

## 135°C Use, High CV, Low ESR Capacitors

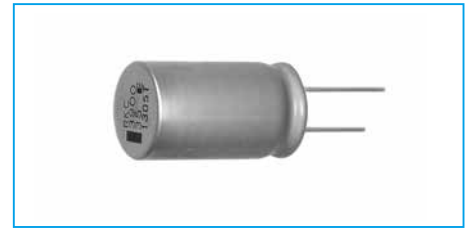
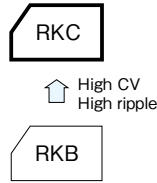
GREEN CAP

Low ESR

135°C 3000hours

Anti-cleaning solvent

- High temperature guaranteed for automotive.
- Guaranteed 3000 hours at 135°C. (63V to 100V : 2000 hours)
- High CV, high ripple current.
- For ECU of Direct injection engine, ESP etc.



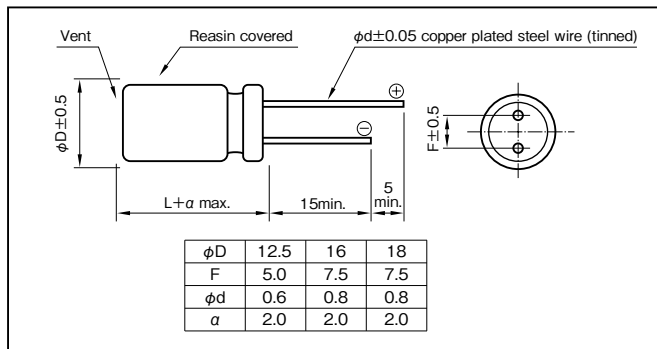
Marking color : Black print

### Specifications

Item	Performance														
Category temperature range (°C)	-40 to +135														
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)														
Leakage current (µA) (max.)	0.01CV or 3 whichever is larger (after 2 minutes) C : Rated capacitance (µF), V : Rated voltage (V) (20°C)														
Tangent of loss angle (tanδ)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>tanδ (max.)</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> </tr> </tbody> </table>	Rated voltage (V)	25	35	50	63	80	100	tanδ (max.)	0.14	0.12	0.10	0.10	0.08	0.08
	Rated voltage (V)	25	35	50	63	80	100								
tanδ (max.)	0.14	0.12	0.10	0.10	0.08	0.08									
0.02 is added to every 1000µF increase over 1000µF. (20°C, 120Hz)															
Characteristics at high and low temperature	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Impedance ratio (max.) Z-40°C/Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Rated voltage (V)	25	35	50	63	80	100	Impedance ratio (max.) Z-40°C/Z+20°C	3	3	3	3	3	3
	Rated voltage (V)	25	35	50	63	80	100								
Impedance ratio (max.) Z-40°C/Z+20°C	3	3	3	3	3	3									
(120Hz)															
Endurance 1 (135°C) (Applied ripple current)	Test time	3000 hours (63V to 100V : 2000 hours)													
	Leakage current	The initial specified value or less													
	Percentage of capacitance change	Within ±30% of initial value													
	Tangent of the loss angle	300% or less of the initial specified value													
Endurance 2 (135°C) (Applied ripple current)	Test time	3000 hours (63V to 100V : 2000 hours)													
	Leakage current	The initial specified value or less													
	Percentage of capacitance change	Within ±30% of initial value													
	Tangent of the loss angle	300% or less of the initial specified value													
Shelf life (135°C)	Test time : 1000hours ; other items are same as the endurance. Voltage application treatment : According to JIS C5101-4 4.1														
Applicable standards	JIS C5101 - 1, - 4 (IEC 60384 - 1, - 4)														

### Outline Drawing

Unit : mm



### Coefficient of Frequency for Rated Ripple Current

Rated capacitance (µF) \ Frequency (Hz)	50 · 60	120	1k	10k · 100k
160 to 360	0.55	0.65	0.85	1
390 to 1000	0.70	0.75	0.90	1
1100 to 12000	0.80	0.85	0.95	1

Product code system : 25V2000µF  
(\*For automotive: powertrain, safety)

RA*	RKC	202	M	1T	G20		T
Category code	Series code	capacitance code	Cap tol. code	Voltage code	Size code	Lead-forming and packing code	Additional code

For details, refer to the various "Product Code System" pages.

## Standard Ratings

Rated voltage (V)	Item	25 (1T)						35 (1G)						50 (1U)					
		Case φD × L (mm)	Size code	ESR (Ω max. / 100kHz)		Rated ripple current (mA rms / 100kHz)		Case φD × L (mm)	Size code	ESR (Ω max. / 100kHz)		Rated ripple current (mA rms / 100kHz)		Case φD × L (mm)	Size code	ESR (Ω max. / 100kHz)		Rated ripple current (mA rms / 100kHz)	
				20°C	-40°C	135°C	125°C			20°C	-40°C	135°C	125°C			20°C	-40°C	135°C	125°C
620	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 20	G20	0.073	0.88	1470	2400	
820	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 25	G25	0.058	0.67	2260	3350	
1000	—	—	—	—	—	—	—	—	—	—	—	—	16 × 20	J20	0.050	0.55	1870	2960	
1100	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 30	G30	0.048	0.52	2520	4220	
1300	—	—	—	—	—	—	12.5 × 20	G20	0.042	0.48	1690	2760	12.5 × 35	G35	0.042	0.44	2780	4810	
													16 × 25	J25	0.042	0.44	2500	4040	
													18 × 20	K20	0.042	0.44	2110	3130	
1600	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 40	G40	0.037	0.36	3020	5240	
													16 × 31.5	J31	0.035	0.36	2960	5130	
1800	—	—	—	—	—	—	12.5 × 25	G25	0.033	0.30	2010	3480	18 × 25	K25	0.033	0.32	2530	4230	
2000	12.5 × 20	G20	0.042	0.48	1690	2760	16 × 20	J20	0.035	0.27	2160	3040	—	—	—	—	—	—	
2200	—	—	—	—	—	—	12.5 × 30	G30	0.028	0.24	2900	4490	16 × 35.5	J35	0.029	0.27	3160	5480	
2400	—	—	—	—	—	—	18 × 20	K20	0.034	0.22	2320	3250	18 × 31.5	K31	0.028	0.25	3020	5240	
2700	—	—	—	—	—	—	12.5 × 35	G35	0.025	0.21	3190	5140	16 × 40	J40	0.025	0.22	3420	5930	
3000	12.5 × 25	G25	0.033	0.30	2010	3480	16 × 25	J25	0.028	0.22	2870	4260	18 × 35.5	K35	0.024	0.20	3390	5870	
3300	16 × 20	J20	0.035	0.27	2160	3040	12.5 × 40	G40	0.024	0.19	3470	5810	—	—	—	—	—	—	
3600	12.5 × 30	G30	0.028	0.24	2900	4490	16 × 31.5	J31	0.023	0.18	3400	5480	18 × 40	K40	0.023	0.16	3700	6420	
3900	—	—	—	—	—	—	18 × 25	K25	0.027	0.19	2900	4500	—	—	—	—	—	—	
4300	18 × 20	K20	0.034	0.22	2320	3250	16 × 35.5	J35	0.020	0.14	3630	6070	—	—	—	—	—	—	
4700	12.5 × 35	G35	0.025	0.21	3190	5140	18 × 31.5	K31	0.022	0.16	3470	5600	—	—	—	—	—	—	
	16 × 25	J25	0.028	0.22	2870	4260													
5100	12.5 × 40	G40	0.024	0.19	3470	5810	—	—	—	—	—	—	—	—	—	—	—	—	
5600	16 × 31.5	J31	0.023	0.18	3400	5480	16 × 40	J40	0.019	0.12	3930	6810	—	—	—	—	—	—	
6200	—	—	—	—	—	—	18 × 35.5	K35	0.019	0.12	3750	6280	—	—	—	—	—	—	
7500	16 × 35.5	J35	0.020	0.14	3630	6070	18 × 40	K40	0.018	0.10	4080	7070	—	—	—	—	—	—	
	18 × 31.5	K31	0.022	0.16	3470	5600													
9100	16 × 40	J40	0.019	0.12	3930	6810	—	—	—	—	—	—	—	—	—	—	—	—	
10000	18 × 35.5	K35	0.019	0.12	3750	6280	—	—	—	—	—	—	—	—	—	—	—	—	
12000	18 × 40	K40	0.018	0.10	4080	7070	—	—	—	—	—	—	—	—	—	—	—	—	

Rated voltage (V)	Item	63 (4E)						80 (1R)						100 (1H)					
		Case φD × L (mm)	Size code	ESR (Ω max. / 100kHz)		Rated ripple current (mA rms / 100kHz)		Case φD × L (mm)	Size code	ESR (Ω max. / 100kHz)		Rated ripple current (mA rms / 100kHz)		Case φD × L (mm)	Size code	ESR (Ω max. / 100kHz)		Rated ripple current (mA rms / 100kHz)	
				20°C	-40°C	135°C	125°C			20°C	-40°C	135°C	125°C			20°C	-40°C	135°C	125°C
160	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 20	G20	0.090	0.75	1410	1580	
220	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 25	G25	0.068	0.55	1960	2140	
270	—	—	—	—	—	—	12.5 × 20	G20	0.072	0.56	1420	1640	16 × 20	J20	0.067	0.47	1670	2050	
300	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 30	G30	0.052	0.41	2330	2950	
360	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 35	G35	0.045	0.35	2630	3530	
													18 × 20	K20	0.061	0.35	1860	2270	
390	12.5 × 20	G20	0.072	0.56	1420	1640	12.5 × 25	G25	0.052	0.39	2050	2520	16 × 25	J25	0.048	0.33	2360	2790	
430	—	—	—	—	—	—	—	—	—	—	—	—	12.5 × 40	G40	0.038	0.29	2920	4140	
470	—	—	—	—	—	—	16 × 20	J20	0.053	0.34	1910	2140	16 × 31.5	J31	0.041	0.27	2720	3440	
510	—	—	—	—	—	—	12.5 × 30	G30	0.042	0.30	2630	3110	18 × 25	K25	0.045	0.25	2470	2920	
560	12.5 × 25	G25	0.052	0.39	2050	2520	—	—	—	—	—	—	16 × 35.5	J35	0.036	0.23	2960	4190	
620	—	—	—	—	—	—	12.5 × 35	G35	0.035	0.25	2970	3760	18 × 31.5	K31	0.037	0.20	2920	3920	
							18 × 20	K20	0.044	0.26	2100	2350							
680	16 × 20	J20	0.053	0.34	1910	2140	16 × 25	J25	0.038	0.23	2680	2940	—	—	—	—	—	—	
750	12.5 × 30	G30	0.042	0.30	2630	3110	12.5 × 40	G40	0.031	0.22	3260	4610	16 × 40	J40	0.028	0.18	3380	5020	
							16 × 31.5	J31	0.034	0.20	3050	3860							
820	—	—	—	—	—	—	18 × 25	K25	0.033	0.19	2810	3080	18 × 35.5	K35	0.030	0.16	3330	4710	
910	12.5 × 35	G35	0.035	0.25	2970	3760	—	—	—	—	—	—	18 × 40	K40	0.026	0.14	3560	5280	
	18 × 20	K20	0.044	0.26	2100	2350													
1000	16 × 25	J25	0.038	0.23	2680	2940	16 × 35.5	J35	0.027	0.15	3420	4590	—	—	—	—	—	—	
1100	12.5 × 40	G40	0.031	0.22	3260	4610	18 × 31.5	K31	0.028	0.15	3220	4080	—	—	—	—	—	—	
1200	16 × 31.5	J31	0.034	0.20	3050	3860	—	—	—	—	—	—	—	—	—	—	—	—	
1300	18 × 25	K25	0.033	0.19	2810	3080	16 × 40	J40	0.025	0.14	3670	5190	—	—	—	—	—	—	
							18 × 35.5	K35	0.022	0.12	3690	5220							
1600	16 × 35.5	J35	0.027	0.15	3420	4590	18 × 40	K40	0.021	0.11	3820	5660	—	—	—	—	—	—	
	18 × 31.5	K31	0.028	0.15	3220	4080													
1800	16 × 40	J40	0.025	0.14	3670	5190	—	—	—	—	—	—	—	—	—	—	—	—	
2200	18 × 35.5	K35	0.022	0.12	3690	5220	—	—	—	—	—	—	—	—	—	—	—	—	
2400	18 × 40	K40	0.021	0.11	3820	5660	—	—	—	—	—	—	—	—	—	—	—	—	

NOTE : Design, Specifications are subject to change without notice.  
It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.