Engineering Bulletin No.747C/Mar. 2017

Inverter-use screw terminal, 85°C Aluminum Electrolytic Capacitors

Mounting Clamp Code : C
<sup>360°</sup>

친번

φD

50

63.5

76.2

89

Е

κ

32.5 37.0

45°±5°

F

38.1 43.5 28.0 14.0

44.5 50.0 31.5 14.0

50.8 56.5 31.5 16.0

J

22.4 14.0

# RWG<sub>Series</sub>

NIPPON

CHEMI-CON

Downsized, high ripple version of RWF series
20% better ripple current at 300Hz than RWF series
Endurance with ripple current : 5,000 hours at 85°C



### *<b>♦SPECIFICATIONS*

RoHS Compliant

Items	Characteristics								
Category Temperature Range	-25 to +85℃								
Rated Voltage Range	350 to 450Vdc								
Capacitance Tolerance	±20% (M)			(at 20℃, 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 minut								
Dissipation Factor (tan $\delta$ )	0.25 max.			(at 20℃, 120Hz)					
Low Temperature Characteristics	Capacitance change $C(-25^{\circ}C)/C(+20^{\circ}C) \ge 0.7$ (at 120H.)								
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 $500V_{dc}$ , the insulation resistance shall not be less than $100M\Omega$ .								
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 5,000 hours at 85°C.								
	Capacitance change	$\leq \pm 20\%$ of the initial value							
	D.F. (tan δ )	$\leq$ 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.								
	Capacitance change	$\leq \pm 20\%$ of the initial value							
	D.F. (tan $\delta$ )	$\leq$ 200% of the initial specified value	]						
	Leakage current	≦The initial specified value							

Mounting Clamp Code : B

d ₽

6

в

78.0 64.0 68.0 22.4

90.0 76.0 80.0 28.0

104.5 90.0 93.5 31.5

Α

Ŧ

WF

<u>A±1</u> W±1

 $30^{0} + 5^{0}$ 

φD

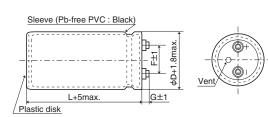
50

63.5

76.2

### DIMENSIONS (Screw-Mount) [mm]

Terminal Code : LG



φ50 : G=6 φ63.5, φ76.2 : G=5 φ89 : G=4

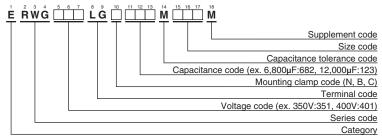
<Screw specifcations>

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



Product specifications in this bulletin are subject to change without notice.Request our product specifications before purchase and/or use. Please use our products based on the information contained in this bulletin and product specifications.

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## RWG<sub>Series</sub>

### **♦STANDARD RATINGS**

WV (Vdc)	Cap (µF)	Case size φD×L(mm)	tan δ	Rated cur (Arms		ent		Cap (µF)	Case size ¢D×L(mm)	tan δ	Rated ripple current (Arms/85°C)		Part No.
				120Hz	300Hz						120Hz	300Hz	
	2,200	50  imes 96	0.25	7.70	9.20	ERWG351LGC222MC96M		6,800	$63.5 \times 190$	0.25	20.6	24.7	ERWG401LGC682MDK0M
	2,700	$50 \times 105$	0.25	8.90	10.6	ERWG351LGC272MCA5M		6,800	$76.2 \times 130$	0.25	19.2	23.0	ERWG401LGC682MED0M
	3,300	50 × 115	0.25	10.3	12.3	ERWG351LGC332MCB5M	400	8,200	76.2 × 155	0.25	22.7	27.2	ERWG401LGC822MEF5M
	3,900	$50 \times 130$	0.25	11.8	14.1	ERWG351LGC392MCD0M		10,000	$76.2 \times 170$	0.25	26.2	31.4	ERWG401LGC103MEH0M
	4,700	$63.5 \times 115$	0.25	13.6	16.3	ERWG351LGC472MDB5M		12,000	89 × 155	0.25	30.0	36.0	ERWG401LGC123MFF5M
	5,600	$63.5 \times 130$	0.25	15.7	18.8	ERWG351LGC562MDD0M		12,000	89 × 170	0.25	31.3	37.5	ERWG401LGC123MFH0M
350	· · ·	$63.5 \times 155$	0.25	18.8	22.5	ERWG351LGC682MDF5M		15,000	89 × 190	0.25	36.7		ERWG401LGC153MFK0M
	6,800		0.25	18.2	21.8	ERWG351LGC682MEB5M		1,500	50  imes 96	0.25	6.40		ERWG451LGC152MC96M
	,	$63.5 \times 190$	0.25	22.6	27.1	ERWG351LGC822MDK0M		1,800	$50 \times 105$	0.25	7.30		ERWG451LGC182MCA5M
	8,200		0.25	21.0	-	ERWG351LGC822MED0M		2,200	50 × 115	0.25	8.40		ERWG451LGC222MCB5M
	10,000		0.25	25.1		ERWG351LGC103MEF5M		2,700	$50 \times 130$	0.25	9.80	11.7	ERWG451LGC272MCD0M
	12,000		0.25	28.7	34.4	ERWG351LGC123MEH0M		3,300	63.5 × 115	0.25	11.4		ERWG451LGC332MDB5M
	15,000	89 × 155	0.25	33.6		ERWG351LGC153MFF5M		3,900	$63.5 \times 130$	0.25	13.1	15.7	ERWG451LGC392MDD0M
	15,000	89 × 170	0.25	35.0	42.0	ERWG351LGC153MFH0M		4,700	$63.5 \times 155$	0.25	15.6	18.7	ERWG451LGC472MDF5M
	18,000	$89 \times 190$	0.25	40.3		ERWG351LGC183MFK0M	450	4,700	76.2 × 115	0.25	15.1	18.1	ERWG451LGC472MEB5M
	1,800	50  imes 96	0.25	7.00	8.40	ERWG401LGC182MC96M		5,600	$63.5 \times 190$	0.25	18.7	22.4	ERWG451LGC562MDK0M
400	2,200	50 × 105	0.25	8.10		ERWG401LGC222MCA5M		5,600	76.2 × 130	0.25	17.4	20.8	ERWG451LGC562MED0M
	2,700	50 × 115	0.25	9.30	11.1	ERWG401LGC272MCB5M		6,800	76.2 × 155	0.25	20.7	24.8	ERWG451LGC682MEF5M
	3,300	$50 \times 130$	0.25	10.9	13.0	ERWG401LGC332MCD0M		8,200	$76.2 \times 170$	0.25	23.7	28.4	ERWG451LGC822MEH0M
	3,900		0.25	12.4	14.8	ERWG401LGC392MDB5M		10,000	89 × 155	0.25	27.4	32.8	ERWG451LGC103MFF5M
	4,700	$63.5 \times 130$	0.25	14.4	17.2	ERWG401LGC472MDD0M		10,000	89 × 170	0.25	28.6		ERWG451LGC103MFH0M
	5,600	63.5 × 155	0.25	17.0		ERWG401LGC562MDF5M		12,000	89 × 190	0.25	32.9	39.4	ERWG451LGC123MFK0M
	5,600	76.2 × 115	0.25	16.5	19.8	ERWG401LGC562MEB5M							

### **♦RATED RIPPLE CURRENT MULTIPLIERS**

#### Frequency Multipliers

Frequency (Hz)	50	120	300	1k	3k				
Coefficient	0.8	1.0	1.2	1.4	1.5				

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 RWG 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.

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