

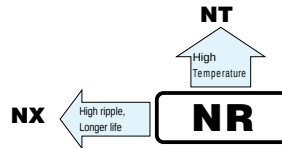
NR

Screw Terminal Type

series



- Load life of 5000 hours application of rated ripple current at 85°C .
- Extended range up to $\phi 100 \times 250L$ size.
- Available for adapted to the RoHS directive (2002/95/EC).

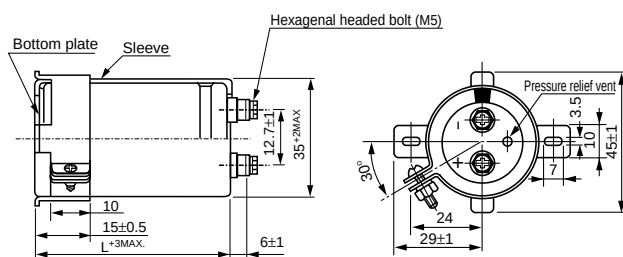


Specifications

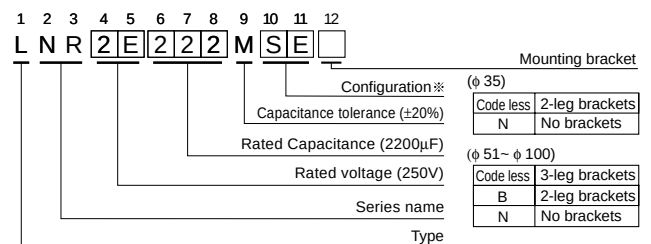
Item	Performance Characteristics																							
Category Temperature Range	- 40 ~ +85°C (10~100V) , - 25 ~ +85°C (160~250V)																							
Rated Voltage Range	10 ~ 250V																							
Rated Capacitance Range	1000 ~ 2200000μF																							
Capacitance Tolerance	±20% at 120Hz, 20°C																							
Leakage Current	After 5 minutes' application of rated voltage, leakage current is not more than $3\sqrt{C/V}$ (μA) or 5 mA, whichever is smaller (at 20°C) . [C:Rated Capacitance (μF) , V:Voltage(V)]																							
tan δ	φD	35	80~100	0.6	0.4	0.35	0.3	0.25	0.25	0.2	0.12	0.15	Measurement frequency: 120Hz, Temperature : 20°C											
			120	0.7	0.55	0.4	0.3	0.25	0.25	0.2	0.15	0.15												
		51	70~100	0.9	0.6	0.45	0.35	0.25	0.25	0.2	0.15	0.15												
			120~140	1.0	0.8	0.5	0.4	0.3	0.25	0.2	0.15	0.15												
		63.5	100	0.9	—	—	0.5	0.35	0.3	0.25	—	0.2												
			120~140	1.2	0.75	0.65	—	—	0.3	0.3	0.2	0.2												
		76.2	100	1.6	—	—	0.65	—	—	—	—	0.2												
			120~140	1.6	1.1	0.75	0.75	0.55	0.5	0.35	0.3	0.2												
		90	140~220	2.0	1.5	1.0	0.9	0.75	0.6	0.4	0.3	0.25												
			100	250	2.4	1.5	1.0	0.9	0.75	0.6	0.4	0.3		0.25										
Stability at Low Temperature	Measurement frequency : 120Hz																							
	Rated voltage(V)				10~100				160~250															
	Impedance ratio ZT/Z20(MAX.)				Z - 40°C / Z+20°C				Z - 25°C / Z+20°C															
Endurance	After an application of DC voltage (in the range of rated DC voltage even after over-lapping the specified rated ripple current) for 5000 hours at 85°C, capacitors meet the characteristic requirements listed at right.																							
													Capacitance change		Within ±15% of initial value									
													tan δ		175% or less of initial specified value									
Shelf Life	After leaving capacitors under no load at 85°C for 1000 hours, they meet the requirements listed at right.																							
													Capacitance change		Within ±20% of initial value									
													tan δ		175% or less of initial specified value									
Marking	Printed with black color letter on light blue sleeve.																							
													Leakage current		Initial specified value or less									

Drawing

φ35 Screw terminal type



Type numbering system (Example : 250V 2200µF)



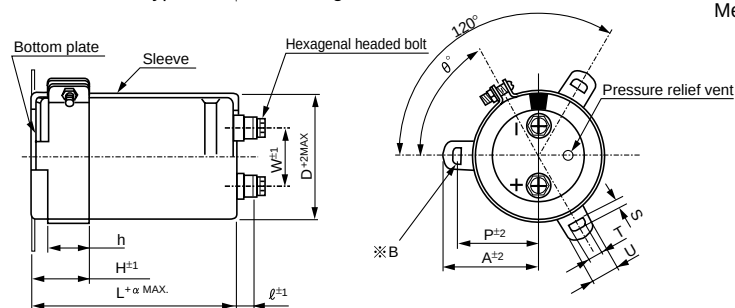
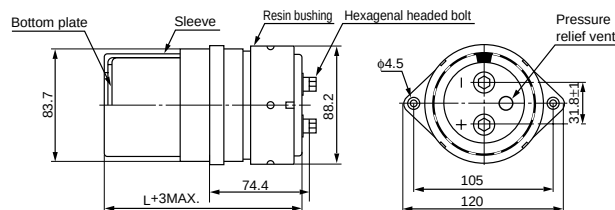
※ Configuration

Cr (III) Plating (RoHS compliant)	Cr (VI) Plating
SE	SM

Resin bushing available upon request.

※ Please contact to us if PVCless products are required.

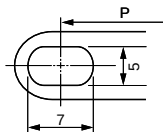
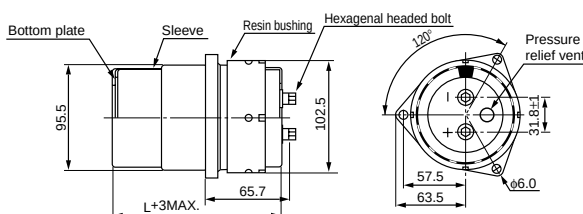
● Dimension table in next page.

Screw terminal types for $\phi 51$ and largerMethod to mount resin bushing ($\phi 76.2$) (Apply to L=150 or more)**Note:**

Capacitors with body dia. $\phi 51$ or larger are furnished with 3-leg brackets shown above as standard.

If these capacitors are preferred to have 2-leg brackets as shown right, add "B" in the 12th digit of type numbering system.

*B
3-leg brackets for $\phi 90$ capacitors have different hole shapes from the ordinary ones as illustrated below.

Method to mount resin bushing ($\phi 90$) (Apply to L=150 or more)● Dimension of terminal pitch (W) and length (ℓ) and Nominal dia. of bolt (mm)

ϕD	W	ℓ	α	Nominal dia. of bolt
51	22.0	6	3	M5
63.5	28.6	6	3	M5
76.2	31.8	6	3	M5
90	31.8	6	3	M5
100	41.5	10	4	M8

● Dimensions of mounting bracket (mm)

Leg Shape Symbol	3-Legs					2-Legs			
	$\phi 51$	$\phi 63.5$	$\phi 76.2$	$\phi 90$	$\phi 100$	$\phi 51$	$\phi 63.5$	$\phi 76.2$	$\phi 90$
P	32.5	38.1	44.5	50.8	56.3	33.2	40.5	46.5	53
A	38.5	43	49.2	58.5	62	40	46.5	53	59
T	7.5	8.0	7.0	8.0	8.0	6.0	7.0	6.0	6.0
S	5.0	5.0	5.0	5.0	5.0	4.5	4.5	4.5	4.5
U	12	14	14	18	16	14	14	14	14
θ°	60	60	60	60	60	30	30	30	30
H	20	25	30	35	36	25	35	35	35
h	15	20	24	25	30	15	20	20	20

■ Dimensions

 $\phi D \times L$ (mm)

V(Code)		10V (1A)		16V (1C)		25V (1E)	
Surge		13V		20V		32V	
Cap. (μF)	Code	Case size	Rated ripple	Case size	Rated ripple	Case size	Rated ripple
33000	333					35×80	6.2
47000	473	35×80	6.0	35×80	6.4	35×100	8.2
68000	683	35×80	7.2	35×100	7.9	35×120	9.4
100000	104	35×100	8.8	35×120	10.6	51×100	12.0
150000	154	51×80	10.7	51×100	11.5	51×120	15.3
220000	224	51×100	13.0	51×120	15.6	63.5×120	18.9
330000	334	63.5×100	15.9	63.5×120	25.1	76.2×120	24.8
470000	474	63.5×120	19.0	76.2×120	30.5	90×170	30.8
680000	684	76.2×120	22.8	90×170	33.0	90×220	33.3
1000000	105	90×170	27.7	90×220	36.0	100×250	36.4
1500000	155	90×220	33.9	100×250	39.7		
2200000	225	100×250	41.1				

Rated Ripple (A rms) at 85°C 120Hz

■Dimensions

φD×L (mm)

V(Code)		35V (1V)		50V (1H)		63V (1J)	
Surge		44V		63V		79V	
Cap.(μF)	Code	Case size	Rated ripple	Case size	Rated ripple	Case size	Rated ripple
10000	103					35×80	4.1
15000	153			35×80	5.4	35×100	5.5
22000	223			35×100	6.1	35×120	7.1
33000	333	35×80	6.2	51×70	7.0	51×80	8.8
47000	473	35×120	8.2	51×90	8.6	51×120	11.7
68000	683	51×80	9.3	51×100	11.0	63.5×100	15.0
100000	104	51×120	13.6	63.5×100	14.2	63.5×140	20.8
150000	154	63.5×100	14.5	76.2×120	18.6	76.2×140	26.0
220000	224	76.2×100	16.8	90×140	20.3	90×170	28.3
330000	334	76.2×140	24.8	90×170	25.3	90×220	31.2
470000	474	90×170	32.6	90×220	33.2	100×250	33.6
680000	684	90×220	35.2	100×250	36.0		
1000000	105	100×250	38.5				

V(Code)		80V (1K)		100V (2A)		160V (2C)	
Surge		100V		125V		200V	
Cap.(μF)	Code	Case size	Rated ripple	Case size	Rated ripple	Case size	Rated ripple
2200	222					35×80	3.2
3300	332					35×120	4.7
4700	472			35×80	3.8	51×80	5.0
6800	682			35×100	4.5	51×100	6.4
10000	103	35×80	4.2	35×120	5.3	63.5×100	9.1
15000	153	35×120	6.0	51×80	6.0	76.2×100	12.0
22000	223	51×80	6.5	51×100	6.8	76.2×140	16.9
33000	333	51×120	9.2	51×140	10.0	90×140	19.2
47000	473	63.5×100	12.7	63.5×140	14.4	90×170	20.6
68000	683	63.5×140	15.5	76.2×140	18.2	90×220	22.3
100000	104	76.2×140	21.3	90×170	22.1	100×250	24.4
150000	154	90×170	26.5	90×220	27.0		
220000	224	90×220	28.9	100×250	32.7		
330000	334	100×250	31.8				

V(Code)		200V (2D)		250V (2E)	
Surge		250V		300V	
Cap.(μF)	Code	Case size	Rated ripple	Case size	Rated ripple
1000	102			35×80	2.4
1500	152	35×80	2.9	35×100	3.0
2200	222	35×100	3.5	51×80	4.0
3300	332	51×80	4.8	51×100	5.4
4700	472	51×100	6.3	63.5×100	7.3
6800	682	51×140	7.3	63.5×120	8.9
10000	103	63.5×120	9.8	76.2×120	11.8
15000	153	76.2×120	13.0	90×140	16.4
22000	223	90×140	15.9	90×170	17.9
33000	333	90×170	19.5	90×220	19.7
47000	473	90×220	20.9	100×250	21.2
68000	683	100×250	22.6		

Rated Ripple (A rms) at 85°C 120Hz

●Frequency coefficient of rated ripple current

Frequency (Hz)		60	120	360	1k	10k~
Coeff.	10~100V	0.90	1.00	1.08	1.15	1.15
	160~250V	0.88	1.00	1.08	1.15	1.20