

RG series

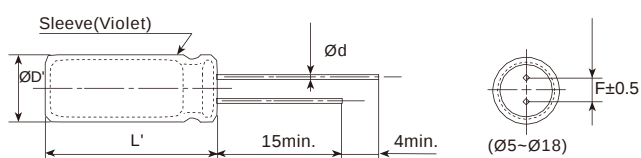
- “GBL” system, high reliability
- Low impedance and high ripple current
- Endurance +105°C 2,000 ~ 8,000 hours
- RoHS Compliant



SPECIFICATIONS

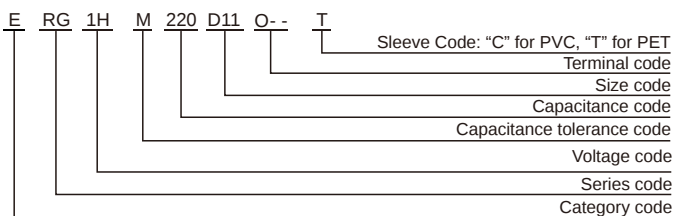
Items	Characteristics							
Category Temperature Range	-55~+105°C							
Rated Voltage Range	6.3~63 V _{dc}							
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)							
Leakage Current	I ≤ 0.01CV or 3μA, whichever is greater. Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage (V) (at 20°C after 2 minutes)							
Dissipation Factor (tanδ)	Rated Voltage(V _{dc})	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(V _{dc})	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		
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						
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	0.8	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



RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Freq.(Hz)	120	1k	10k	100k
Cap.(μF)				
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.

RG series

■ STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Size ΦDxL(mm)	tanδ	Impedance (Ω _{max} /20°C, 100kHz)	Rated ripple current (mA _{rms} /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

WV (V _{dc})	Cap (μF)	Size ΦDxL(mm)	tanδ	Impedance (Ω _{max} /20°C, 100kHz)	Rated ripple current (mA _{rms} /105°C, 100kHz)	Part Number
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
	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
35(1V)	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
	100	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
	330	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
	470	16×20	0.08	0.059	1770	ERG1JM471L20OT
	680	12.5×35	0.08	0.047	2270	ERG1JM681W35OT
	680	16×25	0.08	0.05	2160	ERG1JM681L25OT
	680	18×20	0.08	0.055	2290	ERG1JM681M20OT
	820	12.5×40	0.08	0.042	2560	ERG1JM821W40OT
	820	16×30	0.08	0.043	2670	ERG1JM821L30OT
	820	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
	1200	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