

## RG Wide Temperature Range Series

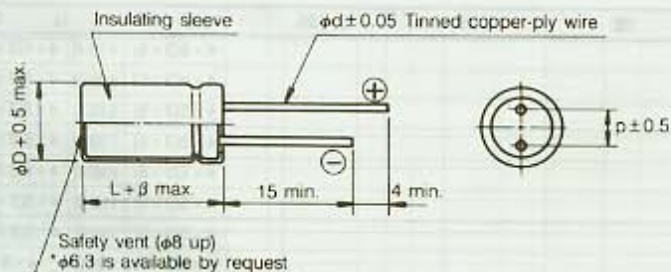
- Wide operating temperature range of -55 ~ +105°C
- Standard series for general purposes
- Voltage range of 6.3~450V
- Load life of 2000 hours at 105°C



Item	Characteristics									
	WV	6.3 ~ 100			160 ~ 350			400, 450		
Operating temperature range	Temperature range	-55 ~ +105°C			-40 ~ +105°C			-25 ~ +105°C		
	Leakage current max.	WV ≤ 100					WV > 100			
I = 0.01CV or 3µA whichever is greater (after 2 min) I = 0.03CV or 4µA whichever is greater (after 1 min)					I = 0.02CV + 15µA (after 5 min)					
Capacitance tolerance	+20% at 120Hz, 20°C									
Dissipation factor max. (at 120Hz, 20°C)	Capacitance > 1000µF : tanδ increases by 0.02 for each 1000µF from below value.									
	WV	6.3	10	16	25	35	50	63	100	160-250
tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.20
Low temperature characteristics (Impedance ratio at 120Hz)	WV	6.3	10	16	25~100		160-350		400, 450	
	Z-25°C/Z+20°C	4	3	2	2		3		8	
	Z-40°C/Z+20°C	8	6	4	3		4		-	
Load life (after application of the rated voltage for 2000 hours at 105°C)	Leakage current	Less than specified value								
	Capacitance change	Within ±20% of initial value								
	tan δ	Less than 200% of specified value								
Shelf life (at 105°C)	φ 5, 6.3 and φ 8 products are for 1000 hours									
	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value.									

### ● DRAWING

Unit : mm



φ D	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φ d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
β	1.0			1.5			

### ● PERMISSIBLE RIPPLE CURRENT MULTIPLIERS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz~
~ 47	0.75	1	1.35	1.55	2.0
68 ~ 680	0.80	1	1.25	1.34	1.5
1000 ~	0.85	1	1.10	1.13	1.15

Temp. (°C)	40	60	70	85	105
Coefficient	2.4	2.1	1.78	1.65	1



**RG** series

• DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV μF	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
0.47						5 × 11 11	5 × 11 12	5 × 11 12	6.3 × 11 11	6.3 × 11 11	6.3 × 11 11			
0.68						5 × 11 13	5 × 11 15	5 × 11 15	6.3 × 11 13	6.3 × 11 13	6.3 × 11 13			
1.0						5 × 11 16	5 × 11 18	5 × 11 18	6.3 × 11 16	6.3 × 11 16	6.3 × 11 16	8 × 11.5 19	8 × 11.5 19	8 × 11.5 16
1.5						5 × 11 20	5 × 11 22	5 × 11 22	6.3 × 11 19	6.3 × 11 19	8 × 11.5 23	10 × 12.5 27	10 × 12.5 27	10 × 12.5 22
2.2						5 × 11 24	5 × 11 26	5 × 11 26	6.3 × 11 23	6.3 × 11 23	8 × 11.5 28	10 × 12.5 32	10 × 12.5 32	10 × 12.5 27
3.3						5 × 11 29	5 × 11 32	5 × 11 32	8 × 11.5 34	8 × 11.5 34	10 × 12.5 39	10 × 16 43	10 × 16 43	10 × 16 36
4.7						5 × 11 35	5 × 11 38	5 × 11 38	8 × 11.5 40	10 × 12.5 47	10 × 12.5 47	10 × 16 51	10 × 16 51	10 × 20 47
6.8						5 × 11 42	5 × 11 46	6.3 × 11 53	10 × 12.5 56	10 × 16 62	10 × 16 62	10 × 20 67	10 × 20 67	13 × 20 66
10						5 × 11 51	5 × 11 56	6.3 × 11 64	10 × 16 75	10 × 16 75	10 × 16 75	10 × 20 82	13 × 20 96	13 × 20 80
15						5 × 11 62	6.3 × 11 78	8 × 11.5 93	10 × 16 92	10 × 20 100	10 × 20 100	13 × 20 118	13 × 25 128	13 × 25 107
22					5 × 11 65	5 × 11 75	6.3 × 11 95	8 × 11.5 112	10 × 20 121	10 × 20 121	13 × 20 143	13 × 25 155	13 × 25 155	16 × 25 144
33				5 × 11 75	5 × 11 80	6.3 × 11 106	6.3 × 11 116	10 × 12.5 159	13 × 20 175	13 × 20 175	13 × 20 175	16 × 25 211	16 × 25 211	16 × 31.5 193
47			5 × 11 81	5 × 11 90	6.3 × 11 110	6.3 × 11 127	8 × 11.5 164	10 × 16 208	13 × 20 208	13 × 25 227	13 × 25 227	16 × 31.5 276	16 × 35.5 289	18 × 40 272
68		5 × 11 90	5 × 11 98	6.3 × 11 125	6.3 × 11 132	8 × 11.5 180	10 × 12.5 229	10 × 20 274	13 × 25 273	16 × 25 303	16 × 25 303	16 × 35.5 348	18 × 40 392	
100	5 × 11 99	5 × 11 109	6.3 × 11 137	6.3 × 11 151	8 × 11.5 189	8 × 11.5 218	10 × 12.5 278	13 × 20 389	16 × 25 368	16 × 31.5 402	16 × 35.5 422	18 × 40 475		
150	6.3 × 11 139	6.3 × 11 154	6.3 × 11 167	8 × 11.5 218	10 × 12.5 269	10 × 16 340	10 × 20 406	13 × 25 520	16 × 31.5 492	16 × 40 543	18 × 40 582			
220	6.3 × 11 168	6.3 × 11 186	8 × 11.5 239	8 × 11.5 264	10 × 12.5 326	10 × 16 412	13 × 16 532	16 × 25 699	16 × 40 657	18 × 40 705				
330	6.3 × 11 206	8 × 11.5 269	8 × 11.5 293	10 × 12.5 376	10 × 16 437	13 × 16 595	13 × 20 708	16 × 25 856	16 × 40 863					
470	8 × 11.5 290	8 × 11.5 321	10 × 12.5 406	10 × 16 491	10 × 20 569	13 × 20 771	13 × 25 921	16 × 31.5 1117						
680	10 × 12.5 405	10 × 16 492	10 × 16 535	13 × 16 696	13 × 20 803	13 × 25 1011	16 × 25 1228	18 × 40 1588						
1000	10 × 12.5 491	10 × 16 596	10 × 20 707	13 × 20 918	13 × 25 1062	16 × 25 1360	16 × 31.5 1630							
1500	10 × 20 677	10 × 20 742	13 × 20 936	13 × 25 1109	16 × 25 1290	16 × 31.5 1578	18 × 40 1983							
2200	13 × 20 913	13 × 20 991	13 × 25 1150	16 × 25 1370	16 × 31.5 1580	18 × 35.5 1924								
3300	13 × 20 1067	13 × 25 1251	16 × 25 1468	16 × 31.5 1709	18 × 35.5 1992									
4700	16 × 25 1474	16 × 25 1576	16 × 31.5 1813	18 × 35.5 2157										
6800	16 × 25 1642	16 × 31.5 1901	16 × 40 2184											
10000	16 × 31.5 1977	18 × 35.5 2330												
15000	18 × 35.5 2396													

Case size ϕ D × L (mm)  
Ripple current (mA rms) at 105°C, 120Hz

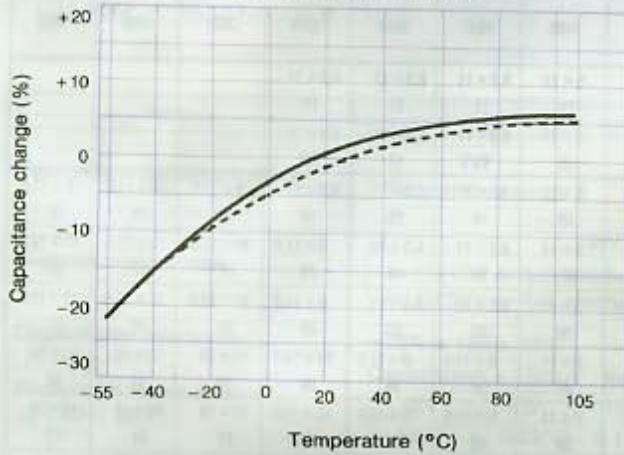


### TYPICAL PERFORMANCE

— 16V 1000 $\mu$ F  
 ... 200V 10 $\mu$ F

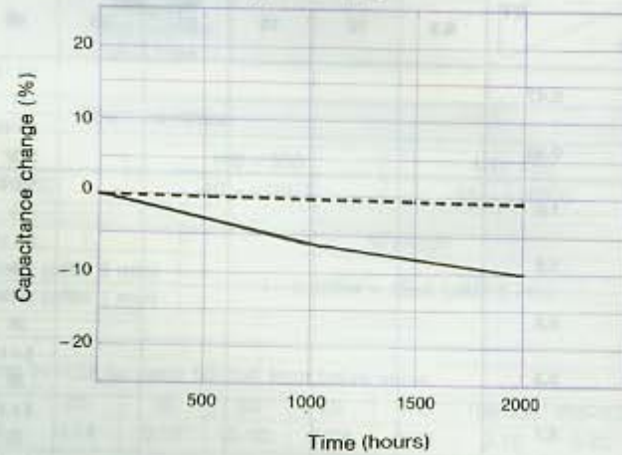
#### ● TEMPERATURE CHARACTERISTICS

Capacitance change vs. temperature

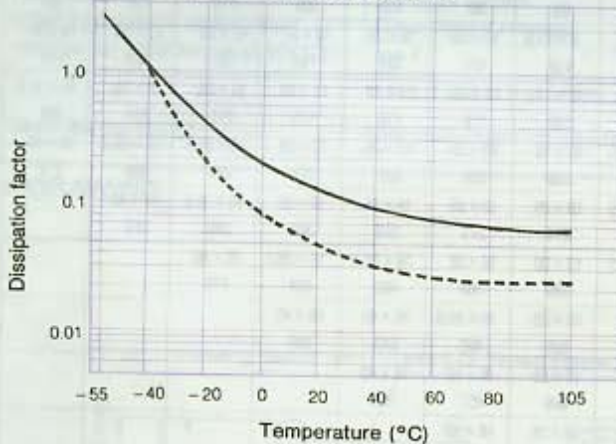


#### ● LOAD LIFE (at +105°C)

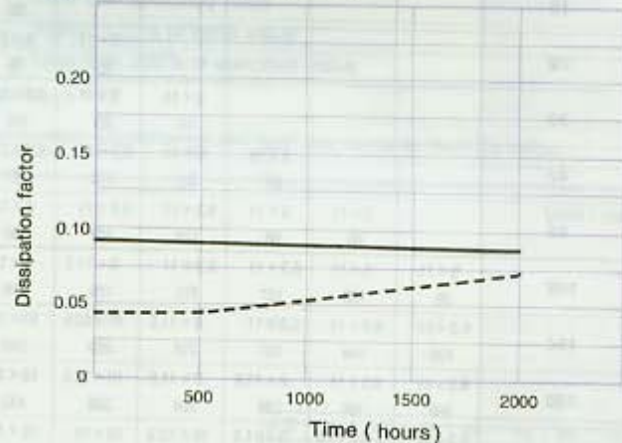
Capacitance change vs. time



Dissipation factor vs. temperature

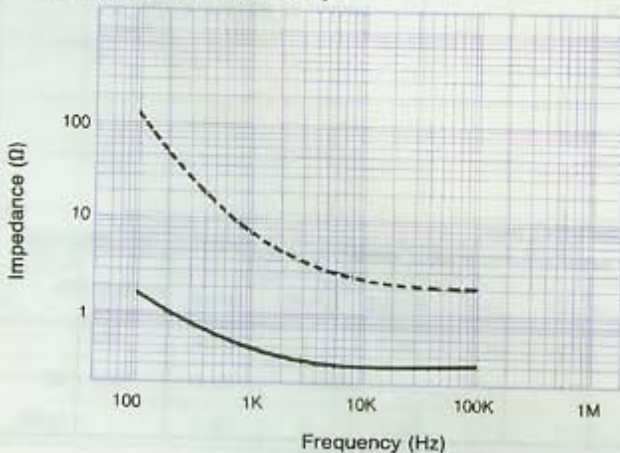


Dissipation factor vs. time



#### ● FREQUENCY CHARACTERISTICS

Impedance vs. frequency



Leakage current vs. time

