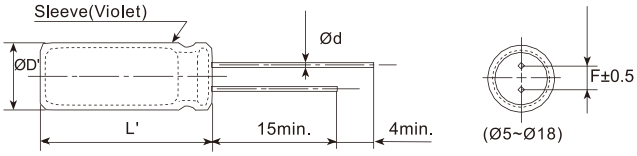
RG series

- "GBL" system, high reliability
- Low impedance and high ripple current
- Endurance +105°C 2,000 ~ 8,000 hours
- **RoHS Compliant**

SPECIFICATIONS

Items	Characteristics
Category Temperature Range	-55~+105°C
Rated Voltage Range	6.3~63 Vdc
Capacitance Tolerance	±20%(M) (at 20°C,120Hz)
Leakage Current	I 0.01CV or 3μA, whichever is greater. Where, I:Max.leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V) (at 20°C after 2 minutes)
Dissipation Factor (tanδ)	Rated Voltage(Vdc): 6.3, 10, 16, 25, 35, 50, 63 tanδ (max.): 0.22, 0.19, 0.16, 0.14, 0.12, 0.10, 0.08 When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C,120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage(Vdc): 6.3, 10, 16, 25, 35, 50, 63 Z(-25°C)/Z(+20°C): 4, 3, 2 Z(-55°C)/Z(+20°C): 8, 6, 4, 3 (at 120Hz)
Endurance	The following specifications shall be met when the capacitors are restored to 20°C after DC voltage plus rated ripple current is applied for a specified period of time at 105°C, the peak voltage shall not exceed the rated voltage. Capacitance Change: ≤±25% of the initial value D.F. (tanδ): ≤200% of the initial specified value Leakage Current: ≤The initial specified value Dia. / Load life (hours): ØD 6.3 / 2,000; ØD=8 / 3,000; ØD=10 / 5,000; ØD=12.5 / 7,000; ØD 16 / 8,000
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20 °C after leaving them under no load at 105°C for 1,000 hours. Capacitance Change: ≤±25% of the initial value D.F. (tanδ): ≤200% of the initial specified value Leakage Current: ≤200% of the initial specified value

DIMENSIONS[mm]



ØD	5	6.3	8		10	12.5	16	18
Ød	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
ØD'	ØD+0.5max.							
L'	L+2max.							

PART NUMBERING SYSTEM

E RG 1H M 220 D11 O- - T

- T: Sleeve Code: "C" for PVC, "T" for PET
- O- -: Terminal code
- D11: Size code
- 220: Capacitance code
- M: Capacitance tolerance code
- 1H: Voltage code
- RG: Series code
- E: Category code

RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Cap.(μF) \ Freq.(Hz)	120	1k	10k	100k
Cap.<220	0.40	0.75	0.90	1.00
220 Cap.<680	0.50	0.85	0.94	1.00
680 Cap.<2200	0.60	0.87	0.95	1.00
2200 Cap.<4700	0.75	0.90	0.95	1.00
Cap. 4700	0.85	0.95	0.98	1.00

The endurance of capacitors is shortened with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

Radial Type

RG series

STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size DxL(mm)	tanδ	Impedance (Ωmax/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)	Part Number
6.3(0J)	100	5×11	0.22	0.65	155	ERG0JM101D11OT
	220	6.3×11	0.22	0.40	255	ERG0JM221E11OT
	330	6.3×11	0.22	0.25	290	ERG0JM331E11OT
	470	8×11	0.22	0.18	400	ERG0JM471F11OT
	560	8×11	0.22	0.17	460	ERG0JM561F11OT
	680	8×11	0.22	0.13	550	ERG0JM681F11OT
	820	8×16	0.22	0.095	730	ERG0JM821F16OT
	1000	8×16	0.22	0.09	730	ERG0JM102F16OT
	1200	8×20	0.22	0.08	810	ERG0JM122F20OT
	1500	10×20	0.22	0.052	1220	ERG0JM152G20OT
	2200	10×20	0.24	0.045	1440	ERG0JM222G20OT
	2700	10×30	0.24	0.037	1690	ERG0JM272G30OT
	3300	12.5×20	0.26	0.038	1660	ERG0JM332W20OT
	3900	12.5×25	0.26	0.03	1950	ERG0JM392W25OT
	4700	12.5×30	0.28	0.025	2310	ERG0JM472W30OT
	5600	12.5×35	0.30	0.022	2510	ERG0JM562W35OT
	6800	12.5×40	0.32	0.017	2870	ERG0JM682W40OT
	8200	16×30	0.36	0.019	3010	ERG0JM822L30OT
	10000	16×35	0.40	0.017	3150	ERG0JM103L35OT
10(1A)	100	5×11	0.19	0.58	175	ERG1AM101D11OT
	220	6.3×11	0.19	0.25	290	ERG1AM221E11OT
	330	8×11	0.19	0.21	410	ERG1AM331F11OT
	470	8×11	0.19	0.13	555	ERG1AM471F11OT
	560	8×16	0.19	0.12	675	ERG1AM561F16OT
	680	8×16	0.19	0.09	730	ERG1AM681F16OT
	820	8×20	0.19	0.085	875	ERG1AM821F20OT
	1000	10×16	0.19	0.068	1050	ERG1AM102G16OT
	1200	10×20	0.19	0.052	1220	ERG1AM122G20OT
	1500	10×20	0.19	0.045	1440	ERG1AM152G20OT
	2200	12.5×20	0.21	0.038	1660	ERG1AM222W20OT
	2700	12.5×25	0.21	0.034	1945	ERG1AM272W25OT
	3300	12.5×25	0.23	0.03	1950	ERG1AM332W25OT
	3900	12.5×30	0.23	0.025	2310	ERG1AM392W30OT
	4700	12.5×35	0.25	0.022	2510	ERG1AM472W35OT
	5600	12.5×40	0.27	0.017	2870	ERG1AM562W40OT
	6800	16×30	0.29	0.019	3010	ERG1AM682L30OT
	8200	16×35	0.33	0.017	3150	ERG1AM822L35OT
	10000	16×40	0.37	0.015	3710	ERG1AM103L40OT
16(1C)	47	5×11	0.16	0.80	120	ERG1CM470D11OT
	68	6.3×11	0.16	0.56	220	ERG1CM680E11OT
	100	6.3×11	0.16	0.52	255	ERG1CM101E11OT
	150	8×11	0.16	0.21	350	ERG1CM151F11OT
	220	8×11	0.16	0.20	405	ERG1CM221F11OT
	330	8×11	0.16	0.13	555	ERG1CM331F11OT
	470	8×16	0.16	0.09	730	ERG1CM471F16OT
	560	8×20	0.16	0.085	810	ERG1CM561F20OT
	680	8×20	0.16	0.069	1050	ERG1CM681F20OT
	820	10×20	0.16	0.058	1220	ERG1CM821G20OT
	1000	10×20	0.16	0.052	1220	ERG1CM102G20OT
	1200	10×25	0.16	0.045	1440	ERG1CM122G25OT
	1500	12.5×20	0.16	0.038	1660	ERG1CM152W20OT
	2200	12.5×25	0.18	0.03	1950	ERG1CM222W25OT
	2700	12.5×30	0.18	0.025	2310	ERG1CM272W30OT
	3300	12.5×35	0.20	0.022	2510	ERG1CM332W35OT
	3900	12.5×40	0.20	0.017	2870	ERG1CM392W40OT
	4700	16×30	0.22	0.019	3010	ERG1CM472L30OT
	5600	16×35	0.24	0.017	3150	ERG1CM562L35OT
	6800	16×40	0.26	0.015	3710	ERG1CM682L40OT
25(1E)	47	5×11	0.14	0.58	175	ERG1EM470D11OT
	68	6.3×11	0.14	0.36	230	ERG1EM680E11OT
	100	6.3×11	0.14	0.35	290	ERG1EM101E11OT
	150	8×11	0.14	0.20	405	ERG1EM151F11OT
	220	8×12	0.14	0.19	555	ERG1EM221F12OT
	330	8×16	0.14	0.12	730	ERG1EM331F16OT
	470	10×16	0.14	0.08	1050	ERG1EM471G16OT
	560	10×20	0.14	0.058	1220	ERG1EM561G20OT
	680	10×20	0.14	0.052	1220	ERG1EM681G20OT
	820	10×25	0.14	0.045	1440	ERG1EM821G25OT
	1000	12.5×20	0.14	0.038	1660	ERG1EM102W20OT
	1200	12.5×25	0.14	0.034	1936	ERG1EM122W25OT
	1500	12.5×25	0.14	0.03	1950	ERG1EM152W25OT
25(1E)	2200	12.5×35	0.16	0.022	2510	ERG1EM222W35OT
	2700	12.5×40	0.16	0.017	2870	ERG1EM272W40OT
	3300	16×30	0.18	0.019	3010	ERG1EM332L30OT
	3900	16×35	0.18	0.017	3150	ERG1EM392L35OT
	4700	16×40	0.20	0.015	3710	ERG1EM472L40OT
35(1V)	10	5×11	0.12	1.50	100	ERG1VM100D11OT
	22	5×11	0.12	0.75	160	ERG1VM220D11OT
	33	5×11	0.12	0.58	210	ERG1VM330D11OT
	47	6.3×11	0.12	0.49	215	ERG1VM470E11OT
	68	8×11	0.12	0.21	350	ERG1VM680F11OT
	100	8×11	0.12	0.20	405	ERG1VM101F11OT
	150	8×12	0.12	0.13	555	ERG1VM151F12OT
	220	8×16	0.12	0.09	730	ERG1VM221F16OT
	330	10×16	0.12	0.08	1050	ERG1VM331G16OT
	470	10×20	0.12	0.065	1220	ERG1VM471G20OT
	560	10×25	0.12	0.045	1440	ERG1VM561G25OT
	680	10×30	0.12	0.037	1690	ERG1VM681G30OT
	820	12.5×25	0.12	0.035	1938	ERG1VM821W25OT
	1000	12.5×25	0.12	0.03	1950	ERG1VM102W25OT
	1200	12.5×30	0.12	0.025	2310	ERG1VM122W30OT
	1500	12.5×35	0.12	0.022	2510	ERG1VM152W35OT
	2200	16×30	0.14	0.019	3010	ERG1VM222L30OT
	2700	16×35	0.14	0.017	3150	ERG1VM272L35OT
	3300	16×40	0.16	0.015	3710	ERG1VM332L40OT
	3900	18×40	0.16	0.015	3800	ERG1VM392M40OT
50(1H)	10	5×11	0.10	2.0	105	ERG1HM100D11OT
	22	5×11	0.10	1.10	155	ERG1HM220D11OT
	33	6.3×11	0.10	0.48	215	ERG1HM330E11OT
	47	6.3×11	0.10	0.40	220	ERG1HM470E11OT
	68	8×11	0.10	0.35	355	ERG1HM680F11OT
	100	8×12	0.10	0.23	485	ERG1HM101F12OT
	150	8×16	0.10	0.16	635	ERG1HM151F16OT
	220	10×16	0.10	0.088	1050	ERG1HM221G16OT
	330	10×25	0.10	0.073	1250	ERG1HM331G25OT
	470	12.5×20	0.10	0.059	1480	ERG1HM471W20OT
	560	12.5×25	0.10	0.044	1840	ERG1HM561W25OT
	680	12.5×30	0.10	0.039	2220	ERG1HM681W30OT
	820	12.5×35	0.10	0.033	2290	ERG1HM821W35OT
	1000	16×25	0.10	0.034	2240	ERG1HM102L25OT
	1200	16×30	0.10	0.028	2700	ERG1HM122L30OT
	1500	16×35	0.10	0.025	2800	ERG1HM152L35OT
	2200	18×35	0.12	0.023	3100	ERG1HM222M35OT
	2700	18×40	0.12	0.02	3400	ERG1HM272M40OT
63(1J)	12	5×11	0.08	1.9	145	ERG1JM120D11OT
	22	6.3×11	0.08	1.0	240	ERG1JM220E11OT
	39	6.3×14	0.08	0.61	330	ERG1JM390E14OT
	68	8×12	0.08	0.34	405	ERG1JM680F12OT
	100	8×16	0.08	0.27	535	ERG1JM101F16OT
		10×12.5	0.08	0.255	540	ERG1JM101G1BOT
	120	10×16	0.08	0.19	600	ERG1JM121G16OT
	150	8×20	0.08	0.21	690	ERG1JM151F20OT
	180	10×20	0.08	0.145	890	ERG1JM181G20OT
	220	10×25	0.08	0.13	1050	ERG1JM221G25OT
	330	10×30	0.08	0.09	1300	ERG1JM331G30OT
		12.5×20	0.08	0.085	1290	ERG1JM331W20OT
	390	12.5×25	0.08	0.07	1720	ERG1JM391W25OT
	470	12.5×30	0.08	0.055	2090	ERG1JM471W30OT
		16×20	0.08	0.059	1770	ERG1JM471L20OT
	680	12.5×35	0.08	0.047	2270	ERG1JM681W35OT
		16×25	0.08	0.05	2160	ERG1JM681L25OT
		18×20	0.08	0.055	2290	ERG1JM681M20OT
	820	12.5×40	0.08	0.042	2560	ERG1JM821W40OT
		16×30	0.08	0.043	2670	ERG1JM821L30OT
		18×25	0.08	0.043	2590	ERG1JM821M25OT
	1000	16×35	0.08	0.036	2770	ERG1JM102L35OT
	1200	16×40	0.08	0.03	2850	ERG1JM122L40OT
		18×30	0.08	0.032	2950	ERG1JM122M30OT
	1500	18×35	0.08	0.03	3100	ERG1JM152M35OT
	1800	18×40	0.08	0.025	3210	ERG1JM182M40OT