

RC 系列 Series

特点 Features

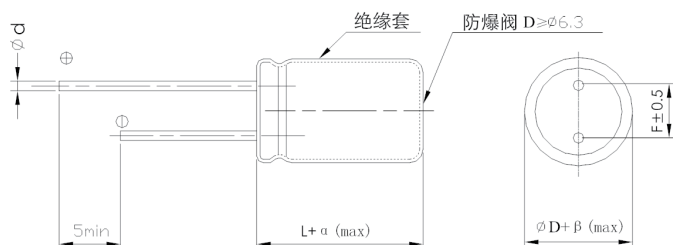
- 宽温度, 105°C, 4000~10000小时。
Wide temperature range, 105°C, long life: 4000~10000 hours.
- RoHS指令已对应完毕。
Adapted to the RoHS directive.



主要技术性能 Specifications

项目 Items	特性 Performance Characteristics																								
使用温度范围 Operating Temperature Range	-40~+105°C																								
额定电压范围 Rated Voltage Range	6.3~63V																								
标称容量范围 Nominal Capacitance Range	2.2~18000μF																								
标称容量允许偏差 Capacitance Tolerance	± 20% (120Hz, +20°C)																								
漏电流 Leakage Current	$I \leq 0.01CV$ (μA) 或 $3\mu A$ 2分钟 取较大者 (at 20°C, after 2 minute) (Whichever is greater)																								
损耗角正切值 (tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <tr> <td>U_r (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>tgδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.10</td> </tr> </table> <p>容量大于1000μF者, 每增加1000μF, 其损耗角正切值增加0.02 When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.</p>	U_r (V)	6.3	10	16	25	35	50	63	tgδ	0.22	0.19	0.16	0.14	0.12	0.12	0.10								
U_r (V)	6.3	10	16	25	35	50	63																		
tgδ	0.22	0.19	0.16	0.14	0.12	0.12	0.10																		
温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <tr> <td>U_g (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	U_g (V)	6.3	10	16	25	35	50	63	Z-25°C / Z+20°C	3	3	3	3	3	3	3	Z-40°C / Z+20°C	3	3	3	3	3	3	3
U_g (V)	6.3	10	16	25	35	50	63																		
Z-25°C / Z+20°C	3	3	3	3	3	3	3																		
Z-40°C / Z+20°C	3	3	3	3	3	3	3																		
耐久性 Load Life	<table border="1"> <tr> <td>ΦD</td> <td>Φ5, 6.3</td> <td>Φ8, 10</td> <td>≥Φ12.5</td> </tr> <tr> <td>6.3~10(V)</td> <td>4,000 hours</td> <td>6,000 hours</td> <td>8,000 hours</td> </tr> <tr> <td>16~100(V)</td> <td>5,000 hours</td> <td>7,000 hours</td> <td>10,000 hours</td> </tr> </table> <p>+105°C加额定电压4000~10000小时, 恢复16小时后: After applying rated voltage for 4000~10000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤The initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value</p>	ΦD	Φ5, 6.3	Φ8, 10	≥Φ12.5	6.3~10(V)	4,000 hours	6,000 hours	8,000 hours	16~100(V)	5,000 hours	7,000 hours	10,000 hours												
ΦD	Φ5, 6.3	Φ8, 10	≥Φ12.5																						
6.3~10(V)	4,000 hours	6,000 hours	8,000 hours																						
16~100(V)	5,000 hours	7,000 hours	10,000 hours																						
高温贮存 Shelf Life	<p>+105°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value 漏电流 Leakage current : ≤2倍初始规定值 ≤2times of the initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value</p>																								

外形图及尺寸表 Case Size Table



D	5	6.3	8	10	12.5	16~18
F	2.0	2.5	3.5	5.0	5.0	7.5
d	0.5	0.5, 0.6	0.6	0.6	0.8	0.8

频率修正系数 Frequency Coefficient

Freq.(Hz)	120	1K	10K	≥100K
CAP(μF)				
Below 4.7	0.42	0.70	0.80	1.00
5.6~33	0.50	0.73	0.90	1.00
34~330	0.55	0.77	0.95	1.00
331~1000	0.60	0.80	0.96	1.00
1200 Above	0.70	0.85	0.98	1.00

单位 Unit: mm

αMAX	α < L < 20 > 1.5	βMAX	β < D < 20 > 0.5
	α < L ≥ 20 > 2.0		β < D ≥ 20 > 1.0



尺寸 Dimensions

CAP(μF) \ WV		6.3V(0J)			10V(1A)			16V(1C)			25V(1E)		
		Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
47	470										5×11	0.67	150
56	560							5×11	0.58	150			
100	101	5×11	0.59	200	5×11	0.58	210				6.3×11	0.35	280
120	121							6.3×11	0.22	340			
150	151	5×11	0.58	210									
220	221				6.3×11	0.25	340				8×11.5	0.20	480
330	331	6.3×11	0.25	340				8×11.5	0.20	520	10×12.5	0.11	760
470	471				8×11.5	0.18	460	10×12.5	0.18	760	10×16	0.10	1250
								6.3×15	0.18	540	10×20	0.09	1400
680	681	8×11.5	0.11	640	8×16	0.11	680	10×16	0.08	1250	10×16	0.09	1250
											10×20	0.08	1400
820	821	10×12.5	0.08	865							10×20	0.072	1400
1000	102	8×16	0.087	840	8×20	0.083	1150	10×20	0.078	1400	10×20	0.068	1400
					10×16	0.085	1250				12.5×15	0.07	1450
1200	122	10×16	0.060	1210	10×20	0.046	1400	10×25	0.05	1540			
1500	152	10×20	0.046	1400	10×25	0.042	1650	12.5×20	0.045	1820	12.5×25	0.040	2060
2200	222	10×25	0.042	1650	10×30	0.036	1800	12.5×25	0.034	1960	16×25	0.032	2540
3300	332	12.5×20	0.035	1900	12.5×25	0.030	2230	12.5×35	0.029	2500	18×25	0.027	3140
3900	392	12.5×25	0.030	2230	12.5×30	0.028	2650	16×25	0.025	2630	18×30	0.025	3400
4700	472	12.5×30	0.027	2650	12.5×35	0.025	2880	16×30	0.024	3100	18×35	0.023	3900
6800	682	16×25	0.024	2930	18×25	0.023	3140	16×40	0.022	3800			
8200	822	16×30	0.023	3450	18×30	0.021	4170	18×35	0.020	3950			
10000	103	16×35	0.021	3610	18×35	0.020	4220	18×40	0.019	4000			
15000	153	18×35	0.020	4220									
18000	183	18×40	0.018	4280									

CAP(μF) \ WV		35V(1V)			50V(1H)			63V(1J)		
		Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
2.2	2R2				5×11	3.5	43			
3.3	3R3				5×11	3.2	53			
4.7	4R7				5×11	3.1	78			
6.8	6R8				5×11	3.0	82			
10	100				5×11	2.0	98			
22	220	5×11	1.5	110	5×11	1.5	110			
33	330	5×11	1.2	125	6.3×11	1.0	158	6.3×11	0.55	180
56	560	6.3×11	0.50	210				8×11.5	0.42	350
82	820							10×12.5	0.20	820
100	101				8×11.5	0.29	500			
120	121				8×16	0.15	530	10×16	0.18	1200
150	151	8×11.5	0.28	380	10×12.5	0.16	820			
220	221	10×12.5	0.16	650	10×16	0.11	1200	10×25	0.18	1540
270	271	8×20	0.15	1150	10×20	0.078	1400	12.5×20	0.18	1820
330	331	10×16	0.14	1200	10×25	0.072	1540	12.5×25	0.079	1950
470	471	8×20	0.13	1180	12.5×20	0.063	1820	12.5×30	0.065	2150
		10×20	0.12	1400						
680	681	12.5×20	0.072	1820	12.5×30	0.058	2150	16×25	0.062	2600
820	821				12.5×35	0.050	2230	18×25	0.050	2800
1000	102	12.5×25	0.060	1950	16×25	0.048	2400	16×35	0.042	2900
1200	122	12.5×30	0.055	2650	18×25	0.040	2680	16×40	0.038	3400
1500	152	12.5×35	0.042	2880	16×35	0.035	2900	18×35	0.030	3400
2200	222	16×30	0.031	3000	18×35	0.030	3680	18×40	0.027	3500
3300	332	16×40	0.026	3200						

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz

Maximum ESR (Ω) at 20°C 100KHz