

RG series

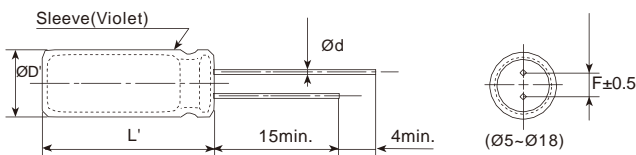
- “GBL” system, high reliability
- Low impedance and high ripple current
- Endurance +105°C 2,000 ~ 8,000 hours
- RoHS Compliant



SPECIFICATIONS

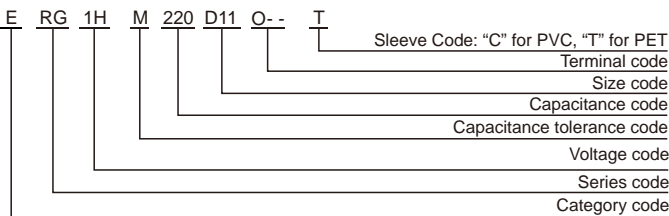
Items	Characteristics								
Category Temperature Range	-55~+105°C								
Rated Voltage Range	6.3~63 V _{dc}								
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)								
Leakage Current	I 0.01CV or 3μA, whichever is greater. Where, I:Max.leakage current (μA), C:Nominal capacitance (μF), V: Rated voltage (V) (at 20°C after 2 minutes)								
Dissipation Factor (tan δ)	Rated Voltage(V _{dc})	6.3	10	16	25	35	50	63	
	tan δ (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						Dia.	Load life (hours)
	D.F. (tan δ)	200% of the initial specified value						ØD=6.3	2,000
	Leakage Current	The initial specified value						ØD=8	3,000
								ØD=10	5,000
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						ØD=12.5	7,000
	D.F. (tan δ)	200% of the initial specified value						ØD=16	8,000
	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.<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 (Vdc)	Cap (µF)	Size DxL(mm)	tan	Impedance (max/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)	Part Number
6.3(0J)	100	5x11	0.22	0.65	155	ERG0JM101D11OT
	220	6.3x11	0.22	0.40	255	ERG0JM221E11OT
	330	6.3x11	0.22	0.25	290	ERG0JM331E11OT
	470	8x11	0.22	0.18	400	ERG0JM471F11OT
	560	8x11	0.22	0.17	460	ERG0JM561F11OT
	680	8x11	0.22	0.13	550	ERG0JM681F11OT
	820	8x16	0.22	0.095	730	ERG0JM821F16OT
	1000	8x16	0.22	0.09	730	ERG0JM102F16OT
	1200	8x20	0.22	0.08	810	ERG0JM122F20OT
	1500	10x20	0.22	0.052	1220	ERG0JM152G20OT
	2200	10x20	0.24	0.045	1440	ERG0JM222G20OT
	2700	10x30	0.24	0.037	1690	ERG0JM272G30OT
	3300	12.5x20	0.26	0.038	1660	ERG0JM332W20OT
	3900	12.5x25	0.26	0.03	1950	ERG0JM392W25OT
	4700	12.5x30	0.28	0.025	2310	ERG0JM472W30OT
	5600	12.5x35	0.30	0.022	2510	ERG0JM562W35OT
	6800	12.5x40	0.32	0.017	2870	ERG0JM682W40OT
	8200	16x30	0.36	0.019	3010	ERG0JM822L30OT
	10000	16x35	0.40	0.017	3150	ERG0JM103L35OT
	10(1A)	100	5x11	0.19	0.58	175
220		6.3x11	0.19	0.25	290	ERG1AM221E11OT
330		8x11	0.19	0.21	410	ERG1AM331F11OT
470		8x11	0.19	0.13	555	ERG1AM471F11OT
560		8x16	0.19	0.12	675	ERG1AM561F16OT
680		8x16	0.19	0.09	730	ERG1AM681F16OT
820		8x20	0.19	0.085	875	ERG1AM821F20OT
1000		10x16	0.19	0.068	1050	ERG1AM102G16OT
1200		10x20	0.19	0.052	1220	ERG1AM122G20OT
1500		10x20	0.19	0.045	1440	ERG1AM152G20OT
2200		12.5x20	0.21	0.038	1660	ERG1AM222W20OT
2700		12.5x25	0.21	0.034	1945	ERG1AM272W25OT
3300		12.5x25	0.23	0.03	1950	ERG1AM332W25OT
3900		12.5x30	0.23	0.025	2310	ERG1AM392W30OT
4700		12.5x35	0.25	0.022	2510	ERG1AM472W35OT
5600		12.5x40	0.27	0.017	2870	ERG1AM562W40OT
6800		16x30	0.29	0.019	3010	ERG1AM682L30OT
8200		16x35	0.33	0.017	3150	ERG1AM822L35OT
10000		16x40	0.37	0.015	3710	ERG1AM103L40OT
16(1C)		47	5x11	0.16	0.80	120
	68	6.3x11	0.16	0.56	220	ERG1CM680E11OT
	100	6.3x11	0.16	0.52	255	ERG1CM101E11OT
	150	8x11	0.16	0.21	350	ERG1CM151F11OT
	220	8x11	0.16	0.20	405	ERG1CM221F11OT
	330	8x11	0.16	0.13	555	ERG1CM331F11OT
	470	8x16	0.16	0.09	730	ERG1CM471F16OT
	560	8x20	0.16	0.085	810	ERG1CM561F20OT
	680	8x20	0.16	0.069	1050	ERG1CM681F20OT
	820	10x20	0.16	0.058	1220	ERG1CM821G20OT
	1000	10x20	0.16	0.052	1220	ERG1CM102G20OT
	1200	10x25	0.16	0.045	1440	ERG1CM122G25OT
	1500	12.5x20	0.16	0.038	1660	ERG1CM152W20OT
	2200	12.5x25	0.18	0.03	1950	ERG1CM222W25OT
	2700	12.5x30	0.18	0.025	2310	ERG1CM272W30OT
	3300	12.5x35	0.20	0.022	2510	ERG1CM332W35OT
	3900	12.5x40	0.20	0.017	2870	ERG1CM392W40OT
	4700	16x30	0.22	0.019	3010	ERG1CM472L30OT
	5600	16x35	0.24	0.017	3150	ERG1CM562L35OT
	6800	16x40	0.26	0.015	3710	ERG1CM682L40OT
25(1E)	47	5x11	0.14	0.58	175	ERG1EM470D11OT
	68	6.3x11	0.14	0.36	230	ERG1EM680E11OT
	100	6.3x11	0.14	0.35	290	ERG1EM101E11OT
	150	8x11	0.14	0.20	405	ERG1EM151F11OT
	220	8x12	0.14	0.19	555	ERG1EM221F12OT
	330	8x16	0.14	0.12	730	ERG1EM331F16OT
	470	10x16	0.14	0.08	1050	ERG1EM471G16OT
	560	10x20	0.14	0.058	1220	ERG1EM561G20OT
	680	10x20	0.14	0.052	1220	ERG1EM681G20OT
	820	10x25	0.14	0.045	1440	ERG1EM821G25OT
	1000	12.5x20	0.14	0.038	1660	ERG1EM102W20OT
	1200	12.5x25	0.14	0.034	1936	ERG1EM122W25OT
	1500	12.5x25	0.14	0.03	1950	ERG1EM152W25OT

WV (Vdc)	Cap (µF)	Size DxL(mm)	tan	Impedance (max/20°C, 100kHz)	Rated ripple current (mArms/105°C, 100kHz)	Part Number	
25(1E)	2200	12.5x35	0.16	0.022	2510	ERG1EM222W35OT	
	2700	12.5x40	0.16	0.017	2870	ERG1EM272W40OT	
	3300	16x30	0.18	0.019	3010	ERG1EM332L30OT	
	3900	16x35	0.18	0.017	3150	ERG1EM392L35OT	
	4700	16x40	0.20	0.015	3710	ERG1EM472L40OT	
	35(1V)	10	5x11	0.12	1.50	100	ERG1VM100D11OT
		22	5x11	0.12	0.75	160	ERG1VM220D11OT
33		5x11	0.12	0.58	210	ERG1VM330D11OT	
47		6.3x11	0.12	0.49	215	ERG1VM470E11OT	
68		8x11	0.12	0.21	350	ERG1VM680F11OT	
100		8x11	0.12	0.20	405	ERG1VM101F11OT	
150		8x12	0.12	0.13	555	ERG1VM151F12OT	
220		8x16	0.12	0.09	730	ERG1VM221F16OT	
330		10x16	0.12	0.08	1050	ERG1VM331G16OT	
470		10x20	0.12	0.065	1220	ERG1VM471G20OT	
560		10x25	0.12	0.045	1440	ERG1VM561G25OT	
680		10x30	0.12	0.037	1690	ERG1VM681G30OT	
820		12.5x25	0.12	0.035	1938	ERG1VM821W25OT	
1000		12.5x25	0.12	0.03	1950	ERG1VM102W25OT	
1200		12.5x30	0.12	0.025	2310	ERG1VM122W30OT	
1500		12.5x35	0.12	0.022	2510	ERG1VM152W35OT	
2200		16x30	0.14	0.019	3010	ERG1VM222L30OT	
2700		16x35	0.14	0.017	3150	ERG1VM272L35OT	
3300		16x40	0.16	0.015	3710	ERG1VM332L40OT	
3900		18x40	0.16	0.015	3800	ERG1VM392M40OT	
50(1H)	10	5x11	0.10	2.0	105	ERG1HM100D11OT	
	22	5x11	0.10	1.10	155	ERG1HM220D11OT	
	33	6.3x11	0.10	0.48	215	ERG1HM330E11OT	
	47	6.3x11	0.10	0.40	220	ERG1HM470E11OT	
	68	8x11	0.10	0.35	355	ERG1HM680F11OT	
	100	8x12	0.10	0.23	485	ERG1HM101F12OT	
	150	8x16	0.10	0.16	635	ERG1HM151F16OT	
	220	10x16	0.10	0.088	1050	ERG1HM221G16OT	
	330	10x25	0.10	0.073	1250	ERG1HM331G25OT	
	470	12.5x20	0.10	0.059	1480	ERG1HM471W20OT	
	560	12.5x25	0.10	0.044	1840	ERG1HM561W25OT	
	680	12.5x30	0.10	0.039	2220	ERG1HM681W30OT	
	820	12.5x35	0.10	0.033	2290	ERG1HM821W35OT	
	1000	16x25	0.10	0.034	2240	ERG1HM102L25OT	
	1200	16x30	0.10	0.028	2700	ERG1HM122L30OT	
1500	16x35	0.10	0.025	2800	ERG1HM152L35OT		
2200	18x35	0.12	0.023	3100	ERG1HM222M35OT		
2700	18x40	0.12	0.02	3400	ERG1HM272M40OT		
63(1J)	12	5x11	0.08	1.9	145	ERG1JM120D11OT	
	22	6.3x11	0.08	1.0	240	ERG1JM220E11OT	
	39	6.3x14	0.08	0.61	330	ERG1JM390E14OT	
	68	8x12	0.08	0.34	405	ERG1JM680F12OT	
	100	8x16	0.08	0.27	535	ERG1JM101F16OT	
	100	10x12.5	0.08	0.255	540	ERG1JM101G1BOT	
	120	10x16	0.08	0.19	600	ERG1JM121G16OT	
	150	8x20	0.08	0.21	690	ERG1JM151F20OT	
	180	10x20	0.08	0.145	890	ERG1JM181G20OT	
	220	10x25	0.08	0.13	1050	ERG1JM221G25OT	
	330	10x30	0.08	0.09	1300	ERG1JM331G30OT	
	390	12.5x20	0.08	0.085	1290	ERG1JM331W20OT	
	390	12.5x25	0.08	0.07	1720	ERG1JM391W25OT	
	470	12.5x30	0.08	0.055	2090	ERG1JM471W30OT	
	470	16x20	0.08	0.059	1770	ERG1JM471L20OT	
	680	12.5x35	0.08	0.047	2270	ERG1JM681W35OT	
	680	16x25	0.08	0.05	2160	ERG1JM681L25OT	
	680	18x20	0.08	0.055	2290	ERG1JM681M20OT	
	820	12.5x40	0.08	0.042	2560	ERG1JM821W40OT	
	820	16x30	0.08	0.043	2670	ERG1JM821L30OT	
820	18x25	0.08	0.043	2590	ERG1JM821M25OT		
1000	16x35	0.08	0.036	2770	ERG1JM102L35OT		
1200	16x40	0.08	0.03	2850	ERG1JM122L40OT		
1200	18x30	0.08	0.032	2950	ERG1JM122M30OT		
1500	18x35	0.08	0.03	3100	ERG1JM152M35OT		
1800	18x40	0.08	0.025	3210	ERG1JM182M40OT		