

# LARGE CAPACITANCE ALUMINUM ELECTROLYTIC CAPACITORS



## NR Series

- Endurance with ripple current : 2,000 hours at 85°C
- RoHS Compliant



### ◆ SPECIFICATIONS

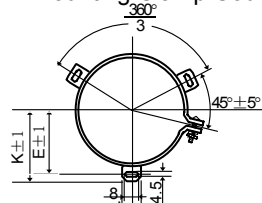
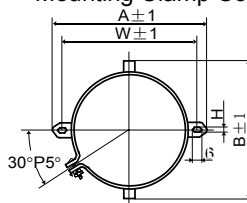
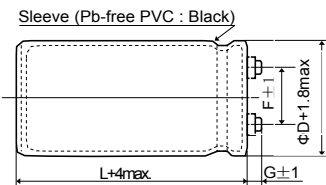
Items	Characteristics	
Category	-40~+85°C (10~100V.DC)	-25~+85°C (160~250V.DC)
Temperature Range		
Rated Voltage Range	10 ~250 V.DC	
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
Leakage Current	I=0.02CV or 5mA, whichever is smaller. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C, after 5 minutes)	
Dissipation Factor (tane)	Shall not exceed the values shown in the standard ratings (at 20°C, 120Hz)	
Low Temperature Characteristics	Capacitance change $C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.7$ (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 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 shorted each other and 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 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
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.	
	Capacitance change	≒ ±20% of the initial value
	D.F. (tan δ)	≒ 150% of the initial specified value
	Leakage current	≒ The initial specified value

### ◆ DIMENSIONS (Screw-Mount) [mm]

● Terminal Code : LG

● Mounting Clamp Code : B

● Mounting Clamp Code : C



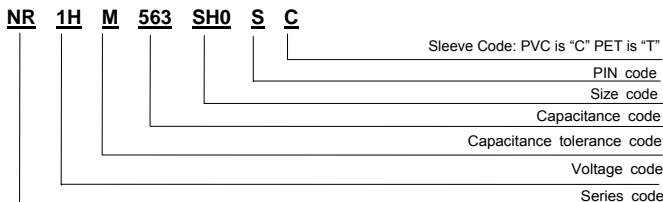
∅D	A	B	W	F
35	58.0	44.0	48.0	12.7
50	78.0	64.0	68.0	22.4
63.5	90.0	76.0	80.0	28.0
76	104.5	90.0	93.5	31.5

∅D	E	K	J	F
50	32.5	37.0	14.0	22.4
63.5	38.1	43.5	14.0	28.0
76	44.5	50.0	14.0	31.5
89	50.8	56.5	16.0	31.5

<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.

### ◆ PART NUMBERING SYSTEM



※ Sleeve Code and Terminal Code should follow the part number system

### ◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multiplier

Rated voltage (Vdc)	Case diameter (mm)	Frequency (Hz)					
		5	120	300	1k	10k	50k
10 to 50	∅ 35 to ∅ 89	0.95	1.00	1.03	1.05	1.09	1.12
	∅ 35	0.90	1.00	1.06	1.10	1.18	1.22
63 & 80	∅ 50 to ∅ 89	0.95	1.00	1.03	1.05	1.09	1.12
	∅ 35	0.82	1.00	1.12	1.22	1.30	1.33
100	∅ 50	0.90	1.00	1.06	1.10	1.18	1.22
	∅ 63.5 to ∅ 89	0.95	1.00	1.03	1.05	1.09	1.12
160 to 250	∅ 35	0.80	1.00	1.19	1.34	1.46	1.52
	∅ 50 & ∅ 63.5	0.81	1.00	1.14	1.26	1.36	1.41
	∅ 76 & ∅ 89	0.82	1.00	1.12	1.22	1.30	1.33

The endurance of capacitors is shorted with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.

When long life performance is required in actual use, the rms ripple current has to be reduced