

RWV Series



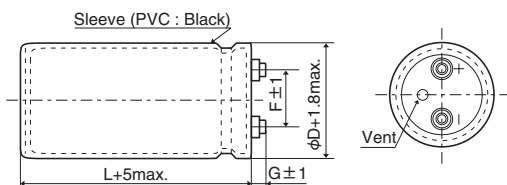
- For frequently change of regenerative voltage from AC servo amplifier and inverter control
- Improved the resistance for charge and discharge from same dimension of RWF series
- Endurance with ripple current : 5,000 hours at 85°C
- Rated voltage range : 350 to 450V_{dc}, Capacitance 820 to 18,000μF
- RoHS2 Compliant

◆ SPECIFICATIONS

Items	Characteristics										
Category Temperature Range	-25 to +85°C										
Rated Voltage Range	350 to 450V _{dc}										
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 $C(-25°C)/C(+20°C) \geq 0.7$ (at 120Hz)										
Insulation Resistance	When measured between the terminals shorted each other and the mounting clamp on the insulating sleeve covering the case by using an insulation resistance meter of 500V _{dc} , the insulation resistance shall not be less than 100MΩ.										
Insulation Withstanding Voltage	When a voltage of 2,000V _{ac} is applied for 1 minute between the terminals shorted each other and the mounting clamp on the insulating sleeve covering the case, there shall not be electrical damage.										
Charge and Discharge	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to charge and discharge test with the voltage waveform shown below at room temperature (15 to 35°C). <table border="1" style="width: 100%; margin-top: 5px;"> <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> <div style="margin-top: 5px;"> <table border="1" style="width: 100%;"> <tr> <td>Frequency</td> <td>3Hz</td> </tr> <tr> <td>Number of cycles</td> <td>50 million times</td> </tr> </table> </div>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value	Frequency	3Hz	Number of cycles	50 million times
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D.F. (tan δ)	≤ 200% of the initial specified value										
Leakage current	≤ The initial specified value										
Frequency	3Hz										
Number of cycles	50 million times										
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 5,000 hours at 85°C. <table border="1" style="width: 100%; margin-top: 5px;"> <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				
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D.F. (tan δ)	≤ 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 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" style="width: 100%; margin-top: 5px;"> <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				
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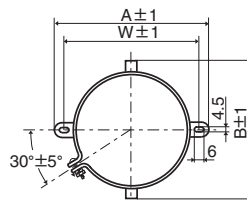
◆ DIMENSIONS (Screw-Mount) [mm]

● Terminal Code : LG



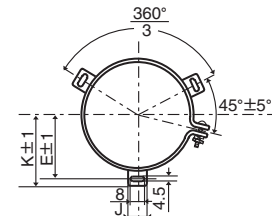
φ50 & φ63.5 : G=6
φ76.2 & φ89 : G=5

● Mounting Clamp Code : B



φD	A	B	W	F
50	78.0	64.0	68.0	22.4
63.5	90.0	76.0	80.0	28.0
76.2	104.5	90.0	93.5	31.5

● Mounting Clamp Code : C



φD	E	K	F	J
50	32.5	37.0	22.4	14.0
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

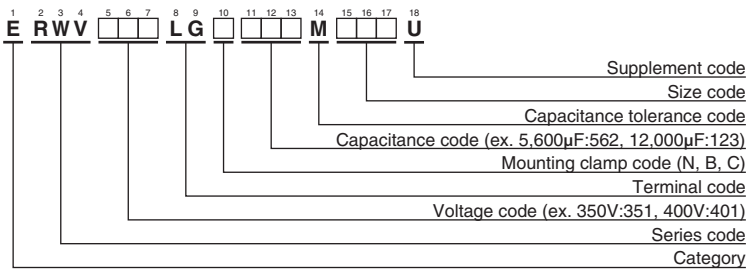
<Screw specifications>

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.

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (screw-mount terminal type)"

◆STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	Rated ripple current (Arms/ 85°C, 120Hz)	Effective value of charge and discharge current (Arms/ 3Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	Rated ripple current (Arms/ 85°C, 120Hz)	Effective value of charge and discharge current (Arms/ 3Hz)	Part No.	
350	1,200	50 × 60	4.70	1.56	ERWV351LGC122MC60U	400	5,600	63.5 × 170	17.1	5.99	ERWV401LGC562MDH0U	
	1,500	50 × 70	5.50	1.83	ERWV351LGC152MC70U		5,600	76.2 × 105	15.2	5.35	ERWV401LGC562MEA5U	
	1,800	50 × 80	6.40	2.13	ERWV351LGC182MC80U		6,800	76.2 × 130	18.4	6.47	ERWV401LGC682MED0U	
	2,200	50 × 96	7.60	2.53	ERWV351LGC222MC96U		8,200	76.2 × 155	21.9	7.68	ERWV401LGC822MEF5U	
	2,700	50 × 105	8.80	2.94	ERWV351LGC272MCA5U		8,200	76.2 × 170	22.8	8.02	ERWV401LGC822MEH0U	
	2,700	50 × 115	9.20	3.06	ERWV351LGC272MCB5U		8,200	89 × 115	20.9	7.35	ERWV401LGC822MFB5U	
	3,300	50 × 130	10.8	3.58	ERWV351LGC332MCD0U		10,000	89 × 130	24.3	8.26	ERWV401LGC103MFD0U	
	4,700	63.5 × 115	13.2	4.61	ERWV351LGC472MDB5U		12,000	89 × 155	28.7	10.0	ERWV401LGC123MFF5U	
	5,600	63.5 × 130	15.2	5.30	ERWV351LGC562MDD0U		12,000	89 × 170	29.9	10.5	ERWV401LGC123MFH0U	
	5,600	76.2 × 105	15.2	5.36	ERWV351LGC562MEA5U		15,000	89 × 190	35.2	12.3	ERWV401LGC153MFK0U	
	6,800	63.5 × 155	18.1	6.32	ERWV351LGC682MDF5U		420	820	50 × 60	3.80	1.29	ERWV421LGC821MC60U
	8,200	63.5 × 170	20.7	7.25	ERWV351LGC822MDH0U			1,000	50 × 70	4.40	1.50	ERWV421LGC102MC70U
	8,200	76.2 × 130	20.2	6.57	ERWV351LGC822MED0U			1,200	50 × 80	5.20	1.75	ERWV421LGC122MC80U
	10,000	76.2 × 155	24.2	8.47	ERWV351LGC103MEF5U			1,800	50 × 96	6.80	2.30	ERWV421LGC182MC96U
10,000	89 × 115	23.1	8.10	ERWV351LGC103MFB5U	1,800	50 × 105		7.10	2.40	ERWV421LGC182MCA5U		
12,000	76.2 × 170	27.6	9.66	ERWV351LGC123MEH0U	2,200	50 × 115		8.20	2.77	ERWV421LGC222MCB5U		
12,000	89 × 130	26.6	9.33	ERWV351LGC123MFD0U	2,700	50 × 130		9.60	3.25	ERWV421LGC272MCD0U		
15,000	89 × 155	32.1	11.2	ERWV351LGC153MFF5U	3,300	63.5 × 115		11.0	3.87	ERWV421LGC332MDB5U		
15,000	89 × 170	33.5	11.7	ERWV351LGC153MFH0U	3,900	63.5 × 130		12.7	4.44	ERWV421LGC392MDD0U		
18,000	89 × 190	38.5	13.5	ERWV351LGC183MFK0U	4,700	63.5 × 155		15.0	5.28	ERWV421LGC472MDB5U		
375	1,000	50 × 60	4.30	1.42	ERWV3H1LGC102MC60U	4,700		76.2 × 105	13.9	4.92	ERWV421LGC472MEA5U	
	1,200	50 × 70	4.90	1.64	ERWV3H1LGC122MC70U	5,600		63.5 × 170	17.1	6.02	ERWV421LGC562MDH0U	
	1,500	50 × 80	5.80	1.94	ERWV3H1LGC152MC80U	5,600		76.2 × 130	16.6	5.90	ERWV421LGC562MED0U	
	2,200	50 × 96	7.60	2.54	ERWV3H1LGC222MC96U	6,800		76.2 × 155	19.8	7.02	ERWV421LGC682MEF5U	
	2,200	50 × 105	8.00	2.65	ERWV3H1LGC222MCA5U	6,800	89 × 115	19.0	6.73	ERWV421LGC682MFB5U		
	2,700	50 × 115	9.20	3.06	ERWV3H1LGC272MCB5U	8,200	76.2 × 170	22.7	8.04	ERWV421LGC822MEH0U		
	3,300	50 × 130	10.8	3.58	ERWV3H1LGC332MCD0U	8,200	89 × 130	22.0	7.78	ERWV421LGC822MFD0U		
	4,700	63.5 × 115	13.2	4.61	ERWV3H1LGC472MDB5U	10,000	89 × 155	26.2	9.24	ERWV421LGC103MFF5U		
	5,600	63.5 × 130	15.2	5.30	ERWV3H1LGC562MDD0U	12,000	89 × 170	29.9	10.5	ERWV421LGC123MFH0U		
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	6,800	63.5 × 155	18.1	6.32	ERWV3H1LGC682MDF5U	450	820	50 × 60	3.80	1.29	ERWV451LGC821MC60U	
	6,800	63.5 × 170	18.9	6.60	ERWV3H1LGC682MDH0U		1,000	50 × 70	4.40	1.50	ERWV451LGC102MC70U	
	8,200	76.2 × 130	20.2	7.09	ERWV3H1LGC822MCD0U		1,200	50 × 80	5.20	1.74	ERWV451LGC122MC80U	
	8,200	89 × 115	20.9	7.35	ERWV3H1LGC822MFB5U		1,500	50 × 96	6.20	2.10	ERWV451LGC152MC96U	
10,000	76.2 × 155	24.2	8.48	ERWV3H1LGC103MEF5U	1,800		50 × 105	7.10	2.41	ERWV451LGC182MCA5U		
10,000	76.2 × 170	25.2	8.85	ERWV3H1LGC103MEH0U	1,800		50 × 115	7.40	2.51	ERWV451LGC182MCB5U		
10,000	89 × 130	24.3	8.54	ERWV3H1LGC103MFD0U	2,200		50 × 130	8.70	2.93	ERWV451LGC222MCD0U		
12,000	89 × 155	28.7	10.0	ERWV3H1LGC123MFF5U	3,300		63.5 × 115	11.0	3.88	ERWV451LGC332MDB5U		
15,000	89 × 170	33.5	11.7	ERWV3H1LGC153MFH0U	3,900		63.5 × 130	12.7	4.44	ERWV451LGC392MDD0U		
15,000	89 × 190	35.2	12.3	ERWV3H1LGC153MFK0U	3,900		76.2 × 105	13.2	4.49	ERWV451LGC392MEA5U		
400	1,000	50 × 60	4.30	1.42	ERWV401LGC102MC60U		4,700	63.5 × 155	15.0	5.27	ERWV451LGC472MDB5U	
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	1,800	50 × 96	6.90	2.29	ERWV401LGC182MC96U		6,800	76.2 × 155	19.8	7.04	ERWV451LGC682MEF5U	
	2,200	50 × 105	8.00	2.65	ERWV401LGC222MCA5U	6,800	89 × 115	19.0	6.72	ERWV451LGC682MFB5U		
	2,200	50 × 115	8.30	2.77	ERWV401LGC222MCB5U	8,200	76.2 × 170	22.7	7.97	ERWV451LGC822MEH0U		
	2,700	50 × 130	9.80	3.23	ERWV401LGC272MCD0U	8,200	89 × 130	22.0	7.72	ERWV451LGC822MFD0U		
	3,900	63.5 × 115	12.0	4.21	ERWV401LGC392MDB5U	10,000	89 × 155	26.2	9.22	ERWV451LGC103MFF5U		
	4,700	63.5 × 130	13.9	4.86	ERWV401LGC472MDD0U	10,000	89 × 170	27.3	9.66	ERWV451LGC103MFH0U		
	5,600	63.5 × 155	16.4	5.75	ERWV401LGC562MDF5U	12,000	89 × 190	31.5	11.1	ERWV451LGC123MFK0U		



RWV Series

◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency (Hz)	50	120	300	1k	3k
Coefficient	0.8	1.0	1.1	1.3	1.4

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.

Also, for the RWV series capacitors, using them at operating voltage less than their rated voltage can extend their lifetime. For the details, please contact a representative of Nippon Chemi-Con.



- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.
- We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.
- We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
- We continually strive to improve the quality and reliability of our products, but in any case that our product does not meet our published specifications, please stop using it promptly and contact us immediately. As for compensation for non-conforming goods delivered by Chemi-Con, we will limit it only to goods found in non-compliance of our published specifications. This may be accomplished by a no cost replacement of non-conforming individual products, a credit of the piece price paid per each individual non-conforming product, or in other ways deemed necessary.
In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

[Part Numbering System](#)

[Part Numbering System \(Appendix\)](#)

[Standardization](#)

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[Available Terminals for Snap-in and Screw Mount Type](#)