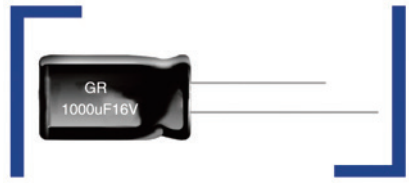
GR



- 85℃, 2000hours
- Used in Smps、Adapter、color-TV, audio sets, air conditioning circuits etc.
- Adapted to the ROHS directive.

Specifications

Items	Characteristics	
Operating Temperature Range	-40℃ ~+85℃	-25 ~ +85℃
Rated Voltage Range	6.3 ~ 100V	160 ~ 500V
Nominal Capacitance Range	0.1 ~ 33000μF	
Capacitance Tolerance	± 20% (120Hz, +20°C)	
Leakage Current	I≤0.01CV (μA) (at 20℃,after 2 minutes) (Whichever is greater)	I≤0.03CV (μA) + 10μA (2 minutes)

Dissipation Factor (+20℃, 120Hz)

U_R (V)	6.3	10	16	25	35	50	63	100
tgδ	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
tgδ	0.20	0.20	0.20	0.20	0.20	0.20	0.24

When nominal capacitance exceeds 1000μF,add 0.02 to the value above for each 1000μF increase.

Temperature characteristics (Impedance ratio at 120Hz)

U_R (V)	6.3	10	16	25	35	50	63	100
Z-25℃ / Z+20℃	5	4	3	2	2	2	2	2
Z-40℃ / Z+20℃	10	8	6	5	3	3	3	3

U_R (V)	160	200	250	400	420	450	500
Z-25℃ / Z+20℃	3	3	4	6	7	7	8

when nominal capacitance exceeds 1000μF, Add 0.5 to the value of Z-25℃ / Z+20℃above for each 1000μF increase.

when nominal capacitance exceeds 1000μF, Add 1.0 to the value of Z-40℃ / Z+20℃above for each 1000μF increase.

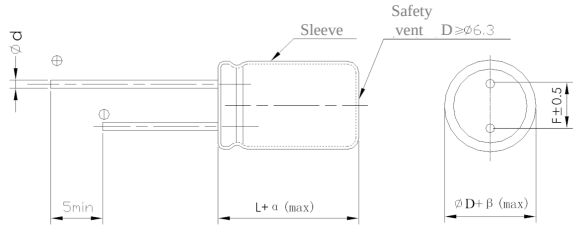
Load Life

After applying rated voltage for 2000 hours at +85℃ and then resumed for 16 hours:
Capacitance change : ±20% of the initial measured value
Leakage current : ≤The initial specified value
Dissipation factor : ≤2times of the initial specified value

Shelf Life

After storage for 1000 hours at +85℃ and then resumed for 16 hours:
Capacitance change : ±20% of the initial measured value
Leakage current : ≤2times of the initial specified value
Dissipation factor : ≤2times 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)	Freq.(Hz) / CAP(μF)	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
160~500	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

Dimensions

WV / 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	25	5×11	28
3.3	3R3							5×11	20	5×11	35	5×11	35
4.7	4R7					5×11	30	5×11	30	5×11	55	5×11	50
10	100					5×11	40	5×11	55	5×11	90	5×11	75
22	220			5×11	55	5×11	75	5×11	80	5×11	110	5×11	110
33	330	5×11	55	5×11	80	5×11	80	5×11	100	5×11	140	5×11	130
47	470	5×11	75	5×11	95	5×11	115	5×11	130	6.3×11	235	6.3×11	180
100	101	5×11	135	5×11	145	5×11	175	6.3×11	215	8×11.5	405	8×11.5	310
220	221	5×11	220	5×11	230	6.3×11	290	8×11.5	370	10×12.5	580	10×12.5	510
330	331	6.3×11	300	6.3×11	325	6.3×11	350	8×11.5	455			10×16	710
						8×11.5	370			10×16	755		
470	471	6.3×11	360	6.3×11	385	8×11.5	500	10×12.5	630	10×20	990	10×20	815
680	681	8×11.5	505	8×11.5	550	10×12.5	690	10×16	830	12.5×20	1410	12.5×20	1000
1000	102	8×11.5	610	10×12.5	795	10×16	930	10×20	1095			12.5×25	1715
		10×12.5	720										
1500	152	10×12.5	780	10×16	875	10×20	1025	12.5×20	1210	16×25	2135		
2200	222	10×16	900	10×20	1230	12.5×20	1555	12.5×25	1800	16×30	2340	16×30	2320
3300	332	10×20	1350	12.5×20	1685	12.5×25	1990	16×25	2305	18×35	3400	18×35	3220
4700	472	12.5×20	1830	12.5×25	2105	16×25	2490	16×30	2855	18×40	3500	18×40	3340
6800	682	12.5×25	1930	16×25	2610	16×30	3010	16×40	3530			22×50	3400
								18×35	3530	22×50	3600		
10000	103	16×25	2760	16×30	2960	16×35	3490	22×35	3650				
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										

Size φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 85℃ 120Hz

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
		10x8	65				
5.6	5R6	10x8	71				
6.8	6R8	8×12	83	10×12.5	80	10×20	80
		10x8.5	73				
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 φD×L(mm)
Maximum Allowable Ripple Current (mA rms) at 85℃ 120Hz