CD 135 Series

85℃ 2000小时

- 85℃ 标准品
- 耐高纹波
- 适用于大功率电源，变频器

2000h at 85℃

- Standard at 85℃
- High Ripple Current
- Power Supplies & Inverters

项目 Item	特性 Characteristics	
使用温度范围（℃） Operating Temperature Range	−40~+85	−25~+85
额定电压范围（V） Voltage Range	10~250	350~600
标称电容量范围（ ） Capacitance Range	270~820000	
标称电容量允许偏差 Capacitance Tolerance（20℃,120Hz）	±20%	
漏电流(μA) Leakage Current（μA）	1≤0.01CV或5mA，取较小者（20℃，5分钟）1≤0.01CV or 5mA whichever issmaller （at 20℃，after 5minuter） C:标称电容器（μF）V:额定电压（V）C:Nominal Capacitance(μF) V:Rated Voltage(V)	
损耗角正切值(tg δ) Dissipation Factor （20℃,120Hz）	小于规格表中的规定值 Less than the value specified in standard products table	

项目 Item	使用寿命 Useful Life		负载寿命 Load Life	耐久试验 Endurance Tost	高温贮存 shelf Life	
寿命 Lifetime	2000h		2000h	2000h	1000h	
漏电流 Leakage Current	≤初始规定值 Not more than specitied value		≤初始规定值 Not more than specitied value	≤初始规定值 Not more than specitied value	≤初始规定值 Not more than specitied value	
容量变化率 Capacitance Change	初始值±30%以内 Within±30% of initial Value		初始值±20%以内 Within±20% of initial Value	初始值±20%以内 Within±10% of initial Value	初始值±20%以内 Within±20% of initial Value	
损耗变化率 Dissipation Factor	≤初始规定值的3倍 Not more than 300% of specified value		≤初始规定值的2倍 Not more than 200% of specified value	≤初始规定值的1.3倍 Not more than 130% of specified value	≤初始规定值的2倍 Not more than 200% of specified value	
使用条件 Condition						
使用电压 Applied Voltage	U_R	U_R	U_R	U_R	$U_R=0$	试验后：施加额定电压30分钟后恢复24小时 After test: UR to be applied for 30min >24h before measurement
使用电流 Applied Current	I_R	$1.2\times I_R$	I_R	$I_R=0$	$I_R=0$	
使用温度 Applied Temperature	85℃	40℃	85℃	85℃	85℃	

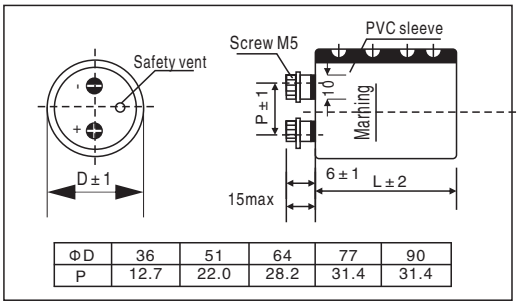
CD 135 系列

Ratings for CD 135 Series

UR (Surge Voltage) Code	Rated Capa-citance	Dissipation Factor 20℃ 120HZ	Max ESR 20℃ 120HZ	Typ ESR 20℃ 120HZ	Rated Ripple Current 85℃ 120HZ	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
10 (13) 1A	33000	0.80	34.7	20.5	4.3	36×53
	39000	0.80	29.4	17.6	4.7	36×53
	47000	0.80	29.4	14.6	5.2	36×65
	56000	0.80	20.5	12.5	6.1	36×83
	68000	0.80	16.9	10.1	6.7	36×83
	82000	0.80	14.0	9.0	7.7	36×100
	100000	0.80	11.5	7.5	8.8	36×100
	120000	0.80	9.6	7.1	10.0	36×121
	150000	1.00	9.6	6.5	10.8	36×121
	180000	1.00	8.0	6.0	12.0	51×96
	220000	1.50	9.8	5.0	11.2	51×121
	270000	1.50	8.0	4.4	12.8	51×121
	330000	1.50	6.5	3.8	15.3	64×96
	390000	1.50	5.5	3.4	17.3	64×115
	470000	2.00	6.1	2.9	16.7	64×130
	560000	2.00	5.1	2.7	19.0	77×115
	680000	2.00	4.2	2.5	21.7	77×130
	820000	2.00	3.5	2.4	24.7	77×155
16 (20) 1C	22000	0.60	39.1	22.0	4.1	36×53
	27000	0.60	31.9	19.1	4.5	36×53
	33000	0.60	26.1	15.7	5.0	36×53
	39000	0.60	22.0	13.1	5.9	36×65
	47000	0.60	18.3	11.0	6.4	36×83
	56000	0.60	15.4	9.5	7.3	36×83
	68000	0.60	12.6	7.9	8.4	36×100
	82000	0.80	14.0	6.8	8.3	36×100
	100000	0.80	11.5	5.8	9.5	36×121
	120000	0.80	9.6	5.1	10.9	36×121
	150000	1.00	9.6	4.4	11.3	51×96
	180000	1.00	8.0	4.0	12.8	51×121
	220000	1.00	6.5	3.4	15.3	51×130
	270000	1.00	5.3	3.0	17.6	64×96
	330000	1.50	6.5	2.8	16.8	64×115
	390000	1.50	5.5	2.6	18.3	64×130
	470000	1.50	4.6	2.4	21.3	77×115
	560000	1.50	3.8	2.2	23.6	77×130
	680000	1.50	3.2	2.0	27.6	77×155
	820000	2.00	3.5	1.9	27.1	90×157
25 (32) 1E	15000	0.50	47.8	22.0	3.7	36×53
	18000	0.50	39.8	18.0	4.1	36×53
	22000	0.50	32.6	15.8	4.5	36×53
	27000	0.50	26.5	12.8	5.0	36×65
	33000	0.50	21.7	11.0	5.9	36×83
	39000	0.50	18.4	9.4	6.7	36×83
	47000	0.50	15.2	7.8	7.7	36×100
	56000	0.60	15.4	6.8	7.9	36×100
	68000	0.60	12.6	5.8	9.1	36×121
	82000	0.60	10.5	5.1	10.4	36×121
	100000	0.80	11.5	4.4	10.3	51×96
	120000	0.80	9.6	4.0	11.7	51×115
	150000	0.80	7.6	3.4	14.1	51×130
	180000	0.80	6.4	3.0	15.7	64×96
	220000	1.00	6.5	2.8	16.1	64×115
	270000	1.00	5.3	2.5	18.6	64×130
	330000	1.00	4.4	2.3	21.9	764×155
	390000	1.20	4.4	2.2	22.0	77×115
	470000	1.20	3.7	2.0	25.6	77×155

UR (Surge Voltage) Code	Rated Capa-citance	Dissipation Factor 20℃ 120HZ	Max ESR 20℃ 120HZ	Typ ESR 20℃ 120HZ	Rated Ripple Current 85℃ 120HZ	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
35 (44) 1V	560000	1.20	3.1	1.8	27.9	90×131
	680000	1.20	2.5	1.5	32.5	90×157
	10000	0.40	57.3	23.6	3.4	36×53
	12000	0.40	47.8	20.0	3.7	36×53
	15000	0.40	38.2	17.0	4.2	36×65
	18000	0.40	31.8	13.7	4.9	36×83
	22000	0.40	26.1	11.6	5.7	36×83
	27000	0.40	21.3	9.4	6.3	36×100
	33000	0.40	17.4	9.0	7.2	36×100
	39000	0.50	18.4	8.2	7.3	36×121
	47000	0.50	15.2	7.9	8.7	51×75
	56000	0.60	15.4	7.6	8.6	51×96
	68000	0.60	12.6	6.0	9.8	51×115
	82000	0.60	10.5	4.8	11.6	64×96
	100000	0.60	8.6	4.0	13.3	64×115
	120000	0.60	7.2	3.9	14.8	64×121
	150000	0.80	7.6	3.6	14.9	64×130
	180000	0.80	6.4	3.2	17.0	77×115
	220000	0.80	5.2	2.9	20.2	77×130
	270000	1.00	5.3	2.5	20.3	77×155
	330000	1.00	4.4	2.3	23.5	90×131
	390000	1.00	3.7	2.0	26.4	90×157
	470000	1.00	3.1	1.8	29.6	90×157
50 (63) 1H	5600	0.30	76.7	46.0	3.0	36×53
	6800	0.30	63.2	38.0	3.3	36×53
	8200	0.30	52.4	31.4	3.6	36×53
	10000	0.30	43.0	25.8	4.0	36×65
	12000	0.30	35.8	21.5	4.7	36×83
	15000	0.30	28.6	15.0	5.5	36×83
	18000	0.30	23.9	12.0	6.2	36×100
	22000	0.40	26.1	10.8	6.3	36×121
	27000	0.40	21.2	9.5	7.1	36×121
	33000	0.40	17.4	8.9	8.2	51×96
	39000	0.50.	18.4	8.2	8.1	51×96
	47000	0.50	15.2	7.6	9.3	51×115
	56000	0.50	12.8	6.4	10.5	64×96
	68000	0.50	10.5	5.3	12.0	64×96
	82000	0.50	8.7	4.2	13.7	64×115
	100000	0.60	8.6	3.9	14.7	77×115
	120000	0.60	7.2	3.3	16.7	77×115
	150000	0.60	5.7	3.0	19.3	77×130
	180000	0.60	4.8	2.5	21.9	77×155
	220000	0.60	3.9	2.0	21.4	90×131
	270000	0.60	3.2	1.8	24.6	90×157
63 (79) 2A	3900	0.25	91.8	47.2	2.7	36×53
	4700	0.25	76.2	39.0	3.0	36×53
	5600	0.25	64.0	38.4	3.3	36×53
	6800	0.25	52.7	31.6	3.6	36×65
	8200	0.25	43.7	26.2	4.3	36×83
	10000	0..25	35.8	23.3	4.9	36×83
	12000	0.25	29.9	18.0	5.6	36×100
	15000	0.30	28.6	16.0	5.9	36×100
	18000	0.30	23.9	14.6	6.7	36×121
	22000	0.30	19.5	13.0	7.8	36×121
	27000	0.40	21.2	12.4	7.4	51×96
	33000	0.40	17.4	7.9	8.4	51×96
	39000	0.40	14.7	7.4	9.5	51×115

外形图尺寸表 Dimensions mm



ΦD	36	51	64	77	90
P	12.7	22.0	28.2	31.4	31.4

频率系数 Frequency Coefficient

频率 Frequency / 额定电压 Rated voltage(V)	50Hz	120Hz	300Hz	1KHz	≥10KHz
10~50	0.95	1.00	1.04	1.10	1.15
63~100	0.95	1.00	1.06	1.16	1.30
160~450	0.80	1.00	1.10	1.25	1.40

CD 135 系列

Ratings for CD 135 Series

UR (Surge Voltage) Code	Rated Capa-citance	Dissipation Factor 20℃ 120HZ	Max ESR 20℃ 120HZ	Typ ESR 20℃ 120HZ	Rated Ripple Current 85℃ 120HZ	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
63 (79) 2A	47000	0.40	12.2	6.2	11.3	51×130
	56000	0.40	10.2	5.5	12.8	64×115
	68000	0.50	10.5	5.3	12.7	64×121
	82000	0.50	8.7	4.4	14.5	64×130
	100000	0.50	7.2	3.6	16.7	77×115
	120000	0.50	6.0	3.0	18.9	77×130
	150000	0.50	4.8	2.4	22.4	77×155
	180000	0.60	4.8	2.4	22.4	90×131
	220000	0.60	3.9	2.0	26.2	90×157
80 (100) 2K	3300	0.25	109	54.0	2.5	36×53
	3900	0.25	91.8	46.0	2.8	36×53
	4700	0.25	76.2	38.1	3.0	36×65
	5600	0.25	64.0	32.0	3.6	36×83
	6800	0.25	52.7	26..4	3.9	36×83
	8200	0.25	43.7	22.1	4.5	36×100
	10000	0.25	35.8	17.1	5.2	36×100
	12000	0.25	29.9	15.0	5.9	36×121
	15000	0.25	23.9	12.0	6.8	36×121
	18000	0.25	19.9	10.4	7.8	51×96
	22000	0.30	19.5	9.8	8.0	51×96
	27000	0.30	15.9	8.0	9.2	51×115
	33000	0.30	13.0	6.5	10.5	51×130
	39000	0.30	11.0	6.0	12.0	64×115
	47000	0.30	9.2	4.9	13.6	64×121
	56000	0.40	10.2	4.3	13.4	64×130
	68000	0.40	8.4	4.0	15.4	77×115
	82000	0.40	7.0	3.5	17.5	77×130
	100000	0.40	5.7	2.8	20.5	77×155
	120000	0.40	4.8	2.4	22.4	90×131
	150000	0.40	3.8	2.0	26.5	90×157
100 (125) 2A	1800	0.25	199.0	48.2	1.9	36×53
	2200	0.25	163	44.0	2.1	36×53
	2700	0.25	133	28.5	2.3	36×53
	3300	0.25	109	34.6	2.6	36×65
	3900	0.25	91.8	28.4	3.0	36×83
	4700	0.25	76.2	26.3	3.5	36×83
	5600	0.25	64.0	23.0	3.9	36×100
	6800	0.25	52.7	21.8	4.5	36×100
	8200	0.25	43.7	20.0	5.1	36×121
	10000	0.25	35.8	18.7	5.9	36×121
	12000	0.25	29.9	16.0	6.4	51×75
	15000	0.25	23.9	11.5	7.0	51×96
	18000	0.25	19.9	9.8	8.3	51×115
	22000	0.25	16.3	7.9	10.0	51×130
	27000	0.25	13.3	6.8	11.5	64×115
	33000	0.25	10.9	5.5	11.9	64×130
	39000	0.25	9.2	4.9	13.4	77×115
	47000	0.25	10.7	4.5	14.2	77×130
	56000	0.25	9.0	4.0	16.0	77×155
	68000	0.35	7.4	3.4	18.8	90×131
	82000	0.35	6.1	3.0	20.5	90×157
	100000	0.35	5.0	2.5	24.0	90×171
160 (200) 2C	3300	0.25	109	30.7	5.2	36×121
	3900	0.25	91.8	26.2	5.3	51×75
	4700	0.25	76.2	20.8	5.9	51×75
	5600	0.25	64.0	18.8	7.0	51×96
	6800	0.25	52.7	16.2	7.8	51×96
	8200	0.25	43.7	13.5	9.1	51×115
	10000	0.25	35.8	12.9	10.4	64×96
	12000	0.25	29.9	10.2	11.3	64×96
	15000	0.25	23.9	9.0	14.3	64×130
	18000	0.25	19.9	7.5	15.6	64×130
	22000	0.25	16.3	6.4	18.3	77×130
	27000	0.25	13.3	5.2	20.0	77×130
	33000	0.25	10.9	3.6	23.8	90×155
	39000	0.25	9.2	2.2	27.9	90×131
200 (250) 2D	2200	0.25	163	38.5	3.9	90×157
	2700	0.25	133	26.4	4.7	36×121
	3300	0.25	109	23.5	4.9	51×75
	3900	0.25	91.8	21.5	5.3	51×75
	4700	0.25	76.2	19.5	6.4	51×96

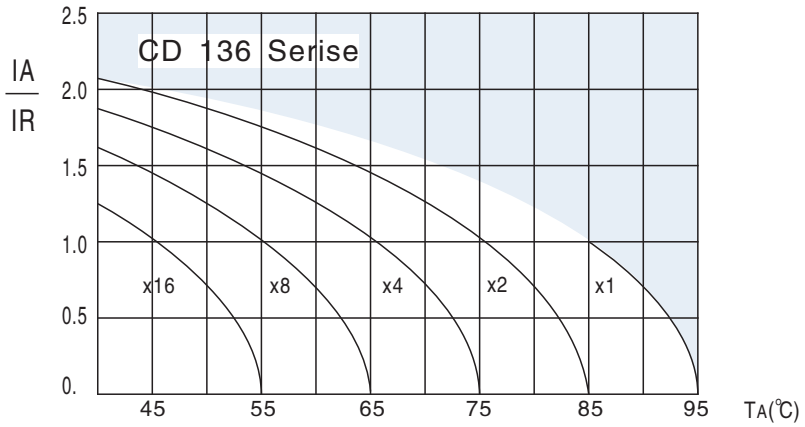
UR (Surge Voltage) Code	Rated Capa-citance	Dissipation Factor 20℃ 120HZ	Max ESR 20℃ 120HZ	Typ ESR 20℃ 120HZ	Rated Ripple Current 85℃ 120HZ	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
200 (250) 2D	5600	0.25	64.0	17.5	7.6	51×115
	6800	0.25	52.7	13.7	8.8	51×130
	8200	0.25	43.7	11.3	9.4	64×96
	10000	0.25	35.8	9.4	10.4	64×96
	12000	0.25	29.9	8.6	12.1	77×96
	15000	0.25	23.9	7.3	14.4	77×96
	18000	0.25	19.9	5.9	16.5	77×130
	22000	0.25	16.3	4.1	19.6	77×155
	27000	0.25	13.3	3.2	21.5	90×131
	33000	0.25	10.9	2.5	25.3	90×157
250 (300) 2E	1500	0.25	239	49.1	3.2	36×100
	1800	0.25	199.0	41.1	3.5	36×100
	2200	0.25	163	32.5	4.0	51×75
	2700	0.25	133	27.7	4.4	51×75
	3300	0.25	109	23.1	5.4	51×96
	3900	0.25	91.8	20.0	6.3	51×115
	4700	0.25	76.2	16..5	7.1	64×96
	5600	0.25	64.0	14.2	7.8	64×96
	6800	0.25	52.7	11.8	9.1	64×115
	8200	0.25	43.7	11.1	10.0	64×115
	10000	0.25	35.8	10.7	11.7	64×130
	12000	0.25	29.9	9.2	12.9	77×115
	15000	0.25	23.9	7.3	15.1	77×130
	18000	0.25	19.9	5.8	17.7	77×155
	22000	0.25	16.3	3.2	20.9	90×157
350 (400) 2V	390	0.20	735	268.0	1.7	36×53
	470	0.20	610	228	2.2	36×83
	560	0.20	512	190	2.4	36×83
	680	0.20	421	152.0	2.6	36×83
	820	0.20	349	126	3.1	36×100
	1000	0.20	287	104	3.4	36×100
	1200	0.20	239	85.8	3.8	51×75
	1500	0.20	191	72.2	4.3	51×75
	1800	0.20	159	58.2	5.1	51×96
	2200	0.20	130	47.9	5.7	51×96
	2700	0.20	107	39.0	7.1	51×130
	3300	0.20	86.8	32.1	7.9	51×130
	3900	0.20	73.5	27.8	9.0	64×115
	4700	0.20	61.0	25.0	10.3	64×130
	5600	0.20	51.2	22.5	11.4	77×115
	6800	0.20	42.1	17.1	13.1	77×130
	8200	0.20	34.9	14.4	15.4	77×155
	10000	0.20	28.6	11.5	18.1	90×157
	12000	0.20	23.9	9.8	20.0	90×157
	15000	0.20	19.1	7.9	24.5	90×196
	18000	0.20	15.9	6.5	28.8	90×236
400 (450) 2G	330	0.20	868	248	1.5	36×53
	390	0.20	735	208.0	2.0	36×83
	470	0.20	610	178	2.2	36×83
	560	0.20	512	145	2.4	36×83
	680	0.20	421	119.0	2.8	36×100
	820	0.20	349	98.5	3.1	36×100
	1000	0.20	287	82.3	3.5	51×75
	1200	0.20	239	67.5	3.8	51×75
	1500	0.20	191	58.0	4.7	51×96
	1800	0.20	159	47.2	5.2	51×96
	2200	0.20	130	34.8	6.4	51×115
	2700	0.20	107	33.2	7.0	64×96
	3300	0.20	86.8	31.2	8.2	64×115
	3900	0.20	73.5	25.1	9.4	64×130
	4700	0.20	61.0	23.7	10.4	77×115
	5600	0.20	51.2	19.0	11.9	77×130
	6800	0.20	42.1	15.5	14.1	77×155
	8200	0.20	34.9	13.5	16.4	90×157
	10000	0.20	28.6	11.1	18.3	90×157
	12000	0.20	23.9	9.8	21.8	90×196
	15000	0.20	19.1	8.0	26.3	90×236
450 (500) 2W	270	0.20	1061	421.0	1.4	36×53
	330	0.20	868	280	1.8	36×83
	390	0.20	735	243	2.0	36×83
	470	0.20	610	200.0	2.2	36×83

CD 135 系列

Ratings for CD 135 Series

UR (Surge Voltage) Code	Rated Capa–citance	Dissipation Factor 20℃ 120HZ	Max ESR 20℃ 120HZ	Typ ESR 20℃ 120HZ	Rated Ripple Current 85℃ 120HZ	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
450 (500) 2W	560	0.20	512	173	2.6	36×100
	680	0.20	421	140	2.8	36×100
	820	0.20	349	95.9	3.2	51×75
	1000	0.20	287	82.2	3.5	51×75
	1200	0.20	239	72.0	4.2	51×96
	1500	0.20	191	58.5	5.1	51×115
	1800	0.20	159	45.5	5.9	51×130
	2200	0.20	130	32.8	6.3	64×96
	2700	0.20	106.2	31.6	7.5	64×115
	3300	0.20	86.8	30.0	8.7	64×130
	3900	0.20	73.5	29.3	9.5	77×115
	4700	0.20	61.0	23.5	10.9	77×130
	5600	0.20	51.2	16.5	12.8	77×155
	6800	0.20	42.1	14.4	15.0	90×157
	8200	0.20	34.9	12.1	16.5	90×157
	10000	0.20	28.6	10.0	20.0	90×196
	12000	0.20	23.9	8.0	23.6	90×236
500 (550) 2H	1500	0.20	180.0	67.5	5.3	51×130
	2200	0.20	142.0	38.5	6.2	64×115
	3300	0.20	88.5	32.5	8.5	77×115
	4700	0.20	63.5	25.5	9.4	77×155
	10000	0.20	26.5	11.5	17.5	90×175
500 (600) 2Y	1200	0.20	182.0	123.0	5.3	51×130
	1800	0.20	147.0	85.5	7.5	64×115
	2700	0.20	91.5	46.0	8.6	77×115
	3900	0.20	65.3	28.5	13.4	77×155
	6800	0.20	28.5	12.5	18.5	90×175
600 (650) 2Z	1200	0.20	242.0	121.0	7.7	64×96
	2200	0.20	162.0	81.0	12.0	77×115
	3300	0.20	88.0	44.0	16.4	90×131
	4700	0.20	62.0	31.0	21.0	90×157

寿命曲线 Lifetime Diagram



IA=actual ripple current 120HZ.IR=rated ripple current at120HZ，85℃

Multiplier of Useful Life as a function of ambient temperature and ripple current load