

# RHB Series

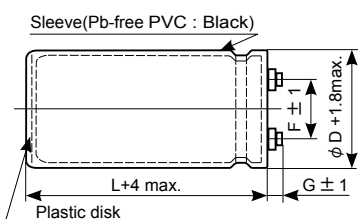
- Useful life with ripple current : 4,000 hours at 85°C
- Endurance with ripple current : 2,000 hours at 85°C
- Realized higher voltage than RWE series. (575 to 700Vdc)
- Suitable for X-ray and welder power supply where high energy is required
- RoHS Compliant

## ◆ SPECIFICATIONS

Items	Characteristics								
Category									
Temperature Range	-25 to +85°C								
Rated Voltage Range	575 to 700Vdc								
Capacitance Tolerance	±20% (M) (at 20°C , 120Hz)								
Leakage Current	I=0.02CV or 5mA, whichever is smaller. Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 5 minutes)								
Dissipation Factor (tan δ)	0.25 max. (at 20°C , 120Hz)								
Low Temperature Characteristics	Capacitance change C(-25°C) / C(+20°C) ≥ 0.6 (at 120Hz)								
Insulation Resistance	When measured between the terminals that are connected to each other and to the mounting clamp on the insulating sleeve covering the case by using an insulation resistance meter of 500Vdc, the insulation resistance shall not be less than 100MΩ.								
Insulation Withstanding Voltage	When a voltage of 2,000V <sub>ac</sub> is applied for 1 minute between the terminals that are connected to each other and to the mounting clamp on the insulating sleeve covering the case, there shall not be electrical damage.								
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 2,000 hours at 85°C .								
	<table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value		
Capacitance change	≤ ±20% of the initial value								
D.F. (tan δ)	≤ 200% of the initial specified value								
Leakage current	≤ The initial specified value								
Useful life	The following specifications shall be satisfied when the capacitors are restored to 20 °C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 4,000 hours at 85°C .								
	<table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±30% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 300% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> <tr> <td>Failure rate</td> <td>≤ 1%</td> </tr> </table>	Capacitance change	≤ ±30% of the initial value	D.F. (tan δ)	≤ 300% of the initial specified value	Leakage current	≤ The initial specified value	Failure rate	≤ 1%
Capacitance change	≤ ±30% of the initial value								
D.F. (tan δ)	≤ 300% of the initial specified value								
Leakage current	≤ The initial specified value								
Failure rate	≤ 1%								
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.								
	<table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value		
Capacitance change	≤ ±20% of the initial value								
D.F. (tan δ)	≤ 200% of the initial specified value								
Leakage current	≤ The initial specified value								

## ◆ DIMENSIONS(Screw-Mount) [mm]

● Terminal Code : LG



φ 63.5 : G=6

φ 76.2 & φ 89 : G=5

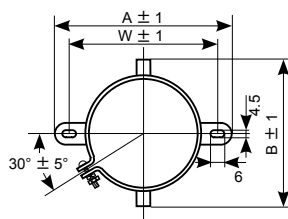
<Screw specifications>

Plus hexagon-headed screw :M5×0.8×10

Maximum screw tightening torque :3.23Nm

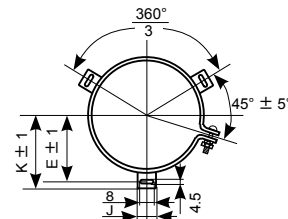
\* The screw and the mounting clamp are separately supplied and not attached to the product.

● Mounting Clamp Code : B



φ D	A	B	W	F
63.5	90.0	76.0	80.0	28.0
76.2	104.5	90.0	93.5	31.5

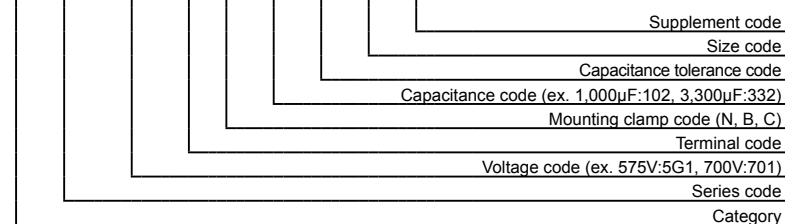
● Mounting Clamp Code : C



φ D	E	K	F	J
63.5	38.1	43.5	28.0	14.0
76.2	44.5	50.0	31.5	14.0
89	50.8	56.5	31.5	16.0

## ◆ PART NUMBERING SYSTEM

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18  
E R H B □ □ LG □ □ □ M □ □ M



Please contact us for mass production schedule.  
Specifications in this bulletin are subject to change without notice.

# RHB Series

## ◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/85°C, 120Hz)	Part No.	WV (Vdc)	Cap (μF)	Case size φ D×L(mm)	tan δ	Rated ripple current (Arms/85°C, 120Hz)	Part No.	
575	1,000	63.5×70	0.25	3.8	ERHB5G1LGC102MD70M	630	1,800	63.5×125	0.25	6.5	ERHB631LGC182MDC5M	
	1,200	63.5×80	0.25	4.4	ERHB5G1LGC122MD80M		1,800	76.2×95	0.25	6.4	ERHB631LGC182ME95M	
	1,500	63.5×95	0.25	5.3	ERHB5G1LGC152MD95M		1,800	89×85	0.25	5.8	ERHB631LGC182MF85M	
	1,500	76.2×70	0.25	5.2	ERHB5G1LGC152ME70M		2,200	76.2×115	0.25	7.8	ERHB631LGC222MEB5M	
	1,800	63.5×100	0.25	5.9	ERHB5G1LGC182MDA0M		2,200	89×90	0.25	6.5	ERHB631LGC222MF90M	
	1,800	76.2×80	0.25	6.0	ERHB5G1LGC182ME80M		2,700	76.2×130	0.25	9.1	ERHB631LGC272MED0M	
	2,200	63.5×120	0.25	7.1	ERHB5G1LGC222MDC0M		2,700	89×100	0.25	7.5	ERHB631LGC272MFA0M	
	2,200	76.2×95	0.25	7.2	ERHB5G1LGC222ME95M		3,300	89×120	0.25	9.0	ERHB631LGC332MFC0M	
	2,700	76.2×105	0.25	8.3	ERHB5G1LGC272MEA5M		700	1,000	63.5×85	0.25	4.4	ERHB701LGC102MD85M
	2,700	89×85	0.25	7.0	ERHB5G1LGC272MF85M			1,200	63.5×95	0.25	4.9	ERHB701LGC122MD95M
	3,300	76.2×120	0.25	9.6	ERHB5G1LGC332MEC0M			1,200	76.2×85	0.25	4.9	ERHB701LGC122ME85M
	3,300	89×100	0.25	8.3	ERHB5G1LGC332MFA0M			1,500	63.5×115	0.25	5.8	ERHB701LGC152MDB5M
	3,900	89×105	0.25	9.1	ERHB5G1LGC392MFA5M			1,500	89×85	0.25	5.0	ERHB701LGC152MF85M
	4,700	89×130	0.25	11.1	ERHB5G1LGC472MFD0M			1,800	63.5×125	0.25	6.9	ERHB701LGC182MDC5M
5,600	89×145	0.25	12.7	ERHB5G1LGC562MFE5M	1,800	76.2×95		0.25	6.7	ERHB701LGC182ME95M		
630	1,000	63.5×85	0.25	4.1	ERHB631LGC102MD85M	1,800		89×95	0.25	5.7	ERHB701LGC182MF95M	
	1,200	63.5×95	0.25	4.7	ERHB631LGC122MD95M	2,200		76.2×115	0.25	7.8	ERHB701LGC222MEB5M	
	1,500	63.5×115	0.25	5.8	ERHB631LGC152MDB5M	2,700		76.2×130	0.25	9.3	ERHB701LGC272MED0M	
	1,500	76.2×85	0.25	5.6	ERHB631LGC152ME85M	2,700	89×120	0.25	7.7	ERHB701LGC272MFC0M		
						3,300	89×135	0.25	8.9	ERHB701LGC332MFD5M		

## ◆ RATED RIPPLE CURRENT MULTIPLIERS

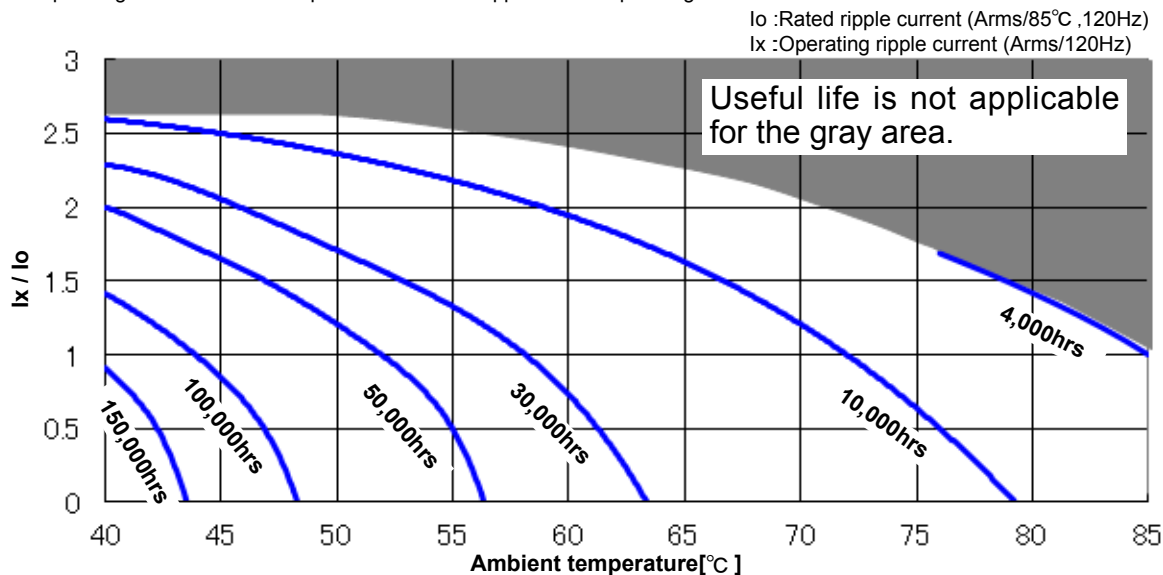
● Frequency Multipliers

Frequency (Hz)	50	120	300	1k	3k
Coefficient	0.8	1.0	1.1	1.2	1.3

Note: The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5 to 10°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced. Also, for the RHB series capacitors, using them at operating voltage less than their rated voltage can extend their lifetime. For details, please contact a representative of Nippon Chemi-Con.

## ◆ USEFUL LIFE

Useful life depending on the ambient temperature Tx under ripple current operating conditions



### ◆ Warning !

Useful life shall indicate the end of the life time without exceeding the specified failure rate. It's generally known that Aluminum Electrolytic Capacitors have wear-out failure mode with gradual deteriorate of the electrical parameters and should have large number of the failure rate at the end of life. The useful life time is specified by a certain failure rate. It's not a guaranteed specification.

Generally the maximum life time is 15 years (131,000hours) considering sealing material deteriorate. When a longer life time is required for your application, please consult us.

Please contact us for mass production schedule. Specifications in this bulletin are subject to change without notice.