



BP 系列

Ratings for BP Series

85°C 2000小时

- 85°C 标准品
- 耐高纹波
- 适用大功率电源, 变频器

2000h at 85°C

- Standard at 85°C
- High Ripple Current
- Power Supplies & Inverters



项目 Item	特性 Characteristics	
使用温度范围(°C) 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(µF) Capacitance Range	270~820000	
标称电容量允许偏差 Capacitance Tolerance(20°C, 120Hz)	± 20%	
漏电流(µA) Leakage Current	I ≤ 0.01CV 或 5mA, 取较小者 (20°C, 5分钟) I ≤ 0.01CV or 5mA whichever is smaller (at 20°C, after 5 minutes) C: 标称电容量 (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°C, 120Hz)	小于图表中规定的数值 Less than the value specified in the standard products tables	

项目 Item	使用寿命 Useful Life		负载寿命 Load Life	耐久试验 Endurance Test	高温贮存 shelf Life
寿命 Lifetime	4000h	>65000h	2000h	2000h	1000h
漏电流 Leakage Current	≤初始规定值 Not more than specified value		≤初始规定值 Not more than specified value	≤初始规定值 Not more than specified value	≤初始规定值 Not more than specified 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 ± 10%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 使用电流 Applied Current 使用温度 APPLIED Temperature	Ur	Ur	Ur	Ur	Ur=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
	Ir	1.2×Ir	Ir	Ir=0	Ir=0
	85°C	40°C	85°C	85°C	85°C

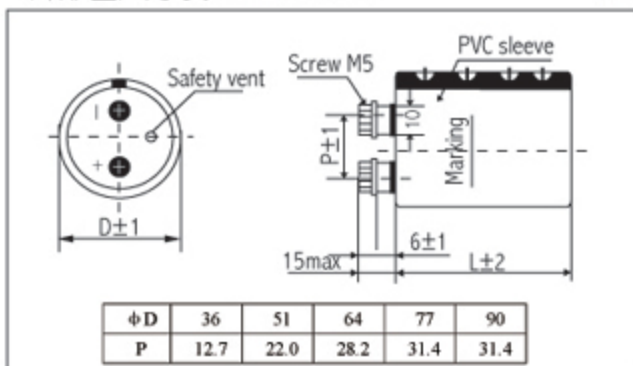
CD 135 系列

Ratings for CD 135 Series

U _s (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C, 120Hz	Max ESR 20°C 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C 120Hz	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
10 (13) 1A	33000	0.80	34.7	20.5	4.3	36x53
	39000	0.80	29.4	17.6	4.7	36x53
	47000	0.80	24.4	14.6	5.2	36x65
	56000	0.80	20.5	12.5	6.1	36x83
	68000	0.80	16.9	10.1	6.7	36x83
	82000	0.80	14.0	9.0	7.7	36x100
	100000	0.80	11.5	7.5	8.8	36x100
	120000	0.80	9.6	7.1	10.0	36x121
	150000	1.00	9.6	6.5	10.8	36x121
	180000	1.00	8.0	6.0	12.0	51x96
	220000	1.50	9.8	5.0	11.2	51x121
	270000	1.50	8.0	4.4	12.8	51x121
	330000	1.50	6.5	3.8	15.3	64x96
	390000	1.50	5.5	3.4	17.3	64x115
	470000	2.00	6.1	2.9	16.7	64x130
	560000	2.00	5.1	2.7	19.0	77x115
	680000	2.00	4.2	2.5	21.7	77x130
	820000	2.00	3.5	2.4	24.7	77x155
16 (20) 1C	22000	0.60	39.1	22.0	4.1	36x53
	27000	0.60	31.9	19.1	4.5	36x53
	33000	0.60	26.1	15.7	5.0	36x53
	39000	0.60	22.0	13.1	5.9	36x65
	47000	0.60	18.3	11.0	6.4	36x83
	56000	0.60	15.4	9.5	7.3	36x83
	68000	0.60	12.6	7.9	8.4	36x100
	82000	0.80	14.0	6.8	8.3	36x100
	100000	0.80	11.5	5.8	9.5	36x121
	120000	0.80	9.6	5.1	10.9	36x121
	150000	1.00	9.6	4.4	11.3	51x96
	180000	1.00	8.0	4.0	12.8	51x115
	220000	1.00	6.5	3.4	15.3	51x130
	270000	1.00	5.3	3.0	17.6	64x96
	330000	1.50	6.5	2.8	16.8	64x115
	390000	1.50	5.5	2.6	18.3	64x130
	470000	1.50	4.6	2.4	21.3	77x115
	560000	1.50	3.8	2.2	23.6	77x130
680000	1.50	3.2	2.0	27.6	77x155	
820000	2.00	3.5	1.9	27.1	90x157	
25 (32) 1E	15000	0.50	47.8	22.0	3.7	36x53
	18000	0.50	39.8	18.0	4.1	36x53
	22000	0.50	32.6	15.8	4.5	36x53
	27000	0.50	26.5	12.8	5.0	36x65
	33000	0.50	21.7	11.0	5.9	36x83
	39000	0.50	18.4	9.4	6.7	36x83
	47000	0.50	15.2	7.8	7.7	36x100
	56000	0.60	15.4	6.8	7.9	36x100
	68000	0.60	12.6	5.8	9.1	36x121
	82000	0.60	10.5	5.1	10.4	36x121
	100000	0.80	11.5	4.4	10.3	51x96
	120000	0.80	9.6	4.0	11.7	51x115
	150000	0.80	7.6	3.4	14.1	51x130
	180000	0.80	6.4	3.0	15.7	64x96
	220000	1.00	6.5	2.8	16.1	64x115
	270000	1.00	5.3	2.5	18.6	64x130
	330000	1.00	4.4	2.3	21.9	64x155
	390000	1.20	4.4	2.2	22.0	77x115
470000	1.20	3.7	2.0	25.6	77x155	

U _s (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C, 120Hz	Max ESR 20°C 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C 120Hz	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
35 (44) 1v	560000	1.20	3.1	1.8	27.9	90x131
	680000	1.20	2.5	1.5	32.5	90x157
	10000	0.40	57.3	23.6	3.4	36x53
	12000	0.40	47.8	20.0	3.7	36x53
	15000	0.40	38.2	17.0	4.2	36x65
	18000	0.40	31.8	13.7	4.9	36x83
	22000	0.40	26.1	11.6	5.7	36x83
	27000	0.40	21.2	9.4	6.3	36x100
	33000	0.40	17.4	9.0	7.2	36x100
	39000	0.50	18.4	8.2	7.3	36x121
	47000	0.50	15.2	7.9	8.7	51x96
	56000	0.60	15.4	7.6	8.6	51x96
	68000	0.60	12.6	6.0	9.8	51x115
	82000	0.60	10.5	4.8	11.6	64x96
	100000	0.60	8.6	4.0	13.3	64x115
	120000	0.60	7.2	3.9	14.8	64x121
	150000	0.80	7.6	3.6	14.9	64x130
	180000	0.80	6.4	3.2	17.0	77x115
220000	0.80	5.2	2.9	20.2	77x130	
270000	1.00	5.3	2.5	20.3	77x155	
330000	1.00	4.4	2.3	23.5	90x131	
390000	1.00	3.7	2.0	26.4	90x157	
470000	1.00	3.1	1.8	29.6	90x157	
50 (63) 1H	5600	0.30	76.7	46.0	3.0	36x53
	6800	0.30	63.2	38.0	3.3	36x53
	8200	0.30	52.4	31.4	3.6	36x53
	10000	0.30	43.0	25.8	4.0	36x65
	12000	0.30	35.8	21.5	4.7	36x83
	15000	0.30	28.6	15.0	5.5	36x83
	18000	0.30	23.9	12.0	6.2	36x100
	22000	0.40	26.1	10.8	6.3	36x121
	27000	0.40	21.2	9.5	7.1	36x121
	33000	0.40	17.4	8.9	8.2	51x96
	39000	0.50	18.4	8.2	8.1	51x96
	47000	0.50	15.2	7.6	9.3	51x115
	56000	0.50	12.8	6.4	10.5	64x96
	68000	0.50	10.5	5.3	12.0	64x96
	82000	0.50	8.7	4.2	13.7	64x115
	100000	0.60	8.6	3.9	14.7	77x115
	120000	0.60	7.2	3.3	16.7	77x115
	150000	0.60	5.7	3.0	19.3	77x130
180000	0.60	4.8	2.5	21.9	77x155	
220000	0.60	3.9	2.0	21.4	90x131	
270000	0.60	3.2	1.8	24.6	90x157	
63 (79) 2A	3900	0.25	91.8	47.2	2.7	36x53
	4700	0.25	76.2	39.0	3.0	36x53
	5600	0.25	64.0	38.4	3.3	36x53
	6800	0.25	52.7	31.6	3.6	36x65
	8200	0.25	43.7	26.2	4.3	36x83
	10000	0.25	35.8	23.3	4.9	36x83
	12000	0.25	29.9	18.0	5.6	36x100
	15000	0.30	28.6	16.0	5.9	36x100
	18000	0.30	23.9	14.6	6.7	36x121
	22000	0.30	19.5	13.0	7.8	36x121
	27000	0.40	21.2	12.4	7.4	51x96
	33000	0.40	17.4	7.9	8.4	51x96
	39000	0.40	14.7	7.4	9.5	51x115

外形图尺寸表 Dimensions mm



频率系数 Frequency Coefficient

频率 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 (V)	Rated Capacitance (μF)	Dissipation Factor 20°C, 120Hz	Max ESR 20°C, 120Hz (mΩ)	Typ ESR 20°C, 120Hz (mΩ)	Rated Ripple Current 85°C, 120Hz (Arms)	Size Φ DXL (mm)	
63 (79) 2A	47000	0.40	12.2	6.2	11.3	51x130	
	56000	0.40	10.2	5.5	12.8	64x115	
	68000	0.50	10.5	5.3	12.7	64x121	
	82000	0.50	8.7	4.4	14.5	64x130	
	100000	0.50	7.2	3.6	16.7	77x115	
	120000	0.50	6.0	3.0	18.9	77x130	
	150000	0.50	4.8	2.4	22.4	77x155	
	180000	0.60	4.8	2.4	22.4	90x131	
220000	0.60	3.9	2.0	26.2	90x157		
80 (100) 1K	3300	0.25	109	54.0	2.5	36x53	
	3900	0.25	91.8	46.0	2.8	36x53	
	4700	0.25	76.2	38.1	3.0	36x65	
	5600	0.25	64.0	32.0	3.6	36x83	
	6800	0.25	52.7	26.4	3.9	36x83	
	8200	0.25	43.7	22.1	4.5	36x100	
	10000	0.25	35.8	17.1	5.2	36x100	
	12000	0.25	29.9	15.0	5.9	36x121	
	15000	0.25	23.9	12.0	6.8	36x121	
	18000	0.25	19.9	10.4	7.8	51x96	
	22000	0.30	19.5	9.8	8.0	51x96	
	27000	0.30	15.9	8.0	9.2	51x115	
	33000	0.30	13.0	6.5	10.5	51x130	
	39000	0.30	11.0	6.0	12.0	64x115	
	47000	0.30	9.2	4.9	13.6	64x121	
	56000	0.40	10.2	4.3	13.4	64x130	
	68000	0.40	8.4	4.0	15.4	77x115	
	82000	0.40	7.0	3.5	17.5	77x130	
100000	0.40	5.7	2.8	20.5	77x155		
120000	0.40	4.8	2.4	22.4	90x131		
150000	0.40	3.8	2.0	26.5	90x157		
100 (125) 2A	1800	0.25	199.0	48.2	1.9	36x53	
	2200	0.25	163	44.0	2.1	36x53	
	2700	0.25	133	38.5	2.3	36x53	
	3300	0.25	109	34.6	2.6	36x65	
	3900	0.25	91.8	28.4	3.0	36x83	
	4700	0.25	76.2	26.3	3.5	36x83	
	5600	0.25	64.0	23.0	3.9	36x100	
	6800	0.25	52.7	21.8	4.5	36x100	
	8200	0.25	43.7	20.0	5.1	36x121	
	10000	0.25	35.8	18.7	5.9	36x121	
	12000	0.25	29.9	16.0	6.4	51x75	
	15000	0.25	23.9	11.5	7.0	51x96	
	18000	0.25	19.9	9.8	8.3	51x115	
	22000	0.25	16.3	7.9	10.0	51x130	
	27000	0.25	13.3	6.8	11.5	64x115	
	33000	0.25	10.9	5.5	11.9	64x130	
	39000	0.25	9.2	4.9	13.4	77x115	
	47000	0.25	10.7	4.5	14.2	77x130	
56000	0.35	9.0	4.0	16.0	77x155		
68000	0.35	7.4	3.4	18.8	90x131		
82000	0.35	6.1	3.0	20.5	90x157		
100000	0.35	5.0	2.5	24.0	90x171		
160 (200) 2C	3300	0.25	109	30.7	5.2	36x121	
	3900	0.25	91.8	26.2	5.3	51x75	
	4700	0.25	76.2	20.8	5.9	51x75	
	5600	0.25	64.0	18.8	7.0	51x96	
	6800	0.25	52.7	16.2	7.8	51x96	
	8200	0.25	43.7	13.5	9.1	51x115	
	10000	0.25	35.8	12.9	10.4	64x96	
	12000	0.25	29.9	10.2	11.3	64x96	
	15000	0.25	23.9	9.0	14.3	64x130	
	18000	0.25	19.9	7.5	15.6	64x130	
	22000	0.25	16.3	6.4	18.3	77x130	
	27000	0.25	13.3	5.2	20.0	77x130	
	33000	0.25	10.9	3.6	23.8	90x131	
	39000	0.25	9.2	2.2	27.9	90x157	
	200 (250) 2D	2200	0.25	163	38.5	3.9	36x100
		2700	0.25	133	26.4	4.7	36x121
		3300	0.25	109	23.5	4.9	51x75
		3900	0.25	91.8	21.5	5.3	51x75
4700		0.25	76.2	19.5	6.4	51x96	

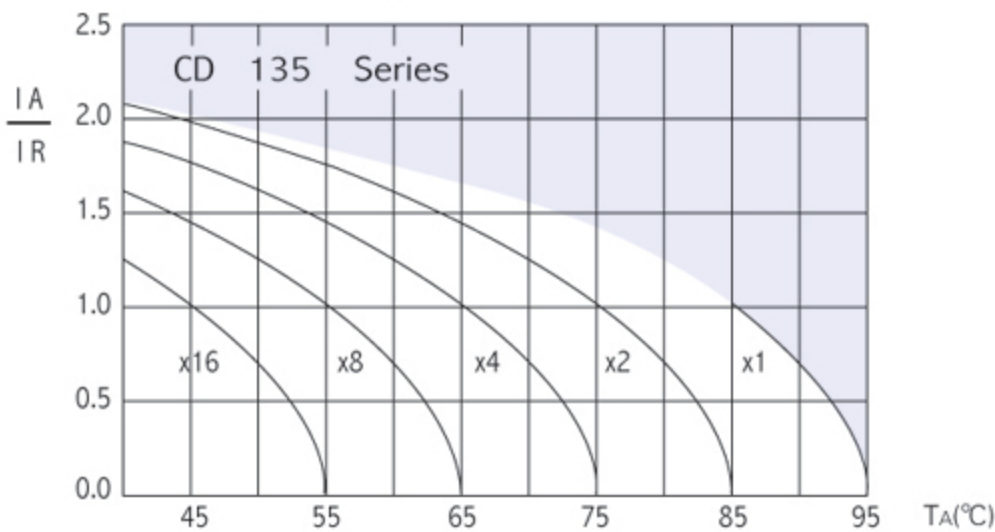
UR (Surge Voltage) Code (V)	Rated Capacitance (μF)	Dissipation Factor 20°C, 120Hz	Max ESR 20°C, 120Hz (mΩ)	Typ ESR 20°C, 120Hz (mΩ)	Rated Ripple Current 85°C, 120Hz (Arms)	Size Φ DXL (mm)	
200 (250) 2D	5600	0.25	64.0	17.5	7.6	51x115	
	6800	0.25	52.7	13.7	8.8	51x130	
	8200	0.25	43.7	11.3	9.4	64x96	
	10000	0.25	35.8	9.4	10.4	64x96	
	12000	0.25	29.9	8.6	12.1	77x96	
	15000	0.25	23.9	7.3	14.4	77x96	
	18000	0.25	19.9	5.9	16.5	77x130	
	22000	0.25	16.3	4.1	19.6	77x155	
	27000	0.25	13.3	3.2	21.5	90x131	
	33000	0.25	10.9	2.5	25.3	90x157	
	250 (300) 2E	1500	0.25	239	49.1	3.2	36x100
		1800	0.25	199.0	41.1	3.5	36x100
2200		0.25	163	32.5	4.0	51x75	
2700		0.25	133	27.7	4.4	51x75	
3300		0.25	109	23.1	5.4	51x96	
3900		0.25	91.8	20.0	6.3	51x115	
4700		0.25	76.2	16.5	7.1	64x96	
5600		0.25	64.0	14.2	7.8	64x96	
6800		0.25	52.7	11.8	9.1	64x115	
8200		0.25	43.7	11.1	10.0	64x115	
10000		0.25	35.8	10.7	11.7	64x130	
12000		0.25	29.9	9.2	12.9	77x115	
15000		0.25	23.9	7.3	15.1	77x130	
18000		0.25	19.9	5.8	17.7	77x155	
22000		0.25	16.3	3.2	20.9	90x157	
350 (400) 2V		390	0.20	735	268.0	1.7	36x53
		470	0.20	610	228	2.2	36x83
		560	0.20	512	190	2.4	36x83
	680	0.20	421	152.0	2.6	36x83	
	820	0.20	349	126	3.1	36x100	
	1000	0.20	287	104	3.4	36x100	
	1200	0.20	239	85.8	3.8	51x75	
	1500	0.20	191	72.2	4.3	51x75	
	1800	0.20	159	58.2	5.1	51x96	
	2200	0.20	130	47.9	5.7	51x96	
	2700	0.20	107	39.0	7.1	51x130	
	3300	0.20	86.8	32.1	7.9	51x130	
	3900	0.20	73.5	27.8	9.0	64x115	
	4700	0.20	61.0	25.0	10.3	64x130	
	5600	0.20	51.2	22.5	11.4	77x115	
	6800	0.20	42.1	17.1	13.1	77x130	
	8200	0.20	34.9	14.4	15.4	77x155	
	10000	0.20	28.6	11.5	18.1	90x157	
12000	0.20	23.9	9.8	20.0	90x157		
15000	0.20	19.1	7.9	24.5	90x196		
18000	0.20	15.9	6.5	28.8	90x236		
400 (450) 2G	330	0.20	868	248	1.5	36x53	
	390	0.20	735	208.0	2.0	36x83	
	470	0.20	610	178	2.2	36x83	
	560	0.20	512	145	2.4	36x83	
	680	0.20	421	119.0	2.8	36x100	
	820	0.20	349	98.5	3.1	36x100	
	1000	0.20	287	82.3	3.5	51x75	
	1200	0.20	239	67.5	3.8	51x75	
	1500	0.20	191	58.0	4.7	51x96	
	1800	0.20	159	47.2	5.2	51x96	
	2200	0.20	130	34.8	6.4	51x120	
	2700	0.20	107	33.2	7.0	64x96	
	3300	0.20	86.8	31.2	8.2	64x115	
	3900	0.20	73.5	25.1	9.4	64x130	
	4700	0.20	61.0	23.7	10.4	77x115	
	5600	0.20	51.2	19.0	11.9	77x130	
	6800	0.20	42.1	15.5	14.1	77x155	
	8200	0.20	34.9	13.5	16.4	90x157	
10000	0.20	28.6	11.1	18.3	90x157		
12000	0.20	23.9	9.8	21.8	90x196		
15000	0.20	19.1	8.0	26.3	90x236		
450 (500) 2W	270	0.20	1061	421.0	1.4	36x53	
	330	0.20	868	280	1.8	36x83	
	390	0.20	735	243	2.0	36x83	
	470	0.20	610	200.0	2.2	36x83	

CD 135 系列

Ratings for CD 135 Series

UR (Surge Voltage) Code	Rated Capa-citance	Dissipation Factor 20°C, 120Hz	Max ESR 20°C 120HZ	Typ ESR 20°C, 120HZ	Rated Ripple Current 85°C 120HZ	Size Φ DXL
(V)	(μF)	—	(mΩ)	(mΩ)	(Arms)	(mm)
450 (500) 2W	560	0.20	512	173	2.6	36x100
	680	0.20	421	140	2.8	36x100
	820	0.20	349	95.9	3.2	51x75
	1000	0.20	287	82.2	3.5	51x75
	1200	0.20	239	72.0	4.2	51x96
	1500	0.20	191	58.5	5.1	51x115
	1800	0.20	159	45.5	5.9	51x130
	2200	0.20	130	32.8	6.3	64x96
	2700	0.20	106.2	31.6	7.5	64x115
	3300	0.20	86.8	30.0	8.7	64x130
	3900	0.20	73.5	29.3	9.5	77x115
	4700	0.20	61.0	23.5	10.9	77x130
	5600	0.20	51.2	16.5	12.8	77x155
	6800	0.20	42.1	14.4	15.0	90x157
	8200	0.20	34.9	12.1	16.5	90x157
	10000	0.20	28.6	10.0	20.0	90x196
500 (550) 2H	12000	0.20	23.9	8.0	23.6	90x236
	1500	0.20	180.0	67.5	5.3	51x130
	2200	0.20	142.0	38.5	6.2	64x115
	3300	0.20	88.5	32.5	8.5	77x115
	4700	0.20	63.5	25.5	9.4	77x155
550 (600) 2Y	10000	0.20	26.5	11.5	17.5	90x175
	1200	0.20	182.0	123.0	5.3	51x130
	1800	0.20	147.0	85.5	7.5	64x115
	2700	0.20	91.5	46.0	8.6	77x115
	3900	0.20	65.3	28.5	13.4	77x155
600 (650) 2Z	6800	0.20	28.5	12.5	18.5	90x175
	1200	0.20	242.0	121.0	7.7	64x96
	2200	0.20	162.0	81.0	12.0	77x115
	3300	0.20	88.0	44.0	16.4	90x131
	4700	0.20	62.0	31.0	21.0	90x157

寿命曲线 Lifetime Diagram



I_A = actual ripple current at 120HZ, I_R = rated ripple current at 120HZ, 85°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load