

RP High voltage, Low Impedance

高压低阻抗品

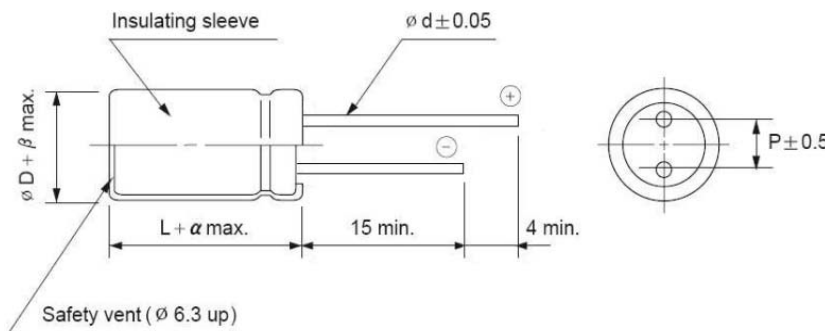
- 105°C, 2000 hours assured.
105°C, 2000 小时寿命品。
- Low Impedance, High ripple current.
超低阻抗, 高纹波
- Suitable for low profile power supply applications, such as, LCD/LED-TV and LCD-Monitor power etc.
适用于超薄电源, 如 LCD/LED 电视、显示器等电源



Specifications 特性表

Items 项目	Characteristics 主要特性																												
Rated Voltage Range 额定工作电压范围	160 ~ 400V _{dc}	420 ~ 450V _{dc}																											
Category Temperature Range 使用温度范围	-40 ~ +105°C	-25 ~ +105°C																											
Capacitance Tolerance 静电容量允许偏差	±20% (M), at 20°C, 120Hz																												
Leakage Current 漏电流, 20°C环境下施加工作电压 2 分钟后. (at 20°C, After 2 minutes)	CV≤1000, I≤0.03CV+15µA 漏电流≤0.03CV+15µA CV>1000, I≤0.02CV+25µA 漏电流≤0.02CV+25µA Where, I : Max. leakage current (漏电流, µA), C : Nominal capacitance (静电容量, µF), V : Rated voltage (额定电压 V)																												
Dissipation Factor (Tanδ, at 20°C, 120Hz) 损耗角正切值 (测试条件为 20°C, 120Hz)	<table border="1"> <tr> <td>Rated voltage (V) 额定工作电压</td> <td>160</td> <td>200</td> <td>220</td> <td>250</td> <td>350</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>Tanδ (Max.) 最大损耗角正切</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> </tr> </table> When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase. 静电容量大于1000µF, 每增加1000µF, 损耗角正切增加0.02		Rated voltage (V) 额定工作电压	160	200	220	250	350	400	420	450	Tanδ (Max.) 最大损耗角正切	0.15	0.15	0.15	0.15	0.15	0.20	0.20	0.20									
Rated voltage (V) 额定工作电压	160	200	220	250	350	400	420	450																					
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Low Temperature Characteristics (Max. Impedance Ratio, 120Hz) 低温特性最大阻抗比	<table border="1"> <tr> <td>Rated voltage (V) 额定工作电压</td> <td>160</td> <td>200</td> <td>220</td> <td>250</td> <td>350</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>6</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>8</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>8</td> <td>---</td> <td>---</td> </tr> </table>		Rated voltage (V) 额定工作电压	160	200	220	250	350	400	420	450	Z(-25°C)/Z(20°C)	4	3	3	3	4	5	6	6	Z(-40°C)/Z(20°C)	8	6	6	6	6	8	---	---
Rated voltage (V) 额定工作电压	160	200	220	250	350	400	420	450																					
Z(-25°C)/Z(20°C)	4	3	3	3	4	5	6	6																					
Z(-40°C)/Z(20°C)	8	6	6	6	6	8	---	---																					
Endurance 耐久性	The following specification shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the ripple current is applied for the specified period of time at 105°C. 在 105°C 环境中, 不超过额定电压的范围下叠加额定纹波电流, 连续加载规定时间的额定电压后, 待温度恢复到 20°C 进行测量时, 应满足以下要求。 <table border="1"> <tr> <td>Test Time 测试时间</td> <td>2,000Hrs</td> </tr> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±20% initial value 初始值的±20%以内</td> </tr> <tr> <td>Dissipation Factor 损耗角正切</td> <td>≤200% of specified value 不大于规范值的 200%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>≤The initial specified value 不大于规范值</td> </tr> </table>		Test Time 测试时间	2,000Hrs	Capacitance Change 静电容量变化率	Within ±20% initial value 初始值的±20%以内	Dissipation Factor 损耗角正切	≤200% of specified value 不大于规范值的 200%	Leakage Current 漏电流	≤The initial specified value 不大于规范值																			
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Leakage Current 漏电流	≤The initial specified value 不大于规范值																												
Shelf Life 高温贮存	The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of IEC 60384-4. 在 105°C 环境中, 无负荷放置 1,000 小时后待温度恢复到 20°C, 进行试验前处理(IEC 60384-4 4.1 项)后进行测量时, 应满足以下要求。 <table border="1"> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±20% initial value 初始值的±20%以内</td> </tr> <tr> <td>Dissipation Factor 损耗角正切值</td> <td>≤200% of specified value 不大于规范值的 200%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>≤The initial specified value 不大于规范值</td> </tr> </table>		Capacitance Change 静电容量变化率	Within ±20% initial value 初始值的±20%以内	Dissipation Factor 损耗角正切值	≤200% of specified value 不大于规范值的 200%	Leakage Current 漏电流	≤The initial specified value 不大于规范值																					
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Drawing(Unit: mm) 外形图



ΦD	6.3	8	10	13	16	18
P	2.5	3.5	5.0		7.5	
Φd	0.5		0.6		0.8	
α	1.0	1.5		2.0		
β	0.5					

Rated ripple current multipliers(Unit: mm) 额定纹波修正系数

Frequency 频率 (Hz)	60Hz	120Hz	300Hz	1KHz	10KHz	100KHz	
Coefficient 系数	Under 100µF	0.70	1.00	1.15	1.25	1.40	1.55
	1000 up above	0.75	1.00	1.08	1.20	1.35	1.45

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.

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, 每升温 5°C 寿命减少一半。

When long life performance is required in actual use, the rms ripple current has to be reduced.

要想保持长寿命请在使用过程中降低纹波电流。

RP Series

■ Standard ratings 标准品一览表

V _{DC} (V)	Cap. (μF)	φ6.3		φ8		φ10		φ13		φ16		φ18	
		φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C
160	2.2	6.3x11	26										
	3.3	6.3x11	33.0										
	4.7	6.3x11	39										
	5.6	6.3x11	41										
	6.8	6.3x11	45										
	8.2	6.3x15	55	8x11.5	60								
	10	6.3x15	58	8x11.5	62								
	12	6.3x15	65	8x11.5	68								
	15			8x15	75	10x12.5	75						
	18			8x15	80	10x12.5	85						
	22			8x15	85	10x12.5	90						
	27			8x20	110	10x16	115						
	33			8x20	120	10x16	125						
	39			8x25	145	10x20	150						
	47			8x30	175	10x20	165						
	56			8x30	190	10x25	195	13x20	200				
	68			8x35	225	10x25	220	13x20	220.000				
	82			8x40	265	10x30	255	13x20	240				
	100			8x50	320	10x35	305	13x25	295				
	120					10x40	360	13x25	320				
150					10x45	420	13x30	390	16x20	370			
180					10x50	485	13x35	455	16x25	440	18x20	410	
220							13x40	530	16x31.5	530	18x25	510	
270							13x45	620	16x31.5	590	18x25	560	
330									16x35.5	680	18x31.5	680	
390									16x40	790	18x35.5	780	
470									16x45	900	18x40	900	
200	2.2	6.3x11	28										
	3.3	6.3x11	35										
	4.7	6.3x11	40										
	5.6	6.3x11	43										
	6.8	6.3x11	48										
	8.2	6.3x15	58	8x11.5	60								
	10	6.3x15	60	8x11.5	65								
	12	6.3x15	70	8x15	70								
	15			8x15	80								
	18			8x15	85								
	22			8x20	98	10x12.5	90						
	27			8x20	115	10x16	110						
	33			8x25	135	10x16	120						
	39			8x30	160	10x20	140						
	47			8x30	175	10x25	180						
	56			8x35	200	10x25	190						
	68			8x40	240	10x30	230						
	82			8x50	290	10x35	270	13x20	230				
	100					10x40	320	13x25	290				
	120					10x45	370	13x30	340	16x20	330		
150							13x35	410	16x25	400			
180							13x40	480	16x25	490	18x20	420	
220							13x45	560	16x31.5	540	18x25	520	
270									16x35.5	630	18x31.5	630	
330									16x40	740	18x35.5	740	
390									16x45	850	18x40	850	

Note1: Case size φD x L(mm), ripple current (mA, rms) at 105°C, 120Hz. 尺寸 φD x L(mm), 纹波电流於 105°C, 120Hz

Note2: Produce custom product too, which are not found in these tables. 客户定制品不在标准品一览表内

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V _{DC} (V)	Cap. (μF)	φ6.3		φ8		φ10		φ13		φ16		φ18		
		φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C	
220	2.2	6.3x11	28											
	3.3	6.3x11	35											
	4.7	6.3x11	40											
	5.6	6.3x11	43											
	6.8	6.3x15	50											
	8.2	6.3x15	58	8x11.5	60									
	10	6.3x15	62	8x11.5	65									
	12			8x15	70									
	15			8x15	80									
	18			8x20	88									
	22			8x20	95	10x16	100							
	27			8x25	120	10x16	110							
	33			8x30	140	10x20	130							
	39			8x35	150	10x20	140							
	47			8x35	180	10x25	180							
	56			8x40	220	10x30	210							
	68			8x45	260	10x30	230	13x20	220.000					
	82					10x35	270	13x25	260					
	100					10x40	320	13x30	310					
	120					10x45	370	13x30	340	16x20	330			
150							13x35	410	16x25	400	18x20	390		
180							13x40	480	16x31.5	490	18x25	470		
220							13x50	590	16x31.5	540	18x25	520		
270									16x35.5	630	18x31.5	630		
330									16x45	780	18x35.5	740		
390									16x50	890	18x40	850		
250	2.2	6.3x11	28											
	3.3	6.3x11	35											
	4.7	6.3x11	40											
	5.6	6.3x15	45											
	6.8	6.3x15	52	8x11.5	55									
	8.2	6.3x15	58	8x15	60									
	10			8x15	62	10x12.5	60							
	12			8x15	70	10x12.5	65							
	15			8x20	82	10x16	82							
	18			8x20	88	10x16	90							
	22			8x20	95	10x16	100							
	27			8x25	120	10x20	120							
	33			8x30	140	10x20	130							
	39			8x35	170	10x25	160							
	47			8x40	190	10x30	190							
	56			8x45	230	10x30	210	13x20	190					
	68					10x35	250	13x25	240					
	82					10x40	290	13x30	280					
	100					10x50	360	13x35	310	16x20	300			
	120							13x35	370	16x25	360	18x20	350	
150							13x40	440	16x31.5	440	18x25	430		
180							13x45	510	16x31.5	480				
220									16x35.5	560	18x31.5	560		
270									16x45	690	18x35.5	640		
330									16x50	810	18x40	760		
390											18x45	870		

Note1: Case size φD x L(mm), ripple current (mA, rms) at 105°C, 120Hz. 尺寸 φD x L(mm), 纹波电流於 105°C, 120Hz

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RP Series

Standard ratings 标准品一览表

V _{DC} (V)	Cap. (μF)	φ6.3		φ8		φ10		φ13		φ16		φ18	
		φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C	φD x L	R.C
350	2.2	6.3x11	22										
	3.3	6.3x15	31	8x11.5	34								
	4.7	6.3x15	37	8x11.5	40								
	5.6			8x15	48	10x12.5	48						
	6.8			8x15	52	10x12.5	53						
	8.2			8x20	68	10x12.5	60						
	10			8x20	80	10x16	75						
	12			8x25	90	10x16	82						
	15			8x25	98	10x20	95	13x16	98				
	18			8x30	120	10x20	105	13x16	105				
	22			8x35	140	10x25	130	13x16	120				
	27			8x40	160	10x30	155	13x20	145				
	33			8x50	210	10x35	190	13x20	170				
	39					10x40	220	13x25	195	16x20	195		
	47					10x40	240	13x30	230.00	16x20	220		
	56					10x50	285	13x30	255	16x20	240		
	68							13x35	295.000	16x25	290	18x20	280
	82							13x40	345	16x31.5	345	18x25	340
100							13x50	420	16x31.5	385	18x31.5	405	
120									16x35.5	440	18x31.5	440	
150									16x45	540	18x35.5	520	
180									16x50	620	18x40	590	
220											18x50	710	
400	1	6.3x11	18										
	2.2	6.3x11	24										
	3.3	6.3x15	34	8x11.5	36								
	4.7			8x11.5	45								
	5.6			8x15	52								
	6.8			8x15	58								
	8.2			8x20	73								
	10			8x20	90	10x16	95						
	12			8x25	105	10x16	100						
	15			8x30	125	10x20	120						
	18			8x35	150	10x25	145						
	22			8x40	170	10x25	155						
	27			8x45	200	10x30	200						
	33			8x50	240	10x35	230	13x20	190				
	39					10x40	260	13x25	235				
	47					10x40	290	13x30	280	16x20	270		
	56					10x50	350	13x35	330	16x25	320		
	68							13x40	390	16x25	350	18x20	340
82							13x45	450	16x31.5	430	18x25	410	
100							13x50	520	16x35.5	500	18x31.5	500	
120									16x40	570	18x35.5	570	
150									16x45	660	18x40	670	
180											18x45	760	

Note1: Case size φD x L(mm), ripple current (mA, rms) at 105°C, 120Hz. 尺寸 φD x L(mm), 纹波电流於 105°C, 120Hz

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V _{DC} (V)	Cap. (μF)	φ 6.3		φ 8		φ 10		φ 13		φ 16		φ 18	
		φ D x L	R.C	φ D x L	R.C	φ D x L	R.C	φ D x L	R.C	φ D x L	R.C	φ D x L	R.C
420	1	6.3x11	19										
	2.2	6.3x11	25										
	3.3	6.3x15	35	8x11.5	36								
	4.7			8x11.5	45								
	5.6			8x15	52								
	6.8			8x15	58								
	8.2			8x20	73								
	10			8x25	100	10x16	95						
	12			8x25	105	10x20	110						
	15			8x30	125	10x20	120						
	18			8x35	150	10x25	145						
	22			8x40	170	10x30	180						
	27			8x45	240	10x35	200	13x20	180				
	33					10x40	230	13x25	220				
	39					10x45	260	13x30	260.00				
	47					10x50	290	13x35	300	16x20	270		
	56							13x40	350.000	16x25	330		
	68							13x45	400	16x31.5	390		
82							13x50	460	16x35.5	450	18x25	410	
100							13x50	500	16x35.5	480	18x31.5	500	
120									16x40	540	18x35.5	580	
150											18x40	680	
180											18x45	760	
450	1			8x11.5	20								
	2.2			8x11.5	28								
	3.3			8x11.5	36								
	4.7			8x15	48								
	5.6			8x15	50								
	6.8			8x20	65								
	8.2			8x20	73								
	10			8x25	95	10x20	95						
	12			8x30	115	10x20	105						
	15			8x35	140	10x25	130						
	18			8x40	160	10x30	160	13x20	150				
	22			8x45	185	10x30	180	13x25	180				
	27			8x50	220	10x35	210	13x25	200				
	33					10x40	240	13x30	240	16x20	230		
	39					10x45	280	13x30	255	16x20	245		
	47					10x50	320	13x35	310	16x25	300	18x20	290
	56							13x40	350	16x31.5	360	18x25	350
	68							13x45	410	16x31.5	385	18x25	380
82							13x50	470	16x35.5	450	18x31.5	460	
100									16x40	530	18x35.5	530	
120									16x45	610	18x40	610	
150											18x45	720	

Note1: Case size φD x L(mm), ripple current (mA, rms) at 105°C, 120Hz. 尺寸 φD x L(mm), 纹波电流於 105°C, 120Hz

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