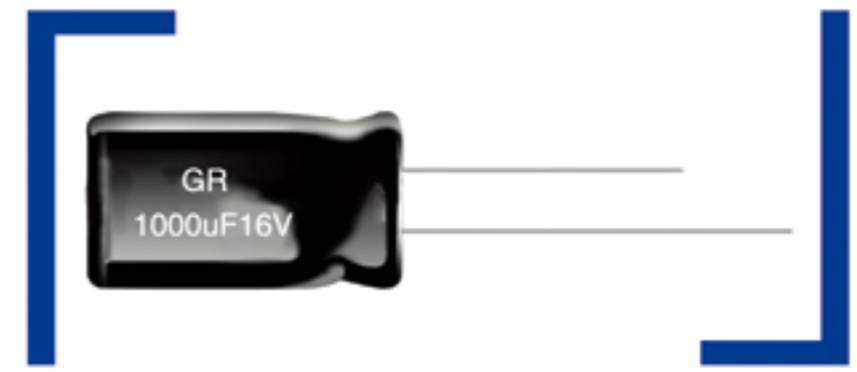


GR 标准品

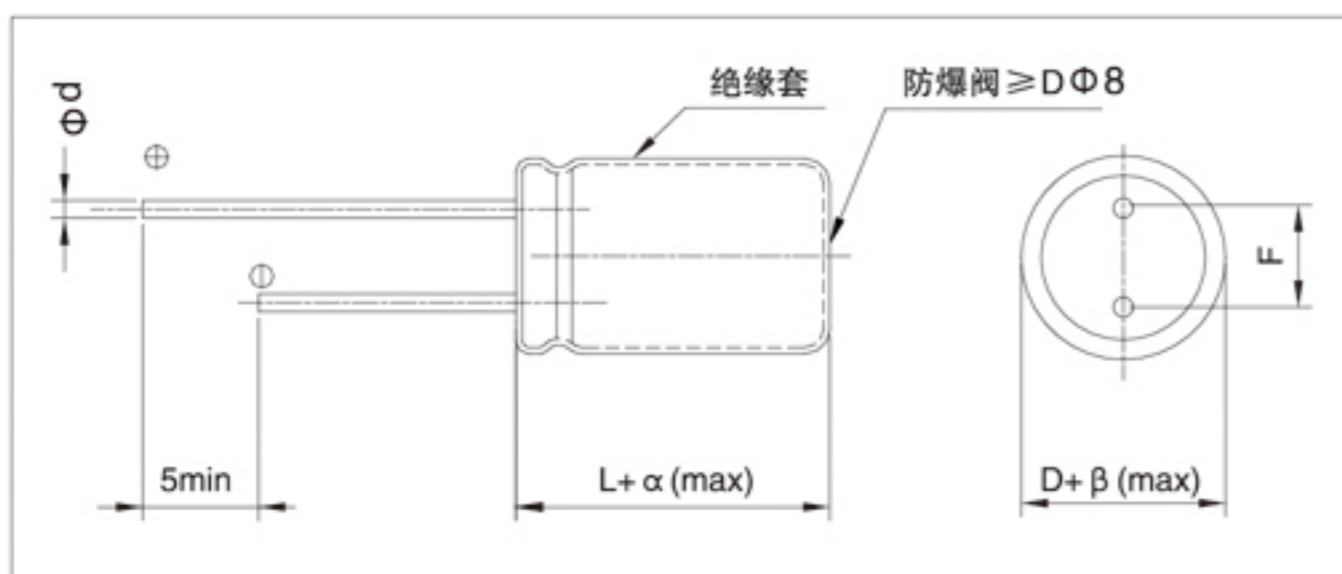
- ◎ 85°C, 2000小时。85°C, 2000hours.
- ◎ 适用于开关电源、适配器、彩电、音响、空调等电子线路中。
Used in Smpls、Adapter、color-TV, audio sets, air conditioning circuits etc.
- ◎ ROHS指令已对应完毕。Adapted to the ROHS directive.



主要技术性能 Specifications

项目 Item	特性 Performance Characteristics																																														
使用温度范围 Operating temperature range	-40 ~ +85°C	-25 ~ +85°C																																													
额定电压范围 Rated voltage range	6.3 ~ 100 V	160 ~ 500V																																													
标称容量范围 Nominal capacitance range	0.1~ 33000 μF																																														
标称容量允许偏差 Capacitance tolerance	± 20% (120Hz, +20°C)																																														
漏电流 Leakage current	$I \leq 0.01CV (\mu A)$ 或 $3 \mu A$ 2分钟 取较大者 (at 20°C, after 2 minutes) (Whichever is greater)	$I \leq 0.03CV (\mu A) + 10 \mu A$ 2分钟(2minute)																																													
损耗角正切值 (tg δ) 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> <td>100</td> </tr> <tr> <td>tg δ</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.08</td> </tr> <tr> <td>U_R(V)</td> <td>160</td> <td>200</td> <td>250</td> <td>400</td> <td>420</td> <td>450</td> <td>500</td> <td></td> </tr> <tr> <td>tg δ</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.24</td> <td></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	100	tg δ	0.24	0.20	0.16	0.14	0.12	0.10	0.10	0.08	U _R (V)	160	200	250	400	420	450	500		tg δ	0.20	0.20	0.20	0.20	0.20	0.20	0.24										
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温度特性 Temperature Characteristics (Impedance ratio at 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> <td>100</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>U_R (V)</td> <td>160</td> <td>200</td> <td>250</td> <td>400</td> <td>420</td> <td>450</td> <td>500</td> <td></td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>3</td> <td>4</td> <td>6</td> <td>7</td> <td>7</td> <td>8</td> <td></td> </tr> </table> <p>Z-25°C / Z+20°C, 容量大于1000μF者, 每增加1000μF阻抗比增加0.5 when nominal capacitance exceeds 1000μF, Add 0.5 to the value of Z-25°C / Z+20°C above for each 1000μF increase. Z-40°C / Z+20°C, 容量大于1000μF者, 每增加1000μF阻抗比增加1.0 when nominal capacitance exceeds 1000μF, Add 1.0 to the value of Z-40°C / Z+20°C above for each 1000μF increase.</p>		U _R (V)	6.3	10	16	25	35	50	63	100	Z-25°C / Z+20°C	5	4	3	2	2	2	2	2	Z-40°C / Z+20°C	10	8	6	5	3	3	3	3	U _R (V)	160	200	250	400	420	450	500		Z-25°C / Z+20°C	3	3	4	6	7	7	8	
U _R (V)	6.3	10	16	25	35	50	63	100																																							
Z-25°C / Z+20°C	5	4	3	2	2	2	2	2																																							
Z-40°C / Z+20°C	10	8	6	5	3	3	3	3																																							
U _R (V)	160	200	250	400	420	450	500																																								
Z-25°C / Z+20°C	3	3	4	6	7	7	8																																								
耐久性 Load life	<p>+85°C加额定电压2000小时, 恢复16小时后: After applying rated voltage for 2000 hours at +85°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ± 20%初始测量值以内 ± 20% 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>																																														
高温贮存 Shelf life	<p>+85°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +85°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ± 20%初始测量值以内 ± 20% 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



单位Unit: mm

D	5	6.3	8	10	12.5	16~18	22
F	2	2.5	3.5	5.0	7.5	7.5	10
d	0.5		0.5、0.6	0.6		0.8	

α MAX	(L < 20) 1.5	β MAX	(D < 20) 0.5
	(L ≥ 20) 2.0		(D ≥ 20) 1.0

Standard

频率修正系数 Frequency coefficient

Rated Voltage(V)	Freq.(Hz)		50	120	300	1K	10K	100K
	CAP(μF)							
6.3~100	~47		0.75	1.00	1.35	1.57	2.00	2.30
	100~470		0.80	1.00	1.23	1.34	1.50	1.65
	≥560		0.85	1.00	1.10	1.13	1.15	1.40
160~500	0.47~4.7		0.65	1.00	1.35	1.75	2.30	2.50
	6.8~82		0.75	1.00	1.25	1.50	1.75	1.80
	100~1000		0.80	1.00	1.15	1.30	1.40	1.50

尺寸 Dimensions

CAP(μF)		6.3V(0J)		10V(1A)		16V(1C)		25V(1E)		35V(1V)		50V(1H)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1	0R1											5 × 11	1.3
0.22	R22											5 × 11	2.9
0.33	R33											5 × 11	4.3
0.47	R47											5 × 11	6.2
1	010											5 × 11	13
2.2	2R2											5 × 11	28
3.3	3R3							5 × 11	20	5 × 11	25	5 × 11	35
4.7	4R7					5 × 11	30	5 × 11	30	5 × 11	35	5 × 11	50
10	100					5 × 11	40	5 × 11	55	5 × 11	55	5 × 11	75
22	220			5 × 11	55	5 × 11	75	5 × 11	80	5 × 11	90	5 × 11	110
33	330	5 × 11	55	5 × 11	80	5 × 11	80	5 × 11	100	5 × 11	110	5 × 11	130
47	470	5 × 11	75	5 × 11	95	5 × 11	115	5 × 11	130	5 × 11	140	6.3 × 11	180
100	101	5 × 11	135	5 × 11	145	5 × 11	175	6.3 × 11	215	6.3 × 11	235	8 × 11.5	310
220	221	5 × 11	220	5 × 11	230	6.3 × 11	290	8 × 11.5	370	8 × 11.5	405	10 × 12.5	510
330	331	6.3 × 11	300	6.3 × 11	325	6.3 × 11	350	8 × 11.5	455	10 × 12.5	580	10 × 16	710
						8 × 11.5	370						
470	471	6.3 × 11	360	6.3 × 11	385	8 × 11.5	500	10 × 12.5	630	10 × 16	755	10 × 20	815
680	681	8 × 11.5	505	8 × 11.5	550	10 × 12.5	690	10 × 16	830	10 × 20	990	12.5 × 20	1000
1000	102	8 × 11.5	610	10 × 12.5	795	10 × 16	930	10 × 20	1095	12.5 × 20	1410	12.5 × 25	1715
		10 × 12.5	720										
1500	152	10 × 12.5	780	10 × 16	875	10 × 20	1025	12.5 × 20	1210				
2200	222	10 × 16	900	10 × 20	1230	12.5 × 20	1555	12.5 × 25	1800	16 × 25	2135	16 × 30	2320
3300	332	10 × 20	1350	12.5 × 20	1685	12.5 × 25	1990	16 × 25	2305	16 × 30	2340	18 × 35	3220
4700	472	12.5 × 20	1830	12.5 × 25	2105	16 × 25	2490	16 × 30	2855	18 × 35	3400	18 × 40	3340
6800	682	12.5 × 25	1930	16 × 25	2610	16 × 30	3010	16 × 40	3530	18 × 40	3500	22 × 50	3400
								18 × 35	3530				
10000	103	16 × 25	2760	16 × 30	2960	16 × 35	3490	22 × 35	3650	22 × 50	3600		
15000	153	16 × 35	2860	16 × 40	3100	22 × 35	3400	22 × 35	3700				
22000	223	18 × 40	3400	22 × 35	3700	22 × 50	4200	22 × 50	4200				
33000	333	22 × 50	3900										

■ 尺寸 Dimensions

CAP(μF) \ WV		63V(1J)		100V(2A)		160V(2C)		200V(2D)		250V(2E)		350V(2V)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47	R47			5 × 11	10					6.3 × 11	10	6.3 × 11	12
1	010			5 × 11	25			6.3 × 11	18	6.3 × 11	18	6.3 × 11	20
2.2	2R2	5 × 11	28	5 × 11	40	6.3 × 11	30	6.3 × 11	30	6.3 × 11	32	6.3 × 11	38
3.3	3R3			5 × 11	45	6.3 × 11	38	6.3 × 11	38	6.3 × 11	40	8 × 11.5	55
4.7	4R7			5 × 11	55	6.3 × 11	56	6.3 × 11	56	6.3 × 11	58	8 × 11.5	70
6.8	6R8			5 × 11	65	6.3 × 11	63	8 × 11.5	73	8 × 11.5	75	8 × 14	83
10	100	5 × 11	80	5 × 11	80	8 × 11.5	90	8 × 11.5	95	10 × 12.5	105	10 × 16	120
22	220	5 × 11	115	6.3 × 11	135	10 × 16	172	10 × 16	175	10 × 20	195	12.5 × 20	210
				8 × 11.5	155								
33	330	6.3 × 11	160	8 × 11.5	190	10 × 20	230	10 × 20	240	12.5 × 20	260	12.5 × 25	300
47	470	6.3 × 11	190	10 × 12.5	260	10 × 20	285	12.5 × 20	310	12.5 × 20	310	16 × 25	390
68	680			10 × 16	290	12.5 × 20	370	12.5 × 25	410	16 × 20	430	16 × 30	500
100	101	8 × 11.5	325	10 × 20	455	12.5 × 25	490	16 × 20	520	16 × 25	580	16 × 35	640
120	121			16 × 25	850	16 × 20	560	16 × 25	630	16 × 30	680		
220	221	10 × 16	615	12.5 × 20	745	16 × 30	900	16 × 35	960	18 × 35	1020		
330	331	10 × 20	825	12.5 × 25	990	18 × 30	1150	18 × 35	1250				
470	471	12.5 × 20	1155	16 × 25	1395	18 × 35	1460	18 × 45	1610				
680	681	12.5 × 25	1515			18 × 45	1600						
1000	102	16 × 25	2040	18 × 35	1995								
2200	222	18 × 35	2300										
3300	332	18 × 40	2500										
4700	472	22 × 50	3400										

CAP(μF) \ WV		400V (2G)		450V(2W)		500V(2H)	
		Size	Ripple	Size	Ripple	Size	Ripple
0.47	R47	6.3 × 11	12	6.3 × 11	12		
1	010	6.3 × 11	20	6.3 × 11	20	6.3 × 11	20
2.2	2R2	6.3 × 11	38	8 × 11.5	38	8 × 11.5	34
3.3	3R3	8 × 11.5	55	8 × 11.5	50	10 × 12.5	50
4.7	4R7	8 × 11.5	70	10 × 12.5	70	10 × 16	68
6.8	6R8	8 × 12	83	10 × 12.5	80	10 × 20	80
10	100	10 × 16	120	10 × 16	105	12.5 × 20	105
22	220	12.5 × 20	210	12.5 × 25	210	16 × 20	195
33	330	12.5 × 25	300	16 × 25	300	16 × 25	260
47	470	16 × 25	390	16 × 30	380	16 × 30	320
68	680	16 × 30	500	16 × 35	480	18 × 35	430
82	820	16 × 30	580	18 × 30	560	18 × 40	500
100	101	16 × 35	640	18 × 35	640	18 × 45	590
120	121	16 × 40	750	18 × 40	720		
150	151	18 × 40	860	18 × 45	850		

Size φ D × L(mm)

Maximum Allowable Ripple Current (mA rms) at 85°C 120Hz