RC Series

- **Suitable for main board.**
- **Extremely low impedance, downsize and high ripple current.**

◆ SPECIFICATIONS

Item	Performance Characteristics
Category Temperature Range	-40 ~ +105℃
Working Voltage Range	6.3 ~ 100Vdc
Capacitance Range	1.0~ 15,000 μF
Capacitance Tolerance	±20% (at 20℃ and 120Hz)

Dissipation Factor (tan δ) (at 20℃, 120Hz)

Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100
tan δ (Max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08

The above values should be increased by 0.02 for every additional 1000μF

Leakage Current

I≤0.01CV or 3μA whichever is greater
I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V)
Apply rated voltage the rated voltage for 2 minutes.

Low Temperature Characteristics Impedance Ratio(MAX)

Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100	
Z(-25°C)/Z(+20°C)	4	3	3	3	3	2	2	2	2	(at 120Hz)
Z(-40°C)/Z(+20°C)	8	6	4	4	4	4	4	4	4	

Endurance

The following requirements shall be satisfied when the capacitor are restored to 20℃ after the rated voltage applied for 2,000 ~3,000hours at 105℃.

Capacitance change	≦±20% of the initial value
Dissipation factor(tan δ)	≦200% of the specified value
Leakage current	≦specified value

Size	Life time (hours)
5Φ~ 8Φ	2,000
10Φ~ 18Φ	3,000

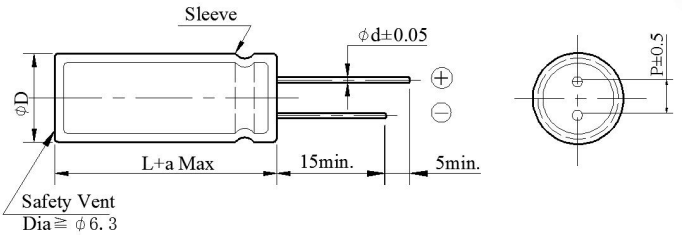
Shelf Life

The following requirements shall be satisfied when the capacitor are restored to 20℃ after the rated voltage applied for 1,000 hours at 105℃without voltage applied.

Capacitance change	≦±20% of the initial value
Dissipation factor(tan δ)	≦200% of the specified value
Leakage current	≦200% of the specified value

Others	Conforms to JIS-C-5101-4 (1998) and IEC 60384-4

◆ DIMENSIONS(mm)



ΦD	5	6.3	8	10	12.5/13	16	18
ΦD	ΦD±0.5 Max						
Φd	0.5	0.5	0.5/0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
a	＜20 L±1.5Max ＞20 L±2.0Max						

◆ PART NUMBER SYSTEM(Example :16V 1200μF)

E	R	C	0	1	6	M	1	2	2	G	2	0	L	O	5	0	A	A

Special Request
Lead size
Lead type
Height code（L：20mm）
Diameter code（G：Φ10）
Capacitance code（1200μF）
Capacitance tolerance code（M：±20%）
Voltage code（16V）
Series code（RC）
Category code

RC Series

◆ **Case size & Permissible rated ripple current: (mA rms) at 105℃ / 100KHz**

WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Impedance (Ωmax/ 100kHz) 25℃	Max.Rated Ripple current @105℃/100kHz (mA rms)	WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Impedance (Ωmax/ 100kHz) 25℃	Max.Rated Ripple current @105℃/100kHz (mA rms)
6.3	100	5×11	0.550	165	10	22	5×11	1.0	100
	150	5×11	0.500	200		47	5×11	1.0	150
	220	5×11	0.480	230		100	5×11	0.500	165
	220	6.3×11	0.450	250		150	5×11	0.480	200
	330	5×11	0.265	262		220	5×11	0.380	230
	330	6.3×11	0.260	295		220	6.3×11	0.350	275
	470	6.3×11	0.250	340		330	6.3×11	0.280	340
	470	8×12	0.180	410		330	8×12	0.180	470
	680	6.3×12	0.180	420		470	6.3×12	0.220	460
	820	6.3×12	0.150	468		470	8×12	0.170	560
	820	8×9	0.180	474		560	8×12	0.170	590
	1000	8×12	0.120	592		680	8×12	0.160	623
	1000	10×12	0.090	680		820	8×12	0.100	685
	1500	10×13	0.100	850		1,000	8×12	0.080	755
	2200	10×16	0.060	1140		1,000	10×13	0.075	890
	2200	10×20	0.058	1300		1,000	10×16	0.068	1050
	3300	10×20	0.050	1450		1500	10×16	0.058	1286
	4700	10×25	0.045	1780		2,200	10×16	0.050	1310
	4700	13×20	0.042	1650		2,200	10×20	0.050	1460
	5600	12.5×25	0.038	2180		3300	10×25	0.048	1690
	10000	16×25	0.028	2380		3300	13×20	0.045	1747
						10000	16×25	0.027	2560
16	4.7	5×11	2.0	85	25	4.7	5×11	2.8	80
	10	5×11	2.0	125		6.8	5×11	2.5	95
	22	5×11	1.0	150		10	5×11	1.5	125
	33	5×11	1.0	150		22	5×11	0.900	140
	47	5×11	0.820	150		33	5×11	0.900	150
	100	5×11	0.350	192		47	5×11	0.500	160
	100	6.3×11	0.250	220		68	6.3×11	0.420	180
	150	6.3×11	0.220	300		100	5×11	0.450	192
	220	6.3×11	0.200	340		100	6.3×11	0.250	220
	220	8×12	0.180	410		120	5×11	0.350	232
	330	6.3×11	0.190	395		150	6.3×11	0.250	280
	330	8×12	0.160	470		220	6.3×12	0.220	410
	470	6.3×12	0.140	498		220	8×12	0.200	450
	470	8×12	0.130	520		330	8×12	0.170	580
	470	10×12	0.090	580		330	10×13	0.120	670
	560	8×12	0.096	580		470	8×14	0.130	630
	680	8×12	0.095	650		470	10×13	0.080	860
	680	10×13	0.070	720		680	8×16	0.079	920
	820	8×12	0.090	730		680	8×20	0.075	970
	820	10×13	0.068	780		680	10×16	0.060	990
	1000	8×16	0.070	920		820	8×16	0.071	988
	1000	10×13	0.068	930		820	10×20	0.050	1250
	1000	10×16	0.060	970		1000	10×16	0.065	1350
	1500	10×16	0.055	1360		1000	10×20	0.050	1480
	2200	10×20	0.048	1580		1500	10×20	0.050	1620
	3300	13×20	0.042	1993		1500	13×20	0.045	1755
	3300	13×25	0.038	2225		2200	10×25	0.048	1758
	4700	13×25	0.035	2670		2200	13×20	0.040	1810
	4700	13×30	0.033	2700		3300	13×25	0.038	2410
	6800	16×30	0.031	3203		4700	16×32	0.033	3300
	10000	16×30	0.030	3114		10000	18×35	0.028	4640
	10000	18×32	0.030	3400					

RC Series

◆ **Case size & Permissible rated ripple current: (mA rms) at 105℃ / 100KHz**

WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Impedance (Ωmax/ 100kHz) 25℃	Max.Rated Ripple current @105℃/100kHz (mA rms)	WV(V)	Nominal capacitance (uF)	Case Size ΦD×L (mm)	Impedance (Ωmax/ 100kHz) 25℃	Max.Rated Ripple current @105℃/100kHz (mA rms)
35	10	5×11	1.200	135	50	1.0	5×11	5.00	80
	22	5×11	0.800	150		2.2	5×11	4.00	90
	33	5×11	0.500	180		3.3	5×11	3.20	95
	47	5×11	0.450	200		4.7	5×11	2.70	110
	47	6.3×11	0.400	220		6.8	5×11	2.50	120
	56	5×11	0.450	200		10	5×11	2.00	145
	68	6.3×11	0.300	250		22	5×11	1.50	170
	100	6.3×11	0.230	286		33	5×11	1.30	195
	100	8×12	0.200	375		33	6.3×11	1.28	220
	150	8×12	0.180	550		47	5×12	0.60	241
	220	6.3×15	0.160	620		47	6.3×11	0.80	260
	220	8×12	0.160	627		68	6.3×11	0.720	280
	330	8×14	0.120	714		68	8×12	0.630	330
	330	10×13	0.080	810		100	6.3×12	0.620	420
	470	8×16	0.075	840		100	8×12	0.520	490
	470	10×16	0.060	980		150	10×13	0.280	650
	680	8×20	0.065	970		220	8×12	0.150	636
	680	10×16	0.060	990		220	8×16	0.120	730
	680	10×20	0.058	1100		220	8×20	0.100	760
	820	8×20	0.060	1095		220	10×13	0.130	750
	820	10×16	0.060	1100		220	10×16	0.088	820
	1000	10×20	0.055	1480		330	8×20	0.080	830
	1000	13×20	0.052	1620		330	10×16	0.084	1000
	1500	13×25	0.045	2250		470	10×16	0.078	1190
	2200	16×20	0.042	2200		470	10×20	0.075	1300
	3300	16×32	0.038	3000		470	13×20	0.072	1450
	3900	16×35	0.035	3420		680	13×20	0.071	1750
	4700	18×35	0.030	3866		1000	13×20	0.058	1815
	5600	18×40	0.028	4508		1000	13×25	0.055	2000
	6800	16×45	0.028	4960		2200	16×32	0.036	2850
						3300	18×35	0.028	3050
63	1.0	5×11	5.500	80	100	1.0	5×11	6.000	80
	2.2	5×11	4.500	90		2.2	5×11	5.500	90
	3.3	5×11	4.000	95		3.3	5×11	4.500	95
	4.7	5×11	3.500	110		4.7	5×11	4.500	107
	6.8	5×11	3.200	120		6.8	5×11	3.200	130
	10	5×11	2.800	145		10	5×11	2.800	152
	22	5×11	2.000	190		10	6.3×11	2.000	180
	33	6.3×11	1.700	232		22	6.3×11	1.400	260
	47	6.3×11	1.200	290		22	8×12	1.200	285
	47	8×12	0.850	305		33	8×12	0.630	327
	68	8×12	0.700	365		47	8×12	0.500	390
	100	8×12	0.540	440		47	10×13	0.360	460
	100	10×13	0.380	535		68	8×16	0.330	480
	150	8×16	0.360	580		100	10×16	0.250	690
	220	8×16	0.230	690		150	10×20	0.150	860
	220	10×16	0.200	785		220	10×25	0.138	1120
	270	10×20	0.180	910		220	13×16	0.120	880
	330	10×20	0.150	980		220	13×20	0.100	960

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◆ **Case size & Permissible rated ripple current: (mA rms) at 105℃ / 100KHz**

63	470	13×20	0.120	1205	100	330	13×20	0.100	1110
	680	13×20	0.100	1444		330	13×25	0.085	1240
	680	13×25	0.080	1580		470	16×26	0.075	1650
	820	13×25	0.068	1580		560	16×30	0.062	1850
	1000	13×30	0.056	1979		680	16×30	0.052	2150
	1000	16×26	0.058	2070		820	18×30	0.050	2390
						1000	18×40	0.040	2360

◆ **RIPPLE CURRENT MULTIPLIERS**
Frequency Multipliers

Vdc	Frequency (Hz)				
	50/60	120	1K	10K	100K
6.3 ~ 16	0.60	0.75	0.90	0.98	1.00
25 ~ 100	0.50	0.62	0.85	0.95	1.00