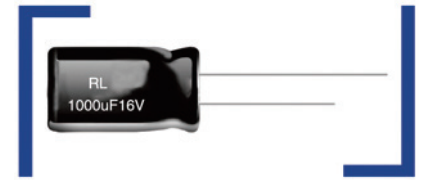


RL

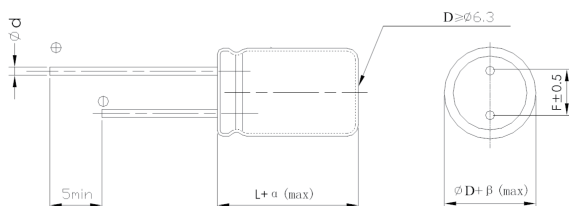


- Wide temperature range, 105°C, long life: 2000 hours. Miniature.
- Used in color-TV, air conditioning electron meter circuits etc.
- ROHS
Adapted to the ROHS directive.

Specifications

Items	Characteristics																																														
Operating Temperature Range	-40°C ~ +105°C	-25 ~ +105°C																																													
Rated Voltage Range	6.3 ~ 100V	160 ~ 450V																																													
Nominal Capacitance Range	0.1 ~ 33000µF																																														
Capacitance Tolerance	± 20% (120Hz, +20°C)																																														
Leakage Current	$I \leq 0.01CV$ (µA) 3µA (at 20°C, after 2 minutes) (Whichever is greater)	$I \leq 0.03CV$ (µA) + 40µA (2 minutes)																																													
(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> <td>100</td> <td></td> <td></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>0.10</td> <td>0.09</td> <td>0.08</td> <td></td> <td></td> </tr> </table>										U_R (V)	6.3	10	16	25	35	50	63	100			tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08																	
	U_R (V)	6.3	10	16	25	35	50	63	100																																						
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<table border="1"> <tr> <td>U_R (V)</td> <td>160</td> <td>200</td> <td>250</td> <td>400</td> <td>450</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>tgδ</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										U_R (V)	160	200	250	400	450						tgδ	0.15	0.15	0.15	0.20	0.20																					
U_R (V)	160	200	250	400	450																																										
tgδ	0.15	0.15	0.15	0.20	0.20																																										
When nominal capacitance exceeds 1000µF, add 0.02 to the value above for each 1000µF increase.																																															
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> <td>160~250</td> <td>400</td> <td>450</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>4</td> <td>6</td> <td>7</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>-</td> <td>-</td> <td>-</td> </tr> </table>											U_R (V)	6.3	10	16	25	35	50	63	100	160~250	400	450	Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	4	6	7	Z-40°C / Z+20°C	8	6	4	3	3	3	3	3	-	-	-
U_R (V)	6.3	10	16	25	35	50	63	100	160~250	400	450																																				
Z-25°C / Z+20°C	4	3	2	2	2	2	2	2	4	6	7																																				
Z-40°C / Z+20°C	8	6	4	3	3	3	3	3	-	-	-																																				
Load Life	After applying rated voltage for 2000 hours at +105°C and then resumed for 16 hours: Capacitance change : ±20% of the initial measured value Leakage current : ≤ The initial specified value Dissipation factor : ≤ 2 times of the initial specified value																																														
Shelf Life	After storage for 1000 hours at +105°C and then resumed 16 hours Capacitance change : ±20% of the initial measured value Leakage current : ≤ 2 times of the initial specified value Dissipation factor : ≤ 2 times of the initial specified value																																														

Case Size Table



Unit: mm

	D	5	6.3	8	10	12.5	16~18	22
F	2	2.5	3.5	5.0	5.0	7.5	10	
d	0.5	0.5	0.5、0.6	0.6	0.6	0.8	0.8	
αMAX	L < 20		1.5					
	L ≥ 20		2.0					
βMAX	D < 20		0.5					
	D ≥ 20		1.0					

Frequency Coefficient

Rated Voltage(V)	CAP(μF)	Freq.(Hz)					
		50	120	300	1K	10K	100K
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
160~450	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	0.80	1.00	1.15	1.30	1.40	1.50

Dimensions

CAP(μF)		WV		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	Size	Ripple
0.1	0R1													5×11	1
0.22	R22													5×11	3
0.33	R33													5×11	4
0.47	R47													5×11	7
1	010													5×11	13
2.2	2R2											5×11	25	5×11	20
3.3	3R3													5×11	35
4.7	4R7							5×11	40	5×11	40	5×11	30	5×11	40
10	100							5×11	50	5×11	50	5×11	45	5×11	55
22	220					5×11	50	5×11	55	5×11	65	5×11	65	5×11	80
33	330	5×11	55	5×11	65	5×11	65	5×11	85	5×11	85	5×11	85	5×11	100
														6.3×11	130
47	470	5×11	70	5×11	75	5×11	80	5×11	100	6.3×11	105	6.3×11	105	6.3×11	135
100	101	5×11	100	5×11	105	5×11	125	6.3×11	160	6.3×11	170	8×11.5	230		
						6.3×11	180			8×11.5	205				
220	221	5×11	155	6.3×11	170	6.3×11	215	8×11.5	285	8×11.5	295	10×16	510		
						8×11.5	280			10×12.5	360				
330	331	6.3×11	215	6.3×11	240	8×11.5	315	8×11.5	340	10×12.5	420	10×16	590		
				8×11.5	320			10×12.5	420	10×16	500				
470	471	6.3×11	260	6.3×11	285	8×11.5	365	10×12.5	470	10×16	545	10×20	705		
				8×11.5	340	10×12.5	440	10×16	520	10×20	590				
680	681	8×11.5	365	8×11.5	410	10×12.5	480	10×16	620	10×20	680	12.5×20	925		
1000	102	8×11.5	445	10×12.5	570	10×16	680	10×20	820	12.5×20	1025	12.5×25	1285		
				10×16	620	10×20	720	12.5×20	920	12.5×25	1150				
2200	222	10×16	740	10×20	900	12.5×20	1110	12.5×25	1175	16×25	1500	16×35	1885		
				12.5×20	950	12.5×25	1250			16×30	1730				
3300	332	10×20	1030	12.5×20	1205	12.5×25	1390	16×25	1645	18×25	1820	18×35	2165		
						16×25	1530	16×30	1800	16×30	1810				
4700	472	12.5×20	1280	12.5×25	1490	16×25	1740	16×30	2010	18×35	2335				
6800	682	12.5×25	1555	16×25	1825	16×30	2080	16×35	2308	18×40	2400				
10000	103	16×25	1900	16×30	1980	16×35	2380	18×35	2500						
22000	223	18×35	2400	18×40	2410										
33000	333	18×40	2555												

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Dimensions

CAP(μF) \ WV		63V(1J)		100V(2A)		160V(2C)		200V(2D)		220V(2P)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1	0R1	5×11	2								
1	010	5×11	15	5×11	15						
2.2	2R2			5×11	25						
3.3	3R3			5×11	35			6.3×11	35	6.3×11	35
4.7	4R7	5×11	40	5×11	40	6.3×11	51	6.3×11	53	6.3×11	53
10	100	5×11	60	6.3×11	85	8×11.5	91	8×11.5	91	8×11.5	91
22	220	5×11	80	6.3×11	95	10×12.5	150	10×16	165	10×16	165
		6.3×11	90	8×11.5	150						
33	330	6.3×11	120	8×11.5	145	10×16	205	10×20	225	10×20	225
				10×12.5	260						
47	470	6.3×11	145	10×12.5	280	10×20	270	10×25	300	12.5×20	300
		8×11.5	155	10×16	280						
68	680	8×11.5	155	10×16	300	12.5×20	350	12.5×20	350	12.5×25	380
82	820					12.5×20	390	12.5×25	420	16×20	440
100	101	10×12.5	260	10×20	350	12.5×25	470	16×20	490	16×25	530
				12.5×20	470						
150	151					16×20	600	16×25	660	16×30	690
180	181					16×25	720	16×30	780	16×35	820
220	221	10×20	505	12.5×25	660	16×30	860	16×35	920	16×40	950
				16×25	960						
270	271					16×35	1020	16×40	1080	18×35	1100
330	331	12.5×20	690	12.5×25	800	16×40	1200	18×35	1200	18×40	1250
				16×25	1030						
390	391					18×35	1280	18×40	1350	18×45	1400
470	471	12.5×20	810	16×25	1050	18×40	1490	18×45	1570		
				16×30	1250						
560	561					18×45	1700				
680	681	12.5×25	1160	16×30	1290						
				16×35	1470						
1000	102	16×25	1450	18×40	2020						
2200	222	18×35	1785								

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Dimensions

CAP(μF) \ WV		250V(2E)		350V(2V)		400V(2G)		420V(2M)		450V(2W)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1	010	6.3×11	16	6.3×11	18	6.3×11	19	6.3×11	19	6.3×11	18
2.2	2R2	6.3×11	29	6.3×11	30	6.3×11	32	8×11.5	32	8×11.5	30
3.3	3R3	6.3×11	37	6.3×11	40	8×11.5	42	8×11.5	42	8×11.5	40
4.7	4R7	8×11.5	53	8×11.5	55	8×11.5	56	8×16	60	8×16	58
						10×8	52				
5.6	5R6					10×8	57				
6.8	6R8	8×11.5	73	8×12	75	8×12	75	8×16	80	10×16	90
						10×8.5	70				
8.2	8R2	8×11.5	80	8×16	82	8×16	82	10×16	98	10×16	98
10	100	8×16	102	10×12.5	105	10×12.5	105	10×16	115	10×20	120
15	150	10×16	135	10×20	150	10×20	150	10×25	165	10×25	165
22	220	10×20	180	10×25	200	10×25	200	12.5×20	205	12.5×25	215
33	330	10×25	245	12.5×25	270	12.5×25	270	16×20	270	16×20	270
39	390	12.5×20	260	16×20	300	16×20	300	16×20	300	16×25	330
47	470	12.5×25	320	16×20	330	16×25	360	16×25	360	16×30	395
56	560	12.5×25	350	16×25	400	16×25	400	16×30	430	16×30	430
68	680	16×20	400	16×30	475	16×30	475	16×30	475	16×35	510
82	820	16×25	480	16×30	520	16×35	580	16×35	580	16×40	590
100	101	16×25	530	16×35	620	16×35	650	16×40	650	18×35	650
120	121	16×30	620	16×40	720	18×35	720	18×40	750	18×40	750
150	151	16×35	750	18×40	840	18×40	780	18×45	880	18×45	880
180	181	16×40	880	18×45	960	18×50	1000	22×40	1000	22×40	1000
220	221	18×40	1010	22×40	1100	22×45	1120				

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

SOLID
CHIP
MINIATURE
STANDARD
LOW-ESR
SWITCH-POWER
LIGHTING
SPECIAL
SNAP-IN
SCREW