +105	-25 ~ +105																																																																
标称静电容容量范围 Nominal Capacitance Range	220 µF-680000µF																																																																	
静电容量允许偏差 Capacitance Tolerance	±20%(M,+20 ,120Hz)																																																																	
漏电流: Leakage current:	施加额定电压5分钟: I 0.02CV或5mA(最较大值) 20 After application of rated voltage for 5 minutes: I 0.02CV or 5mA(whichever is greater)20 C: 标称静电容容量 (µF) C: Nominal Capacitance in µF; V: 额定工作电压 (V) V: Rated Working Voltage in V																																																																	
损耗角正切值(tan δ) Dissipation Factor (20 ,120Hz)	<table border="1"> <thead> <tr> <th>D \ WV(V)</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>35</td> <td>0.75</td> <td>0.60</td> <td>0.40</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> </tr> <tr> <td>50</td> <td>1.00</td> <td>0.70</td> <td>0.50</td> <td>0.50</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.20</td> <td>0.15</td> <td>0.20</td> </tr> <tr> <td>65</td> <td>1.30</td> <td>0.80</td> <td>0.70</td> <td>0.60</td> <td>0.50</td> <td>0.30</td> <td>0.25</td> <td>0.25</td> <td>0.20</td> <td>0.25</td> </tr> <tr> <td>76-90</td> <td>1.50</td> <td>1.00</td> <td>0.80</td> <td>0.70</td> <td>0.60</td> <td>0.40</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.25</td> </tr> </tbody> </table>											D \ WV(V)	10	16	25	35	50	63	80	100	160-250	350-450	35	0.75	0.60	0.40	0.30	0.25	0.20	0.20	0.15	0.15	0.20	50	1.00	0.70	0.50	0.50	0.30	0.25	0.20	0.20	0.15	0.20	65	1.30	0.80	0.70	0.60	0.50	0.30	0.25	0.25	0.20	0.25	76-90	1.50	1.00	0.80	0.70	0.60	0.40	0.30	0.25	0.20	0.25
D \ WV(V)	10	16	25	35	50	63	80	100	160-250	350-450																																																								
35	0.75	0.60	0.40	0.30	0.25	0.20	0.20	0.15	0.15	0.20																																																								
50	1.00	0.70	0.50	0.50	0.30	0.25	0.20	0.20	0.15	0.20																																																								
65	1.30	0.80	0.70	0.60	0.50	0.30	0.25	0.25	0.20	0.25																																																								
76-90	1.50	1.00	0.80	0.70	0.60	0.40	0.30	0.25	0.20	0.25																																																								
高温负荷特性 Load life	<p>在+105 环境中施加额定电压2000小时后, 电容器的性能符合下表要求: After applying rated voltage for 2000 hours at +105 , Capacitors meet the characteristics requirements measured at +20 listed below;</p> <table border="1"> <thead> <tr> <th>静电容量变化 Capacitance Change</th> <th>初始值的 ±15%以内 Within ±15% of the initial measured value</th> </tr> </thead> <tbody> <tr> <td>漏电流 Leakage Current</td> <td>不大于初期规定值 Less than the initial specified value</td> </tr> <tr> <td>损耗角正切值 Tan</td> <td>不大于初期规定值的150% Less than 150% the initial specified value</td> </tr> </tbody> </table>											静电容量变化 Capacitance Change	初始值的 ±15%以内 Within ±15% of the initial measured value	漏电流 Leakage Current	不大于初期规定值 Less than the initial specified value	损耗角正切值 Tan	不大于初期规定值的150% Less than 150% the initial specified value																																																	
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高温贮存特性 Shelf Life	在+105 环境中无负荷放置1000小时后, 电容器的性能符合高温负荷特性中所列的规定值 After leaving capacitors under no load at +105 for 1000 hours, capacitors meet the characteristics listed above																																																																	

- \* 纹波倍乘因子MULTIPLIER FOR RIPPLE CURRENT
- \* 频率因子Frequency coefficient

Frequency(Hz)	50(60)	100(120)	400	1k	10k	
Coefficient	10~50WV	0.8	1.0	1.03	1.05	1.08
	63~100WV	0.8	1.0	1.05	1.07	1.10
	160~450WV	0.8	1.0	1.10	1.13	1.18



● 外形图及尺寸表CASE SIZE TABLE



D ±1.5	35	50	65	76	90
L ± 3.0	50 60 80 100	80 100 120	100 120 140	100 120 140 150	140 150
F ± 1.0	12.7	21.8	28.2	31.4	31.4

■ GH 尺寸、额定电压及标称容量  
DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

Cap(uF)	10(LB)		16(LC)		25(LD)		35(LE)		50(LF)		63(LG)		80(LH)		
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	
3300(332)													35×50	3.0	
3900(392)													35×60	3.3	
4700(472)												35×50	3.2	35×80	3.6
5600(562)												35×60	3.5	35×80	3.9
6800(682)							35×50	2.5	35×50	3.6	35×60	3.8	35×80	4.3	
8200(822)							35×50	2.8	35×60	3.9	35×80	4.3	35×100	5.1	
10000(103)							35×50	3.8	35×80	4.2	35×80	4.7	35×120	5.8	
12000(123)							35×60	4.3	35×80	5.0	35×100	5.6	50×80	7.0	
15000(153)							35×60	4.7	35×80	5.5	35×120	6.4	50×80	7.6	
18000(183)					35×50	4.2	35×80	5.1	35×100	5.7	50×80	7.5	50×100	7.7	
22000(223)					35×60	4.6	35×80	5.1	35×100	5.7	50×80	7.5	50×100	9.0	
27000(273)					35×60	4.6	35×100	6.6	35×120	7.5	50×80	8.7	50×120	10.1	
33000(333)			35×50	4.0	35×80	5.2	35×120	6.7	50×80	7.5	50×100	10.3	65×100	11.6	
39000(393)	35×50	4.4	35×60	5.0	35×80	5.4	50×80	7.1	50×100	9.3	50×120	11.2	65×120	13.5	
47000(473)	35×60	5.5	35×80	5.2	35×100	6.5	50×80	8.4	50×100	9.4	50×120	11.2	65×140	15.8	
56000(563)	35×60	6.0	35×80	5.8	35×100	7.5	50×80	9.9	50×100	11.7	50×120	12.9	76×100	17.0	
68000(683)	35×80	6.6	35×100	6.8	35×120	8.9	50×100	10.3	50×120	12.4	50×140	15.2	76×120	20.4	
82000(823)	35×80	7.5	35×100	6.9	50×80	10.0	50×100	11.4	50×120	15.1	50×140	16.0	76×140	21.5	
100000(104)	35×100	7.6	35×120	8.4	50×100	10.7	50×120	12.5	50×140	15.5	50×160	17.7	76×150	22.3	
120000(124)	35×120	9.0	50×80	8.4	50×100	12.0	65×100	15.5	65×120	16.3	65×140	21.5	90×140		
150000(154)	50×80	10.2	50×100	11.3	50×120	13.7	65×120	17.9	65×140	19.1	65×160	23.4			
180000(184)	50×80	11.0	50×100	11.4	65×100	16.4	65×120	20.0	65×140	23.7					
220000(224)	50×100	13.4	50×120	12.5	65×120	16.7	65×140	24.1	65×160						
270000(274)	50×120	14.0	65×100	14.2	65×120	20.5	65×140	26.5							
330000(334)	50×120	14.5	65×100	16.6	65×120	21.3	65×140								
390000(394)	65×100	16.0	65×120	17.5	65×140	26.0	65×160								
470000(474)	65×120	18.0	65×120	24.3	65×140	27.2									
560000(564)	76×100	19.5	65×120	25.2	65×140										
680000(684)	76×100	20.0	65×140	26.7	65×160										
	76×120	24.1	65×150	29.1											
	76×140	26.5	90×140												
	90×140														





## GT 型特性 FEATURES

- \* 寿命: 85 2000小时 Life time: 85 2000 hours
- \* 适用于UPS不间断电源、空调逆变器电子设备  
Suited for smoothing circuits for general purpose inverter control for F.A. Machine designed for use as input filter capacitor for current



## 特性表 SPECIFICATIONS

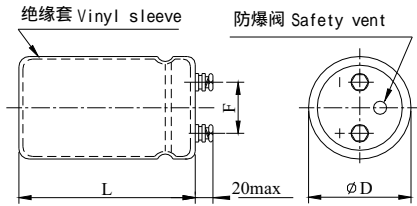
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使用温度范围 Operating Temperature Range	-40 ~ +85	-25 ~ +85																																																															
标称静电容量范围 Nominal Capacitance Range	270 $\mu$ F ~ 1000000 $\mu$ F																																																																
静电容量允许偏差 Capacitance Tolerance	$\pm 20\%$ (M, +20 , 120Hz)																																																																
漏电流: Leakage current:	施加额定电压5分钟: I 0.02CV或5mA(取较大值) 20 After application of rated voltage for 5 minutes: I 0.02CV or 5mA(whichever is greater) 20 C: 标称静电容量 ( $\mu$ F) C: Nominal Capacitance in $\mu$ F; V: 额定工作电压 (V) V: Rated Working Voltage in V																																																																
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D \ WV(V)	10	16	25	35	50	63	80	100	160-250	350-450																																																							
35	0.75	0.60	0.40	0.30	0.25	0.20	0.20	0.15	0.15	0.20																																																							
50	1.00	0.70	0.50	0.50	0.30	0.25	0.20	0.20	0.15	0.20																																																							
65	1.30	0.80	0.70	0.60	0.50	0.30	0.25	0.25	0.20	0.25																																																							
76-90	1.50	1.00	0.80	0.70	0.60	0.40	0.30	0.25	0.20	0.25																																																							
高温负荷特性 Load life	<p>在+85 环境中施加额定电压2000小时后, 电容器的性能符合下表要求: After applying rated voltage for 2000 hours at +85 , Capacitors meet the characteristics requirements measured at +20 listed below;</p> <table border="1"> <tbody> <tr> <td>静电容量变化 Capacitance Change</td> <td colspan="10">初始值的 <math>\pm 15\%</math> 以内 Within <math>\pm 15\%</math> of the initial measured value</td> </tr> <tr> <td>漏电流 Leakage Current</td> <td colspan="10">不大于初期规定值 Less than the initial specified value</td> </tr> <tr> <td>损耗角正切值 Tan</td> <td colspan="10">不大于初期规定值的175% Less than 175% the initial specified value</td> </tr> </tbody> </table>										静电容量变化 Capacitance Change	初始值的 $\pm 15\%$ 以内 Within $\pm 15\%$ of the initial measured value										漏电流 Leakage Current	不大于初期规定值 Less than the initial specified value										损耗角正切值 Tan	不大于初期规定值的175% Less than 175% the initial specified value																															
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高温贮存特性 Shelf Life	在+85 环境中无负荷放置1000小时后, 电容器的性能符合高温负荷特性中所列的规定值 After leaving capacitors under no load at +85 for 1000 hours, capacitors meet the characteristics listed above																																																																

- \* 纹波倍乘因子 MULTIPLIER FOR RIPPLE CURRENT
- \* 频率因子 Frequency coefficient

Frequency (Hz)		50 (60)	100 (120)	400	1k	10k
Coefficient	10~50WV	0.8	1.0	1.03	1.05	1.08
	63~100WV	0.8	1.0	1.05	1.07	1.08
	160~450WV	0.8	1.0	1.10	1.13	1.18

# ALUMINUM ELECTROLYTIC CAPACITOR(CD138 GT)

## ● 外形图及尺寸表CASE SIZE TABLE






D ±1.5	35	50	65	76	90
L ± 3.0	50 60 80 100	80 100 120	100 120 140	100 120 140 150	140 150
F ± 1.0	12.7	21.8	28.2	31.4	31.4

## ■ GT 尺寸、额定电压及标称容量 DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

Cap(uF)	10(LB)		16(LC)		25(LD)		35(LE)		50(LF)		63(LG)		80(LH)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
3300(332)													35X50	2.50
3900(392)													35X50	2.60
4700(472)													35X50	2.80
5600(562)											35X50	3.00	35X60	2.90
6800(682)									35X50	3.30	35X50	3.20	35X80	3.70
8200(822)									35X50	3.70	35X60	3.80	35X80	4.20
10000(103)							35X50	3.60	35X50	4.30	35X80	4.10	35X100	5.00
12000(123)							35X50	3.70	35X60	5.30	35X80	4.40	50X80	5.40
15000(153)							35X50	4.00	35X80	5.50	35X100	5.50	50X80	7.70
18000(183)					35X50	5.00	35X60	4.70	35X80	5.70	50X80	6.20	50X80	7.80
22000(223)					35X60	5.40	35X80	5.60	35X100	6.10	50X80	7.10	50X80	8.00
27000(273)			35X50	5.10	35X80	5.80	35X80	6.20	50X80	6.70	50X80	7.40	50X100	8.70
33000(333)			35X60	5.10	35X80	6.00	35X80	6.30	50X80	7.10	50X100	8.80	50X120	10.5
39000(393)	35X50	5.00	35X80	7.10	35X80	6.70	35X100	7.60	50X80	7.40	50X120	10.0	65X100	12.1
42000(423)	35X60	6.00	35X80	7.30	35X100	8.00	50X80	8.70	50X100	8.70	65X100	11.9	65X100	14.4
56000(563)	35X80	6.30	35X100	7.60	50X80	8.40	50X80	10.0	50X100	9.80	65X100	12.6	65X120	15.0
68000(683)	35X80	7.90	35X100	10.3	50X80	9.30	50X80	10.8	50X120	12.0	65X120	15.0	65X140	16.8
82000(823)	35X80	8.40	50X80	10.5	50X80	10.0	50X100	12.0	65X100	12.3	76X100	16.4	76X120	19.4
100000(104)	50X80	9.30	50X80	10.9	50X100	12.0	50X120	13.6	65X120	14.2	76X120	18.9	76X140	21.5
120000(124)	50X80	10.0	50X100	11.1	50X120	12.9	65X100	13.8	65X120	16.0	76X140	21.6	90X140	22.3
150000(154)	50X80	11.0	50X100	12.6	65X100	15.3	65X100	14.6	76X120	18.6	90X140	26.0	90X150	26.5
180000(184)	50X100	12.1	50X120	13.2	65X100	15.5	65X120	16.7	76X140	19.5	90X150	30.8	90X150	31.7
220000(224)	50X100	14.0	65X100	14.7	65X120	18.0	76X100	17.4	90X140	23.3	90X150	37.0		
270000(274)	50X120	14.2	65X120	15.4	76X100	18.8	76X140	23.1	90X140	24.8				
330000(334)	65X100	17.3	65X140	18.3	76X120	23.2	76X150	25.9	90X150	29.0				
390000(394)	65X120	18.0	76X120	19.0	76X140	23.5	90X140	26.5	90X150	35.0				
470000(474)	65X140	19.3	76X140	22.0	90X140	24.7	90X150	28.3						
560000(564)	76X120	20.1	76X150	23.0	90X140	26.2	90X150	33.0						
680000(684)	76X140	24.0	76X150	27.0	90X140	30.8								
820000(824)	76X150	28.5	90X140	32.0	90X150	37.0								
1000000(105)	90X140	34.0	90X150	38.0										



WV(V) Cap(μF)	100(MA)		160(MB)		200(MC)		250(MD)		350(MF)		400(VA)		450(VB)		
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(1)	(2)	(1)	
270(271)												35X50	1.30	35X50	1.60
330(331)												35X50	1.70	35X60	1.80
390(391)										35X50	1.90	35X60	1.80	35X80	2.20
470(471)								35X50	1.60	35X60	2.10	35X80	2.30	35X80	2.40
560(561)								35X60	1.60	35X80	2.40	35X80	2.70	35X100	2.80
680(681)						35X50	1.60	35X60	1.70	35X80	2.90	35X100	2.90	50X80	3.10
820(821)						35X50	1.70	35X60	1.80	35X100	3.40	35X100	3.40	50X80	3.60
1000(102)						35X60	2.20	35X80	2.40	35X100	3.80	50X80	3.90	50X80	4.00
1200(122)															
1500(152)															
1800(182)															
2200(222)															
2700(272)															
3300(332)															
3900(392)															
4700(472)															
5600(562)															
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47000(473)															
56000(563)															
68000(683)															
82000(823)															
100000(104)															



 最大允许纹波电流 Max allowable ripple current (A r.m.s./85 .120Hz )  

 外形尺寸 Case Size DXL (mm)