

Aluminum Electrolytic Capacitors

AN CD289H LF Series



FEATURE

- * Life time: **105.C 5000 hours** ($\Phi D \geq 12.5$)
- * Low impedance
- * For switching power supplies and other industrial electronic products applications

I SPECIFICATIONS

Item	Performance characteristics								
Rated Voltage Range	6.3V. DC~250V.DC								
Operating Temperature Range	-55°C~+105°C								
Nominal Capacitance Range	0.47 μ F~15000 μ F								
Capacitance Tolerance	$\pm 20\%$ (M+20°C,120Hz)								
Leakage Current	After application of rated voltage for 2 minutes: $I \leq 0.01 CV$ or $3\mu A$ (Whichever is greater) 20 C (μ F): Nominal Capacitance in μ F; V. (V): V Rated Working Voltage in V								
Dissipation Factor	Rated Working Voltage	6.3	10	16	25	35	50	63	100
	$\tan \delta$ (MAX) (20°C,120Hz)	0.18	0.16	0.14	0.12	0.12	0.10	0.09	0.08
When capacitance is over 1000 μ F, $\tan \delta$ shall be added 0.02 with increase of every 1000 μ F									
Temperature Stability	Rated Working Voltage		6.3	10	16	25~100			
	Impedance Ratio(120Hz)	(Z-25°C/z+20°C)	4	3	2	2			
		(Z-55°C/z+20°C)	8	6	4	3			
Load Life	After applying rated voltage for 5000 hours at + 105°C Capacitors meet the characteristics requirements measured at +20°C listed below								
	Capacitance Change	Within $\pm 25\%$ of the initial measured value			Case Dia	Life Time			
	Leakage current	Less than the initial specified value				6.3-100 WV	160-250 WV		
	$\tan \delta$	Less than 200% the initial specified value			$\Phi D \leq 8$	3000			
$\Phi D = 10$					4000			2000	
$\Phi D \geq 12.5$				5000		2000			
Self Life	After application of rated working voltage and maximum permissible ripple specified at +105°C for 2000 hours, Capacitors meet the characteristics requirements measured at +20°C listed below.								

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Aluminum Electrolytic Capacitors

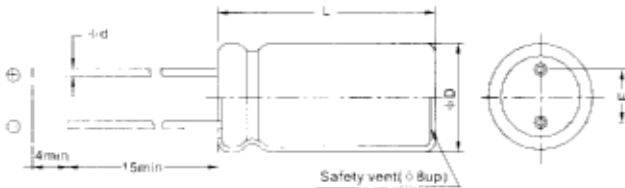
(CD289H LF)

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Cap (μF) \ Freq (Hz)	50(60)	100(120)	1K	10K	≥100K
0.47~4.7	0.35	0.42	0.60	0.80	1.00
10~33	0.45	0.55	0.75	0.90	1.00
47~330	0.60	0.70	0.85	0.95	1.00
470~1000	0.65	0.75	0.90	0.98	1.00
2200-15000	0.75	0.80	0.95	1.00	1.00

CASE SIZE TABLE



D	±0.5			±1.0			
	5	6.3	8	10	12.5	16	18
F±	2.0	2.5	3.5	5	5	7.5	7.5
0.5							
d±	0.5	0.5	0.6	0.6	0.6	0.8	0.8
0.1							
L	11	11	12	12:1	20:2	25:3	35
				6:20	5	0:35	
	L=11、12、16: L±1.5; L=20、25、30、35: L±2.0						

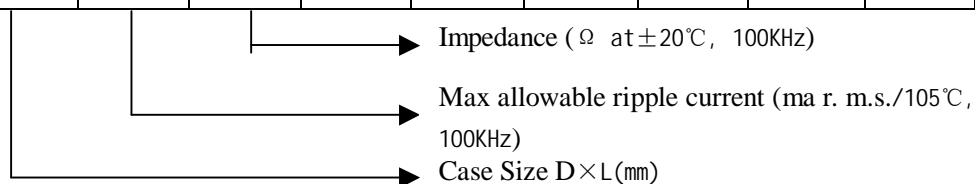
LF DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) \ Cap (μF)	6.3(LA)			10(LB)			16(LC)			25(LD)			35(LE)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
33(330)										52×11	150	0.90	5×11	150	0.90
47(470)							5×11	150	0.90	5×11	150	0.90	5×11	250	0.40
100(101)	5×11	150	0.90	5×11	150	0.90	63×11	250	0.40	63×11	250	0.40	8×12	400	0.25
220(221)	63×11	250	0.40	63×11	250	0.40	8×12	400	0.25	8×12	400	0.25	10×12	580	0.16
330(331)	63×11	250	0.40	8×12	400	0.25	8×12	400	0.25	10×12	580	0.16	10×16	770	0.12
470(471)	8×12	400	0.25	8×12	400	0.25	10×12	580	0.16	10×16	770	0.12	10×20	1050	0.078
1000(102)	10×12	580	0.16	10×16	770	0.12	10×20	1050	0.078	12.5×20	1300	0.062	12.5×25	1650	0.048
2200(222)	12.5×20	1300	0.062	12.5×20	1300	0.062	12.5×25	1650	0.048	16×25	1850	0.034	16×30	2000	0.029
3300(332)	12.5×20	1300	0.062	12.5×25	1650	0.048	16×25	1850	0.034	16×30	2000	0.029	18×35	2200	0.025
4700(472)	16×25	1850	0.034	16×25	1850	0.034	16×30	2000	0.029	18×35	2200	0.025			
6800(682)	10×25	1850	0.034	16×30	2000	0.029	18×35	2200	0.025						
10000(103)	16×30	2000	0.029	18×35	2200	0.025									
15000(153)	18×35	2200	0.025												

Aluminum Electrolytic Capacitors-CD289H

WV (V) Cap (μF)	50(LF)			63(LG)			100(MA)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
0.47 (R47)	5×11	17	5.500				5×11	15	6.000
1(1R0)	5×11	30	4.000				5×11	20	4.500
2.2(2R2)	5×11	43	2.500				5×11	30	3.000
3.3(3R3)	5×11	53	2.200				5×11	40	2.700
4.7 (4R7)	5×11	88	1.900				5×11	65	2.500
10(100)	5×11	100	1.500	5×11	87	2.300	6.3×11	140	1.200
22(220)	5×11	150	0.900	6.3×11	140	1.300	8×12	160	0.630
33(330)	6.3×11	250	0.400	6.3×11	140	1.200	10×12	230	0.430
47(470)	6.3×11	250	0.400	8×12	210	0.630	10×10	290	0.310
100(101)	8×12	400	0.250	10×12	300	0.430	12.5×10	430	0.160
220(221)	10×16	770	0.120	10×20	520	0.210	16×25	900	0.073
330(331)	10×20	1050	0.078	12.5×20	660	0.160	16×25	900	0.073
470(471)	12.5×20	1300	0.062	12.5×25	750	0.120			
1000(102)	16×25	1850	0.034	16×30	1390	0.054			
2200(222)	18×35	2200	0.025						

WV (V) Cap (μF)	160(MB)			200(MC)			250(MD)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
22(220)	10×20	350	1.00	10×20	350	1.0	10×20	300	1.4
33(330)	12.5×20	450	0.70	12.5×25	550	0.55	12.5×25	450	0.70
47(470)	12.5×25	600	0.45	12.5×25	600	0.44	16×25	850	0.31
68(680)	12.5×25	600	0.45	16×25	950	0.24	16×30	1050	0.22
100(101)	16×25	950	0.24	16×30	1200	0.17	18×35	1200	0.18
150(151)	16×30	1200	0.17	18×35	1280	0.16			
220(221)	18×35	1400	0.14	18×35	1400	0.14			



Aluminum Electrolytic Capacitors

AN CD289Y LY series

- * Life time: **105°C 10000** hours
- * Low impedance
- * For switching power supplies and other industrial electronic products applications



I SPECIFICATIONS

Item	Performance Characteristics										
Rated Voltage Range	63V.DC~ 100V.DC										
Operating Temperature Range	-5°C ~ + 105°C										
Nominal Capacitance Range	0.47 μF~18000 μF										
Capacitance Tolerance	±20% (M, +20°C, 120Hz)										
Leakage Current	Rated working voltage		6.3 - 100								
	Leakage Current		20°C After application of rated voltage for 2 minute: $1 \leq 0.001 CV$ or $3 \mu A$ (Whichever is greater) 20°C								
			Nominal Capacitance in u F Rated Working Voltage in V								
Dissipation Factor	working voltage	6.3	10	16	25	35	50	63	100		
	tan δ (MAX) (20°C ,120Hz)	0.18	0.16	0.14	0.12	0.12	0.10	0.09	0.08		
	When capacitance is over 1000 μF, tan δ shall be added 0.02 with increase of every 1000 μF										
Temperature Stability	Rated Working Voltage		6.3	10	16	25	35	50	63	100	
	Impedance Ratio(120Hz)		Z-25°C /z+20°C		4	3	2	2	2	2	2
			Z-55°C /z+20°C		8	6	4	3	3	3	3
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C, Capacitors meet the characteristics requirement measure at +20°C listed below;										
	Capacitance Change		Within ± 20% of the initial measured value			Case Dia		Life Time			
	Leakage current		Less than the initial specified value					6.3-100 WV	160-250 WV		
	tan δ		Less than 200% the initial specified value			ΦD≤8		4000	5000		
						ΦD=10		6000	7000		
					ΦD≥12.5		8000	1000			
Shelf Life	After Leaving capacitor under no load at + 105°C for 1000 hours, Capacitors meet the characteristics listed above										

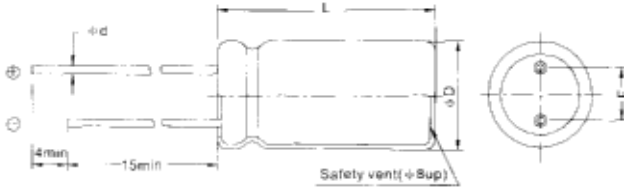
Aluminum Electrolytic Capacitors - AN CD289Y LY series

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

WV(V) \ Cap(μF)	50(60)	100(120)	1K	10K	100K
6.8~33	0.30	0.42	0.70	0.90	1.00
39~270	0.35	0.50	0.73	0.92	1.00
330~680	0.40	0.55	0.77	0.94	1.00
820~1800	0.45	0.60	0.80	0.96	1.00
2200~18000	0.50	0.70	0.85	0.98	1.00

CASE SIZE TABLE



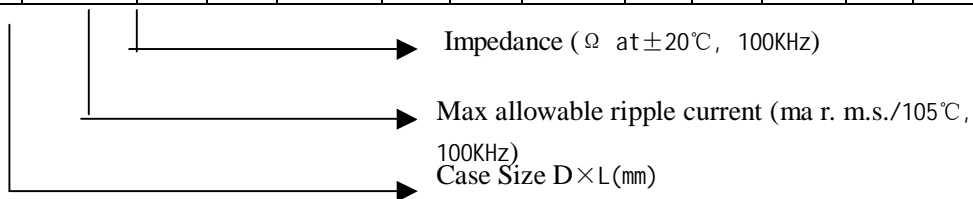
D	±0.5			±1.0			
	5	6.3	8	10	12.5	16	18
F±	2.0	2.5	3.5	5	5	7.5	7.5
0.5							
d±	0.5	0.5	0.6	0.6	0.6	0.8	0.8
0.1							
L	11	11	12	12:16:20	12:16:	16:20:	20:25:
					20:25:30	25:30:35	30:35:40
L=11、12、16: L±1.5; L=20、25、30、35: L±2.0							

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) \ Cap(μF)	6.3(LA)			16(LC)			25(LD)			50(LF)			100(MA)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
6.8 (6R8)													5x11	62	1.8
15 (150)													6.3x11	126	1.0
22 (220)										5x11	210	0.70			
33 (330)															
56 (560)				5x11	210	0.58				6.3x11	295	0.30	8x20	408	0.26
68 (680)													10x16	400	0.25
82 (820)													10x20	518	0.17
100 (101)							6.3x11	340	0.22	8x12	555	0.17	10x20	595	0.16
120 (121)				6.3x11	340	0.22				8x16	730	0.12	25x20	765	0.13
150 (151)	5x11	210	0.58							10x12	760	0.12	16x16	895	0.11
180 (181)										8x20	910	0.091	25x25	875	0.096
220 (221)							8x12	640	0.13	10x16	1050	0.084	12.5x30	1010	0.080
270 (271)										10x20	1220	0.060	25x35	1140	0.070
330 (331)	6.3x11	340	0.22	8x12	640	0.13				10x16	1440	0.055	18x20	1300	0.072
470 (471)				8x16	840	0.087	8x20	1050	0.069	10x30	1690	0.043	16x35	1900	0.040
				10x12	865	0.080	10x16	1210	0.060	12.5x20	1660	0.045			

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560 (561)										12.5x25	1950	0.034	16x35	2130	0.036
680 (681)	8x12	640	0.13	8x12 10x16	1050 1210	0.069 0.060	10x20 12.5x16	1400 1450	0.046 0.049	12.5x30	2310	0.030	18x35	1890	0.036
820 (821)	10x12	865	0.08				10x20	1650	0.042	12.5x35	2570	0.025	18x40	2470	0.032
1000 (102)	8x 16	840	0.087	10x20 12.5x16	1400 1450	0.046 0.049	10x30 12.5x20	1910 1900	0.031 0.035	16 25	2555	0.025			
1200 (122)	8x20 10x16	1050 1210	0.069 0.060	10x20	1650	0.042	16x20	2210	0.043	16x30	3010	0.022			
1500 (152)	10x20	1400	0.046	10x30 12.5x16	1910 1900	0.031 0.035	12.5x25	2230	0.027	16×35	3150	0.019			
1800 (182)	12.5x16	1450	0.049				12.5x30	2650	0.024	18x30	3635	0.021			
2200 (222)	10×20	1650	0.042	12.5x25	2230	0.027	12.5x35	2880	0.020	18×35	3680	0.017			
2700 (272)	10x30	1910	0.031	12.5x30	2650	0.024	16x25	2930	0.021	18x40	3800	0.014			
3300 (332)	12. ×20	1900	0.035	12.5x35	2880	0.020	18×30	3650	0.017						
3900 (392)	12.5x25	2230	0.027	16x25	2930	0.021	16×35	3610	0.015						
4700 (472)	12.5×30	2650	0.024	16×30	3450	0.017	18× 35	4220	0.014						
5600 (562)	12.5x35 16x20	2880 2530	0.020 0.027	16x35	3610	0.015	18x40	4280	0.012						
6800 (682)	16×25	2930	0.021	18×35	4080	0.014									
8200 (822)	16×30	3450	0.017	18×35	4220	0.014									
1000 (103)	16x35	3610	0.015	18x40	4280	0.012									
12000 (123)	18x30	4170	0.015												
15000 (153)	18×35	4220	0.014												
18000 (183)	18×40	4280	0.012												



Aluminum Electrolytic Capacitors

AN CD285- MX series

- * Life time: **105°C 1000 hours**
- * Low impedance series with **5 mm height**
- * For switching power supplies and other industrial electronic products applications



I SPECIFICATIONS

Item	Performance Characteristics						
Rated Voltage Range	4V.DC~ 35V.DC						
Operating Temperature Range	-5°C ~ + 105°C						
Nominal Capacitance Range	1 µF~100 µF						
Capacitance Tolerance	±20% (M,+20°C , 120Hz)						
Leakage Current	After application of rated voltage for 2 minutes: $I < 0.01 CV$ or $3\mu A$ (Whichever is greater) 20°C C: (µ F) C: Nominal Capacitance in µF; (V) V: Rated Working Voltage in V						
Dissipation Factor	working voltage	6.3	10	16	25	35	
	$\tan \delta$ (MAX) (20°C ,120Hz)	0.18	0.16	0.14	0.12	0.12	
Temperature Stability	Rated Working Voltage		6.3	10	16	25	35
	120Hz		2	2	2	2	2
	Impedance Ratio(Z-55°C/z+20°C)		8	6	4	3	3
Load Life	After applying rated voltage for 1000 hours at 105°C, Capacitors meet the characteristics requirements measured at +20°C listed below;						
	Capacitance Change	Within ± 25% of the initial measured value					
	Leakage current	Less than the initial specified value					
Shelf Life	Dissipation factor		Less than 200% the initial specified value				
	After leaving Capacitors under no load at + 105°C for 1000 hours, capacitors meet the characteristics listed above						

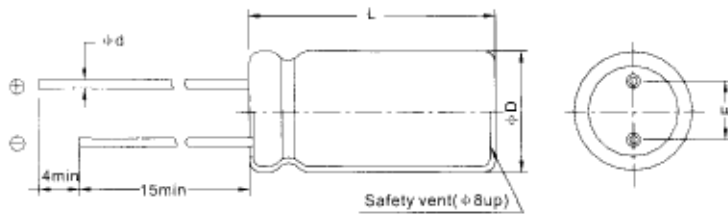
MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

WV(V) Cap(µF)	50(60)	100(120)	1K	10K	≥100K
1~4.7	0.35	0.42	0.60	0.80	1.00
10-33	0.45	0.55	0.75	0.90	1.00
47~100	0.68	0.70	0.85	0.95	1.00

AN CD285-MX series

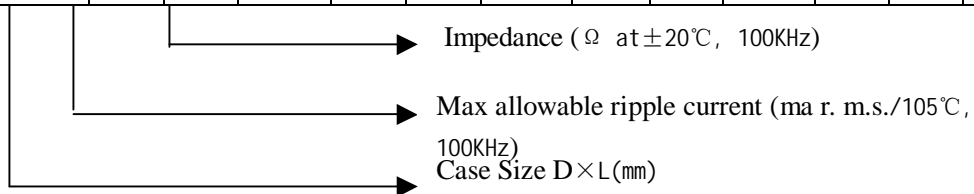
CASE SIZE TABLE



$\Phi D \pm 0.5$	4.0	5.0	6.3
$F \pm 0.5$	15	20	25
$\Phi d \pm 0.1$	0.45		
$L \pm 10$	50		

MX DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap (μF)	6.3(LA)			10(LB)			16(LC)			25(LD)			35(LE)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
1(1R0)													4×5	50	5.0
1.5(1R5)													4×5	50	5.0
2.2(2R2)													4×5	50	5.0
3.3(3R3)													4×5	50	5.0
4.7(4R7)										4×5	50	5.0	4×5	50	5.0
6.8(6R8)										4×5	50	5.0	5×5	80	2.6
10(100)							4×5	50	5.0	5×5	80	2.6	5×5	80	2.6
15(150)							5×5	80	2.6	5×5	80	2.6	6.3×5	115	1.3
22(220)	4×5	50	5.0	5×5	80	2.6	5×5	80	2.6	6.3×5	115	1.3	6.3×5	115	1.3
33(330)	5×5	80	2.6	5×5	80	2.6	6.3×5	115	1.3	6.3×5	115	1.3	6.3×5	115	1.3
47(470)	5×5	80	2.6	6.3×5	115	1.3	6.3×5	115	1.3						
68(680)	6.3×5	115	1.3												
100(101)	6.3×5	115	1.3												



Aluminum Electrolytic Capacitors

AN CD287 SE series

- * Life time: **105°C 1000 hours**
- * Low impedance series with **7 mm heigh**
- * For switching power supplies and other industrial electronic products applications



I SPECIFICATIONS

Item	Performance Characteristics							
Rated Voltage Range	6.3V.DC~ 50V.DC							
Operating Temperature Range	-55°C ~ + 105°C							
Nominal Capacitance Range	10 μF~100 μF							
Capacitance Tolerance	±20%(M,+20°C, 120Hz)							
Leakage Current	Leakage Current		20°C After application of rated voltage for 2 minute. $1 \leq 0.01CV$ or $3\mu A$ (whichever is greater) 20°C					
	Nominal Capacitance in μF,			Rated working Voltage in V				
Dissipation Factor	Working voltage	6.3	10	16	25	35	50	
	tan δ (MAX) (20°C ,120Hz)	0.18	0.16	0.14	0.12	0.12	0.10	
Temperature Stability	Rated Working Voltage		6.3	10	16	25	35	50
	Impedance	Z-25°C/z+20°C	2	2	2	2	2	2
	Ratio (120Hz)	Z-55°C/z+20°C	3	3	3	3	3	3
Load Life	After applying rated voltage for 1000 hours at 105C, Capacitors meet the characteristics requirements measured at +20°C listed below;							
	Capacitance Change	Within ± 25% of the initial measured value						
	Leakage current	Less than the initial specified value						
	Dissipation factor	Less than 200% the initial specified value						
Shelf Life	After leaving Capacitors under no load at + 105% for 1000 hours, capacitors meet the characteristics listed above							

MULTIPLIER FOR RIPPLE CURRENT

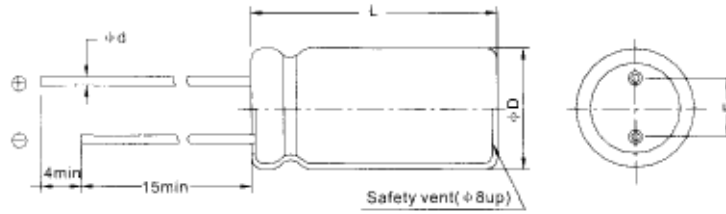
Frequency coefficient

Freq (HZ)		50(60)	100(120)	1K	10K	≥100K
Coefficient	10~33	0.35	0.50	0.73	0.92	1.00
	47~68	0.40	0.55	0.77	0.94	1.00
	100~220	0.45	0.60	0.80	0.96	1.00

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ALUMINUM ELECTROLYTIC CAPACITOR (AN CD287 SE)

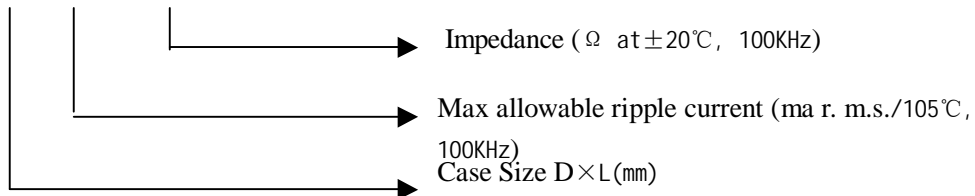
CASE SIZE TABLE



$\Phi D \pm 0.5$	4.0	5.0	6.3
$F \pm 0.5$	1.5	2.0	2.5
$\Phi d \pm 0.1$	0.45		
$L \pm 10$	7.0		

SE DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap (μF)	6.3(LA)			10(LB)			16(LC)			25(LD)			50(LF)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
10(100)										4×7	130	0.96	5×7	210	0.50
15(150)										4×7	130	0.60	6.3×7	220	0.42
22(220)				4×7	110	0.98	4×7	130	0.85	5×7	210	0.46	6.3×7	300	0.26
33(330)	4×7	130	0.85	5×7	130	0.85	5×7	210	0.45	6.3×7	250	0.50	8×7	380	0.17
47(470)	5×7	150	0.60	5×7	210	0.44	6.3×7	220	0.42	6.3×7	250	0.30			
68(680)	5×7	210	0.43	6.3×7	220	0.42	6.3×7	300	0.24	8×7	300	0.24			
100(101)	6.3×7	250	0.30	6.3×7	250	0.30	8×7	320	0.18	8×7	380	0.15			
150(151)	6.3×7	300	0.23	8×7	380	0.15									
220(221)	8×7	380	0.15	8×7	405	0.13									



Aluminum Electrolytic Capacitors

AN CD289 LM series

- * Life time: **105°C 4000 hours**
- * Low impedance
- * For switching power supplies and other industrial electronic products applications



I SPECIFICATIONS

Item	Performance Characteristics										
Rated Voltage Range	63V.DC~ 100V.DC					160V.DC~ 450V.DC					
Operating Temperature Range	-5°C ~ + 105°C					-25°C ~ + 105°C					
Nominal Capacitance Range	0.47 μF~15000 μF										
Capacitance Tolerance	±20%(M,+20°C, 120Hz)										
Leakage Current	Rated working voltage	6.3 - 100					160 - 450				
	Leakage Current	After application of rated voltage for 2 minute: $1 \leq 0.001 CV$ or $3\mu A$ (Whi chever is greater) 20°C					After application of rated voltage for 2 minute: $1 \leq 0.003 CV$				
		Nominal Capacitance in u F					Rated Working Voltage in V				
Dissipation Factor	Working voltage	6.3	10	16	25	35	50	63	100	160-450	
	tan δ (MAX) (20°C ,120Hz)	0.18	0.16	0.14	0.12	0.12	0.10	0.09	0.08	0.10	
	When capacitance is over 1000 μF, tan δ shall be added 0.02 with increase of every 1000 μF										
Temperature Stability	Rated Working Voltage		6.3-16	25-100	160-250	350-450					
	Impedance	Z-25°C/z+20°C				3	6				
	Ratio(120Hz)	Z-55°C/z+20°C				4	8				
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C, Capacitors meet the characteristics requirement measure at +20°C listed below;										
	Capacitance Change	Within ± 20% of the initial measured value					Case Dia	Life Time			
	Leakage current	Less than the initial specified value					ΦD≤8	2000			
	tan δ	Less than 200% the initial specified value					ΦD=10	3000			
						ΦD≥12.5	5000				
Shelf Life	After Leaving capacitor under no load at + 105°C for 1000 hours, Capacitors meet the characteristics listed above										

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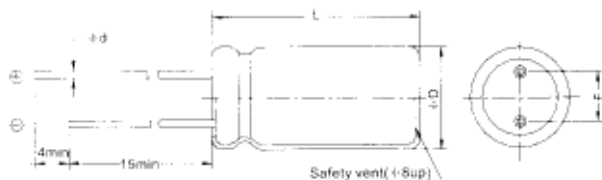
Aluminum Electrolytic Capacitors- AN CD289 LM series

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

WV(V) Cap(μF)	50(60)	100(120)	1K	100K≤
0.47-4.7	0.35	0.42	0.60	1.00
6.8-33	0.45	0.55	0.75	1.00
47-330	0.60	0.70	0.85	1.00
470-1000	0.65	0.75	0.90	1.00
1200-15000	0.75	0.80	0.95	1.00

CASE SIZE TABLE



D	±0.5			±1.0			
	5	6.3	8	10	12.5	16	18
F±0.5	2.0	2.5	3.5	5	5	7.5	7.5
d±0.1	0.5	0.5	0.6	0.6	0.6	0.8	0.8
L	11	11	12	12:16:20:25:30	20:25:30:35	20:25:30	20:25: 30:35:40
	L=11、12、16: L±1.5; L=20、25、30、35: L±2.0						

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap (μF)	6.3(LA)			10(LB)			25(LD)			35(LE)			50(LF)				
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)
0.47 (R47)													5x11	11	23.00	5x11	8
0.68 (R68)													5x11	14	16.00	5x11	11
1 (1R0)													5x11	18	11.00	5x11	13
1.5 (1R5)													5x11	22	7.500	5x11	17
2.2 (2R2)													5x11	27	5.000	5x11	21
3.3 (3R3)													5x11	33	3.300	5x11	27
4.7 (4R7)													5x11	40	2.200	6.3 x11	34
6.8 (6R8)													5x11	45	1.800	6.3 x11	41

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10 (100)													5x11	57	1.400	6.3 x11	52
15 (150)													5x11	72	0.930	8x12	65
22 (220)										5x11	85	0.750	6.3x11	100	0.650	8x12	122
33 (330)							5x11	88	0.800	6.3x11	125	0.490	6.3x11	135	0.430	10x12	166
68 (680)				5x11	97	0.800	6.3×11	160	0.360	8×12	230	0.240	8×12	225	0.200	10×25	326
100 (101)	5×11	99	0.850	6.3×11	135	0.550	8×12	245	0.240	8×12	305	0.160	10×16	385	0.160	10×30	438
120 (121)	5×11	115	0.650	6.3×11	160	0.440	8×12	275	0.200	10×12	375	0.150	10×16	435	0.130	12.5×15	519
150 (151)	6.3×11	155	0.490	6.3×11	185	0.350	8×12	320	0.160	10×12	435	0.120	10×20	570	0.100	12.5×15	535
180 (181)	6.3×11	175	0.390	6.3×11	205	0.290	10x12	395	0.150	10x16	500	0.110	10x20	635	0.085	16x20	706
220 (221)	6.3×11	210	0.300	8x12	270	0.240	10x12	435	0.130	10x16	560	0.090	10x25	760	0.075	16x25	854
270 (271)	8x12	275	0.240	8x12	300	0.200	10x16	525	0.110	10x20	735	0.070	10x30	900	0.065	18x20	918
330 (331)	8x12	310	0.200	8x12	350	0.160	10x16	572	0.095	10x20	810	0.060	10x30	995	0.055	18x30	1160
390 (391)	8x12	345	0.170	10x12	430	0.150	10x20	770	0.070	10x25	955	0.055	12.5x25	1120	0.048	18x30	1210
470 (471)	10x12	455	0.140	10x12	475	0.130	10x20	810	0.065	10x30	1130	0.046	12.5x25	1190	0.044	18x35	1110
560 (561)	10x12	485	0.130	10x16	565	0.110	10x25	990	0.055	12.5x20	1160	0.041	16x20	1260	0.044	18x35	1680
680 (681)	10x16	680	0.110	10x16	635	0.090	16x30	1180	0.046	12.5x25	1370	0.036	16x20	1350	0.040	16x40	1910
820 (821)	10x16	635	0.095	10x20	835	0.070	12.5x20	1210	0.041	12.5×25	1490	0.032	18×20	1530	0.036		
1000 (102)	10×20	820	0.075	10×20	915	0.060	12.5x30	1430	0.036	16x20	1530	0.034	16x30	1830	0.030		
1200 (122)	10×20	895	0.065	10x25	1120	0.050	12.5x25	1550	0.032	16×25	1740	0.031	18×30	1880	0.027		
1500 (152)	10x25	1090	0.055	10x30	1290	0.045	16x20	1590	0.034	16x20	1840	0.028	18x30	1990	0.029		
1800 (182)	10 ×30	1230	0.050	12.5×20	1320	0.039	16×25	1780	0.031	16x30	2220	0.022	18×35	2210	0.025		
2200 (222)	10x30	1320	0.043	12.5x25	1530	0.034	18×20	1840	0.028	16×30	2240	0.023	18×40	2300	0.024		

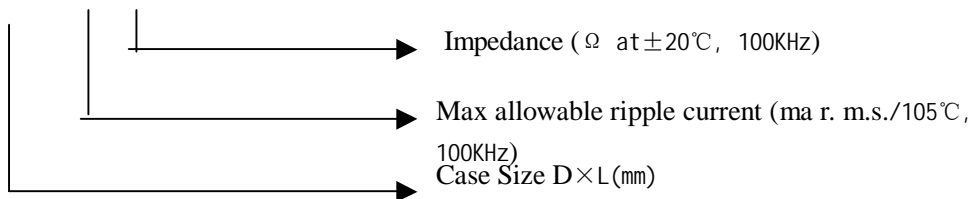
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2700 (272)	12.5×25	1430	0.038	16×20	1560	0.035	16×30	2220	0.022	18×35	2420	0.021					
3300 (332)	12.5 ×25	1530	0.034	16×20	1660	0.031	18×30	2240	0.023	18×40	2730	0.017					
3900 (392)	16 ×20	1540	0.036	18 ×20	1840	0.028	18 ×35	2420	0.021								
4700 (472)	18 ×20	1720	0.032	18 ×30	2170	0.023	18 ×40	2660	0.018								
5600 (562)	18 ×20	1780	0.030	18 ×25	2100	0.024											
6800 (682)	18×30	2130	0.024	18×30	2280	0.022											
8200 (822)	18×30	2150	0.025	18×35	2420	0.021											
10000 (103)	18×30	2240	0.023	18×40	2730	0.017											
12000 (123)	18×35	2530	0.019														
15000 (153)	18×40	2660	0.018														

AN CD289

LM DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) (μ F)	160 (MB)			200(MC)			250(MD)			400(VA)			450(VB)		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
1R0)															
(2R2)										10×12	28	8.0	10×12	28	7.5
(3R3)										10×16	47	6.5	10×16	48	6.2
(4R7)							10×16	60	4.0	10×20	55	3.8	10×20	55	3.8
(100)	10×16	155	2.5	10×16	155	2.5	10×20	125	2.3	12.5×20	85	2.6	12.5×20	90	2.6
(220)	10×20	175	1.5	10×20	175	1.5	12.5×20	170	1.2	16×25	30	1.2	16×25	135	1.1
(330)	12.5×20	265	0.71	12.5×20	245	0.71	12.5×25	170	0.70	16×30	70	0.65	16×30	170	0.6
(470)	12.5×20	275	0.46	12.5×30	275	0.46	16×25	285	0.60	18×30	205	0.50	18×30	280	0.4
(101)	16×25	345	0.24	16×25	345	0.25	18×30	300	0.30	18×35	275	0.34	18×40	310	0.3
(221)	18×30 18×35	455	0.21 0.19	18×30 18×35	455	0.22 0.18									



Aluminum Electrolytic Capacitors

AN CD81 RX series

- * Life time: **105°C 1000 hours**
- * Wide operating temperature range
- * Ideally suited for high stability circuits



I SPECIFICATIONS

Item	Performance Characteristics		
Rated Voltage Range	63V.DC~ 100V.DC	160V.DC~ 450V.DC	
Operating Temperature Range	-40°C ~ + 105°C	-25°C ~ + 105°C	
Nominal Capacitance Range	0.1 µF~22000 µF	0.47 µF~220 µF	
Capacitance Tolerance	±20% (M,+20°C, 120Hz)		
Leakage Current	Rated working voltage	6.3 - 100 160 - 450	
	Leakage Current	After application of rated voltage for 2 minute: $1 \leq 0.001 CV$ or $3\mu A$ (Whichever is greater) 20°C	
	Nominal Capacitance in u F	Rated Working Voltage in V	
Dissipation Factor	working voltage	6.3 10 16 25 35 50 63 100 160-450	
	$\tan \delta$ (MAX) (20°C ,120Hz)	0.26 0.22 0.18 0.16 0.14 0.12 0.10 0.08 0.15	
	When capacitance is over 1000 µF, $\tan \delta$ shall be added 0.02 with increase of every 1000 µF		
Temperature Stability	Rated Working Voltage	6. 10 16 25 35 50 63 100 160-250 150-450	
	Impedance Ratio(120Hz)	Z-25°C /z+20°C	4 3 2 3 6
		Z-55°C /z+20°C	8 6 4 4 3 6
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C for 1000 hours Capacitors meet the characteristics requirement measure at +20°C listed :		
	Capacitance Change	Within ± 20% of the initial measured value	
	Leakage current	Less than the initial specified value	
	$\tan \delta$	Less than 200% the initial specified value	
Shelf Life	After Leaving capacitor under no load at + 105°C for 500 hours, Capacitors meet the characteristics listed above		

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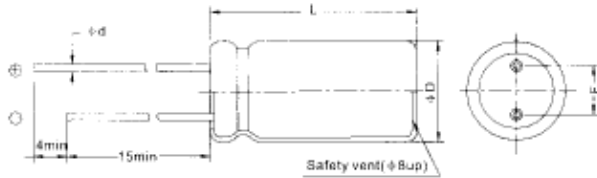
Aluminum Electrolytic Capacitors- AN CD81 RX series

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz) Cap(μF)	50(60)	100(120)	1K	≥10K
0.1~1.5	0.50	1.00	1.30	1.50
2.2~6.8	0.65	1.00	1.30	1.50
10~68	0.80	1.00	1.30	1.50
100~1500	0.80	1.00	1.15	1.20
2200~33000	0.80	1.00	1.10	1.15

CASE SIZE TABLE



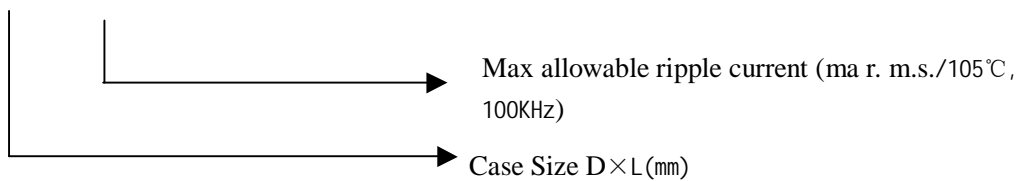
D	±0.5			±1.0			
	5	6.3	8	10	12.5	16	18
F± 0.5	2.0	2.5	3.5	5	5	7.5	7.5
d± 0.1	0.5	0.5	0.6	0.6	0.6	0.8	0.8
L	11	11	12	12:16:20	16:20:25	16:20:25	20:25:30:
				:30:35	:30:35		35:40
L=11、12、16: L±1.5; L=20、25、30、35: L±2.0							

RX DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(v) Cap(μF)	6.3(LA)		10(LB)		25(LD)		35(LE)		50(LF)		63(LG)		100	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.1(R10)									5×11	1.0				
0.15(R15)									5×11	1.5				
0.22(R22)									5×11	2.5				
0.33(R33)									5×11	4				
0.47(R47)									5×11	7			5×11	8
0.68(R68)									5×11	10			5×11	11
1(R10)									5×11	13			5×11	15
1.5(R15)									5×11	16			5×11	17
2.2 (R22)									5×11	20			5×11	21
3.3(R33)									5×11	25			5×11	29
4.7(R47)									5×11	32			5×11	32
6.8(R68)									5×11	38			5×11	46
10(100)					5×11	21			5×11	47	5×11	48	6.3×11	54
15(150)					5×11	31			5×11	52	5×11	51	6.3×11	75
22(220)					5×11	46	5×11	64	5×11	70	6.3X11	76	8×12	93
33(330)					5×11	69	5X11	77	63×11	92	6.3X11	100	8X12	130

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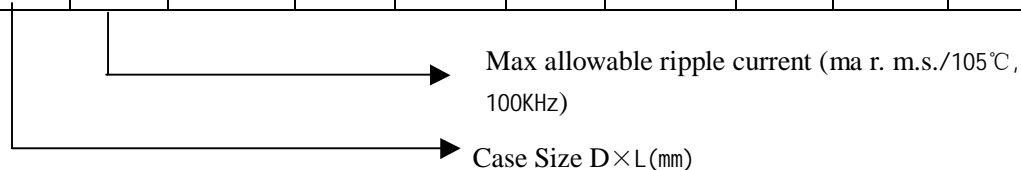
47(470)			5×11	49	5×11	84	(5×11) 6.3X11	(94) 94	63×11 (8×12)	115 (115)	(6.3×11) 8×12	(130) 130	10×12	65
68(680)			5×11	71	5×11	94	6.3×11	100	8×12	153	8×12	146	10×16	210
100(101)	5×11	96	5×11	105	6.3×11	140	(6.3X11) 8X12	(150) 150	8×12	190	10×12	215	10×20	265
150(151)	5×11	103	63×11	117	8×12	160	8×12	185	10×12	276	10×16	230	12.5×20	380
220(221)	(5×11) 63X11	(160) 160	6.3×11	175	(6.3×11) 8×12	(240) 240	(8×12))10×12	(275) 275	(10×12) 10×16	(305) 305	(10x16) 10×20	(340) 340	12.5×25	440 (540) 540
330(331)	63×11	210	63×11	235	(8×12) 10×12	(310) 315	(10×12) 10×16	(350) 350	(10×16) 10×20	(380) 380)10×20) 12.5×20	(540) 540	(12.5×25) 16×25	
470(471)	(6.3×11) 8×12	(275) 275	(6.3×11) 8×12	(250) 295	(10×12) 10×16	(385) 385	(10×16) 10×20	(480) 480	(10×20) 12.5×20	(535) 535	(12.5×20) 12.5×25	(640) 640	(16×25) 16×30	(350) 860
680(681)	5×12	285	10×12	415	10×20	460	12.5×20	560	12.5×25	646	16×25	630	18×35	830
1000(102)	(8×12) 10×12	(315) 460	(10×12) 10×16	(470) 470	10×20 12.5×20	680 (740)	12.5×20	830	(12.5×25) 16×25	(950) 950	(16×25) 16×30	(930) 930	15×40	935
1500(152)	10×16	490	10×20	560	12.5×25	750	12.5×25	1250	16×25	1080	18×30	1120		
2200(222)	(10×16) 10×20	(710) 775	10×20	860	12.5×25 16×25	1230 1230			16×30) 16×35	(1480) 1480	(18×35) 18×40	(1650) 1650		
3300(332)	10×20	985	12.5×20	1100	16×25	1520	16×35	1610	(18×35) 18×40	(780) 1780				
4700(472)	12.5×20	1150	125×25	1350	16×30	1800	18×35	1920						
6800(682)	12.5×25	1480	16×25	1700	16×35 18×35	0.91020 50								
10000(103)	16×25	1700	16×35	1950										
15000(153)	16×35	2090	18×35	2180										
22000(223)	18×40	2350												



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Aluminum Electrolytic Capacitors- AN CD81 RX series

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)
0.47(R47)					6.3×11	9						
1(1R0)	6.3×11	9			6.3×11	13			8×12	15	8×12	15
1.5(1R5)	6.3×11	11			6.3×11	17			8×12	23	8×12	20
2.2(2R2)	6.3×11	18	6.3×11	17	6.3×11	23	8×12	25	(8×12) 10×12	(29) 37	10×12	25
3.3(3R3)	6.3×11	23	(6.3×11) 8×12	(26) 37	8×12	35	(8×12) 10×12	(40) 46	10×12	40	(10×12) 10×16	(33) 37
4.7(4R7)	8×12	43	8×12	40	8×12	40	(10×12) 10×16	(50) 52	10×16	52	(10×16) 10×20	(42) 47
6.8(6R8)	8×12	51	10×12	58	10×12	51	10×16	55	10×20	58	10×20	51
10(100)	8×12 (10×12)	77 (81)	(10×12) 10×16	(70) 75	(10×12) 10×16	(75) 85	10×20	80	(10×20) 12.5×20	(85) 88	12.5×20	67
15(150)	10×16	85	10×20	85	10×20	91	12.5×20	93	12.5×20	91	12.5×25	94
22(220)	10×16	125	10×20	125	(10×20) 12.5×20	(130) 140	(12.5×20) 12.5×25	(135) 150	12.5×25	140	(12.5×25) 16×25	(115) 135
33(330)	10×20	170	(10×20) 12.5×20	(140) 165	12.5×20	170	16×25	195	16×25	200	16×30	155
47(470)	12.5×20	210	12.5×20	210	12.5×25	220	(16×25) 16×30	(230) 240	16×30	250	(16×35) 18×30	(185) 215
68(680)	12.5×25	200	12.5×25	230	16×25	250	18×30	260	18×30	270		
100(101)	12.5×25 (16×25)	320 (340)	16×25	335	16×30	360	(18×35) 18×40	(375) 385	18×40	380		
150(151)	16×30	370	18×25	410								
220(221)	(16×35) 18×30	(580) 600	(16×35) 18×30	(580) 600								



Aluminum Electrolytic Capacitors-

AN CD82 RT series

- * Life time: **105°C 3000 hours**
- * Wide operating temperature range
- * Ideally suited for high stability circuits



I SPECIFICATIONS

Item	Performance Characteristics													
Rated Voltage Range	63V.DC~ 100V.DC						160V.DC~ 500V.DC							
Operating Temperature Range	-40°C ~ + 105°C						-25°C ~ + 105°C							
Nominal Capacitance Range	0.47 μF~10000 μF						1 μF~220 μF							
Capacitance Tolerance	±20%(M,+20°C, 120Hz)													
Leakage Current	Rated working voltage		6.3 - 100						160 - 500					
	Leakage Current		After application of rated voltage for 2 minute: $1 \leq 0.001 CV$ or $3\mu A$ (Whichever is greater) 20°C						After application of rated voltage for 2 minute: $1 \leq 0.003 CV\mu A$ 20°C					
	Nominal Capacitance in u F						Rated Working Voltage in V							
Dissipation Factor	working voltage		6.3	10	16	25	35	50	63	100	160-500			
	tan δ (MAX) (20°C ,120Hz)		0.26	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.15			
When capacitance is over 1000 μF, tan δ shall be added 0,02 with increase of every 1000 μF														
Temperature Stability	Rated Working Voltage		6.3	10	16	25	35	50	63	100	160	150	500	
			3								-25	-45		
	Impedance Ratio(120Hz)		Z-25°C	4	3	2						3	4	6
		/z+20°C												
		Z-55°C	8	6	4	3								
		/z+20°C												
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C for 31000 hours Capacitors meet the characteristics requirement measured at +20°C listed :													
	Capacitance Change		Within ± 20% of the initial measured value						Case Dia		Life Time			
	Leakage current		Less than the initial specified value						ΦD≤8		2000			
	tan δ		Less than 200% the initial specified value						ΦD≥10		3000			
Shelf Life	After Leaving capacitor under no load at + 105°C for 1000 hours, Capacitors meet the characteristics listed above													

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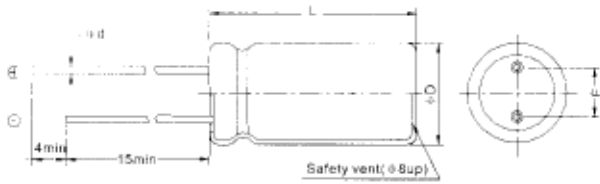
Aluminum Electrolytic Capacitors- AN CD82 RT series

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz) Cap(μF)	50(60)	100(120)	1K	10K	≥100K
6.3~100	0.20	0.40	0.70	0.80	1.00
160~500	0.25	0.50	0.80	0.90	1.00

CASE SIZE TABLE



D	±0.5			±1.0			
	5	6.3	8	10	12.5	16	18
F±0.5	2.0	2.5	3.5	5	5	7.5	7.5
d±0.1	0.5	0.5	0.6	0.6	0.6	0.8	0.8
L	11	11	12	12:16:20	20:25	20:25:30	25:30:35:40
	L=11、12、16: L±1.5; L=20、25、30、35: L±2.0						

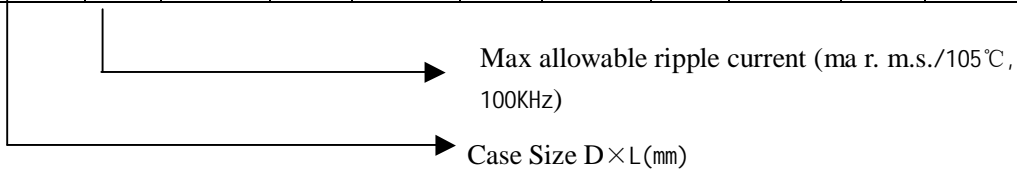
RT DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	6.3(LA)		10(LB)		25(LD)		35(LE)		50(LF)		63(LG)		100(MA)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.47(R47)									5×11	11			5×11	13
0.68(R68)									5×11	15			5×11	16
1(1R0)									5×11	18			5×11	23
1.5(1R5)									5×11	23			5×11	25
2.2(2R2)									5×11	28			5×11	33
3.3(3R3)									5×11	38			5×11	44
4.7(4R7)					5×11	36	5×11	41	5×11	45	5×11	51	5×11	55
6.8(6R8)					5×11	60	5×11	47	5×11	58	5×11	68	6.3×11	70
10(100)					5×11	60	5×11	66	5×11	76	5×11	83	6.3×11	98
15(150)					5×11	70	5×11	77	5×11	78	6.3×11	90	8×12	110
22(220)	5×11	51	5×11	68	5×11	87	5×11	98	6.3×11	110	6.3×11	130	8×12	170
33(330)	5×11	83	5×11	98	5×11	105	6.3×11	130	6.3×11	160	6.3×11	165	10×12	240
47(470)	5×11	98	5×11	105	6.3×11	120	6.3×11	170	6.3×11	185	8×12	230	10×12	310
68(680)	5×11	110	5×11	120	6.3×11	160	6.3×11	190	8×12	230	8×12	250	10×16	440
100(101)	5×11	150	6.3×11	160	6.3×11	210	8×12	280	8×12	310	10×12	380	10×20	580
150(151)	6.3×11	180	6.3×11	200	8×12	270	8×12	440	10×12	420	10×16	480	12.5×25	680
220(221)	6.3×11	240	6.3×11	260	8×12	360	10×12	480	10×16	600	10×20	700	12.5×25	860
330(331)	6.3×11	310	8×12	380	10×12	530	10×16	650	10×20	800	12.5×20	980	16×25	1080
470(471)	8×12	420	8×12	440	10×16	700	10×20	870	12.5×20	1100	12.5×25	1200	16×30	1300
680(681)	8×12	520	10×12	620	10×20	950	2.5×20	980	12.5×25	1220	16×25	1380	18×30	1680
1000(102)	10×12	690	10×16	800	2.5×20	1280	12.5×25	1500	16×25	1650	16×30	1800	18×40	1980

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1500(152)	10×16	894	10×20	1050	2.5×20	1400	16×25	1600	16×30	1850	18×30	2300		
2200(222)	10×20	1380	12.5× 25	1500	16×25	1840	16×30	2200	16×35 18×30	2230	18×40	2700		
3300(332)	12.5× 20	1650	12.5× 25	1820	16×30	2200	18×30	2500	18×40	2710				
4700(472)	125×25	1980	16×25	2100	18×30	2400	18×40	3100						
6800(682)	16×25	2220	16×30	2400										
10000(103)	16×30	2730	18×30	2920										

WV(V) Cap(uF)	160(MB)		200(MC)		250(MD)		350(MF)		400(VA)		450(VB)		500(JC)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1.0(R0)							8×12	70	8×12	80	8×12	80		
1.8(1R8)							8×12	75	10×12	85	10×12	100		
2.2(2R2)							8×12	80	10×12	90	10×12	110	10×12	110
3.3(3R3)							10×12	100	10×16	110	10×16	150	10×16	150
4.7(4R7)	8×12	70			10×12	100	10×16	150	10×16	150	10×20	180	10×20	180
6.8(6R8)	8×12	80			10×16	110	10×16	180	10×20	180	10×20	180	10×20	180
10(100)	10×16	130	10×16	250	10×16	180	10×20	250	12.5×20	250	12.5×20	280	12.5×20	280
15(150)	10×16	150	10×20	250	10×16	280	12.5×20	280	12.5×20	280	12.5×25	330	12.5×25	350
20(220)	10×20	200	10×20	250	10×20	300	12.5×20	300	12.5×25	310	16×25	330	16×25	350
33(330)	10×20	250	12.5×20	300	12.5×20	350	12.5×25	330	16×25	350	16×30	380	16×30	380
47(470)	12.5×20	300	12.5×20	300	125×25	380	16×25	350	16×30	380	18×30	430	18×30	430
68(680)	12.5×25	380	12.5×25	380	16×25	430								
100(101)	16×25	660	16×25	600	16×30	650								
220(221)														



Aluminum Electrolytic Capacitors

AN CD83F RF series

* Life time:105°C 5000 hours

* Ideally suited for high stability circuits



I SPECIFICATIONS

Item	Performance Characteristics											
Rated Voltage Range	6.3V.DC~ 50V.DC					160V.DC~ 450V.DC						
Operating Temperature Range	-40°C ~ + 105°C					-25°C ~ + 105°C						
Nominal Capacitance Range	0.47 μF~15000 μF					0.47 μF~220 μF						
Capacitance Tolerance	±20% (M,+20°C, 120Hz)											
Leakage Current	Rated working voltage		6.3 - 100				160 - 450					
	Leakage Current		After application of rated voltage for 2 minute: $1 \leq 0.001 CV$ or $3\mu A$ (Whichever is greater) 20°C				After application of rated voltage for 2 minute: $1 \leq 0.003 CV$.					
	Nominal Capacitance in u F					Rated Working Voltage in V						
Dissipation Factor	working voltage		6.3	10	16	25	35	50	160-450			
	tan δ (MAX) (20°C ,120Hz)		0.26	0.22	0.18	0.16	0.14	0.12	0.15			
When capacitance is over 1000 μF, tan δ shall be added 0,02 with increase of every 1000 μF												
Temperature Stability	Rated Working Voltage		6.3	10	16	25	35	50	160	200	250	350-450
	Impedance Ratio(120Hz)	Z-25°C	4	3	2			3			4	
		Z-55°C /z+20°C	8	6	4	3						
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C for 1000 hours Capacitors meet the characteristics requirement measure at +20°C listed :											
	Capacitance Change		Within ± 20% of the initial measured value					Case Dia	Life Time			
	Leakage current		Less than the initial specified value					ΦD≤8	3000			
	tan δ		Less than 200% the initial specified value					ΦD≥10	5000			
Shelf Life	After Leaving capacitor under no load at + 105°C for 500 hours, Capacitors meet the characteristics list above											

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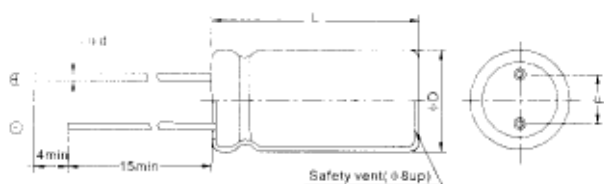
ALUMINUM ELECTROLYTIC CAPACITOR (AN CD83F RF)

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz) Cap(μF)	50(60)	100(120)	1K	10K	≥100K
6.3~100	0.20	0.40	0.70	0.80	1.00
160~450	0.25	0.50	0.80	0.90	1.00

CASE SIZE TABLE



D	±0.5			±1.0			
	5	6.3	8	10	12.5	16	18
F±0.5	2.0	2.5	3.5	5	5	7.5	7.5
d±0.1	0.5	0.5	0.6	0.6	0.6	0.8	0.8
L	11	11	12	12:16:20	20:25:30:35	20:25:30:35	20:25:30:35:40
	L=11、12、16: L±1.5; L=20、25、30、35: L±2.0						

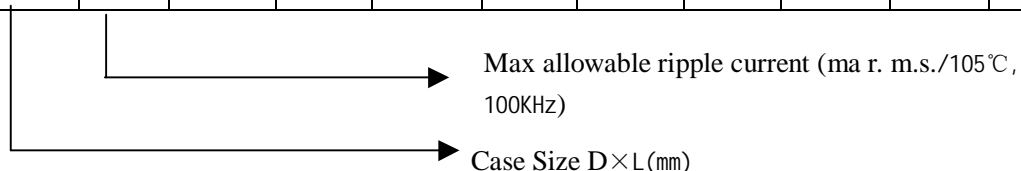
RF DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	6.3(LA)		10(LB)		16(LC)		25(LD)		35(LE)		50(LF)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.47(R17)											5×11	7
0.68(R68)											5×11	9
1.0(1R0)											5×11	12
1.5(1R5)											5×11	15
2.2(2R2)											5×11	15
3.3(3R3)											5×11	22
4.7(4R7)											5×11	2
6.8(6R8)											5×11	33
10(100)											5×11	39
15(150)											5×11	46
22(220)									5×11	47	5×11	65
33(330)							5×11	49	6.3×11	64	6.3×11	80
47(470)					5×11	60	8×11	64	5×11	82	8×12	105
68(680)					6.3×11	81	6.3×11	84	8×12	105	8×12	190
100(101)	5×11	64	5×11	82	5×11	100	5×12	110	8×12	200	10×16	250
150(151)	6.3×11	91	6.3×11	105	8×12	135	8×12	205	10×12	265	10×20	400
220(221)	6.3×11	120	8×12	140	8×12	215	10×12	270	10×15	350	10×25	530
330(331)	8×12	160	8×12	225	10×12	300	10×16	355	10×20	495	12.5×20	680
470(471)	10×12	280	10×12	295	10×16	380	10×20	495	12.5×20	670	12.5×25	825

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680(681)	10×16	355	10×16	395	10×20	515	12.5×20	700	12.5×25	820	16×20	1110
1000(102)	10×15	495	10×20	555	12.5×20	720	12.5×2	850	16×20	1080	16×30	1520
1500(152)	10×20	650	12.5×20	770	12.5×25	885	16×20	1130	18×20	1320	18×30	1710
2200(222)	12.5×20	780	12.5×25	905	15×20	1140	18×20	1320	18×30	1550	18×40	2080
3300(332)	12.5×25	915	16×20	1180	18×20	1330	18×30	1640	18×40	2080		
4700(472)	16×20	1230	18×20	1580	18×30	1640	18×40	2060				
6800(682)	18×20	1550	18×30	1680	18×35	1950						
10000(103)	15×30	1640	18×40	2080								
15000(153)	18×40	2060										

WV(V) Cap(uF)	160(MB)		200(MC)		250(MD)		350(MR)		400(VA)		450(VB)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1.0(1R0)									8×12	80	8×12	90
1.8(1R8)									10×12	100	10×12	110
2.2(2R2)									10×16	160	10×15	150
3.3(3R3)							10×16	180	10×16	180	10×16	180
4.7(4R7)							10×15	220	10×16	220	10×12	250
6.8(6R8)							10×16	220	10×16	220	10×20	280
10(100)	10×12	210	10×15	300	10×15	300	10×20	280	10×20	280	12×20	310
22(220)	10×16	300	10×16	360	10×20	500	12.5×20	350	12.5×25	430	12.5×25	450
33(330)	10×20	360	10×20	500	12.5×20	600	12×25	430	15×25	640	16×30	650
47(470)	12.5×20	500	12.5×20	660	12.5×25	720	16×25	660	16×30	750	18×30	780
68(680)	12.5×25	660	12.5×25	760	15×25	920			18×30	520		
100(101)	16×25	750	16×25	1120								
220(221)												



Aluminum Electrolytic Capacitors

AN CD83 RG series

- * Life time: **105°C 8000 hours**
- * High ripple current long life
- * Ideally suited for high stability circuits



I SPECIFICATIONS

Item	Performance Characteristics		
Rated Voltage Range	160V.DC~ 450V.DC		
Operating Temperature Range	-40°C ~ + 105°C		
Nominal Capacitance Range	6.8 μF~220 μF		
Capacitance Tolerance	±20%(M,+20°C, 120Hz)		
Leakage Current	Rated working voltage	160 - 450	
	Leakage Current	After application of rated voltage for 2 minute: $1 \leq 0.001 CV$ or $3\mu A$ 20°C	
	Nominal Capacitance in u F	Rated Working Voltage in V	
Dissipation Factor	working voltage	160-450	
	tan δ (MAX) (20°C ,120Hz)	0.15	
Temperature Stability	Rated Working Voltage		100-250
	Impedance Ratio (120Hz)	Z-25°C/z+20°C	3
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C for 1000 hours Capacitors meet the characteristics requirement measure at +20°C listed :		
	Capacitance Change	Within ± 20% of the initial measured value	
	Leakage current	Less than the initial specified value	
	tan δ	Less than 200% the initial specified value	
Shelf Life	After Leaving capacitor under no load at + 105°C for 1000 hours, Capacitors meet the characterist listed above		

MULTIPLIER FOR RIPPLE CURRENT

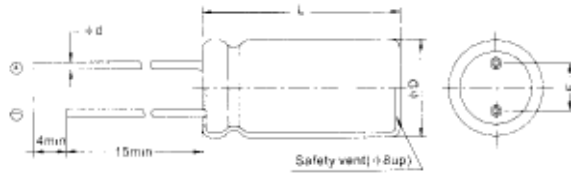
Frequency coefficient

Freq(Hz)	50(60)	100(1 20)	1k	10k	≥100k
Cooffioont	0.25	0.50	0.80	0.90	1.00

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Aluminum Electrolytic Capacitors-AN CD83 RG series

CASE SIZE TABLE



D \pm 1.0	10	12.5	16	18
F \pm 0.5	5	5	75	7.5
d \sim 01	0.6	0.6	0.8	08
L	16:20	20:25	20:25:30	20:25:30
	L=16 L \pm 1.5		L=20. 25. 30 L \pm 2.0	

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

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)
6.8(6R8)							10 \times 16	220	10 \times 16	220	10 \times 20	150
10(100)	10 \times 16	250	10 \times 16	250	10 \times 20	280	10 \times 20	280	10 \times 20	280	12.5 \times 20	320
22(220)	10 \times 20	500	10 \times 20	500	12.5 \times 20	600	12.5 \times 20	350	12.5 \times 25 16 \times 20	430	16 \times 25 18 \times 20	560
33(330)	10 \times 20	500	12.5 \times 20	600	12.5 \times 20	600	16 \times 20	500	16 \times 25 18 \times 20	640	16 \times 30 18 \times 25	700
47(470)	12.5 \times 20	660	12.5 \times 20	660	12.5 \times 25 16 \times 20	720	16 \times 25 18 \times 20	660	16 \times 30 18 \times 25	840	18 \times 30	880
68(680)	12.5 \times 25 16 \times 20	760	12.5 \times 25 16 \times 20	760	16 \times 25 18 \times 20	920	16 \times 30 18 \times 25	850	18 \times 30	1000		
100(101)	16 \times 25 18 \times 20	1120	16 \times 25 18 \times 20	1120	16 \times 30 18 \times 25	1200						
150(151)	16 \times 30 18 \times 25	1360	16 \times 30 18 \times 25	1360	18 \times 30	1500						
220(221)	16 \times 30 8 \times 25											

Max allowable ripple current (ma r. m.s./105°C, 100KHz)

Case Size D \times L(mm)

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Aluminum Electrolytic Capacitors

AN CD83A RA series

*extreme long life specially designed for electronic ballast and energy-save lamp

* Life time: **1 05 C 1 0000 hours**

*High ripple current, High temperature.



I SPECIFICATIONS

Item	Performance Characteristics							
Rated Voltage Range	160V.DC~ 450V.DC							
Operating Temperature Range	-25℃ ~ + 105℃							
Nominal Capacitance Range	1μF~220 μF							
Capacitance Tolerance	±20%(M,+20℃, 120Hz)							
Leakage Current	I=0.003 CV ^μ A (2minute) Nominal Capacitance in u F Rated Working Voltage in V							
Dissipation Factor	working voltage	160	200	250	350	400	450	
	tan δ (MAX) (20℃ ,120Hz)	3	3	3	6	6	6	
Temperature Stability	Rated Working Voltage		160	200	250	350	400	450
	Impedance Ratio(120Hz)	Z-25℃/z+20℃	0.15	0.15	0.15	0.15	0.15	0.15
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105℃ for 1000 hours Capacitors meet the characteristics requirement measure at +20℃ listed :							
	Capacitance Change	Within ± 20% of the initial measured value	Case Dia				Life Time	
	Leakage current	Less than the initial specified value	8×12, 10×12				5000	
	tan δ	Less than 200% the initial specified value	10×16, 10×20				8000	
Shelf Life	After Leaving capacitor under no load at + 105℃ for 500 hours, Capacitors meet the characteristics listed above							

MULTIPLIER FOR RIPPLE CURRENT

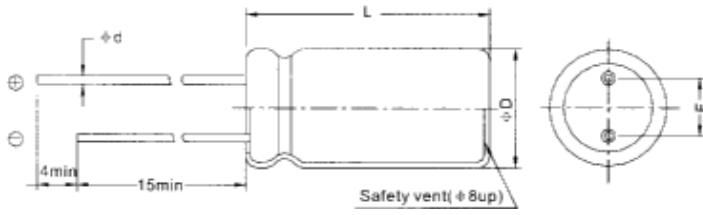
Frequency coefficient

Freq(Hz)	50(60)	100(120)	1k	10k	≥100k
coofiticiont	0.25	0.50	0.80	0.90	1.00

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Aluminum Electrolytic Capacitors- AN CD83A RA series

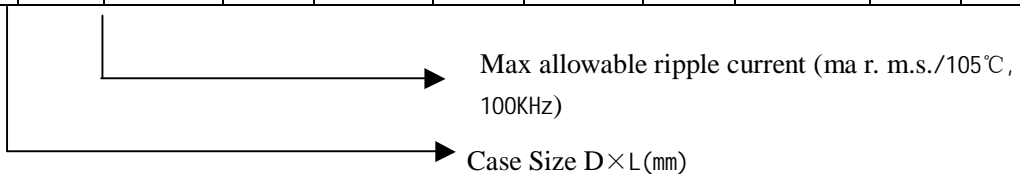
CASE SIZE TABLE



D	±0.5	±1.0			
	8	10	12.5	16	18
F±0.5					
d±0.1	0.6	0.6	0.6	0.8	0.8
L	12	12: 16: 20	16: 20: 25	20: 25	20: 25
	L=16 L±1.5		L=20. 25. 30 L±2.0		

RA DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

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)
1(1R0)									8×12 10×12	60 70		
1.5(1R5)									8×12 10×12	100		
1.8(1R8)									8×12 10×12	95 120		
2.2(2R2)									8×12 10×12	95 140		
3.3(3R3)									10×12 10×16	150 180		
4.7(4R7)					8×12	160	10×12	150	10×16	220	10×20	220
5.6(5R6)							10×12	180	10×16	250	10×120	250
6.8(6R8)					10×12	250	10×116	280	10×16	280	10×120	280
10(100)	10×16	320	10×16	320	10×16	320	10×20	350	10×20	350	12.5×20	450
15(150)									12.5×20	550	12.5×125	600
22(220)	10×20	500	10×12	500	10×12	500	12.5×20	650	12.5×25 16×12	760	16×120	730
33(330)	10×20	650	10×20	650	12.5×20	800	16×20	900	16×20	900	16×25	980
47(470)	10×20	750	12.5×20	980	12.5×20	980	16×20	1080	16×25 18×20	1180	18×25	1200
68(680)	12.5×12	1180	12.5×25 16×120	1300	16×20	1300	18×25	1470	18×25	1470		
82(820)			16×20	1380	16×20	1380	18×25	1530				
100(101)	12.5×25 16×20	1420	16×20	1420	16×12.5	1530						
150(151)	16×125	1890	16×125	1890	18×12.5	1940						
220(221)												



Aluminum Electrolytic Capacitors

AN CD83Y RY series

- * Life time: **105°C 12000 hours**
- * High ripple current, High temperature.
- * extreme long life specially designed for electronic ballast and energy-save lamp



SPECIFICATIONS

Item	Performance Characteristics								
Rated Voltage Range	160V.DC~ 450V.DC								
Operating Temperature Range	-25°C ~ + 105°C								
Nominal Capacitance Range	6.8 μF~220 μF								
Capacitance Tolerance	±20%(M,+20°C , 120Hz)								
Leakage Current	$I \leq 0.03 CV \mu A$ (2 minute) Nominal Capacitance in u F Rated Working Voltage in V								
Dissipation Factor	working voltage	160	200	250	350	400	450		
	tan δ (MAX) (20°C ,120Hz)	0.15	0.15	0.15	0.15	0.15	0.15		
Temperature Stability	Rated Working Voltage			60	200	250	350	400	450
	Impedance Ratio (120Hz)	$Z_{-25^\circ C} / z_{+20^\circ C}$			3	3	3	6	6
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C for 1000 hours Capacitors meet the characteristics requirement measure at +20°C listed :								
	Capacitance Change		Within ± 20% of the initial measured value						
	Leakage current		Less than the initial specified value						
	tan δ		Less than 200% the initial specified value						
Shelf Life	After Leaving capacitor under no load at + 105°C for 1000 hours, Capacitors meet the characteristics listed above								

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Aluminum Electrolytic Capacitors

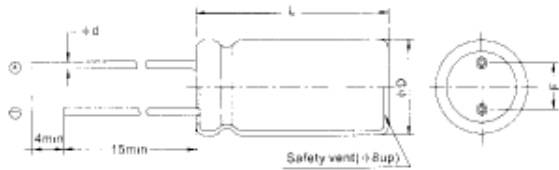
AN CD83Y RY series

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz)	50(60)	100(120)	1k	10k	≥100k
Cooffiioont	0.25	0.50	0.80	0.90	1.00

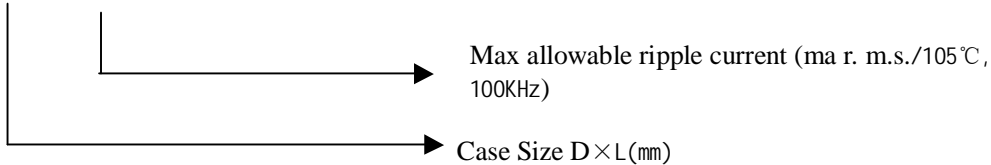
CASE SIZE TABLE



D±1.0	10	12.5	16	18
F±0.5	5	5	7.5	7.5
d-0.1	0.6	0.6	0.8	0.8
L	16:20	20:25	20:25.30	20:25:30
	L=12, 16 L±1.5 L=20, 25, 30 L±2.0			

RY DIMENSIONS RATED VOLTAGE AND CAPACITANCE

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)
5.8(5R8)							10×16	220	10×6	220	10×20	150
10(100)	10×16	250	10×16	250	10×20	280	10×20	280	10×20	280	12.5×20	320
22(220)	10×20	800	10×20	500	12.5×20	600	12.5×20		12.5×25	430	16×25	560
									16×20		18×20	
33(330)	10×20	500	12.5×20	600	12.5×20	600	16×20	500	16×25	640	16×30	700
									18×20		18×25	
47(470)	12.5×20	660	12.5×20	660	12.5×25	720		660	16×30	840	18×30	880
					16×20				18×28			
68(680)	12.5×25	760	12.5×25	760	16×25	920	16×30	850	18×30	1000		
	16×20		16×20		18×20		18×25					
100(101)	16×25	1120	16×25	1120	16×30	1200						
	18×20		18×20		18×25							
150(151)	16×30	1360	16×30	1360	18×30	1500						
	18×25		18×25									
220(221)	16×30											
	18×25											



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Aluminum Electrolytic Capacitors

AN CD83H RK series

- * Life time: **125°C 2000 hours**
- * High temperature
- * Ideally suited for automobile electronic equipments, electronic ballast etc



I SPECIFICATIONS

Item	Performance Characteristics		
Rated Voltage Range	10V.DC~ 450V.DC		
Operating Temperature Range	-40°C ~ + 125°C		
Nominal Capacitance Range	0.47 μF~1000 μF		
Capacitance Tolerance	±20%(M,+20°C, 120Hz)		
Leakage Current	Rated working voltage	10 - 100	160 - 450
	Leakage Current	After application of rated voltage for 2 minute: $1 \leq 0.01 CV$ or $3\mu A$ (Whichever is greater) 20°C After application of rated voltage for 2 minute: $1 \leq 0.03 CV$.	
		Nominal Capacitance in u F	Rated Working Voltage in V
Dissipation Factor	working voltage	10	16
	tan δ (MAX) (20°C ,120Hz)	0.35	0.22
		25	35
		50	63
		100	160-450
		0.15	0.12
		0.10	0.15
When capacitance is over 1000 μF, tan δ shall be added 0,02 with increase of every 1000 μF			
Temperature Stability	Rated Working Voltage		10
	Impedance	Z-25°C/z+20°C	4
	Ratio(120Hz)	Z-55°C/z+20°C	6
		16	3
		25	2
		35-250	3
		350-450	6
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +105°C for 2000 hours Capacitors meet the characteristics requirement measure at +20°C listed :		
	Capacitance Change	Within ± 20% of the initial measured value	
	Leakage current	Less than the initial specified value	
	tan δ	Less than 200% the initial specified value	
Shelf Life	After Leaving capacitor under no load at + 125°C for 1000 hours, Capacitors meet the characteristics listed above		

MULTIPLIER FOR RIPPLE CURRENT

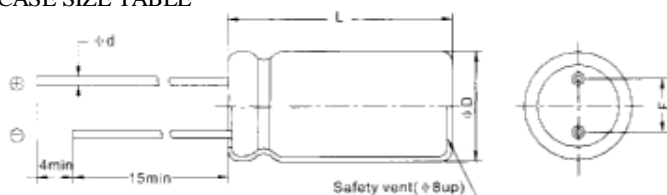
Frequency coefficient

Freq(Hz) Cap(μF)	50(60)	100(120)	1K	≥10K
0.47~33	0.20	0.45	0.70	1.00
4.7~1000	0.25	0.50	0.80	1.00

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ALUMINUM ELECTROLYTIC CAPACITOR(AN CD83H RK)

CASE SIZE TABLE

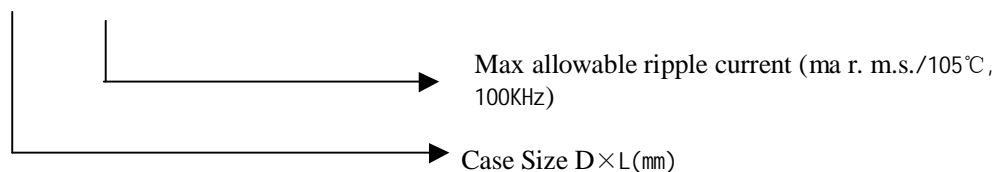


D	±0.5	±1.0			
	8	10	12.5	16	18
F±0.5	3.5	5	5	7.5	7.5
d±0.1	0.6	0.6	0.6	0.8	0.8
L	12	12,16,20	20~25	20~25,30	20,25,30
	L=12、16 L±1.5L=20. 25. 30 L±2.0				

RK DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(uF)	10(LB)		16(LC)		25(LD)		35(LE)		50(LF)		63(LG)		100(MA)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.47(R47)									8×12				8×12	15
1(1R0)									8×12	15			8×12	30
2.2(2R2)									8×12	35			8×12	70
3.3(3R3)									8×12	50	8×12	65	10×12	90
4.7(4R7)									8×12	70	8×12	120	10×12	110
10(100)									8×12	130	8×12	130	10×20	200
22(220)						-	8×12	150	10×12	180	10×12	180	12.5×25	350
33(330)					8×12	165	10×12	200	10×12	200	10×16	250		
47(470)			8×12	170	8×12	170	10×12	220	10×16	280	10×20	320		
100(101)	8×12	180	10×12	230	10×16	300	10×20	400	12.5×20	460	12.5×25	560		
220(221)	10×16	320	10×20	410	10×20	420	12.5×25	650						
330(331)	10×16	330	12.5×20	540	12.5×25	630								
470(471)	10×20	360	12.5×25	690										

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)
1.0(1R0)					8×12	90	8×12	90	8×12	80	8×12	70
1.8(1R8)					8×12	100	10×12	100	10×12	90	10×12	80
2.2(2R)					8×12	150	10×12	110	10×12	100	10×12	90
3.3(3R3)					10×12	200	10×16	150	10×16	150	10×16	100
4.7(4R7)			10×12	150	10×16	250	10×16	200	10×20	180	10×20	130
6.8(6R8)			10×16	180	10×20	280	10×16	220	10×16	220	10×20	150
10(100)	10×16	250	10×16	250	10×20	280	10×20	280	10×20	280	12.5×20	320
22(220)	10×20	500	10×20	500	12.5×20	600	12.5×20	350	12.5×25	430	16×25	560
									16×20		18×20	
33(330)	10×20	500	12.5×20	600	12.5×20	600	16×20	500	16×25	640	16×30	700
									18×20		18×25	
47(470)	12.5×20	660	12.5×20	660	12.5×25	720	16×25	660	16×30	840	18×30	880
					16×20		18×20		18×25			
68(680)	12.5×25	760	12.5×25	760	16×25	920	16×30	850	18×30	1000		
	16×20		16×20		18×20		18×25					
100(101)	16×25	1120	16×25	1120	16×30	1200						
	18×20		18×20		18×25							
150(151)	16×30	1360	16×30	1360	18×30	1500						
	18×25		18×25									
220(221)	16×30											
	18×25											



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Aluminum Electrolytic Capacitors

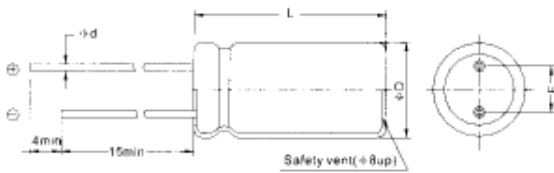
AN CD117 WS series

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz) \ Cap(μF)	50(60)	100(120)	300	1k	10k
047-47	0.8	1.0	1.20	1.30	1.50

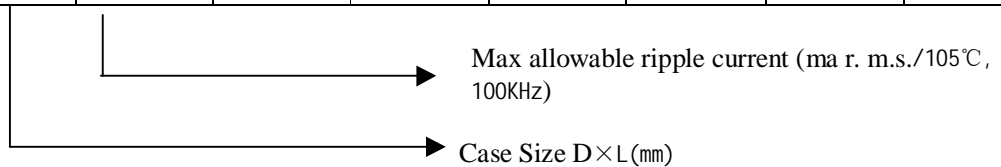
CASE SIZE TABLE



D	±0.5		±1.0	
	6.3	8	10	12.5
F±0.5	2.5	3.5	5	5
d±0.1	0.5	0.6	0.6	0.6
L	11	12	12;16;20	20
	L=12, 16 L±1.5		L=20, 25, 30 L±2.0	

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

Cap(μF) \ WV(v)	10(LB)		16(LC)		25(LD)		50(LF)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.47(R47)							6.3×11	14
1.0(IR0)					6.3×11	20	6.3×11	20
2.2(2R2)			6.3×11	26	6.3×11	26	6.3×11	26
3.3(3R3)			6.3×11	32	6.3×11	32	6.3×11	32
4.7(4R7)	6.3×11	43	6.3×11	40	6.3×11	40	8×12	43
10(100)	8×12	75	8×12	65	10×12	70	10×16	75
22(220)	10×12	95	10×12	100	10×16	110	10×20	131
33(330)	10×16	120	10×16	120	10×20	150	12.5×20	176
47(470)	10×20	150	10×20	150	12.5×20	172		



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Aluminum Electrolytic Capacitors

AN CD71 NP series

- * Life time: **85°C 1000 hours**
- * **None-polarity**
- * Ideally suited for high stability circuits



I SPECIFICATIONS

Item	Performance Characteristics																																					
Rated Voltage Range	63V.DC~ 100V.DC																																					
Operating Temperature Range	-40°C ~ + 85°C																																					
Nominal Capacitance Range	0.1 μF~1000 μF																																					
Capacitance Tolerance	±20%(M,+20°C, 120Hz)																																					
Leakage Current	After application of rated voltage for 2 minute: $1 \leq 0.03 CV$ or $5 \mu A$ (Whichever is greater) 20°C C: Nominal Capacitance in u F V:Rated Working Voltage in V																																					
Dissipation Factor	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 15%;">working voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>$\tan \delta$ (MAX) (20°C ,120Hz)</td> <td>0.25</td> <td>0.25</td> <td>0.20</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> </tr> </table> When capacitance is over 1000 μF, $\tan \delta$ shall be added 0.02 with increase of every 1000 μF									working voltage	6.3	10	16	25	35	50	63	100	$\tan \delta$ (MAX) (20°C ,120Hz)	0.25	0.25	0.20	0.20	0.15	0.15	0.15	0.15											
working voltage	6.3	10	16	25	35	50	63	100																														
$\tan \delta$ (MAX) (20°C ,120Hz)	0.25	0.25	0.20	0.20	0.15	0.15	0.15	0.15																														
Temperature Stability	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td colspan="2">Rated Working Voltage</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td rowspan="2">Impedance Ratio(120Hz)</td> <td>Z-25°C/z+20°C</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td colspan="4">2</td> </tr> <tr> <td>Z-55°C/z+20°C</td> <td>12</td> <td>10</td> <td>8</td> <td>6</td> <td colspan="2">4</td> <td colspan="2">3</td> </tr> </table>									Rated Working Voltage		6.3	10	16	25	35	50	63	100	Impedance Ratio(120Hz)	Z-25°C/z+20°C	6	4	4	3	2				Z-55°C/z+20°C	12	10	8	6	4		3	
Rated Working Voltage		6.3	10	16	25	35	50	63	100																													
Impedance Ratio(120Hz)	Z-25°C/z+20°C	6	4	4	3	2																																
	Z-55°C/z+20°C	12	10	8	6	4		3																														
Load Life	After application of rated working voltage and maximum permissible ripple current specified of +85°C for 1000×2 hours Capacitors meet the characteristics requirement measured at +20°C listed : <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 40%;">Capacitance Change</td> <td>Within ± 20% of the initial measured value</td> </tr> <tr> <td>Leakage current</td> <td>Less than the initial specified value</td> </tr> <tr> <td>$\tan \delta$</td> <td>Less than 200% the initial specified value</td> </tr> </table>									Capacitance Change	Within ± 20% of the initial measured value	Leakage current	Less than the initial specified value	$\tan \delta$	Less than 200% the initial specified value																							
Capacitance Change	Within ± 20% of the initial measured value																																					
Leakage current	Less than the initial specified value																																					
$\tan \delta$	Less than 200% the initial specified value																																					
Shelf Life	After Leaving capacitor under no load at + 105°C for 500 hours, Capacitors meet the characteristics listed above																																					

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Aluminum Electrolytic Capacitors

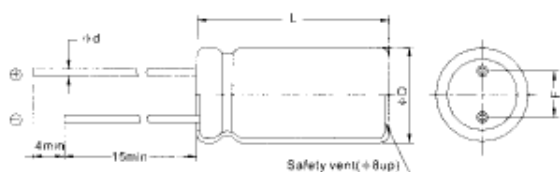
AN CD71 NP series

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Cap(μF) \ Freq(Hz)	50(60)	100(120)	500	1k	≥10KHz
0.1-1	0.50	1.00	1.20	1.30	1.50
2.2-4.7	0.65	1.00	1.20	1.30	1.50
10-47	0.80	1.00	1.20	1.30	1.50
100-1000	0.80	1.00	1.10	1.15	1.20

CASE SIZE TABLE



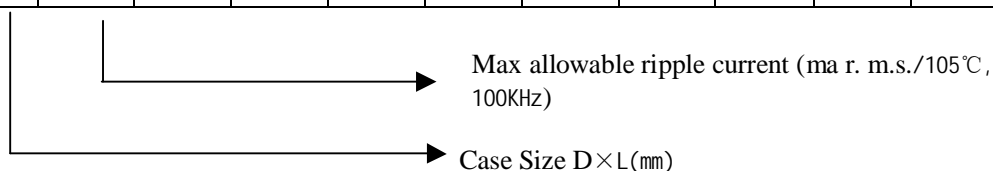
D	±0.5			±10	
	5	6.3	8	10	12.5
F±0.5	2.0	2.5	3.5	5	5
d±0.1	0.5	0.5	0.6	0.6	0.6
L	5:7:11	5:7:11	5:7:12	12:16:20	20:25
	L=5、7、11、12、16: L±1.5: L=20、25: L±2.0				

5mm DIMENSIONS. RATED VOLTAGE AND CAPACITANCE

WV(V) \ Cap(μF)	6.3(LA)		10(LB)		16(LC)		25(LD)		35(LE)		50(LF)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.1(R10)											4×5	1
0.22(R22)											4×5	2
0.33(R33)											4×5	2
0.47(R47)											4×5	3
1(1R0)											5×5	5
2.2(2R2)									4×5	9	5×5	10
3.3(3R3)							5×5	10	5×5	11	5×5	13
4.7(4R7)					4×5	12	5×5	13	5×5	14	6.3×5	17
10(100)	4×5	14	5×5	18	5×5	20	6.3×5	21	6.3×5	24		
22(220)	5×5	25	6.3×5	30	6.3×5	32	6.3×5	27				
33(330)	6.3×15	35	6.3×5	37	6.3×5	39						
47(470)	6.3×5	40	6.3×5	43								

7mm DIMENSIONS. RATED VOLTAGE AND CAPACITANCE

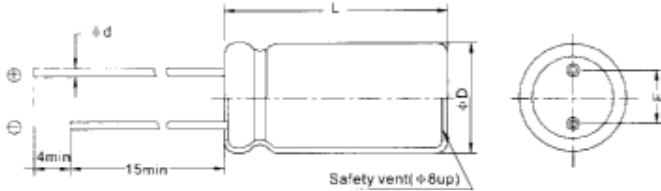
WV(V) \ Cap(μF)	6.3(LA)		10(LB)		16(LC)		25(LD)		35(LE)		50(LF)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.1(R10)											4×7	1
0.22(R22)											4×7	2
0.33(R33)											4×7	3
0.47(R47)											4×7	5
1(1R0)											4×7	10
2.2(2R2)									4×7	13	5×7	15
3.3(3R3)							4×7	15	5×7	19	5×7	19
4.7(4R7)					4×7	15	4×7	18	5×7	22	6.3×7	26
10(100)			4×7	23	4×7	25	6.3×7	35	6.3×7	37		
22(220)	5×7	32	5×7	35	6.3×7	45	6.3×7	50				
33(330)	5×7	40	6.3×7	45	6.3×7	60						
47(470)												



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ALUMINUM ELECTROLYTIC CAPACITOR(CD71 NP)

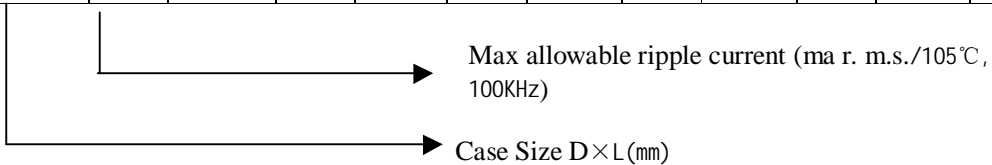
CASE SIZE TABLE



D	±0.5			±10	
	5	6.3	8	10	12.5
F±0.5	2.0	2.5	3.5	5	5
d±01	0.5	0.5	0.6	0.6	0.6
L	5:7:11	5:7:11	5:7:12	12:16:20	20:25
	L=5、7、11、12、16: L±1.5:			L=20、25: L±2.0	

11mm DIMENSIONS, RATED VOLTAGE AND CAPACITANCE WV(V)

WV(V) Cap(μF)	6.3(LA)		10(LB)		25(LD)		35(LE)		50(LF)		63(LG)		100(MA)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
0.47(R47)									5×11	8			5×11	10
1.0(1R0)									5×11	12			5×11	15
2.2(2R2)									5×11	19			5×11	20
3.3(3R3)									5×11	25			5×11	27
4.7(4R7)									5×11	35	5×11	35	6.3×11	37
10(100)									5×11	40	6.3×11	45	8×12	65
22(220)							5×11	65	6.3×11	72	8×12	82	10×12	96
33(330)					5×11	77	6.3×11	90	6.3×11	95	8×12	100	10×16	125
47(470)					6.3×11	100	6.3×11	110	8×12	130	10×12	140	10×20	165
100(101)	5×11	100	6.3×11	115	8×12	175	10×12	220	10×16	235	10×20	250	12.5×25	285
220(221)	6.3×11	160	8×12	205	10×12	295	10×20	390	12.5×20	460	12.5×25	490		
330(331)	8×12	225	8×12	240	10×16	380	12.5×20	540	12.5×25	590				
470(471)	8×12	250	10×12	345	10×20	510	12.5×25	640						
1000(1 02)														



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Aluminum Electrolytic Capacitors

AN CD72S HA series

- * Life time: **85°C 1000 hours**
- * **None-polarity**
- * Ideally suited for high stability circuits



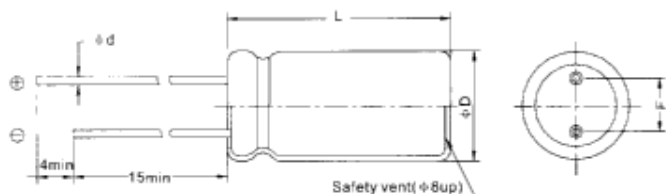
I SPECIFICATIONS

Item	Performance Characteristics						
Rated Voltage Range	25V.DC~ 50V.DC						
Operating Temperature Range	-40°C ~ + 85°C						
Nominal Capacitance Range	1 μF~10 μF						
Capacitance Tolerance	±20%(M,+20°C, 120Hz)						
Leakage Current	After application of rated voltage for 2 minute: $I \leq 0.2 CV 20^\circ C$ C: Nominal Capacitance in u F V:Rated Working Voltage in V						
Dissipation Factor	≤ 0.5						
Temperature Stability	Capacitance change shall be within +10% of the value at + 20°C over operatating temperature range						
Load Life	After application of DC 12V and ripple current at + 85°C for 1000×2 hours Capacitors meet the characteristics requirement measured at +20°C listed below : <table border="1" style="margin-left: 20px; border-collapse: collapse;"> <tr> <td>Capacitance Change</td> <td>Within ± 15% of the initial measured value</td> </tr> <tr> <td>Leakage current</td> <td>Less than the initial specified value</td> </tr> <tr> <td>tan δ</td> <td>Less than 200% the initial specified value</td> </tr> </table>	Capacitance Change	Within ± 15% of the initial measured value	Leakage current	Less than the initial specified value	tan δ	Less than 200% the initial specified value
Capacitance Change	Within ± 15% of the initial measured value						
Leakage current	Less than the initial specified value						
tan δ	Less than 200% the initial specified value						
Shelf Life	After Leaving capacitor under no load at + 85°C for 1000 hours, Capacitors meet the characteristics listed above						

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

Nominal Capacitance	1.0(1R0)	1.5(1R5)	2.2(2R2)	3.3(3R3)	4.7(4R7)	6.8(6R8)	8.2(8R2)	10(100)
Case Size	10×20	10×20	12.5×20	16×25	16×25	16×30	16×35	18×35
Max Ripple current (AP-P)at85°C 15.75KHz)	1.8	2.0	3.3	4.5	5.8	7.8	9.0	9.5

CASE SIZE TABLE



D±1.0	10	12.5	16	18
F±0.5	5	5	7.5	7.5
d± 0.1	0.6	0.6	0.8	0.8
L ± 2.0	20	20	25:30:36	35

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Aluminum Electrolytic Capacitors

AN CD71P HP series

* Life time:85~C(105°C) 1000 hours

I **Non-polarity,**

I low dissipation

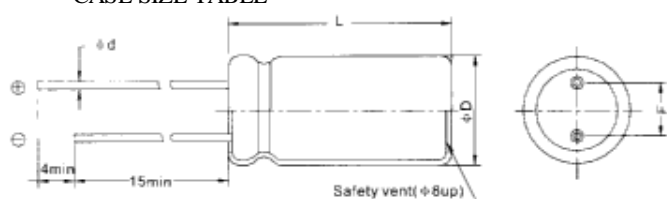
* For speaker crossover net Hi-Fi audio



I SPECIFICATIONS

Item	Performance Characteristics						
Rated Voltage Range	50V.DC						
Operating Temperature Range	-40°C ~ + 85°C (105°C)						
Nominal Capacitance Range	1 μF~100 μF						
Capacitance Tolerance	P grade ±15% D grade ±20% (20°C, 1KHz)						
Leakage Current	After application of rated voltage for 2 minute: $I \leq 0.03CV + 5 \mu A$ 20°C (whichever is greater) 20°C C: Nominal Capacitance in u F V:Rated Working Voltage in V						
Leakage Current (20°C)	<table border="1"> <thead> <tr> <th>Frequency</th> <th>1KHz</th> <th>10KHz</th> </tr> </thead> <tbody> <tr> <td>tan δ</td> <td>0.05</td> <td>0.15</td> </tr> </tbody> </table>	Frequency	1KHz	10KHz	tan δ	0.05	0.15
Frequency	1KHz	10KHz					
tan δ	0.05	0.15					
Load Life	After application of DC 12V and maximum permissible ripple current 1000×2 hours at + 85°C (105°C), Capacitors meet the characteristics requirement measured at +20°C listed below : <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ± 15% of the initial measured value</td> </tr> <tr> <td>Leakage current</td> <td>Less than the initial specified value</td> </tr> <tr> <td>tan δ</td> <td>Less than 200% the initial specified value</td> </tr> </tbody> </table>	Capacitance Change	Within ± 15% of the initial measured value	Leakage current	Less than the initial specified value	tan δ	Less than 200% the initial specified value
Capacitance Change	Within ± 15% of the initial measured value						
Leakage current	Less than the initial specified value						
tan δ	Less than 200% the initial specified value						
Shelf Life	After Leaving capacitor under no load at + 85°C (105°C) for 500 hours, Capacitors meet the characteristics listed above						

CASE SIZE TABLE



D±1.0	10	12.5	16	18
F±0.5	5	5	7.5	7.5
d± 0.1	0.6	0.6	0.8	0.8
L ± 2.0	20	20	25:30	40

HP DIMENSIONS,RATED VOLTAGE AND CAPACITANCE

P GRADE FEATURES

Cap(μF)	WV(V)	50(LF)	
		(1)	(2)
1.0(1R0)		10×20	60
1.5(1R5)		10×20	76
2.2(2R2)		12.5×20	96
3.3(3R3)		16×25	144
4.7(4R7)		16×25	192
6.8(6R8)		16×30	226
10(100)		18×40	264

Max allowable ripple current
(ma r. m.s./105°C, 100KHz)

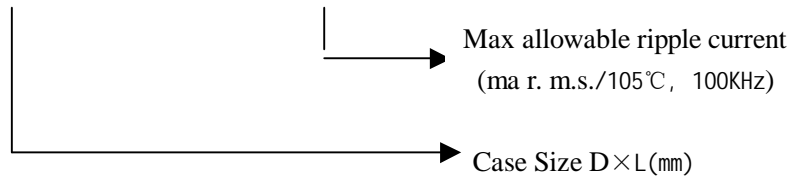
Case Size D×L(mm)

Alumimum Electrolytic Capacitors

HT DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

D GRADE FEATURES

Cap (µF) \ WW(V)	50(LF)	
	(1)	(2)
1(1R0)	6.3×11	27
1.5(1R5)	6.3×11	30
2.2(2R2)	8×12	34
3.3(3R3)	8×12	60
47(4R7)	8×12	76
6.8(6R8)	10×12	94
10(100)	10×16	112
15(150)	10×20	138
22(220)	12.5×20	234
33(330)	12.5×25	288
47(470)	16×25	360
68(680)	16×30	450



Aluminum Electrolytic Capacitors

AN CD294 LH series

- * Life time: **105°C 1000 hours**
- * **Snap-in type**
- * Ideally suited for switching power supplies
telecommunication and other electronic products



I SPECIFICATIONS

Item	Performance Characteristics										
Rated Voltage Range	10V.DC~ 100V.DC					160V.DC~ 450V.DC					
Operating Temperature Range	-40°C ~ + 105°C					-25°C ~ + 105°C					
Nominal Capacitance Range	680 μF~56000 μF					47 μF~22000 μF					
Capacitance Tolerance	±20% (M,+20°C, 120Hz)										
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in u F Rated Working Voltage in V										
Dissipation Factor	working voltage	10	16	25	35	50	63	80	100	160-450	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
Temperature Stability	Rated Working Voltage		10-100			160-250			350-450		
	Impedance	Z-25°C/z+20°C		3			3			8	
	Ratio(120Hz)	Z-55°C/z+20°C		12							
Load Life	After applying rated voltage for 1000 hours at +105°C, Capacitors meet the characteristics requirement measured at +20°C listed below:										
	Capacitance Change		Within ± 20% of the initial measured value								
	Leakage current		Less than the initial specified value								
	tan δ		Less than 200% the initial specified value								
Shelf Life	After Leaving capacitor under no load at + 105°C for 1000 hours, Capacitors meet the characteristics listed above.										

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz) WV(V)	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

Ancol

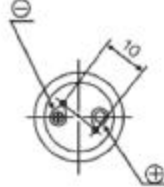
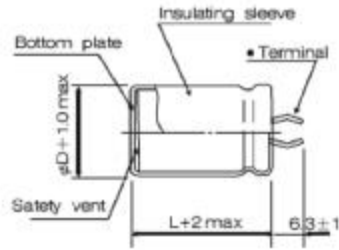
Aluminum Electrolytic Capacitors AN CD294 LH series

CASE SIZE TABLE

DRAWING

Unit:mm

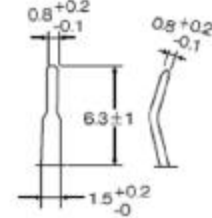
DRAWING



PC Board Mounting Holes



Terminal



There are two available dimensions, one is 6.3 ± 1.0 mm Length Shorter terminal (4.6 ± 0.5) is also available upon request

LH DIMENSIONS RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μ)	10(L8)		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)															22725	09
820(821)															22730	1 32
1000(102)													22×25	19	22×30	1.45
1200(122)											22×25	1.20	22×30	1.44	22×35	1.69
1500(152)											22×30	1.47	22×30	1.59	22×40	1.98
1800(182)									22×25	1.34	22×30	1.58	22×35	1.79	22×45	2.20
2200(222)									22×30	1.60	22×35	1.82	22×40	2.03	25×45	2.55
2700(272)									22×30	1.70	22×40	2.11	22×45	2.35	25×50	282
3300(332)							22×25	1.45	22×35	1.88	22×45	2.27	25×45	2.64	30×45	330
3900(392)							22×30	1.69	22×30	2.20	25×40	2.51	25×50	2.92	30×50	3.60
4700(472)					22×25	1.61	22×35	2.02	22×45	2.43	25×50	2.97	30×45	3.34	35×45	380
5600(562)					22×30	1.80	22×35	2.00	22×50	2.72	30×40	3.22	30×50	3.80	35×50	4.05

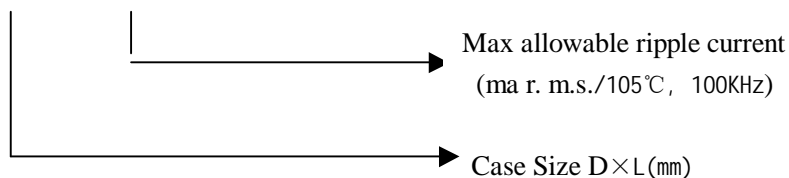
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									30×30							
6800(682)			22×25	1.75	22×35 25×25	2.09	22×40 25×35	241	25×45 30×35	330	30×50	365	35×45	3.90		
8200(822)			22×30	2.00	22×40 25×30	2.34	22×50 25×40 30×30	2.73	30×40 35×35	3.60	35×45	4.04	35×50	4.20		
10000(103)	22×25	1.77	22×30 25×25	2.10	22×45 25×35 30×30	265	25×45 30×35	305	30×50 35×40	405	35×50	448				
12000(123)	22×30 25×25	2.10	22×35 25×30	2.58	22×50 25×40 30×30	2.80		3.37	35×45	456						
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	372	35×50	477						
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	250 3.07	25×45 30×35	330	30×45	404	35×45	4.92								
27000(273)	22×50 25×40 30×30		25×50 30×40 35×35	3.85	35×45	4.74										
33000(333)	25×45 30×35		30×45	4.30	35×50	550										
39000(393)	30×40	3.70	30×50 35×40	4.80												
47000(473)	30×45	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	0.725

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											30 × 30	
150(151)							22×35 25×30	0.73	22×40 25×35	0.85	22×50 25×40 30×35	0.85
180(181)					22×5	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	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	30×0 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	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 30×0 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	36×50	3.45								
2200(222)	35×45	3.34										



Aluminum Electrolytic Capacitors

AN CD295 LK series

- * Life time: **85~C 2000 hours**
- * **Snap-in type**
- * Ideally suited for switching power supplies
telecommunication and other electronic products



I SPECIFICATIONS

Item	Performance Characteristics										
Rated Voltage Range	10V.DC~ 100V.DC					160V.DC~ 450V.DC					
Operating Temperature Range	-40°C ~ + 105°C					-25°C ~ + 85°C					
Nominal Capacitance Range	820 μF~820000 μF					47 μF~2700 μF					
Capacitance Tolerance	±20%(M,+20°C, 120Hz)										
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in u F Rated Working Voltage in V										
Dissipation Factor	working voltage	10	16	25	35	50	63	80	100	160-450	350-450
	$\tan \delta$ (MAX) (20°C ,120Hz)	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.15
Temperature Stability	Rated Working Voltage		10-100		160-250		350-450				
	Impedance	Z-25°C/z+20°C		3		4		12			
	Ratio(120Hz)	Z-55°C/z+20°C		12							
Load Life	After application of rated working voltage and maximum permissible current specified at +85°C for 2000 hours, Capacitors meet the characteristics requirement measured at +20°C listed below:										
	Capacitance Change		Within ± 20% of the initial measured value								
	Leakage current		Less than the initial specified value								
	$\tan \delta$		Less than 200% the initial specified value								
Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.										

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz) WV(V)	50(60)	100(120)	500	1k	≥10k
10-100	0.90	1.00	1.05	1.10	1.15
160-250	0.80	1.00	1.20	1.30	1.50
350-450	0.80	1.00	1.05	1.10	1.15

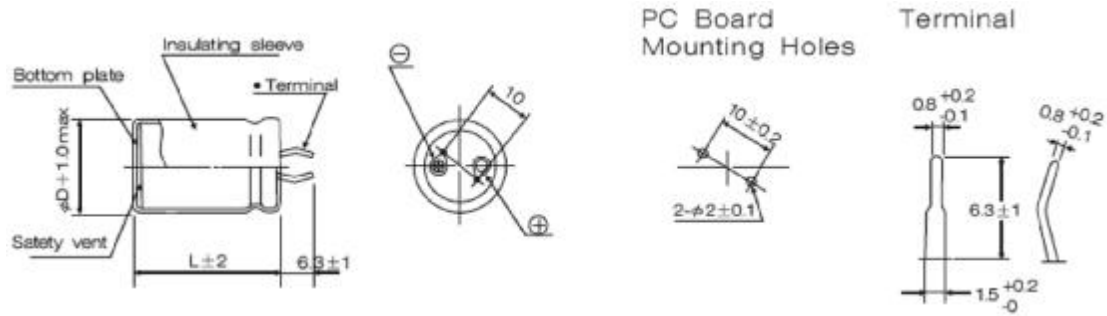
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Aluminum Electrolytic Capacitors- AN CD295 LK series

CASE SIZE TABLE

DRAWING

Unite:mm



There are two available dimensions, one is 6.3 ± 1.0 mm Length Shorter terminal (4.6 ± 0.5) is also available upon request

DIMENSIONS RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	10(LB)		15(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	18	
1000(102)															22×30	2.0	
1200(122)													22×25	1.70	22×35	21	
1500(152)													22×30	2.00	25×35	2.4	
1800(182)												22×25	1.90	22×40	2.50	22×45	3.2
2200(222)									22×25	1.90	22×35	2.30	22×40	2.50	25×40	2.7	
2700(272)									22×30	2.20	22×45	2.50	22×45	2.90	22×45	3.6	
3300(332)									22×30	2.40	22×40	2.60	22×50	3.20	30×45	4.0	
3900(392)									25×25	2.20	25×35	2.70	25×40	3.20	35×40	4.0	
4700(472)									22×30	2.40	22×40	3.00	22×50	3.30	25×50	4.20	
5600(562)									25×30	2.30	22×35	2.70	25×40	3.30	30×40	5.1	
6800(662)									22×25	2.30	22×35	2.70	25×40	3.80	30×45	5.7	
8200(822)									25×30	2.50	22×40	2.80	25×50	4.40	35×50	5.7	
									25×30	2.80	22×40	2.80	25×50	5.10	35×60	6.0	
									30×35	3.30	25×45	3.30	30×45	5.80			
									25×45	4.40	30×45	4.90	35×50				

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					25×30		25×35 30×30		25×35 30×30		35×35					
10000(103)	22×25	1.87	22×30	2.80	22×35 25×30	3.10	22×50 22×40 30×30	3.50	30×40 35×35	5.00	30×50 35×40	5.40	35×60	6.50		
12000(123)	22×25	2.40	22×30 25×25	3.10	22×40 25×25	3.50	30×40 35×35	4.00	30×50 35×40	5.60	35×50	6.30				
15000(153)	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						
18000(183)	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						
22000(223)	22×40 25×30	3.80	22×50 25×40 30×30	4.50	30×40 35×35	5.20	35×45	6.30								
27000(273)	25×35	4.00	22×45 30×35	4.80	30×40 35×35	6.00	35×50	6.90								
33000(333)	22×50 25×40 30×30	4.50	25×50 30×40 35×35	5.30	35×45	6.70	35×60	7.80								
39000(393)	25×45 30×35	5.20	30×45 35×35	6.10	35×50	7.50	35×60	8.10								
47000(473)	25×50 30×40 35×35	5.70	30×50 35×40	6.80												
56000(563)	30×45 35×35	6.40	35×45	7.60												
68000(683)	30×50 35×40	7.50														
82000(823)	35×50	8.50														

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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)									22×25	0.50	22×25	0.50
68(680)									22×25	0.68	22×25	0.68
82(820)									22×5	0.80	22×30	0.80
100(101)									22×30	0.90	22×35 25×25	0.90
120(121)							22×25	0.99	22×30 25×25	1.08	22×35 25×30	1.00
270(271)			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
330(331)	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	2.00
390(391)	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
470(471)	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
560(561)	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
680(681)	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		
820(821)	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				
1000(102)	22×50 25×45 30×/35	2.80	25×50 30×40	3.00	30×50 35×40	3.30	35×60	3.50				
1200(122)	25×50 30×40	3.20	25×50 30×40 35×35	3.40	30×50 35×40	3.80						



Aluminum Electrolytic Capacitors

AN CD292 LQ series

- * Life time: **85~C 2000 hours**
- * **Snap-in** type
- * Ideally suited for switching power supplies
telecommunication and other electronic products



I SPECIFICATIONS

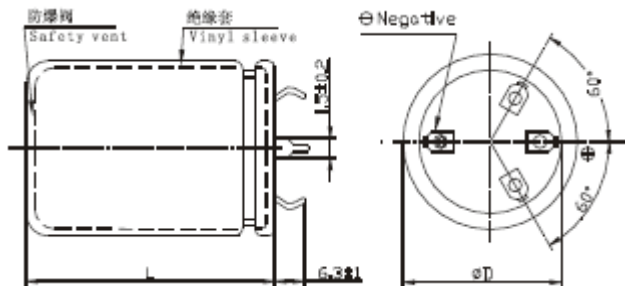
Item	Performance Characteristics	
Rated Voltage Range	10V.DC~ 100V.DC	160V.DC~ 450V.DC
Operating Temperature Range	-40°C ~ + 85°C	-25°C ~ + 85°C
Nominal Capacitance Range	820 μF~820000 μF	47 μF~2700 μF
Capacitance Tolerance	±20%(M,+20°C, 120Hz)	
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in u F Rated Working Voltage in V	
Dissipation Factor	working voltage	10 16 25 35 50 63 80 100 160-450 350-450
	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
Temperature Stability	Rated Working Voltage	10-100 160-250 350-450
	Impedance	Z-25°C/z+20°C 3 4 12
	Ratio(120Hz)	Z-55°C/z+20°C 12
Load Life	After application of rated working voltage and maximum permissible current specified at +85°C for 2000 hours, Capacitors meet the characteristics requirement measured at +20°C listed below:	
Shelf Life	Capacitance Change	Within ± 20% of the initial measured value
	Leakage current	Less than the initial specified value
Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.	

LQ CASE SIZE TABLE(ΦD≥35)

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq(Hz)	50(60)	(100)120	500	1k	10k
10~100	0.90	1.00	1.15	1.10	1.15
160-250	0.80	1.00	1.20	1.30	1.50
350~450	0.80	1.00	1.05	1.10	1.15

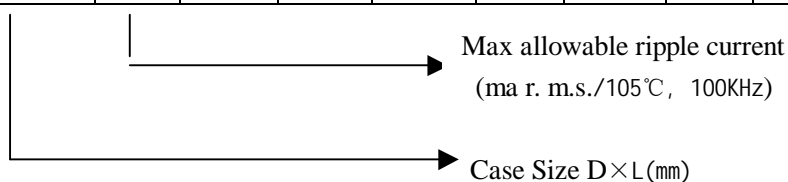


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AN CD292 LQ DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	1 0(LB)		1 6(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)	
3300(332)															35×40	4.00	
3900(392)															35×35	4.60	
4700(472)													35×40	4.20	35×45	5.10	
5600(562)													35×35	4.50	35×50	5.70	
6800(682)												35×35	4.40	35×40	5.10	35×60	6.00
8200(822)												35×35	4.90	35×50	5.80		
10000(103)									35×35	5.00		35×40	5.40	35×60	6.50		
12000(123)									35×40	5.60		35×50	6.30				
15000(153)							35×35	4.80	35×45	6.40							
18000(183)							35×40	5.70	35×50	6.70							
22000(223)					35×35	5.20	35×45	6.30									
27000(273)					35×40	6.00	35×50	6.90									
33000(333)			35×35	5.30	35×45	6.70	35×60	7.80									
39000(393)			35×35	6.10	35×50	7.50	35×60	8.10									
47000(473)	35×35	5.70	35×40	6.80													
56000(563)	35×36	6.40	35×45	7.60													
68000(683)	35×40	7.50															
82000(823)	35×50	7.50															

WV(V) Cap(μF)	1 60(MB)		200	MC	250	MD	350	MF	400(VA)	450(V6)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1>	(2)	(1)	(2)	(1)	(2)
270(271)											35×35	1.80
330(331)											38×35	2.00
390(391)									35×35	2.10	35×40	2.20
470(471)							35×35	2.40	35×40	2.40	35×45	2.50
560(561)							35×35	2.60	35×45	2.70	35×60	3.10
680(681)							35×40	3.00	35×50	2.90		
820(821)							35×50	3.30				
1000(102)					35×40	3.30	35×60	3.50				
1200(122)			35×35	3.40	35×40	3.80						
1500(152)	35×40	3.70	35×40	3.90	35×50	4.10						
1800(182)	35×40	4.10	35×45	4.30	35×50	4.30						
2200(222)	35×45	4.70	35×50	5.00								
2700(272)												



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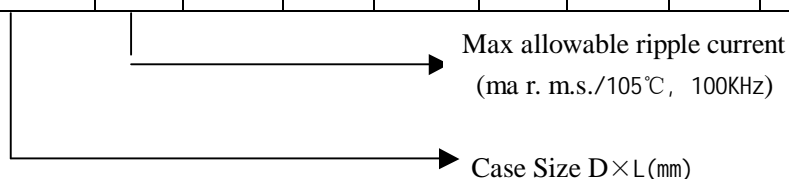
CD292P LP --DIMENSIONS RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	10(LB)		16(LC)		25(LD)		35(LE)		50(LF)		63(LG)		80(LH)		1 00(MA)		
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	
1200(122)															25×30	2.	
1500(152)															25×35 30×30	2.	
1800(182)													25×25	220	25×35	2.	
2200(222)												25×25	2.30	25×30	2.50	25×40 30×35	3.
2700(272)												25×30	2.50	25×/35 30×30	2.90	25×45 30×35	3.
3300(332)										25×25	2.40	25×35	2.60	25×45 30×35	3.20	30×/45 35×40	4.
3900(392)										25×30	2.70	25×35 30×30	3.10	25×45	3.60	30×45	4.
4700(472)							25×25	2.40	25×30	3.00	25×40 30×30	3.30	25×50 35×40	4.20	35×45	5.	
5600(562)							25×30	2.70	25×35 30×30	3.40	25×45 30×35	3.80	30×45 35×35	4.0	35×50	5.	
6800(682)							25×30	2.80	25×40 30×35	3.80	25×50 30×40 35×35	4.40	30/50 35/40	5.10	35×60	6.	
8200(822)					25×25	2.80	25×35 30×30	3.30	25×45 30×35	4.40	30×45	4.90	35×50	5.80			
10000(103)					25×30	3.10	25×40 30×30	3.50	30×40	5.00	30×50 35×40	5.40	35×60	6.50			
12000(123)			25×25	3.10	25×35	3.50	25×45		30×50 35×40	5.60	35×50	6.30					
15000(153)	25×25	2.80	25×30	3.60	25×40 30×30	4.00	30×40	4.80	35×45	6.40							
18000(183)	25×30	3.20	25×35 30×30	3.90	25×45 30×35	4.60	30×45 35×40	5.70	35×50	6.70							
22000(223)	25×30	3.60	25×40 30×30	4.50	30×40 ~	5.20	35×45	6.30									
27000(273)	25×35	4.00	25×45 30×35	4.80	30×45 35×40	6.00	35×50	6.90									
33000(333)	25×40 30×30	4.50	25×50 30×40 35×35	5.30	35×45	6.70	35/60	7.80									
39000(393)	25×45 30×35	5.20	30×45 35×35	6.10	35×50	7.50	35×60	8.10									
47000(473)	25×50 30×40 35×35	5.70	30×50	6.80													

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56000(563)	30×45 35×35	6.40	35×45	7.60												
68000(683)	30× 50	7.50														
82000(823)	35×50	8.50														

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)
100(101)											25×25	0.90
120(121)									25×25	1.08	25×30	1.00
150(151)							25×25	1.00	25×35	1.20	25×35 30×30	1.00
180(181)							25×30	1.30	25×35	1.30	25×40 30×30	1.30
220(221)					25×25	1.10	25×35	1.40	25×40 30×35	1.50	25×45 30×35	1.50
270(271)					25×30	1.40	25×40 30×35	1.60	25×40 30×35	1.70	25×50 30×40 35×35	1.80
330(331)			25×25	1.40	25×30	1.50	25×/ 40 30×35	1.80	25×50 30×40	1.90	30×45	2.00
390(391)	25×30	1.50	25×30	1.60	25×30	1.70	25×/45 30×35	2.10	30×40	2.10	30×50 35×40	2.20
470(471)	25×30	1.70	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
560(561)	25×30	2.00	25×35	2.00	25×40 30×35	2.30	30×45 ~	2.60	35×45	2.70	35×60	3.10
680(681)	25×40	2.20	25×40 30×30	2.30	25×45 30×40	2.50	35×40	3.00	35×50	2.90		
820(821)	25×40 30×35	2.50	25×40 30×35	2.60	25×50 30×40	2.80	35×50	3.30				
1000(102)	25×45 30×35	2.80	25×50 30×40	3.00	30×50 35×40	3.30	35×60	3.50				
1500(152)	30×45 35×40	3.70	30×0 35×0	3.90	35×50	4.10						
1800(182)	30×50 35×40	4.10	35×45 30×50	4.30	35×50	4.30						
2200(222)	35×45	4.70	35×50	5.00								
2700(272)	35×50	5.30										



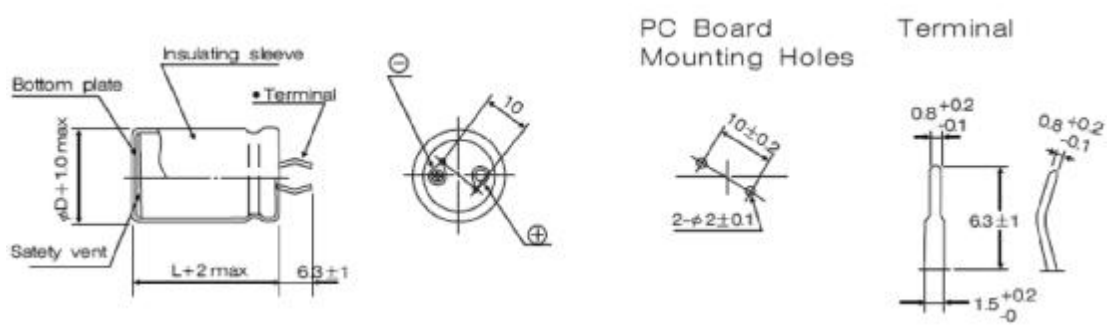
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ALUMINUM ELECTROLYTIC CAPACITOR(AN CD295A LA)

CABLE SIZE TABLE

DRAWING

Unit:mm



There are two available dimensions, one is 63 ± 1.0 mm Length Shorter terminal (4.5 ± 0.5) is also available upon request

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(uF)	10 (LB)		16 (LC)		25 (LO)		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)																	22×25	1.00
680(681)																	22×30	1.20
820(821)													22×25	1.00			22×35	1.20
													25×25					
1000(102)												22×25	1.10	22×30	1.20		22×140	1.50
																	25X30	
1200(122)												22×25	1.10	22×35	1.30		22×45	1.70
														25×125			25×35	
														30×30			30×30	
1500(152)									22×125	1.20		22×30	1.40	22×40	1.70		22×15	2.00
											25×125		25×30				25×40	
													25×30				30×30	
1800(182)									22×25	1.30		22×35	1.60	22×48			25×45	2.20
											25×30		25×35			30x35		
2200(222)									22×30	1.50		22×40	1.85	22×145	2.20		30×40	2.50
									25×25			25×30		30×30				
2700(272)							22×25	1.20	22×35	1.70		22×45	2.10	30×35	2.50		30×45	2.80
									25×30			25×35					35×40	
												30×30						
3300(332)		-					22X30	1.50	22X40	2.00			2.20	30X40	2.60		35>145	3.20
									25>130					35X35				
3900(392)					22×25	1.30	22×35	1.60	22×45	2.20	25×45	2.50	30×45	3.00			35×50	3.50
					25×25		25×25		25×35		30×38		35×40					
							30×30											
4700(472)					22×30	1.50	22×40	2.00	25×40	2.40			2.80	35×45	3.40			

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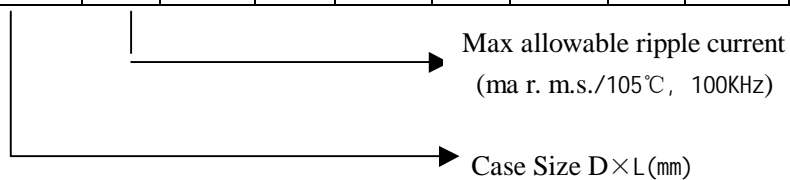
							25X30		30×30								
5600(862)			22×25	1.40	22×35 25X25	1.60	22×45 25×35	225	25×45 30×35	2.00		3.20	35×80	3.70			
6800(682)			22×30	1.60	22×40 25×30	2.00	22×50 25×40 30×30	2.45	30×40 35×35	3.00	35×45	3.60					
8200(822)	22×25	1.30	22×30 25×25	1.70	22×45 25×38	220	25×45 30×35	2.80	30×50 35×140	3.60	35×150	3.90					
10000(103)	22×30	1.65	22×35 25×30	208	22×50 25×40 30×30	2.50	30×40	3.00	35×45	3.80							
12000(123)	22×35 25×25	185	22×40 25×35	2.35	25×45 30×35	270	30×45 35×35	3.30	35×50	4.00							
15000(153)	22×40 25×30	2.10	22×45 25×40 30×30	2.70	30×40	3.10	35×40	3.80									
18000(183)	22×45 25×35 30×30	240	25×48 30×38	3.00	30×45 35×35	3.50	38×45	4.40									
22000(223)	25×40 30×30	2.70	25×50 30×40	3.40	30×50 35×40												
27000(273)	25×45 30×35	3.00	30×45 35×35	3.85	35×50	4.70											
33000(333)	25×50 30×40 35×35	3.50		4.30													
39000(393)	30×45 35×40	380	35×45	4.90													
47000(473)		4.60	35×50	5.40													
56000(563)	35×50	5.00															

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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)									22×25	0.30	22×25	0.35
68(680)							22×25	0.34	22×30	0.35	22×30	0.40
82(820)							22×30	0.40	22×30 25×25	0.40	25×30	0.45
100(101)							22×30 25×25	0.46	22×35 25×30	0.45	22×40 25×35	0.50
120(121)							22×35 25×30	0.52	22×40 25×35	0.55	22×45 25×40	0.60

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									30×30			
150(151)					22×25	0.52	22×40 25×5	0.60	22×50 25×40 30×30	0.65	25×45 30×35	0.70
180(181)			22×25	0.55	22×30 25×25	0.62	22×45 25×40 30×30	0.70	25×45 30×35	0.70	25×50 30×40	0.80
220(221)	22×25	0.60	22×30	0.70	22×35 25×30	0.76	22×50 25×45 30×35	0.82	25×50 30×40	0.80	30×45 35×40	0.90
270(271)	22×30	0.75	22×35 25×25	0.80	22×40 25×35		25×50 30×40	0.95	30×45 35×35	1.00	30×50 35×40	1.05
330(331)	22×35 25×25	0.90	22×40 25×30	0.90	22×45 25×35 30×30	1.00	30×45 35×35	1.05	30×50 35×40	1.10	35×45	1.20
390(391)	22×35 25×30	0.95	22×40 25×35	1.05	22×50 25×40 30×35	1.15	30×50 35×40	1.10	35×45	1.20	35×50 30×60	1.30
470(471)	22×40 25×35 30×30	1.10	22×45 25×40 30×30	1.20	25×45 30×35	1.30	35×45	1.25	35×0	1.30	35×60	1.40
560(561)	22×45 25×35 30×30	1.25	25×45 30×35	1.40	25×50 30×40 35×35	1.45	35×50	1.40	35×60	1.50		
680(681)	22×50 25×40 30×35	1.50	25×50 30×40	1.60	30×45 35×40	1.70						
820(821)	25×45 30×40	1.60	30×45 35×35	1.85	30×50 35×40	1.90						
1000(102)	30×50 35×40	1.89	30×50 35×40	2.10	35×45	2.20						
1200(122)	30×50 35×40	2.20	35×45	2.40								
1500(152)	35×45	2.60	35×50	2.70								
1800(182)	35×50	2.90										



Aluminum Electrolytic Capacitors

AN CD295D LD series

- * Life time: 85~C 8000 hours
- * Snap-in type
- * Ideally suited for switching power supplies
telecommunication and other electronic products



I SPECIFICATIONS

Item	Performance Characteristics										
Rated Voltage Range	10V.DC~ 100V.DC						160V.DC~ 450V.DC				
Operating Temperature Range	-40°C ~ + 85°C						-25°C ~ + 85°C				
Nominal Capacitance Range	560 μF~560000 μF						47 μF~1800 μF				
Capacitance Tolerance	±20%(M,+20°C, 120Hz)										
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in u F Rated Working Voltage in V										
Dissipation Factor	working voltage	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
Temperature Stability	Rated Working Voltage		10-100			160-250			350-450		
	Impedance	Z-25°C/z+20°C		3			3			8	
	Ratio(120Hz)	Z-55°C/z+20°C		12							
Load Life	After application of rated working voltage and maximum permissible current specified at +85°C for 2000 hours, Capacitors meet the characteristics requirement measured at +20°C listed below:										
	Capacitance Change	Within ± 20% of the initial measured value						Case Dia	Life Time		
	Leakage current	Less than the initial specified value						ΦD≤30	8000		
Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.										

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

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

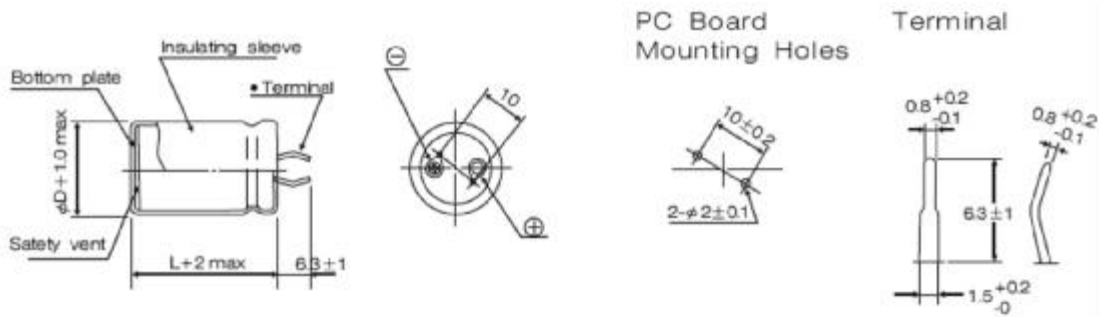
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Aluminum Electrolytic Capacitors--AN CD295D LD series

CASE SIZE TABLE

DRAWING

Unit:mm



There are two available dimensions, one is $63 \pm 1.0 \text{ mm}$ Length Shorter terminal (4.5 ± 0.5) is also available upon request

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) 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)
0(561)															22×25	1.00
0(681)															22×30	1.20
0(821)													22×25	1.00	22×35 25×25	1.20
0(1 02)											22×25	1.10	22×30	1.20	22×40 25×30	1.50
10(122)											22×25	1.10	22×35 25×25	1.30	20×45 25×35	1.70
10(152)								22×25	1.20	22×30 25×25	1.40	22×40 25×30	1.70	22×50 25×40	2.00	
10(182)								22×25	1.30	22×35 25×30	1.60	22×45 25×35	1 ~ °	25×45 30×35	2.20	
10(222)								22×30 25×25	1.50	22×40 25×30	1.85	22×45 30×30	2.20	30×40 35×35	2.50	
10(272)						22×25	1.20	22×35 25×30	1.70	22×45 25×35 30×30	2.10	30×35	2.50	30×45 35×40	2.80	
10(332)						22×30	1.50	22×40 25×30	2.00	25×40 30×30	2.20	30×40 35×35	2.60	35×45	3.20	
10(392)					22×25	1.30	22×35 25×25	1.60	22×45 25×35 30×30	2.20	25×45 30×35	2.50	30×45 35×40	3.00	35×50	3.50
10(472)					22×30	1.50	22×40 25×30	2.00	25×40 30×30	2.40	30×40 35×35	2.80	35×45	3.40		
10(562)			22×25	1.40	22×35	1.60	22×45	2.25	25×45	2.00	30×45	3.20	35×50	3.70		

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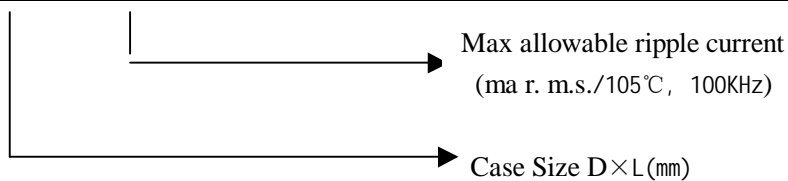
					25×25		25×35		30×35		35×40					
00(682)			22×30	1.60	22×40 25×30	2.00	22×50 25×40 30×30	2.45	30×40 35×35	3.00	35×45	3.60				
00(822)	22×25	1.30	22×30 25×25	1.70	22×45 25×35	2.20	25×45 30×35	2.80	30×50 35×40	3.60	35×50	3.90				
00(103)	22×30	1.65	22×35 25×30	2.08	22×50 25×40 30×30	2.50	30×40	3.00	35×45	3.80						
00(123)	22×35 25×25	1.85	22×40 25×35	2.35	25×45 30×35	2.70	30×45 35×35	3.30	35×0	4.00						
00(153)	22×40 25×30	2.10	22×45 25×40 30×30	2.70	30×40	3.10	35×40	3.80								
00(183)	22×45 25×35 30×30	2.40	25×45 30×35	3.00	30×45 35×35	3.50	35×45	4.40								
00(223)	25×40 30×30	2.70	25×50 30×40	3.40	30×50 35×40											
00(273)	25×45 30×35	3.00	30×45 35×35	3.85	35×50	4.70										
00(333)	25×50 30×40 35×35	3.50		4.30												
00(393)	30×45 35×40		35×45	4.90												
00(473)	30×50 35×45	4.60	35×50	5.40												
00(563)	35×50	5.00														

ALUMINUM ELECTROLYTIC CAPACITOR(AN CD295D LD)

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)										22×25	0.30	22×25	0.35
68(680)								22×25	0.34	22×30	0.35	22×30	0.40
82(820)								22×30	0.40	22×30 25×25	0.40	25×30	0.45
100(101)								22×30 25×25	0.46	22×35 25×30	0.45	22×40 25×35	0.50
120(121)								22×35 25×30	0.52	22×40 25×35 30×30	0.55	22×45 25×40	0.60

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150(151)					22×25	0.52	22×40 25×35	0.60	22×50 25×40 30×30	0.65	25×45 30×35	0.70
180(181)			22×25	0.55	22×30 25×25	0.62	22×45 25×40 30×30	0.70	25×45 30×35	0.70	25×50 30×40	0.80
220(221)	22×25	0.60	22×30	0.70	22×35 25×30	0.76	22×50 25×45 30×35	0.82		0.80	30×45 35×40	0.90
270(271)	22×30	0.75	22×35 25×25	0.80	22×40 25×35	0.90	25×50 30×40	0.95	30×45 35×35	1.00	30×50 35×40	1.05
330(331)	22×35 25×25	0.90	22×40 25×30	0.90	22×45 25×35 30×30	1.00	30×45 35×35	1.05	30×50 35×40	1.10	35×45	1.20
390(391)	22×35 25×30	0.95	22×40 25×35	1.05	22×50 25×40 30×35	1.15	30×50 35×40	1.10	35×45	1.20	35×50 30×60	1.30
470(471)	22×40 25×35 30×30	1.10	22×45 25×40 30×30	1.20	25×45 30×35	1.30	35×45	1.25	35×50	1.30	35×60	1.40
560(561)	22×45 25×35 30×30	1.25	25×45 30×35	1.40	25×50 30×40 35×35	1.45	35×50	1.40	35×60	1.50		
680(681)	22×50 25×40 30×35	1.50	25×50 30×40	1.60	30×45 35×40	1.70						
820(821)	25×45 30×40	1.60	30×45 35×35	1.85	30×50 35×40	1.90						
1000(102)	30×45 35×35	1.89	30×50 35×40	2.10	35×45	2.20						
1200(122)	30×50 35×40	2.20	35×45	2.40								
1500(152)	35×45	2.60	35×50	2.70								
1800(182)	35×50	2.90										



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Aluminum Electrolytic Capacitors

AN CD296 LT series

- * Life time **105°C 2000 hours**
- * **Snap-in type**
- * Ideally suited for switching power supplies
telecommunication and other electronic products



I SPECIFICATIONS

Item	Performance Characteristics										
Rated Voltage Range	10V.DC~ 100V.DC					160V.DC~ 450V.DC					
Operating Temperature Range	-40°C ~ + 85°C					-25°C ~ + 85°C					
Nominal Capacitance Range	470 μF~100000 μF					47 μF~2200 μF					
Capacitance Tolerance	±20%(M,+20°C, 120Hz)										
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in u F Rated Working Voltage in V										
Dissipation Factor	working voltage	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
Temperature Stability	Rated Working Voltage		10-100			160-250			350-450		
	Impedance	Z-25°C/z+20°C		3			3			8	
	Ratio(120Hz)	Z-55°C/z+20°C		12							
Load Life	After application of rated working voltage and maximum permissible current specified at +85°C for 2000 hours, Capacitors meet the characteristics requirement measured at +20°C listed below:										
	Capacitance Change		Within ± 20% of the initial measured value								
	Leakage current		Less than the initial specified value								
	tan δ		Less than 200% the initial specified value								
Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.										

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

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

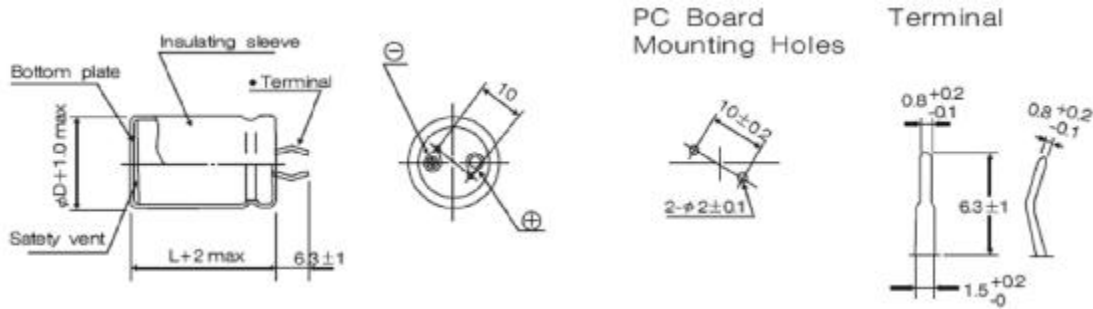
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ALUMINUM ELECTROLYTIC CAPAC~TOR(AN CD296 LI)

CABLE SIZE TABLE

DRAWING

Unit: mm



There are two available dimensions, one is 6.3±1.0mm Length Shorter terminal (4.5±0.5) is also available upon request

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)
470(471)															22×25	0.95
560(561)															22×30	1.00
680(681)															22×30 25×25	1.09
820(821)															25×30	1.20
1000(102)											22×25	1.10	22×25	1.19	25×30	1.47
1200(122)											22×30	1.20	25×25	1.30	22×40	1.50
1500(152)											22×30 25×25	1.38	22×30 25×25	1.59	22×45 25×40	1.89
1800(182)											25×30	1.50	25×30	1.80	25×45	2.10
2200(222)									22×30 25×25	1.46	22×35 25×30	1.66	22×40 25×35	2.01	25×50	2.48
2700(272)									22×35	1.50	25×35	1.80	25×40	2.20	30×45	2.70
3300(332)							22×25	1.54	22×35 25×30	1.72	25×35 30×30		25×45 30×35		30×50 35×45	3.25
3900(392)							22×30	1.60	25×30	1.80	30×35	2.40	30×40	2.80	35×50	3.50
4700(472)							22×35 25×25	1.87	25×35 30×30	2.25	25×50 30×40	2.77	30×45 35×35	3.30	30×60 35×50	3.80
5600(562)							25×30	2.00	30×35	2.50	30×45	3.10	35×40	3.60	35×60	4.10
6800(682)			22×25	1.66	22×35 25×25	1.88	22×40 25×35	2.28	25×45 30×35	2.91	30×50 35×40	3.61	30×50 35×45			
8200(820)			25×25	1.80	25×40	2.00	25×40	2.40	30×45	3.10	35×50	3.80	35×50	4.10		
10000(103)	22×25	1.65	22×30 25×30	2.07	25×35 30×30	2.38	25×45 30×35	2.78	30×50 35×40	3.57	30×60 35×50	4.69	35×60	4.30		
12000(123)	22×30	1.80	25×35	2.20	25×40	2.50	30×40	3.00	35×50	4.10						

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15000 (153)	22×35 25X30	2.01	25×35 30×30	2.54	25×45 30×35	3.00	30×45 3×35	3.70	35×50	4.76						
18000(183)	25×35	2.20	30×35	2.81	30×40	3.40	35×40	4.00								
22000(223)	25×35 30×30	2.59	25×45 30×35	3.31	30×45 35×35	3.92	30×50 35×45	4.90								
27000(273)	30×35	2.80	30×40	3.60	35×45	4.10	35×50	5.10								
33000(333)	25×45 30×35	3.43	30×45 35×40	4.33	30×60 35×50	5.13	35×60	6.30								
56000(563)	35×45	4.50	35×50	5.60												
68000(683)	30×60 35×50	5.50	35×60	7.00												
82000(823)	35×60	5.80														
100000(104)	35×60	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)									22×25	0.37	22×25	0.40
82(820)							22×35	0.50	22×30	0.60	22×30	0.60
100(101)							22×35 25×25	0.70	22×35 25×30	0.69	22×40 25×30	0.64
120(121)							25×30	0.80	25×35	0.75	25×35	0.70
150(151)					22×25	0.70	25×30	0.82	22×40 25X35	0.82	25×40 30×30	0.79
180(181)					22X30	0.80	25×35	1.00	22X45	0.90	30×35	0.85
220(221)	22×25	0.75	22×25	1.00	22×35 25×30	1.00	25×35 30×30	1.03	25×40 30×35	1.00	25×50 30×40	1.00
390(391)	22×30	1.10	25×35	1.30	30×35	1.30	30×40	1.40	35×40	1.30	35×45	1.40
470(471)	22×35 25×30	1.30	22×40 25×35	1.40	25×50 30×40	1.40	30×45 35×35	1.65	35×45	1.40	35×50	1.50
560(561)	30×30	1.50	30×35	1.50	30×45	1.50	35×45	1.80	35×50	1.50		
680(681)	25×40 30×30	1.60	30×40 35×35	1.70	30×45 35×40	1.70	35×50	2.00	35×60	1.80		
820(821)	30×35	1.80	35×40	1.80	35×45	1.80						
1000(102)	30×40 35×35	2.20	30×45 35×40	2.20	35×50	2.20						
1200(122)	35×40	2.30	35×45	2.30	35×60	2.40						
1500(152)	30×50 35×40	2.50	30×60 35×50	2.70								
1800(182)	35×50	2.80	35×60	2.80								
2200(222)	35×60	3.30										

Max allowable ripple current
 (ma r. m.s./105°C, 100KHz)

Case Size D×L(mm)

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Aluminum Electrolytic Capacitors

AN CD296H LS series

- * Life time 105°C 5000 hours
- * Snap-in type
- * Ideally suited for switching power supplies
telecommunication and other electronic products



SPECIFICATIONS

Item	Performance Characteristics																
Rated Voltage Range	10V.DC~ 100V.DC					160V.DC~ 450V.DC											
Operating Temperature Range	-40°C ~ +105°C					-25°C ~ + 105°C											
Nominal Capacitance Range	560 μF~560000 μF					47 μF~1800 μF											
Capacitance Tolerance	±20%(M,+20°C, 120Hz)																
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in μF Rated Working Voltage in V																
Dissipation Factor	working voltage	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						
Temperature Stability	Rated Working Voltage		10-100			160-250			350-450								
	Impedance	Z-25°C/z+20°C		3			3			8							
	Ratio(120Hz)	Z-55°C/z+20°C		12													
Load Life	After application of rated working voltage and maximum permissible current specified at +85°C for 2000 hours, Capacitors meet the characteristics requirement measured at +20°C listed below: <table border="1" style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 50%;">Capacitance Change</td> <td>Within ± 20% of the initial measured value</td> </tr> <tr> <td>Leakage current</td> <td>Less than the initial specified value</td> </tr> <tr> <td>tan δ</td> <td>Less than 200% the initial specified value</td> </tr> </table>											Capacitance Change	Within ± 20% of the initial measured value	Leakage current	Less than the initial specified value	tan δ	Less than 200% the initial specified value
Capacitance Change	Within ± 20% of the initial measured value																
Leakage current	Less than the initial specified value																
tan δ	Less than 200% the initial specified value																
Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.																

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

<div style="display: flex; align-items: center;"> <div style="border-bottom: 1px solid black; border-right: 1px solid black; width: 100px; height: 100px; margin-right: 5px;"></div> <div style="margin-left: 5px;">Freq(Hz)</div> </div>	50	60	120	1k	10k
WV(V)					
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

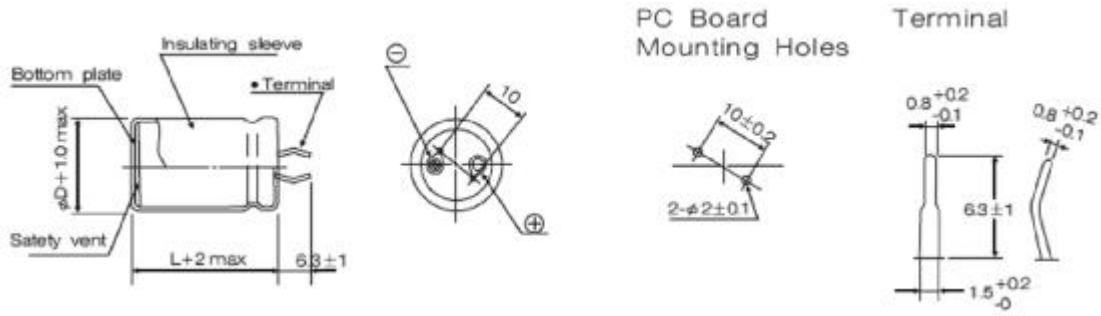
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Aluminum Electrolytic Capacitors--AN CD296H LS series

CASE SIZE TABLE

DRAWING

Unit:mm



There are two available dimensions, one is 6.3 ± 1 0mm Length Shorter terminal (4.5 ± 0.5) is also available upon request

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	10(LB)		16(LC)		25(LD)		35(LE)		50(LF)		63(LO)		80(LH)		100(MA)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
560(561)															22×25	1.00
680(681)															22×30	1.20
820(821)													22×25	1.00	22×35	1.20
													25×25			
1000(102)											22×25	1.10	22×30	1.20	22×40	1.50
													25×30			
1200(122)											22×25	1.10	22×35	1.30	22×45	1.70
													25×25			
1500(152)									22×25	1.20	22×30	1.40	22×40	1.70	22×50	2.00
											25×25		25×30		25×40	
1800(182)									22×25	1.30	22×35	1.60	22×45	1.90	25×45	2.20
											25×30		25×35		30×35	
2200(222)									22×30	1.50	22×40	1.85	22×45	2.20	30×40	2.50
									25×25		25×30		30×30		35×35	
2700(272)							22×25	1.20	22×35	1.70	22×45	2.10	30×35	2.50	30×45	2.30
									25×30		25×35				35×40	
									30×30		30×30					
3300(332)							22×30	1.50	22×40	2.00	25×40	2.20	30×40	2.60	35×45	3.20
									25×30		30×30		35×35			
3900(392)					22×25	1.30	22×35	1.60	22×45	2.20	25×45	2.50	30×45	3.00	35×50	3.50
					25×25		25×25		25×35		30×35		35×40			
									30×30							
4700(472)					22×30	1.50	22×40	2.00	25×40	2.40	30×40	2.80	35×45	3.40		
							25×30		30×30		35×35					
5600(562)			22×25	1.40	22×35	1.60	22×45	2.25	25×45	2.00	30×45	3.20	35×50	3.70		
					25×25		25×35		30×35		35×40					

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6800(682)			22×30	1.60	22×40 25×30	2.00	22×50 25×40 30×30	2.45	30×40 35×35	3.00	35×45	3.60				
8200(822)	22×25	1.30	22×30 25×25	1.70	22×45 25×35	2.20 -	25×45 30×35	2.80	30×50 35×40	3.60	35×50	3.90				
10000(103)	22×30	1.65	22×35 25×30	2.08	22×50 25×40 30×30	2.50	30×40	3.00	35×45	3.80						
12000(123)	22×35 25×25	1.85	22×40 25×35	2.35	25×45 30×35	2.70	30×45 35×35	3.30	35×50	4.00						
15000(153)	22×40 25×30	2.10	22×45 25×40 30×30	2.70	30×40	3.10	35×40	3.80								
18000(183)	22×45 25×35 30×30	2.40	25×45 30×35	3.00	30×45 35×35	3.50	35×45	4.40								
22000(223)	25×40 30×30	2.70	25×50 30×40	3.40	30×50 35×40											
27000(273)	25×45 30×35	3.00	30×45 35×35	3.85	35×50	4.70										
33000(333)	25×50 30×40 35×35	3.50		4.30		-				-		-				
39000(393)	30×45 35×40	3.80	35×45	4.30												
47000(473)		4.60	35×50	5.30												
56000(563)	35×50	5.00														

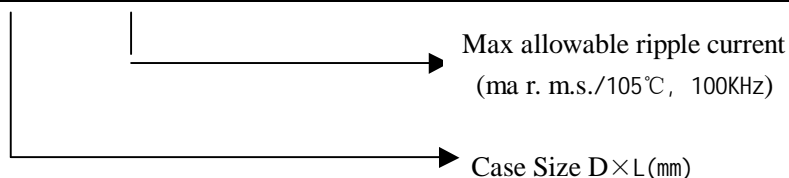
ALUMINUM ELECTROLYT-C CAPACIToR(AN CD296H LS)

LS DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

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)									22×25	0.30	22×25	0.35
68(680)							22×25	0.34	22×30	0.35	22×30	0.40
82(820)							22×30	0.40	22×30 25×25	0.40	25×30	0.45
100(101)							22×30 25×25	0.46	22×35 25×30	0.45	22×40 25×35	0.50
120(121)							22×35 25×30	0.52	22×40 25×35 30×30	0.55	22×45 25×40	0.60
150(151)					22×25	0.52		0.60	22×50	0.65	25×45	0.70

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									25×40 30×30		30×35	
180(181)			22×25		22×30 25×25	0.62	22×45 25×40 30×30	0.70	25×45 30×35	0.70	25×50 30×40	0.80
220(221)	22×25	0.60	22×30	0.70	22×35 25×30	0.76	22×50 25×45 30×35	0.82	25×50 30×40	0.80	30×45 35×40	0.90
270(271)	22×30	0.75	22×35 25×25	0.80	22×40 25×35	0.90	25×50 30×40	0.95	30×45 35×35	1.00	30×50 35×40	1.05
330(331)	22×35 25×25	0.90	22×40 25×30	0.90	22×45 25×35 30×30	1.00	30×45 35×35	1.05	30×50 35×40	1.10	35×45	1.20
390(391)	22×35 25×30	0.95	22×40 25×35	1.05	22×50 25×40 30×35	1.15	30×50 35×40	1.10	35×45	1.20	35×50 30×60	1.30
470(471)	22×40 25×35 30×30	1.10	22×45 25×40 30×30	1.20	25×45 30×35	1.30	35×45	1.25	35×50	1.30	35×60	1.40
560(561)	22×45 25×35 30×30	1.25	25×45 30×35	1.40	25×50 30×40 35×35	1.45	35×50	1.40	35×60	1.50		
680(681)	22×50 25×40 30×35	1.50	25×50 30×40	1.60	30×45 35×40	1.70						
820(821)	25×45 30×40	1.60	30×45 35×35	1.85	30×50 35×40	1.90						
1000(102)		1.89	30×50 35×40	2.10	35×45	2.20						
1200(122)	30×50 35×40	2.20	35×45	2.40								
1500(152)	35×45	2.60	35×50	2.70								
1800(182)	35×50	2.90										



Aluminum Electrolytic Capacitors

AN CD296G LG series

- * Life time **105°C 5000 hours**
- * **Snap in type**
- * Ideally suited for switching power supplies
telecommunication and other electronic products



I SPECIFICATIONS

Item	Performance Characteristics		
Rated Voltage Range	160V.DC~ 450V.DC		
Operating Temperature Range	-25°C ~ + 105°C		
Nominal Capacitance Range	47 μF~1800 μF		
Capacitance Tolerance	±20%(M,+20°C, 120Hz)		
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in u F Rated Working Voltage in V		
Dissipation Factor	working voltage	160-250	350-450
	tan δ (MAX) (20°C ,120Hz)	0.15	0.20
Temperature Stability	Rated Working Voltage	160-250	350-450
	Impedance Ratio(120Hz)	Z-25°C/z+20°C 3	8
Load Life	After application of rated working voltage and maximum permissible current specified at +85°C for 2000 hours, Capacitors meet the characteristics requirement measured at +20°C listed below:		
	Capacitance Change	Within ± 20% of the initial measured value	
	Leakage current	Less than the initial specified value	
	tan δ	Less than 200% the initial specified value	
Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.		

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

WV(V)	Freq(Hz)	50(60)	120	500	1k	≥10K
160.~250		0.80	1.00	1.20	1.30	1.00
350~450		0.80	1.00	1.20	1.25	1.40

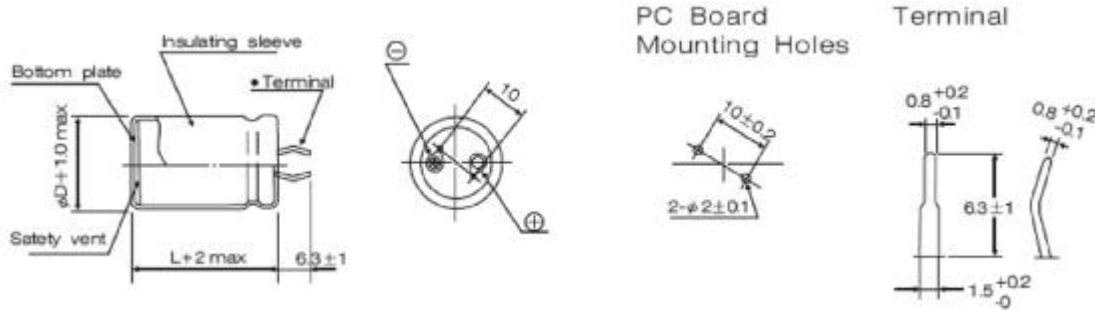
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ALUM-NUM ELECTROLYTIC CAPACITOR(AN CD296G LG)

CASE SIZE TABLE

DRAWING

Unit:mm



There are two available dimensions, one is 6.3 ± 1.0 mm Length Shorter terminal (4.5 ± 0.5) is also available upon request

LG DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(μF)	160(MB)		200(MC)		250(MO)		350(MF)		400(VA)		450(VB)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
47(470)									22×25	0.30	22×25	0.35
68(680)							22×25	0.34	22×30	0.35	22×30	0.40
82(820)							22×30	0.40	22×30 25×25	0.40	25×30	GAS
100(101)							22×30 25×25	0.46	22×35 25×30	0.45	22×40 25×35	0.50
120(121)							22×35 25×30	2.05	22×40 25×35 30×30	0.55	22×45 25×40	0.60
150(151)					22×25	0.52		0.60	22×50 25×40 30×30	0.65	25×45 30×35	0.70
180(181)			22×25	0.55	22×30 25×25	0.62	22×45 25×40 30×30	0.70	25×45 30×35	0.70	25×50 30×40	0.80
220(221)	22×25	0.62	22×30	0.70	22×35 25×30	0.76	22×50 25×45 30×35	0.82	25×50 30×40	0.80	30×45 35×40	0.90
270(271)	22×25	0.76	22×35 25×25	0.80	22×40 25×35	0.90	25×50 30×40	0.95	30×45 35×35	1.00	30×50 35×40	1.05
330(331)	22×25 25×25	0.82	22×40 25×30	0.90	22×45 25×35 30×30	1.00	30×45 35×35	1.05 •	30×50 35×40	1.10	35×45	1.20
390(391)	22×35 25×30	0.95	22×40 25×35	1.05	22×50 25×40 30×35	1.15	30×50 35×40	1.10	35×45	1.20	35×50 30×60	1.30

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470(471)	22×40 25×35 30×30	1.10	22×45 25×40 30×30	1.20	25×45 30×35	1.30	35×45	1.25	35×50	1.30	35×60	1.40
560(561)	22×45 25×35 30×30	1.25	25×45 30×35	1.40	25×50 30×40 35×35	1.45	35×50	1.40	35×60	1.50		
680(681)	22×50 25×40 30×35	1.50	25×50 30×40	1.60	30×45 35×40	1.70						
820(821)	25×45 30×40	1.60	30×45 35×35	1.85		1.90						
1000(1 02)	30×45 35×35	1.89	30×50 35×40	2.10	35×45	2.20						
1200(1 22)	30×50 35×40	2.20	35×45	2.40								
1500(152)	35×45	2.60	35×50	2.70								
1800(182)												

→ Max allowable ripple current
(ma r. m.s./105°C, 100KHz)

→ Case Size D×L(mm)

Aluminum Electrolytic Capacitors

AN CD138H GH series

* Life time **105°C 2000 hours**

* **Screw type**

* Suited for smoothing circuits for general purpose inverter control for
FA, machine designed for use as input filter capacitor for current



I SPECIFICATIONS

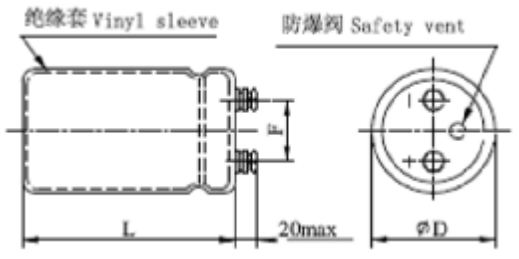
Item	Performance Characteristics										
Rated Voltage Range	10V.DC~ 100V.DC					160V.DC~ 400V.DC					
Operating Temperature Range	-40°C ~ + 105°C					-25°C ~ + 105°C					
Nominal Capacitance Range	47 μF~1800 μF										
Capacitance Tolerance	±20%(M,+20°C , 120Hz)										
Leakage Current	After application of rated voltage for 5minutes: $I \leq 3\sqrt{CV}(\mu A)$ at +20°C Nominal Capacitance in u F Rated Working Voltage in V										
Dissipation Factor	WV(V) ΦD	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
Load Life	After application of rated working voltage and maximum permissible current specified at +85°C for 2000 hours, Capacitors meet the characteristics requirement measured at +20°C listed below:										
	Capacitance Change		Within ± 20% of the initial measured value								
	Leakage current		Less than the initial specified value								
	tan δ		Less than 200% the initial specified value								
Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.										

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Frequency(Hz)		50(60)	100(120)	400	1k	10k
Coefficient	10~50WV	0.80	1.00	1.03	1.05	1.08
	63~100WV	0.80	1.00	1.05	1.07	1.10
	160~450WV	0.80	1.00	1.10	1.13	1.18

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D±2.0	35	50	65	76	90
L±3.0	50 60 80 100	80 100	100 120	100 120 140	140 150
		120	140	150	
F±1.0	12.7	21.8	28.2	31.4	31.4

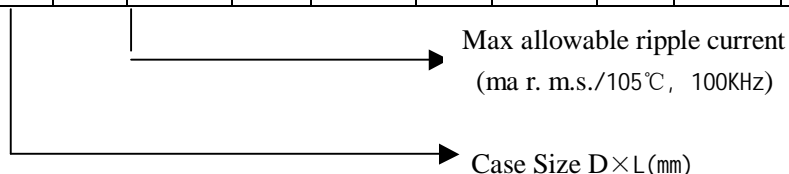
DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) p(μF)	1 0(LB)		1 6(LG)		25(LD)		35(LE)		50(LF)		63(LG)		80(LH)		
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	
300(332)													35×50	30	
900(392)													35×60	3.3	
700(472)												35×50	3.2	35×80	3.6
600(562)												35×60	3.5	35×80	3.9
800(682)							35×50	2.5	35×50	3.6	35×60	3.8	35×80	4.3	
200(822)							35×50	2.8	35×60	3.9	35×80	4.3	35×100	5.1	
3000(1 03)							35×50	3.8	35×80	4.2	35×80	4.7	35× 120	5.8	
2000(123)							35×60	4.3	35×80	5.0	35×100	5.6	50×80	7.0	
5000(153)					35×50	4.2	35×80	4.7	35×100	5.5	35×120	6.4	50×80	7.6	
8000(183)					35×60	4.6	35×80	5.1	35×100	5.7	50×80	7.5	50×100	7.7	
2000(223)			35×50	4.0	35×80	5.2	35×100	6.6	35×120	7.5	50×80	7.5	50× 120	9.0	
7000(273)	35×50	4.4	35×60	5.0	35×80	5.4	35×120	6.7	50×80	7.5	50×100	8.7	65×100	10.1	
3000(333)	35×60	5.5	35×80	5.0	35×100	6.5	50×80	7.1	50×100	9.3	50×120	10.3	65×120	11.6	
9000(393)	35×60	6.0	35×80	5.8	35×100	7.5	50×80	8.4	50×100	9.4	65×100	11.2	65×140	13.5	
7000(473)	35×80	6.6	35×100	6.8	35×20	~9	50×100	~9	50×120	11.7	65×120	12.9	76×100	15.8	
6000(563)	35×80	7.5	35×100	~9	50×80	10±~	50×100	11~3	65×100	12.4	65×140	15.2	76×120	17.0	
8000(683)	35×100	7.6	35×120	8.4	50×100	10.7	50×120	11.4	65×120	15.1	76×100	16.0	76×40	20.4	
2000(823)	35×120	9.0	50×80	8.4	50×100	12.0	65×100	12.5	76×100	15~	76×120	17.7	76×50	21.5	
3000(104)	5×80	10.2	50×100	11.3	50×120	13.1	65×120	15.5	76×100	16.3	76×40	21.5	90×40	22.3	
3000(124)	5×80	11.0	50×100	11.4	65×100	13.7	76×100	15.5	76×120	19.1	90×40	22.4			
3000(154)	5×100	13.4	50/120	12.5	65x120	16.4	76/120	17.9	76/140	23.4					
3000(184)	5×120	14.0	65/100	14.2	76/100	16.7	76/140	20.0	90/140	23.7					
3000(224)	6.5×100	14.5	65/120	16.6	76/120	20.5	76/150	24.1							
3000(274)	6.5×120	16.0	76/100	17.5	76/140	21.3	90/140	26.5							
3000(334)	7.6×100	18.0	76/120	24.3	76/150	26.0									
3000(394)	7.6×100	19.5	76/140	25.2	90/140	27.2									
3000(474)	7.6×120	20.0	76/150	26.7											
3000(564)	7.6×140	24.1	90/140	29.1											
3000(684)	90×140	26.5													

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AN CD138H GH DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

wv(v) Cap(uF)	1 00(MA)		1 60(MB)		200(MC)		250(MD)		31 5(MQ)		350(MF)		400(VA)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
220(221)											35×50	0.9	35×50	1.0
270(271)									35×50	1.0	35×50	1.0	35×60	1.0
330(331)									35×50	1.2	35×60	1.2	35×60	1.2
390(391)									35×60	1.3	35×80	1.3	35×80	1.4
470(471)							35×50	1.3	35×80	1.5	35×80	1.5	35×100	1.5
560(561)					35×50	1.4	35×60	1.6	35×80	1.6	35×100	1.7	35×100	1.7
680(681)					35×50	1.5	35×80	1.7	35×100	1.9	35×100	1.9	50×80	2.3
820(821)			35×50	1.4	35×80	1.9	35×80	1.9	35×120	2.2	35×120	2.1	50×100	2.4
1000(102)			35×60	1.9	35/80	2.2	35×100	2.3	50×80	2.3	50×100	2.5	50×20	2.7
1200(122)			35×80	2.3	35×80	2.3	35×100	2.4	50×100	2.7	50×100	2.7	50×120	3.0
1500(152)			35×80	2.6	35×100	2.9	35×120	2.9	50×100	3.1	50×120	3.3	65×100	3.5
1800(182)			35×80	2.6	35×100	2.9	35×120	3.0	50×120	3.6	65×100	3.8	65×120	3.6
2200(222)	35×50	2.9	35×100	3.2	35×120	3.3	50×100	3.8	65×100	4.2	65×120	4.6	76×100	4.1
2700(272)	35×60	3.4	35×120	3.2	50×80	3.8	50×120	4.5	65×120	4.3	76×100	4.6	76×120	4.8
3300(332)	35×80	3.9	35×120	3.7	50×100	4.7	65×100	5.2	76×100	4.9	76×120	5.3	76×140	5.7
3900(392)	35/80	4.2	50×100	4.3	50×120	5.4	65×120	5.2	76×120	5.8	76×140	6.2	90×140	6.7
4700(472)	35×80	4.6	50×100	4.8	65×100	6.2	65×120	5.7	76×120	6.3	90×140	7.4	90×140	7.4
5600(562)	35×100	4.9	50×120	5.5	65×100	6.3	76×100	6.4	76×140	7.3	90×140	8.1		
6800(682)	35×120	5.5	65×100	6.3	65×120	7.3	76×120	7.6	90×140	8.9				
8200(822)	50×80	6.2	65×120	7.1	76×100	8.5	76×140	8.3						
10000(103)	50×100	6.7	76×100	7.9	76×120	9.5	90×140	9.9						
12000(123)	50×100	7.3	76×120	9.0	76×140	10.5	90×140	10.8						
15000(153)	50×120	8.6	76×140	11.3	90×140	12.5								
18000(183)	65×100	8.9	90×140	13.0	90×140	13.3								
22000(223)	65×120	10.3	90×140	14.3										
27000(273)	65×140	12.1												
33000(333)	76×120	14.1												
39000(393)	76×140	16.5												
47000(473)	76×140	18.3												
56000(563)	90×140	19.2												
68000(683)														



Aluminum Electrolytic Capacitors

AN CD13S GS series

* Life time: **105.C 5000 hours**

* **Screw type**

* Suited for smoothing circuits for general purpose inverter control for
FA, machine designed for use as input filter capacitor for current



I SPECIFICATIONS

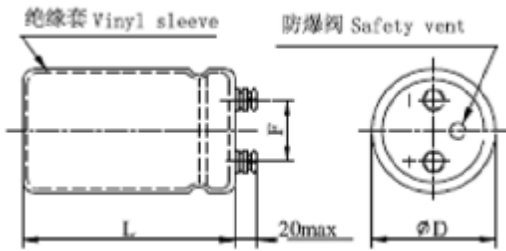
Item	Performance Characteristics																																																																	
Rated Voltage Range	10V.DC~ 100V.DC	160V.DC~ 400V.DC																																																																
Operating Temperature Range	-40°C ~ + 105°C	-25°C ~ + 105°C																																																																
Nominal Capacitance Range	220 μF~680000 μF																																																																	
Capacitance Tolerance	±20%(M,+20°C , 120Hz)																																																																	
Leakage Current	After application of rated voltage for 5minutes:0.02CV or 5mA(whichever is greater)20°C C: Nominal Capacitance in u F V:Rated Working Voltage in V																																																																	
Dissipation Factor	<table border="1"> <tr> <th>WV(V) \ ΦD</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> <tr> <th>35</th> <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> <th>50</th> <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> <th>65</th> <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> <th>76-90</th> <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> </table>	WV(V) \ ΦD	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										
	WV(V) \ ΦD	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																																																								
Load Life	After applying rated voltage for 2000 hours at +105°C , Capacitors meet the characteristics requirement measured at +20°C listed below:																																																																	
	Capacitance Change		Within ±15% of the initial measured value																																																															
	Leakage current		Less than the initial specified value																																																															
Shelf Life	tan δ		Less than 150% the initial specified value																																																															
	After Leaving capacitor under no load at +105°C for 1000 hours, Capacitors meet the characteristics listed above.																																																																	

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Frequency(Hz)		50(60)	100(120)	400	1k	10k
Coefficient	1 0~50WV	0.80	1 00	1 03	1. 05	1.08
	63 1 00WV	0.80	1.00	1 05	1. 07	1.10
	160-450WV	080	100	1 10	1. 13	1. 18

CASE SIZE TABLE



D±2.0	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

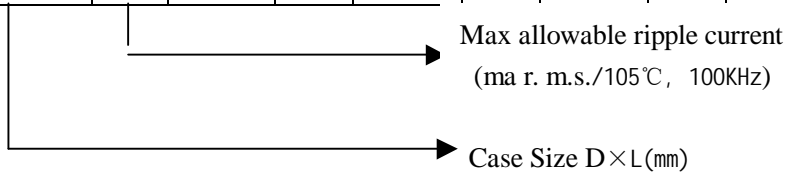
DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

wv(v) p(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)
300(332)													35×50	3.0
390(392)													35×60	3.3
470(472)											35×50	3.2	35×80	3.6
560(562)											35×60	3.5	35×80	3.9
680(682)							35×50	2.5	35×50	3.6	35×60	3.8	35×80	4.3
820(822)							35×50	2.8	35×60	3.9	35×80	4.3	35×100	5.1
1000(103)							35×50	3.8	35×80	4.2	35×80	4.7	35×120	5.8
1200(123)							35×60	4.3	35×80	5.0	35×100	5.6	50×80	7.0
1500(153)					35×50	4.2	35×80	4.7	35×100	5.5	35×120	6.4	50×80	7.6
1800(183)					35×60	4.6	35×80	5.1	35×100	5.7	50×80	7.5	50×100	7.7
2200(223)			35×50	4.0	35×80	5.2	35×100	6.6	35×120	7.5	50×80	7.5	50×120	9.0
2700(273)	35×50	4.4	35×60	5.0	35×80	5.4	35×120	6.7	50×80	7.5	50×100	8.7	65×100	10.1
3300(333)	35×60	5.5	35×80	5.2	35×100	6.5	50×80	7.1	50×100	9.3	50×120	10.3	65×120	11.6
3900(393)	35×60	6.0	35×80	5.8	35×100	7.5	50×80	8.4	50×100	9.4	65×100	11.2	65×140	13.5
4700(473)	35×80	6.6	35×100	6.8	35×120	8.9	50×100	9.9	50×120	11.7	65×120	12.9	76×100	15.8
5600(563)	35×80	7.5	35×100	6.9	50×80	10.0	50×100	10.3	65×100	12.4	65×140	15.2	76×120	17.0
6800(683)	35×100	7.6	35×120	8.4	50×100	10.7	50×120	11.4	65×120	15.1	76×100	16.0	76×140	20.4
8200(823)	35×120	9.0	50×80	8.4	50×100	12.0	65×100	12.5	76×100	15.5	76×120	17.7	76×150	21.5
10000(104)	50×80	10.2	50×100	11.3	50×120	13.1	65×120	15.5	76×100	16.3	76×140	21.5	90×140	22.3
12000(124)	50×80	11.0	50×100	11.4	65×100	13.7	76×100	15.5	76×120	19.1	90×140	22.4		
15000(154)	50×100	13.4	50×120	12.5	65×120	16.4	76×120	17.9	76×140	23.4				
18000(184)	50×120	14.0	65×100	14.2	76×100	16.7	76×140	20.0	90×140	23.7				
22000(224)	65×100	14.5	65×120	16.6	76×120	20.5	76×150	24.1						
27000(274)	65×120	16.0	76×100	17.5	76×140	21.3	90×140	26.5						
33000(334)	76×100	18.0	76×120	24.3	76×150	26.0								
39000(394)	76×100	19.5	76×140	25.2	90×140	27.2								
47000(474)	76×120	20.0	76×150	26.7										
56000(564)	76×140	24.1	90×140	29.1										
68000(684)	90×140	26.5												

Ancol

AN CD13S GS DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

wv(v) μF	100(MA)		160(MB)		200(MC)		250(MD)		315(MQ)		350(MF)		400(VA)	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
)(221)											35×50	0.9	35×50	1.0
)(271)									35×50	1.0	35×50	1.0	35×60	1.0
)(331)									35×50	1.2	35×60	1.2	35×60	1.2
)(391)									35×60	1.3	35×80	1.3	35×80	1.4
)(471)							35×50	1.3	35×80	1.5	35×80	1.5	35×100	1.5
)(561)					357.50	1.4	35×60	1.6	35×80	1.6	35×100	1.7	35×100	1.7
)(681)					35×50	1.5	35×80	1.7	35×100	1.9	35×100	1.9	50×80	2.3
)(821)			35×50	1.4	35×80	1.9	35×80	1.9	35×120	2.2	35×120	2.1	50×100	2.4
0(102)			35×60	1.9	35×80	2.2	35×100	2.3	50×80	2.3	50×100	2.5	50×120	2.7
0(122)			35×80	2.3	35×80	2.3	35×100	2.4	50×100	2.7	50×100	2.7	50×120	3.0
0(152)			35×80	2.6	35×100	2.9	35×120	2.9	50×100	3.1	50×120	3.3	65×100	3.5
0(182)			35×80	2.6	35×100	2.9	35×120	3.0	50×120	3.6	65×100	3.8	65×120	3.6
0(222)	35×50	2.9	35×100	3.2	35×120	3.3	50×100	3.8	65×100	4.2	65×120	4.6	76×100	4.1
0(272)	35×60	3.4	35×120	3.2	50×80	3.8	50×120	4.5	65×120	4.3	76×100	4.6	76×120	4.8
0(332)	35×80	3.9	35×120	3.7	50×100	4.7	65×100	5.2	76×100	4.9	76×120	5.3	76×140	5.7
0(392)	35×80	4.2	50×100	4.3	50×120	5.4	65×120	5.2	76×120	5.8	76×140	6.2	90×140	6.7
0(472)	35×80	4.6	50×100	4.8	65×100	6.2	65×120	5.7	76×120	6.3	90×140	7.4	90×140	7.4
0(562)	35×100	4.9	50×120	5.5	65×100	6.3	76×100	6.4	76×140	7.3	90×140	8.1		
0(682)	35×120	5.5	65×100	6.3	65×120	7.3	76×120	7.6	90×140	8.9				
0(822)	50×80	6.2	65×120	7.1	76×100	8.5	76×140	8.3						
0(103)	50×100	6.7	76×100	7.9	75×120	9.5	90×140	9.9						
0(123)	50×100	7.3	76×120	9.0	76×140	10.5	90×140	10.8						
0(153)	50×120	8.6	76×140	11.3	90×140	12.5								
0(183)	65×100	8.9	90×140	13.0	90×140	13.3								
0(223)	65×120	10.3	90×140	14.3										
0(273)	65×140	12.1												
0(333)	76×120	14.1												
0(393)	76×140	16.5												
0(473)	76×140	18.3												
0(563)	90×140	19.2												
0(683)														



Ancol

Aluminum Electrolytic Capacitors

AN CD138 GT series

* Life time:85°C 2000 hours

* Screw type

* Suited for smoothing circuits for general purpose inverter control for F.A.

Machine designed for use as input filter capacitor for current



I SPECIFICATIONS

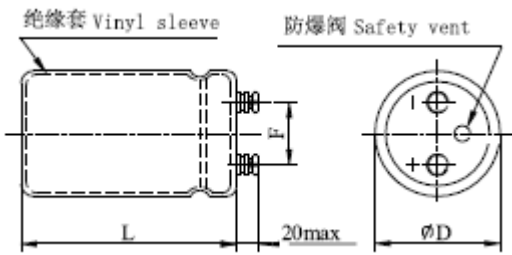
Item	Performance Characteristics																																																																	
Rated Voltage Range	10V.DC~ 100V.DC	160V.DC~ 450V.DC																																																																
Operating Temperature Range	-40°C ~ + 85°C	-25°C ~ + 85°C																																																																
Nominal Capacitance Range	270 μF~1000000 μF																																																																	
Capacitance Tolerance	±20%(M,+20°C , 120Hz)																																																																	
Leakage Current	After application of rated voltage for 5minutes: $I \leq 0.02CV$ or 5mA(whichever is greater)20°C C: Nominal Capacitance in u F V:Rated Working Voltage in V																																																																	
Dissipation Factor	<table border="1"> <thead> <tr> <th rowspan="2">WV(V) ΦD</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>											WV(V) ΦD	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
WV(V) ΦD	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																																																								
Load Life	After applying rated voltage for 2000 hours at +86°C, Capacitors meet the characteristics requirement measured at +20°C listed below: <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±15% of the initial measured value</td> </tr> <tr> <td>Leakage current</td> <td>Less than the initial specified value</td> </tr> <tr> <td>tan δ</td> <td>Less than 150% the initial specified value</td> </tr> </tbody> </table>											Capacitance Change	Within ±15% of the initial measured value	Leakage current	Less than the initial specified value	tan δ	Less than 150% the initial specified value																																																	
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Shelf Life	After Leaving capacitor under no load at +85°C for 1000 hours, Capacitors meet the characteristics listed above.																																																																	

MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Frequency(Hz)		50(60)	100(120)	400	1k	≥10k
Coefficient	10-50WV	0.80	1.00	1.03	1.05	1.08
	63-100WV	0.80	1.00	1.05	1.07	1.08
	160-450WV	0.80	1.00	1.10	1.13	1.18

AN CD138 GT- CASE SIZE TABLE



D±1.5	35	50	65	76	90
L±3.0	506080100	80100120	100 120 140	100 120 140 150	140 150
F±1.0	12.7	21.8	28.2	31.4	31.4

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

wv(v) p(μF)	1 0(LB)		1 6(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)
300(332)													35×50	2.50
900(392)													35×50	2.60
700(472)													35×50	2.80
600(562)											35×50	3.00	35×60	2.90
800(682)									35×50	3.30	35×50	3.20	35×80	3.70
1200(822)									35×50	3.70	35×60	3.80	35×80	4.20
3000(103)							35×50	3.60	35×50	4.30	35×80	4.10	35×100	5.00
2000(123)							35×50	3.70	35×60	5.30	35×80	4.40	50×80	5.40
5000(153)							35×50	4.00	35×80	5.50	35×100	5.50	50×80	7.70
8000(183)					35×50	5.00	35×60	4.70	35×80	5.70	50×80	6.20	50×80	7.80
2000(223)					35×60	5.40	35×80	5.60	35×100	6.10	50×80	7.10	50×80	8.00
7000(273)			35×50	5.10	35×80	5.80	35×80	6.20	50×80	6.70	50×80	7.40	50×100	8.70
3000(333)			35×60	5.10	35×80	6.00	35×80	6.30	50×80	7.10	50×100	8.80	50×120	10.5
9000(393)	35×50	5.00	35×80	7.10	35×80	6.70	35×100	7.60	50×80	7.40	50×120	10.0	65×100	12.1
2000(423)	35×60	6.00	35×80	7.30	35×100	8.00	50×80	8.70	50×100	8.70	65×100	11.9	65×100	14.4
5000(563)	35×80	6.30	35×100	7.60	50×80	8.40	50×80	10.0	50×100	9.80	65×100	12.6	65×120	15.0
8000(683)	35×80	7.90	35×100	10.3	50×80	9.30	50×80	10.8	50×120	12.0	65×120	15.0	65×140	16.8
2000(823)	35×80	8.40	50×80	10.5	50×80	10.0	50×100	12.0	65×100	12.3	76×100	16.4	76×120	19.4
3000(104)	50×80	9.30	50×80	10.9	50×100	12.0	50×120	13.6	65×120	14.2	76×120	18.9	76×140	21.5
5000(124)	50×80	10.0	50×100	11.1	50×120	12.9	65×100	13.8	65×120	16.0	76×140	21.6	90×140	22.3
7000(154)	50×80	11.0	50×100	12.6	65×100	15.3	65×100	14.6	76×120	18.6	90×140	26.0	90×150	26.5
10000(184)	50×100	12.1	50×120	13.2	65×100	15.5	65×120	16.7	76×140	19.5	90×150	30.8	90×150	31.7
10000(224)	50×100	14.0	65×100	14.7	65×120	18.0	76×100	17.4	90×140	23.3	90×150	37.0		
10000(274)	50×120	14.2	65×120	15.4	76×100	18.8	76×140	23.1	90×140	24.8				
10000(334)	65×100	17.3	65×140	18.3	76×120	23.2	76×150	25.9	90×150	29.0				
10000(394)	65×120	18.0	76×120	19.0	76×140	23.5	90×140	26.5	90×150	35.0				
10000(474)	65×140	19.3	76×140	22.0	90×140	24.7	90×150	28.3						
10000(564)	76×120	20.1	76×150	23.0	90×140	26.2	90×150	33.0						
10000(684)	76×140	24.0	76×150	27.0	90×140	30.8								
10000(824)	76×150	28.5	90×140	32.0	90×150	37.0								

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AN CD138 GT DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(V) Cap(uF)	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)											35×50	1.30	35×50	1	
330(331)											35×50	1.70	35×60	1	
390(391)										35×50	1.90	35×60	1.80	35×80	2.
470(471)								35×50	1.60	35×60	2.10	35×80	2.30	35×80	2
560(561)								35×60	1.60	35×80	2.40	35×80	2.70	35×100	2
680(681)					35×50	1.60	35×60	1.70	35×80	2.90	35×100	2.90	50×80	3	
820(821)					35×50	1.70	35×60	1.80	35×100	3.40	35×100	3.40	50×80	3.	
1000(102)					35×60	2.20	35×80	2.40	35×100	3.80	50×80	3.90	50×80	4	
1200(122)			35×50	2.30	35×60	2.30	35×80	2.40	50×80	4.20	50×80	4.20	50×100	4	
1500(152)			35×60	3.20	35×80	2.90	35×100	3.10	50×80	4.70	50×100	4.80	50×120	5	
1800(182)			35×80	3.40	35×80	2.90	50×80	3.40	50×100	6.30	50×100	5.70	65×100	6	
2200(222)	35×50	2.50	35×80	3.60	35×100	3.60	50×80	3.90	50×100	6.40	50×120	7.00	65×100	7	
2700(272)	35×50	2.70	35×80	3.80	50×80	4.00	50×80	4.00	65×100	8.80	65×100	7.90	65×120	8	
3300(332)	35×50	3.20	50×80	4.70	50×80	4.60	50×100	5.40	65×100	8.80	65×120	9.50	76×120	10	
3900(392)	35×60	3.30	50×80	5.30	50×80	4.70	50×120	6.00	65×120	10.3	76×100	10.7	76×120	11	
4700(472)	35×80	3.50	50×80	5.60	50×100	7.10	65×100	7.30	76×100	12.0	76×120	12.8	76×140	12	
5600(562)	35×80	3.80	50×100	6.40	50×120	8.30	65×100	7.30	76×120	12.7	76×140	14.5	76×140	13	
6800(682)	35×100	4.50	50×100	7.50	65×100	9.50	65×120	8.90	76×140	16.0	76×150	17.5	90×150	14	
8200(822)	50×80	6.00	50×120	8.10	65×100	10.0	76×100	8.90	90×140	19.0	90×140	18.0			
10000(103)	50×80	6.30	65×100	9.90	65×120	11.1	76×120	11.8	90×140	20.0	90×150	20.8			
12000(123)	50×80	6.60	65×120	10.8	76×100	11.6	76×140	13.1							
15000(153)	50×80	8.50	76×100	12.7	76×120	12.9	96×140	16.5							
18000(183)	50×100	8.90	76×120	14.1	76×140	15.2									
22000(223)	50×120	10.2	76×140	16.6	90×140	15.6									
27000(273)	65×100	11.0	90×140	17.7											
33000(333)	65×120	11.7	90×140	18.9											
39000(393)	76×100	12.5													
47000(473)	76×120	14.5													
56000(563)	76×140	16.2													
68000(683)	76×150	18.3													
82000(823)	90×140	20.1													
100000(104)															



Aluminum Electrolytic Capacitors

AN CD60 LR series

* Load life of 1 5000 times and 30000 times

* **For motor starting**

* Used for the compressor starter of a refrigerator and air-conditioner and for the water pumps

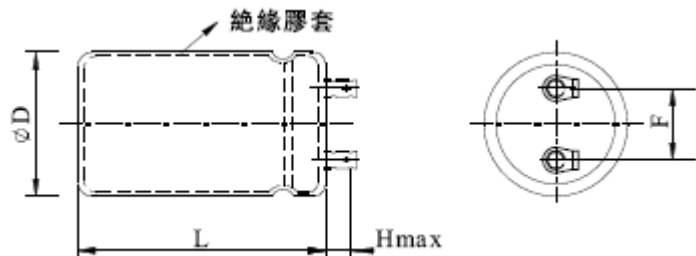


I SPECIFICATIONS

Item	Performance Characteristics
Operating Temperature Range	-25°C ~ +65°C
Rated Wttage Range	110-330VAC
Nominal Capacitance Range	50 μF~1000 μF
Capacitance Tolerance	0~±20%
tan δ (20C, 100Hz)	tg δ ≤0.10, tg δ ≤0.15
Load Life	Apply for one,second and rest for 59 seconds, two times per minute at +65C after 30000 times Appiy for onesecond and rest for 59 seconds, one times per minute at +65>C after 15000 times Power fscctor:20% or less.Within ± 15% of initial measured value
Over-voltage Test	Applied 1.2 times rated voltage for 2 seconds
Withstanding Voltage	Withstand 2000V,AO(r.m.s) for ten seconds between both terminals and the case holding clamp.

DIMENSIONS

Φ	35	42	50	65
D±2				
L62	60-80	80-100	80~ 100, 120	100-120
F±1.0	12	14	22	28
Hmax	11	11	12	13



STANDARD RATINGS

WV(V) \ Cap(μF)	11 0(RA)	1 25(RB)	1 65(RC)	220(RD)	250(MD)	300(RF)
50	35×60	35×60	35×60	35×80	35×80	35×80
75	35×60	35×60	35×60	35×80	35×80	42×80
100	35×80	35×80	35×80	35×80	42×80	42×100
150	35×80	35×80	42×80	50×100	50×100	50×100
200	35×80	35×80	42×80	50×100	50×100	50×100
300	42×80	42×80	42×100	50×100	50×100	50×120
400	42×100	42×100	50×100	50×100	50×120	65×100
650	50×100	50×100	50×100	50×120	65×100	65×120
800	50×100	50×100	50×120	65×100		

Aluminum Electrolytic Capacitors

AN CD17 FW series

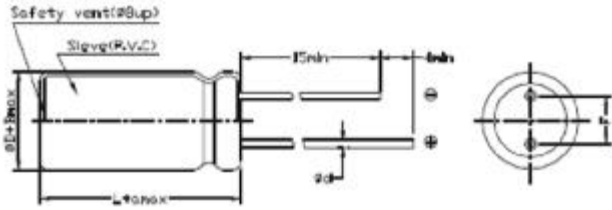
- * Smaller size Low dissipation factor Low leakage current
- * Suited for **photo flash** applications with lead wire terminal



I SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature Range	-20°C ~ + 55°C	
Rated Wttage Range	330VDC	
Nominal Capacitance Range	80 μF~300 μF	
Capacitance Tolerance	-10%~±20% (25°C , 120Hz)	
Leakage Curren	After application at rated working voltage tor 5 minutes $I \leq 1 \times C (\mu A)$	
Dissipation Factor	≤ 0.06 (25°C, 120Hz)	
Temperature Stability	(120Hz) Impedance Ratio: $Z_{-20^\circ C} / Z_{+20^\circ C} \leq 7$	
Charge and Discharge	Charge and di scharge at rated Vol tage at 5-35°C in every 30 seconds for 5000 times Vi a Xe flash to be wi th discharge resistance of 0.7~1.0Ω .	
	Capacitance Change	Within ±15% of the initial measured value
	Leakage current	Less than 150% the initial specified value
	tan δ	Less than 150% the initial specified value
Load Life	After applying rated voltage for 2000 hours at +86°C, Capacitors meet the characteristics requirement measured at +20°C listed below:	
	Capacitance Change	Within ±15% of the initial measured value
	Leakage current	Less than the initial specified value
	tan δ	Less than 150% the initial specified value
Shelf Life	After Leaving capacitor under no load for 1000 hours at +55°C	
	Capacitance Change	Within ±15% of the initial measured value
	Leakage current	Less than the initial specified value
	tan δ	Less than 150% the initial specified value

Ancol



$\Phi D \pm 1.0$	12.5~13.0	13.5~20
$F \pm 0.5$	5.0	7.5
$\Phi d \pm 0.1$	0.8	
$L \pm 2.0$	23--48	

DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(v) Cap(μF)	330V(MN)								
	125	13	135	14.5	15	155	16	18	20
80(800)	12.5×27	13×25	13.5×25	14.5×23					
100(101)	12.5×30	13×28	13.5×27	14.5×25		15.5×26	16×25		
120(121)	12.5×35	13×33	13.5×31	14.5×29	15×28	15.5×27	16×26		
140(101)	12.5×39	13×38	13.5×36	14.5×33	15×±32	15.5×29	16×28	18×28	
150(151)	12.5×41	13×41	13.5×38	14.5×3s	15×34	15.5×3t	16×30	18×26	
160(161)	12.5×44	13×42	13.5×40	14.5×37	15×37	15.5×32	16×3t	18×8	
t80(181)	12.5×48	13×45	13.5×43	14.5×40	15×39	15.5×36	16×3S	18×30	
200(201)			13.5×48	14.5×45	15×44	15.5×39	16×38	18×32	20×28
220(221)				14.5×48	15×46	15.5×42	16×40	18×33	20×30
280(251)						15.5×46	16×45	16×37	20×32
30(1)3011								18×43	20×38

Aluminum Electrolytic Capacitors

AN CD17K FK series

- * Low dissipation factor Low leakage current
- * Suited for photo flash applications with **lug terminal**

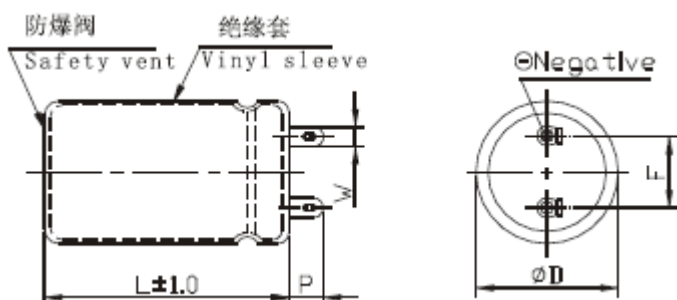


I SPECIFICATIONS

Item	Performance Characteristics		
Operating Temperature Range	-20°C ~ + 55°C		
Rated Voltage Range	330V		
Nominal Capacitance Range	180 μF~1500 μF		
Capacitance Tolerance	-10%~±20% (25°C , 120Hz)		
Leakage Current	After application at rated working voltage for 5 minutes $I \leq 1 \times C (\mu A)$		
Dissipation Factor	≤ 0.06 (25°C, 120Hz)		
Dissipation Factor	Capacitance	180-600	601-1500
	Tan δ (MAX) (25°C, 120Hz)	0.07	0.10
Temperature Stability	(120Hz) Impedance Ratio: $Z_{-20^\circ C} / Z_{+20^\circ C} \leq 7$		
Charge and Discharge	Charge and discharge at rated Voltage at 5-35°C in every 30 seconds for 5000 times via Xe flash to be with discharge resistance of 0.7~1.0Ω.		
	Capacitance Change	Within ±15% of the initial measured value	
	Leakage current	Less than 150% the initial specified value	
	tan δ	Less than 150% the initial specified value	
Shelf Life	After Leaving capacitor under no load for 1000 hours at +55°C		
	Capacitance Change	Within ±15% of the initial measured value	
	Leakage current	Less than 150% the initial specified value	
	tan δ	Less than 150% the initial specified value	

Ancol

CASE SIZE TABLE



D--1.0max	20,22	25,30	35
P:1.0	5.0	5.5	5.5
F±0.5	6.0	8.0	10.0
W	2.6	3.0	3.0

AN CD17K FK DIMENSIONS, RATED VOLTAGE AND CAPACITANCE

WV(v) Cap(μF)	330V(MN)				
	20	22	25	30	35
180(181)	20×25				
220(221)	20×30				
250(251)	20×32	22×30			
300(301)	20×40	22×35			
350(351)	20×45	22×35	25×30		
400(401)	20×50	22×40	25×35		
450(451)	20×55	22×45	25×40		
500(501)	20×60	22×50	25×40		
600(601)		22×55	25×45	30×35	
700(701)			25×50	30×40	
500(801)			25×60	30×45	
900(901)			25×65	30×45	35×40
1000(102)				30×50	35×45
1200(122)				30×60	35×50
1300(132)					35×50
1500(152)					35×60