

PB 系列

Ratings for PB Series

85°C 3000小时

- 耐大纹波电流
- 长寿命
- 适用电源、变频器、UPS

3000h at 85°C

- High Ripple Current
- Long Life
- Power supplies & Inverters & UPS



项目 Item	特性 Characteristics	
工作温度范围(°C) Operating Temperature Range (°C)	-40~+85	-25~+85
额定电压范围(V) Rated Voltage Range(V)	10~250	350~500
容量范围(µF) Capacitance Range (µF)	270~820000	
容量偏差(20°C,120Hz) Capacitance Tolerance (20°C,120Hz)	± 20%	
漏电流(µA) Leakage Current (µA)	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: 标称容量 (µF) V: 额定电压 (V) C: Nominal Capacitance (µF) V: Rated Voltage (V)	
损耗角正切值 Dissipation Factor (20°C,120Hz)	小于规格表中的规定值 Less than the value specified in 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	5000h	80000h	3000h	3000h	1000h
漏电流 Leakage Current	不超过规定值 Not more than specified value		不超过规定值 Not more than specified value	不超过规定值 Not more than specified value	不超过规定值 Not more than specified value
容量变化 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 ± 20% of initial Value	初始值 ± 20% 以内 Within ± 20% of initial Value
损耗角正切 Dissipation Factor	不超过规定值的3倍 Not more than 300% of specified value		不超过规定值的2倍 Not more than 200% of specified value	不超过初始规定值的2倍 Not more than 200% of specified value	不超过初始规定值的2倍 Not more than 200% of specified value
工作条件 Condition: 施加电压 APPLIED Voltage 施加电流 Applied Current 使用温度 APPLIED Temperature	U _R	U _R 1.2 × I _R 40°C	U _R I _R 85°C	U _R I _R =0 85°C	U _R =0 I _R =0 85°C <div style="border: 1px solid black; padding: 5px; width: fit-content;">试验后: 施加额定电压30分 钟后恢复24小时 After test: U_R to be applied for 30min >24h before measurement</div>



CD 13B 系列
Ratings for CD 13B Series

UR (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

UR (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)	
25 (32) 1E	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	
	560000	1.20	3.1	1.8	27.9	90x131	
	680000	1.20	2.5	1.5	32.5	90x157	
	35 (44) 1V	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		

CD 13B 系列
Ratings for CD 13B Series

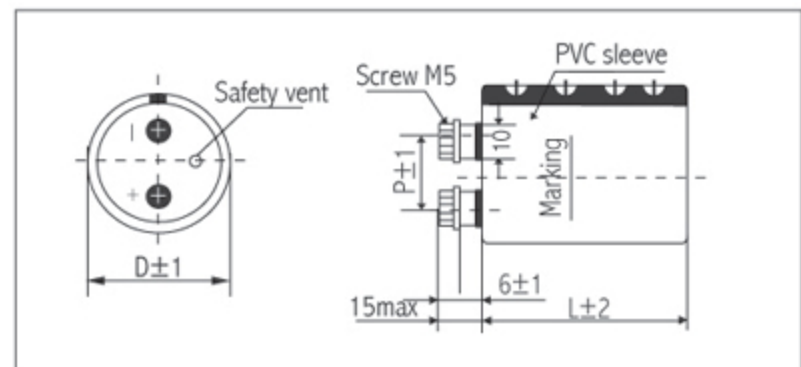
UR (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C, 120Hz	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C 120Hz	Size Φ DXL
(V)	(μ F)	—	(m Ω)	(m Ω)	(Arms)	(mm)
50 (63) 1H	39000	0.50	18.4	8.2	8.1	51x96
	47000	0.50	15.2	7.6	9.3	51x115
	56000	0.50	12.8	6.4	10.5	64x96
	68000	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
	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

UR (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)	(μ F)	—	(m Ω)	(m Ω)	(Arms)	(mm)
80 (100) 1K	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

频率系数 Frequency Coefficient

额定电压 Rated Voltage (V)	频率 Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10 kHZ
10~50		0.95	1.00	1.04	1.10	1.15
63~100		0.95	1.00	1.06	1.16	1.30
160~500		0.80	1.00	1.10	1.25	1.40

外形尺寸表 Dimensions



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



CD 13B 系列

Ratings for CD 13B Series

U _R (Surge Voltage) Code	Rated Capa- citanace	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)
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	38.5	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	0.35	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	90×131
	39000	0.25	9.2	2.2	27.9	90×157
	200 (250) 2D	2200	0.25	163	38.5	3.9
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
5600		0.25	64.0	17.58	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

U _R (Surge Voltage) Code	Rated Capa- citanace	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)	
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	51×120	
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
	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	

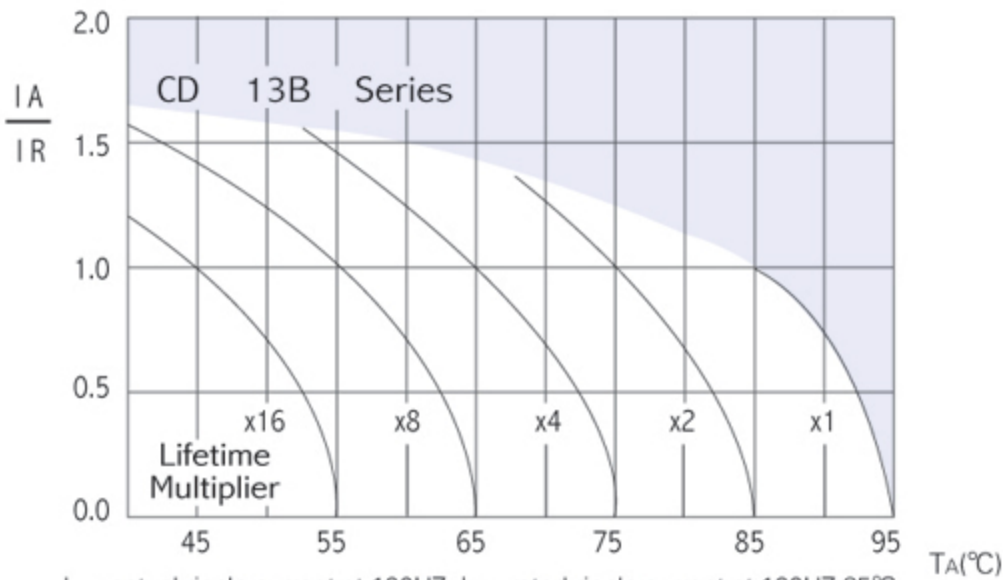
CD 13B 系列

Ratings for CD 13B Series

U _R (Surge Voltage) Code	Rated Capa- citanace	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)
500 (550) 2H	1000	0.20	265	106	4.6	51×115
	1500	0.20	177	70.8	5.7	64×96
	2200	0.20	121	48.3	6.9	64×130
	2700	0.20	98.3	39.3	8.1	77×115
	3300	0.20	80.4	32.2	9.6	77×130
	3900	0.20	68	27.2	10.8	77×130
	4700	0.20	56.5	22.6	12.1	77×155
	5600	0.20	47.4	19	13.8	90×157
	6800	0.20	39	15.6	15.8	90×171
	8200	0.20	32.4	12.9	17.2	77×220
10000	0.20	26.5	10.6	22.1	90×236	

Customer products are available on request

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