

RWR Series

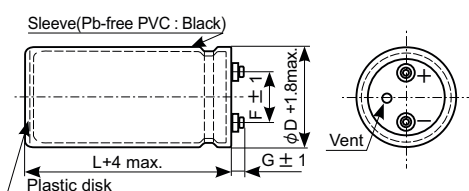
- Useful life with ripple current : 5,000 hours at 85°C
- Endurance with ripple current : 2,000 hours at 85°C
- Downsized and high ripple current from RWQ series
- RoHS Compliant

◆ SPECIFICATIONS

Items	Characteristics
Category	
Temperature Range	-25 to +85°C
Rated Voltage Range	350 to 450Vdc
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) ≥ 0.7 (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 2,000Vac 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 .
	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 5,000 hours at 85°C .
	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.
	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, φ 76.2 : G=6
φ 89 : G=4

<Screw specifications>

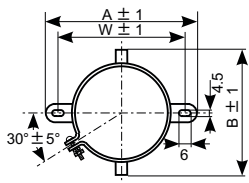
Plus hexagon-headed screw :M5×0.8×10 * M6×1.0×12

Maximum screw tightening torque :3.23Nm

* If ripple current is over 60Arms for actual using, please select M6 screw terminal.

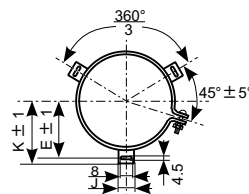
** The screw and the mounting clamp are separately supplied and not attached to the product.

● Mounting Clamp Code : B



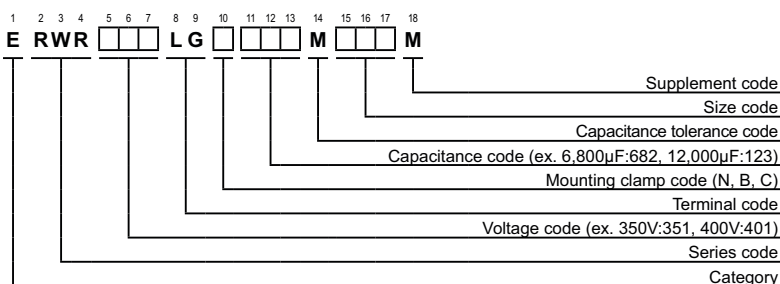
φ D	A	B	W	F
63.5	90.0	76.0	80.0	28.0
76.2	104.5	90.0	93.5	31.5

● 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



Specifications in this bulletin are subject to change without notice.

RWR 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.	
350	3,900	63.5×100	0.25	13.7	ERWR351LGC392MDA0M	400	6,800	76.2×110	0.25	20.9	ERWR401LGC682MEB0M	
	4,700	63.5×100	0.25	15.1	ERWR351LGC472MDA0M		8,200	76.2×130	0.25	24.7	ERWR401LGC822MED0M	
	5,600	63.5×115	0.25	17.5	ERWR351LGC562MDB5M		10,000	89×125	0.25	26.4	ERWR401LGC103MFC5M	
	5,600	76.2×100	0.25	18.2	ERWR351LGC562MEA0M		12,000	89×145	0.25	30.8	ERWR401LGC123MFE5M	
	6,800	76.2×100	0.25	20.1	ERWR351LGC682MEA0M		450	2,700	63.5×100	0.25	11.4	ERWR451LGC272MDA0M
	8,200	76.2×115	0.25	23.4	ERWR351LGC822MEB5M			3,300	63.5×105	0.25	12.9	ERWR451LGC332MDA5M
	10,000	76.2×135	0.25	27.7	ERWR351LGC103MED5M			3,900	63.5×115	0.25	14.6	ERWR451LGC392MDB5M
	12,000	89×125	0.25	28.9	ERWR351LGC123MFC5M			3,900	76.2×100	0.25	15.2	ERWR451LGC392MEA0M
	15,000	89×150	0.25	34.9	ERWR351LGC153MFF0M			4,700	63.5×135	0.25	17.2	ERWR451LGC472MDD5M
	400	3,300	63.5×100	0.25	12.6			ERWR401LGC332MDA0M	4,700	76.2×105	0.25	17.0
3,900		63.5×100	0.25	13.7	ERWR401LGC392MDA0M	5,600		76.2×115	0.25	19.3	ERWR451LGC562MEB5M	
4,700		63.5×115	0.25	16.0	ERWR401LGC472MDB5M	6,800		76.2×135	0.25	22.8	ERWR451LGC682MED5M	
4,700		76.2×100	0.25	16.7	ERWR401LGC472MEA0M	8,200		89×125	0.25	23.9	ERWR451LGC822MFC5M	
5,600		63.5×130	0.25	18.4	ERWR401LGC562MDD0M	10,000		89×150	0.25	28.5	ERWR451LGC103MFF0M	

◆ RATED RIPPLE CURRENT MULTIPLIERS

• Frequency Multipliers

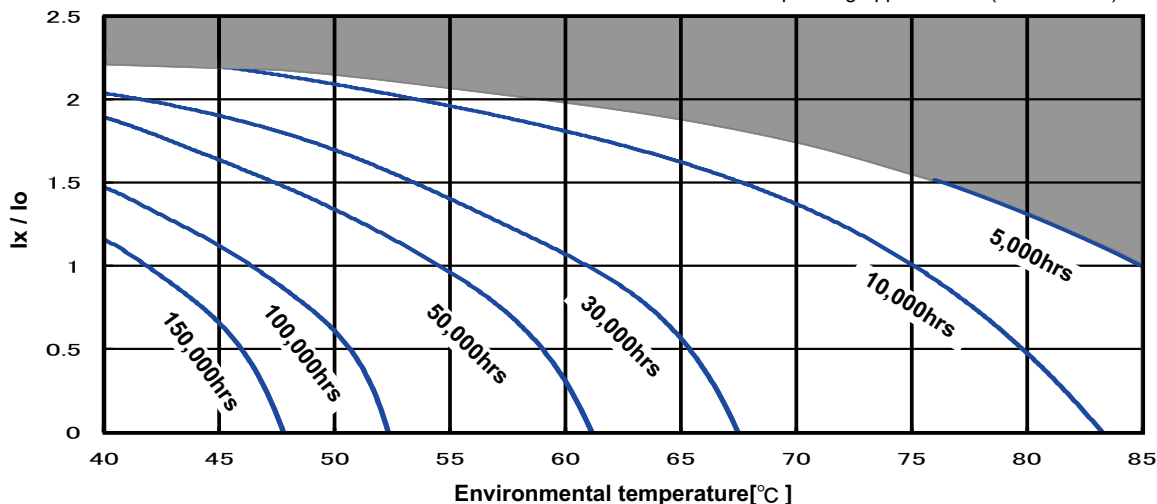
Frequency (Hz)	50	120	300	1k	3k
Coefficient	0.8	1.0	1.1	1.3	1.4

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 RWR 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 ambient temperature Tx under ripple current operating conditions

Io : Rated ripple current (Arms/85°C, 120Hz)
Ix : Operating ripple current (Arms/120Hz)



◆ 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.