

**RC Series**

- Low impedance ,high ripple current
- For switching power supply
- RoHS2.0 Compliant

◆ 规格表 Specifications

项目 Items	特性参数 Characteristics															
使用温度范围 Category Temperature Range	-40 ~ +105℃															
额定工作电压范围 Rated Voltage Range	6.3 ~ 450V.DC															
静电容量允许偏差 Capacitance Tolerance	±20%(M) (at 20℃,120Hz)															
漏电流 Leakage Current	I≤0.01CV or 3μA ,二者取大值 (施加额定工作电压2分钟后) Whichever is greater (After 2 minute application of rated voltage )								I≤0.02CV+10(μA) (施加额定工作电压2分钟后) (After 2 minute application of rated voltage )							
	Note: I=Max.leakage current (μA), C=Nominal capacitance(μF), V=Rated voltage(V) (at 20℃)															
损耗角正切值 tanδ Dissipation Factor	Rated voltage(V)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	0.15	0.2	0.2	0.2	
	标称容量超过 1000 μF,则每增加 1000 μF,损耗角正切值增加 0.02. When nominal capacitance exceeds 1000μF,add 0.02 to the value above for each 1000μF increase. (at 20℃,120Hz)															
低温特性 Low Temperature Characteristics (Max.Impedance Ratio)	阻抗比值不得超过下表中列出的值 The impedance ratio shall not exceed the values listed in the below table. (at 120Hz)															
	Rated voltage(V)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	Z(-25℃)/Z(+20℃)	4	3	3	3	3	2	2	2	3	5			6		
耐久性 Endurance	在 105℃ 环境中, 不超过额定电压的范围内叠加最大允许纹波电流, 连续加载右表时间, 经恢复到 20℃ 后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple Current is applied for the specified period of time at 105℃															
	Capacitance change	≤ ±20% of the initial value									Load life					
	D.F.(tanδ)	≤ 200% of the initial specified value									6.3~100v Φ5~ Φ8 : 2000h; ≥Φ10:3000h					
高温储存特性 Shelf Life	在 105℃ 环境中, 不施加电压条件下储存 1000 小时, 经恢复到 20℃ 后, 电容器满足以下各项要求。 The following specifications shall be satisfied when the capacitors are restored at 20℃ after exposing them for 1000 hours at 105℃ without voltage applied.															
	capacitance change	≤ ±20% of the initial value														
	D.F.(tanδ)	≤ 200% of the initial specified value														
	Leakage current	≤ The initial specified value									160~450v Φ6.3:3000h; ≥Φ8:5000h					
	Leakage current	≤ 200% of the initial specified value														

◆ 尺寸图 (单位: mm) DIMENSIONS (Unit:mm)



ΦD	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8

α	(L<20)1.5
	(L≥20)2.0

◆ 纹波电流修正系数 Rated Ripple Current Coefficient

● 频率系数 Frequency Coefficient

Rated Voltage(V)	Frequency(Hz)				
	Capacitance(μF)	120	1K	10K	100K
6.3~450V	≤ 4.7μF	0.42	0.70	0.90	1.00
	5.6 ~ 33μF	0.50	0.73	0.92	1.00
	34 ~ 330μF	0.55	0.77	0.94	1.00
	331 ~ 1,000μF	0.60	0.80	0.96	1.00
	>1,000μF	0.70	0.85	0.98	1.00

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◆ 标准品一览表 Standard Ratings

WV (V <sub>dc</sub> )	Cap. (μF)	Case Size ΦD×L (mm)	Impedance (Ω) Max. 20°C /100kHz	Rated ripple current (mA <sub>rms</sub> ) 105°C/100KHz	WV (V <sub>dc</sub> )	Cap. (μF)	Size ΦD×L (mm)	Impedance (Ω) Max. 20°C /100kHz	Rated ripple current (mA <sub>rms</sub> ) 105°C /100KHz	WV (V <sub>dc</sub> )	Cap. (μF)	Size ΦD×L (mm)	Impedance (Ω) Max. 20°C /100kHz	Rated ripple current (mA <sub>rms</sub> ) 105°C /100KHz
6.3	33	5×11	1.0	100	25	10,000	18×40	0.015	3,810	50	68	8×12	0.630	330
	47	5×11	1.0	125		4.7	5×11	2.8	80		100	8×12	0.520	490
	100	5×11	0.550	165		6.8	5×11	2.5	95		150	10×13	0.300	650
	150	5×11	0.500	200		10	5×11	1.5	125		220	10×16	0.088	820
	220	6.3×11	0.450	250		22	5×11	0.900	140		330	10×20	0.073	930
	330	6.3×11	0.260	295		33	5×11	0.900	150		470	13×20	0.072	1,230
	470	8×12	0.180	410		47	5×11	0.500	160		680	13×25	0.070	1,450
	680	8×16	0.140	580		68	6.3×11	0.420	180		820	16×26	0.070	1,550
	820	8×20	0.120	680		100	6.3×11	0.250	220		1,000	16×26	0.070	1,960
	1,000	10×13	0.090	730		150	8×12	0.220	330		0.47	5×11	6.0	68
	2,200	13×20	0.045	1,455		220	8×12	0.200	450		1.0	5×11	5.5	80
	3,300	13×25	0.038	1,650		330	10×13	0.090	670		2.2	5×11	4.5	90
	4,700	16×26	0.030	2,310		470	10×16	0.068	950		3.3	5×11	4.0	95
	6,800	16×32	0.017	2,880		680	10×20	0.055	1,100		4.7	5×11	3.0	110
	10,000	16×36	0.017	3,160		820	10×20	0.050	1,250		6.8	5×11	2.8	120
15,000	18×36	0.015	3,690	1,000	13×20	0.045	1,450	10	5×11	2.0	145			
10	22	5×11	1.0	100	2,200	16×32	0.022	2,520	22	6.3×11	1.0	220		
	33	5×11	1.0	125	3,300	18×36	0.019	3,020	33	6.3×11	0.900	250		
	47	5×11	1.0	150	4,700	18×36	0.015	3,720	47	8×12	0.850	305		
	100	5×11	0.500	165	6,800	18×40	0.034	4,087	68	8×12	0.700	365		
	150	6.3×11	0.450	220	4.7	5×11	4.2	110	100	10×13	0.270	535		
	220	6.3×11	0.350	275	6.8	5×11	2.8	120	150	10×16	0.220	650		
	330	8×12	0.180	470	10	5×11	1.2	135	220	10×20	0.130	860		
	470	8×12	0.120	560	22	5×11	0.800	150	330	13×20	0.090	1,010		
	680	10×13	0.100	710	33	5×11	0.500	180	470	13×25	0.087	1,520		
	820	10×16	0.080	850	47	6.3×11	0.400	220	680	16×26	0.065	1,700		
	1,000	10×16	0.068	1,050	68	6.3×11	0.300	250	1,000	16×32	0.036	2,270		
	2,200	13×20	0.038	1,670	100	6.3×11	0.230	286	0.47	5×11	8.0	68		
	3,300	13×25	0.030	1,950	150	8×12	0.180	550	1.0	5×11	6.0	80		
	4,700	16×26	0.022	2,310	220	10×13	0.090	730	2.2	5×11	5.5	90		
	6,800	16×32	0.020	3,050	330	10×16	0.068	860	3.3	5×11	4.5	95		
10,000	18×36	0.016	3,250	470	10×20	0.052	1,056	4.7	6.3×11	4.0	130			
16	10	5×11	2.0	125	680	13×20	0.045	1,250	6.8	6.3×11	3.8	145		
	22	5×11	1.0	150	820	13×20	0.040	1,400	10	6.3×11	3.2	180		
	33	5×11	1.0	150	1,000	13×25	0.031	1,870	22	8×12	2.5	285		
	47	5×11	0.500	150	2,200	16×32	0.019	2,530	33	10×13	2.0	385		
	100	6.3×11	0.250	220	3,300	18×36	0.025	3,390	47	10×16	1.5	510		
	150	6.3×11	0.220	300	4,700	18×40	0.016	4,130	68	10×20	1.0	600		
	220	8×12	0.180	410	0.47	5×11	6.0	68	100	13×20	0.800	900		
	330	8×12	0.160	470	1.0	5×11	5.0	80	150	13×25	0.650	1,250		
	470	10×13	0.090	740	2.2	5×11	4.0	90	220	16×26	0.090	1,450		
	680	10×16	0.075	800	3.3	5×11	3.2	95	330	16×32	0.090	1,550		
	820	10×20	0.065	1,050	4.7	5×11	2.7	110	470	18×36	0.060	1,980		
	1,000	10×20	0.052	1,230	6.8	5×11	2.5	120						
	2,200	13×25	0.032	1,960	10	5×11	2.0	145						
	3,300	16×26	0.022	2,520	22	5×11	1.5	170						
	4,700	16×32	0.019	3,020	33	6.3×11	1.0	220						
6,800	18×36	0.015	3,720	47	6.3×11	0.800	260							

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◆ 标准品一览表 Standard Ratings

WV (V <sub>dc</sub> )	Cap. (μF)	Case Size ΦD×L(mm)	Rated ripple current (mA <sub>rms</sub> ) 105°C/100KHz
160	10	10X16	320
	22	10X20	500
	33	10X20	650
	47	10X20	750
	68	12.5X20	1180
	82	12.5X25	1,420
	100	16X20	1,420
	150	16X25	1,890
	220	18X25	2,370
200	6.8	8X12	204
	10	10X16	320
	22	10X16	453
	22	10X20	500
	33	10X16	589
	33	10X20	650
	47	12.5X20	980
	68	12.5X25	1,300
	68	16X20	1,300
	82	16X20	1,380
	100	16X20	1,420
	150	16X25	1,890
	220	18X30	2,648
250	4.7	8X12	160
	6.8	8X12	215
	6.8	10X12.5	250
	10	10X16	320
	22	10X16	453
	22	10X20	500
	33	10X16	640
	33	12.5X20	800
	47	12.5X20	980
	47	12.5X20	1,200
	68	16X20	1,300
	82	16X20	1,380
	100	16X25	1,530
	150	18X25	1,940

WV (V <sub>dc</sub> )	Cap. (μF)	Case Size ΦD×L(mm)	Rated ripple current (mA <sub>rms</sub> ) 105°C/100KHz
350	5	10X12.5	150
	5.6	10X12.5	180
	6.8	10X16	280
	10	10X20	350
	22	12.5X20	650
	33	16X20	900
	47	16X20	1,080
	68	18X25	1,470
	82	18X25	1,530
	400	1	8X12
1.5		8X12	90
1.5		10X12.5	100
1.8		8X12	95
1.8		10X12.5	120
2.2		8X12	95
2.2		10X12.5	140
3.3		8X12	130
3.3		10X12.5	150
4.7		8X12	171
4.7		10X16	220
5.6		10X16	250
6.8		10X16	280
10		10X16	317
10		10X20	350
15		12.5X25	487
15		12.5X20	550
22		12.5X20	760
33		12.5X25	861
33		16X20	900
47	12.5X25	1,027	
47	16X20	1,073	
47	16X25	1,180	
47	18X20	1,180	
68	16X25	1,374	
68	16X30	1,488	
68	18X25	1,470	

WV (V <sub>dc</sub> )	Cap. (μF)	Case Size ΦD×L(mm)	Rated ripple current (mA <sub>rms</sub> ) 105°C/100KHz
450	2.2	8X12	105
	4.7	8X16	176
	4.7	10X20	220
	5.6	10X20	250
	6.8	10X12.5	228
	6.8	10X20	280
	10	10X20	397
	10	12.5X20	450
	15	12.5X25	600
	22	12.5X25	698
	22	16X20	730
	33	16X20	891
	33	16X25	980
	47	16X25	1,121
	47	18X20	1,093
	47	18X25	1,200

※铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化，中心温度每升温5°C寿命减少一半。要想保持长寿命请在使用过程中降低纹波电流  
 The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.