GR Series

· Used in general electronic circuits as coupling, by-pass, filter ect.

SPECIFICATION

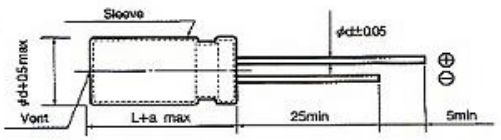
ITEM	SPECIFICATION													
Capacitance Tolerance (120Hz 20˚C)	±20%(M)													
Rated Workig Voltage	6.3~100WV									160~450WV				
Operatiom Temperature Range	-40 ~ +85˚C									-25~+85˚C				
Surge voltage(V) (20˚C)	WV	6.3	10	16	25	35	50	63	100	160	200	250	350	450
	SV	8	13	20	32	44	63	79	125	200	250	300	400	500
Leakage Current (20˚C)	1≦ 0.01CV or 3									1≦ 0.03CV +10				
	Whichever is greater after rated voltage applied for 3 minutes 1:Leakage Current (μA) c:capacitance(μF) V:Voltage(V)													
Dissipation Factor(tan δ) (120Hz20 20˚C)	WV	6.3	10	16	25	35	50	63	100	160	200	250	350	450
	DF	0.24	0.20	0.16	0.14	0.12	0.10	0.10	0.10	0.20	0.20	0.20	0.24	0.24
	Add 2 % per 1000 μF for more then 1000 μF													

Low Temperature Characteristics														
	Comparison Z \ WV	6.3	10	16	25	35	50	63	100	160	200	250	350	450
	-25˚C/20˚C	4	3	2	2	2	2	2	2	3	3	3	4	4
	-40˚C/20˚C	8	6	4	4	3	3	3	3	-	-	-	-	-

Load Life	After 2000 hours application of W,V, at 85˚C. The capacitor shall meet the following limits.	
	Capacitance Change	≦ ±20% of initial Value
	Dissipation Factor	≦ 200% of initial Specified Value
	Leakage Current	≦ Initial Specified Value

Shelf Life	After 500 hours to place at 85˚C without rated voltage applied. The capacitor shall meet the limits as same as load life.
Others	Satisfied JIS C-5141

DIMENSIONS (unit:mm)



øD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8
a	1.0	1.0	1.0	1.0	2.0	2.0	2.0

RIPPLE CURRENT COEFFICIENTS

Frequency Multipliers

WV	Freq.(Hz) / Cap.(μF)	50	120	1K	10K~
6.3~100	0.1~47	0.75	1.00	1.57	2.00
	100~470	0.80	1.00	1.34	1.50
	1000~15000	0.85	1.00	1.13	1.15
160~450	0.47~330	0.80	1.00	1.40	1.60

Temperature Multipliers

WV / Temp.(˚C)	~75	85
6.3~100	1.27	1.00
160~450	1.27	1.00

Aluminium Electrolytic Capacitors

CASE SIZE & MAX RIPLE CURRENT

CASE SIZE ØDXL (mm) MAX RIPPLE CURRENT (MA/85℃, 120HZ)

μF \ WV	6.3		10		16		25		35		50		63		100		160		200		250		350		450	
0.10											5X11	1.3														
0.22											5X11	2.1														
0.33											5X11	4.4														
0.47											5X11	7	5X11	7	5X11	12	5X11	11	5X11	11	5X11	11	5X11	13	6.3X11	13
1.0											5X11	12	5X11	12	5X11	22	5X11	14	5X11	14	6.3X11	14	6.3X11	15	8X11	15
2.2											5X11	22	5X11	31	5X11	32	6.3X11	21	6.3X11	21	8X11	23	8X11	23	10X15	23
3.3											5X11	37	5X11	42	5X11	42	8X11	27	8X11	27	8X11	27	10X15	29	10X15	31
4.7									5X11	37	5X11	48	5X11	48	5X11	53	8X11	31	8X11	31	10X12	34	10X17	34	10X17	37
10									5X11	64	5X11	69	5X11	74	6.3X11	74	10X15	50	10X17	50	10X17	53	10X17	59	13X20	65
22					5X11	79	5X11	96	5X11	100	5X11	110	6.3X11	115	8X14	125	10X17	84	10X17	84	10X20	100	13X20	100	16X26	105
33			5X11	64	5X11	120	5X11	120	5X11	125	6.3X11	120	8X11	140	10X17	155	10X20	120	10X20	120	13X25	125	13X25	130	16X36	140
47			5X11	96	5X11	140	5X11	140	6.3X11	140	6.3X11	140	8X11	170	10X17	190	13X25	140	13X25	140	13X25	160	16X26	170		
100	5X11	145	5X11	195	6.3X11	195	6.3X11	195	8X11	230	8X14	265	10X15	265	10X20	365	16X26	230	16X26	230	16X32	260	18X36	275		
220	6.3X11	260	6.3X11	270	8X11	305	8X14	330	10X15	370	10X17	420	10X20	470	13X25	580	16X32	385	18X40	395						
330	8X11	325	8X11	365	8X11	375	10X12	415	10X17	465	10X20	535	13X20	585	16X26	735	18X40	570								
470	8X11	410	8X11	430	8X14	470	10X17	610	10X20	590	13X20	690	13X25	790	16X32	940										
1000	10X12	625	10X15	675	10X17	725	13X20	895	13X25	945	16X26	1100	16X32	1150												
2200	10X20	940	13X20	970	13X25	1055	16X26	1255	16X36	1305	16X36	1355														
3300	13X20	1080	13X20	1150	13X25	1055	16X32	1255	16X36	1305																
4700	13X20	1235	13X25	1265	16X26	1425	16X36	1255																		
6800	16X26	1340	16X26	1470	16X32	1670																				
10000	18X32	1465	18X36	1625																						
15000	18X36	1725																								