

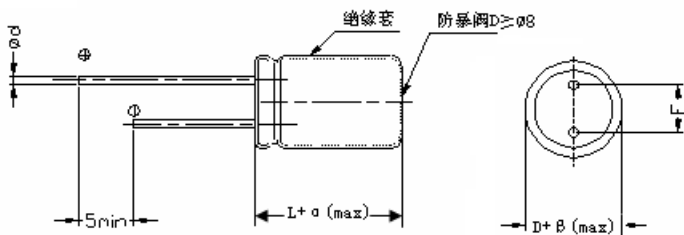
# RT

- 耐高纹波电流，高频超低阻抗  
High ripple current, Extremely Low impedance at high frequency.
- 105℃，4000~10000 小时寿命  
High reliability withstanding 10000 hours load life at 105℃ (4000~10000 hours for smaller case size as specified bellow)
- 符合 RoHS 指令。  
Complied 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℃																		
额定电压范围 Rated voltage range	6.3 ~ 100V																		
标称容量范围 Nominal capacitance range	0.47~ 15000μF																		
标称容量允许偏差 Capacitance tolerance	± 20% (120Hz, +20℃)																		
漏电流 Leakage current	$I \leq 0.01CV (\mu A)$ or $3 \mu A$ , 取较大值 2 分钟(at 20℃, after 2 minutes, whichever is greater)																		
损耗角正切值 (tg δ) Dissipation factor (+20℃, 120Hz)	<table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>tg δ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </tbody> </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 <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100	tg δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100											
tg δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08											
温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25~100</th> </tr> </thead> <tbody> <tr> <td>Z-20℃ / Z+20℃</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40℃ / Z+20℃</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> </tr> </tbody> </table>	U <sub>R</sub> (V)	6.3	10	16	25~100	Z-20℃ / Z+20℃	4	3	2	2	Z-40℃ / Z+20℃	8	6	4	3			
U <sub>R</sub> (V)	6.3	10	16	25~100															
Z-20℃ / Z+20℃	4	3	2	2															
Z-40℃ / Z+20℃	8	6	4	3															
耐久性 Load life	<table border="1"> <thead> <tr> <th>ΦD</th> <th>Φ5,6.3</th> <th>Φ8,10</th> <th>≥Φ12.5</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>+105℃加额定电压，恢复 16 小时后： After applying rated voltage 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℃,1000 小时贮存后,恢复 16 小时后: After storage for 1000 hours at +105℃ 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	7.5
d	0.5		0.5、0.6	0.6		0.8	0.8

α MAX	( L < 20 ) 1.5
	( L ≥ 20 ) 2.0

β MAX	( D < 20 ) 0.5
	( D ≥ 20 ) 1.0

## 频率修正系数 Frequency coefficient

Freq.(Hz) CAP(μF)	120	1K	10K	≥100K
~180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1800	0.60	0.87	0.95	1.00
2200~3900	0.75	0.90	0.95	1.00
4700~15000	0.85	0.95	0.98	1.00

## 尺寸 DIMENSIONS

WV CAP(μF)		6.3V(0J)			10V(1A)			16V(1C)			25V(1E)		
		Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
10	100										5×11	1.20	120
22	220										5×11	1.00	130
33	330										5×11	0.90	150
47	470							5×11	0.58	210	5×11	0.58	210
100	101	5×11	0.58	210	5×11	0.58	210	6.3×11	0.22	340	6.3×11	0.22	350
220	221	6.3×11	0.26	290	6.3×11	0.22	340	8×11.5	0.13	510	8×11.5	0.13	640
330	331	6.3×11	0.21	340	6.3×11	0.20	380	8×11.5	0.10	640	8×16	0.087	840
470	471	8×11.5	0.14	400	8×11.5	0.13	640	8×16	0.087	840	8×20	0.069	1050
								10×12.5	0.080	865	10×16	0.060	1210
680	681	8×11.5	0.13	640	8×16	0.085	840	8×20	0.060	1050	10×20	0.038	1400
								10×16	0.046	1150			
820	821	8×11.5	0.10	720									
1000	102	8×16	0.08	850	8×20	0.069	1050	10×20	0.046	1400	12.5×20	0.035	1900
		10×12.5	0.08	870	10×16	0.060	1210						
1200	122	8×20	0.069	1050									
		10×16	0.064	1200									
1500	152	10×20	0.050	1380	10×25	0.042	1650	12.5×20	0.035	1900	12.5×25	0.027	2230
2200	222	10×25	0.042	1650	12.5×20	0.035	1900	12.5×25	0.027	2230	16×25	0.025	2780
3300	332	12.5×20	0.035	1900	12.5×25	0.030	2125	16×25	0.025	2420	16×30	0.020	2920
4700	472	12.5×25	0.030	2200	16×25	0.025	2400	16×30	0.020	2920	18×35	0.018	3520
6800	682	16×25	0.025	2400	16×30	0.020	2920	18×35	0.018	3520			
10000	103	16×30	0.020	2920	18×35	0.018	3520						
15000	153	16×30	0.020	2920									

WV CAP(μF)		35V(1V)			50V(1H)			63V(1J)			100V(2A)		
		Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
0.47	R47				5×11	5.50	20				5×11	6.00	15
1	10				5×11	3.00	45				5×11	4.50	20
2.2	2R2				5×11	2.50	60				5×11	3.00	30
3.3	3R3				5×11	2.20	65				5×11	2.70	40
4.7	4R7	5×11	1.50	40	5×11	1.90	100				5×11	2.50	65
6.8	6R8										5×11	1.80	105
10	100				5×11	1.50	130	5×11	1.50	105	6.3×11	1.20	140

15	150										6.3×11	1.00	140
22	220				5×11	0.70	200	6.3×11	0.96	200	8×11.5	0.70	210
33	330	5×11	0.58	210	6.3×11	0.60	280	6.3×11	0.96	200	10×12.5	0.50	240
47	470	6.3×11	0.22	340	6.3×11	0.38	290	8×11.5	0.40	360	10×12.5	0.34	400
68	680							8×11.5	0.30	420	10×16	0.30	460
100	101	8×11.5	0.16	460	8×11.5	0.16	600	10×12.5	0.10	685	10×25	0.16	800
											12.5×20	0.18	820
220	221	8×16	0.087	900	10×16	0.084	1050	10×25	0.08	1100	16×20	0.073	1100
		10×12.5	0.080	910									
270	271	8×20	0.069	1000									
330	331	10×16	0.060	1210	10×25	0.055	1480	12.5×20	0.075	1100	16×25	0.070	1300
470	471	10×20	0.046	1400	12.5×20	0.045	1670	12.5×30	0.060	1800			
560	561	10×25	0.042	1650									
680	681	12.5×20	0.035	1900				16×25	0.050	2000			
820	821							18×25	0.048	2200			
1000	102	12.5×25	0.027	2130	16×25	0.025	2410	16×35	0.040	2500			
1200	122							18×30	0.030	2600			
2200	222	16×30	0.025	2610	18×35	0.022	3180						
3300	332	18×35	0.020	3200									

Size  $\phi D \times L$ (mm)

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

Maximum ESR ( $\Omega$ ) at 20°C 100KHz