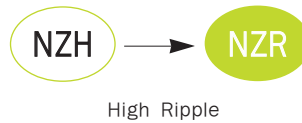


NZR Series

• 105°C 2,000Hrs assured.

- Non-solvent proof
- High ripple and High surge voltage
- For LED TV Power , SMPS
- **RoHS compliant.**
- **Halogen-free capacitors are also available.**

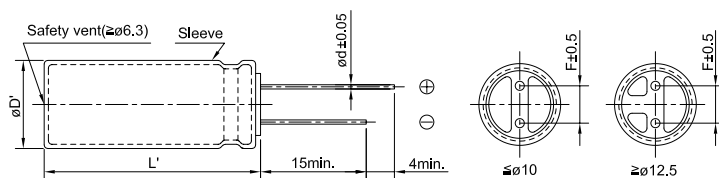


SPECIFICATIONS

Item	Characteristics											
Rated Voltage	450 V _{DC}											
Surge Voltage	550 V _{DC}											
Operating Temperature Range	-25 ~ +105℃											
Capacitance Tolerance	±20%(M) (at 20℃, 120Hz)											
Leakage Current	<table><tr><th>CV \ Time</th><th>After 1 minute</th><th>After 5 minutes</th></tr><tr><td>≤ 1000</td><td>I=0.1CV+40</td><td>I=0.03CV+15</td></tr><tr><td>> 1000</td><td>I=0.04CV+100</td><td>I=0.02CV+25</td></tr></table> Where, I : Max. Leakage current(μA) C : Nominal capacitance(μF) V : Rated voltage(V_{DC}) (at 20℃)			CV \ Time	After 1 minute	After 5 minutes	≤ 1000	I=0.1CV+40	I=0.03CV+15	> 1000	I=0.04CV+100	I=0.02CV+25
CV \ Time	After 1 minute	After 5 minutes										
≤ 1000	I=0.1CV+40	I=0.03CV+15										
> 1000	I=0.04CV+100	I=0.02CV+25										
Dissipation Factor(Tanδ)	<table><tr><td>Rated Voltage(V_{DC})</td><td>450</td></tr><tr><td>Tanδ(Max.)</td><td>0.24</td></tr></table> (at 20℃, 120Hz)			Rated Voltage(V _{DC})	450	Tanδ(Max.)	0.24					
Rated Voltage(V _{DC})	450											
Tanδ(Max.)	0.24											
Temperature Characteristics (Max. Impedance ratio)	<table><tr><td>Rated Voltage(V_{DC})</td><td>450</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>6</td></tr></table> (at 120Hz)			Rated Voltage(V _{DC})	450	Z(-25℃)/Z(20℃)	6					
Rated Voltage(V _{DC})	450											
Z(-25℃)/Z(20℃)	6											
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage with the rated ripple current is applied for 2,000 hours at 105℃. Capacitance change ≤ ±20 % of the initial value 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℃ after exposing them for 1,000 hours at 105℃ without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours an not more than 48 hours before the measurements. Capacitance change ≤ ±20 % of the initial value tan δ ≤ 200 % of the initial specified value Leakage current ≤ 500 % of the initial specified value											
Others	Satisfied characteristics KS C IEC 60384-4											

DIMENSIONS OF NZR Series

Unit(mm)



Marking : DARK BLUE SLEEVE, SILVER INK

øD	8	10	12.5	16	18
ød	0.6	0.6	0.6	0.8	0.8
F	3.5	5.0	5.0	7.5	7.5
øD'	øD + 0.5 max.				
L'	L + 2.0 max				

※ ø16 x 60L, L' ≤ L+3.0

RATINGS OF NZR Series

V _{dc}	450	
Items μF	$\varnothing D \times L (mm)$	Rated Ripple Current (mA rms/105°C, 120Hz)
23	8 X 50	300
39	10 X 50	450
51		480
62	10 X 60	570
68	12.5 X 50	750
	16 X 35.5	750
	18 X 31.5	750
82	12.5 X 60	800
	16 X 40	800
	18 X 31.5	800
100	16 X 45	900
	18 X 35.5	900
120	16 X 50	1,000
	18 X 40	1,000
150	16 X 60	1,400
	18 X 50	1,400

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap. (μF) \ Freq. (Hz)	120	1k	10k	50k	100k
23 ~ 150	1.00	1.25	1.50	1.75	2.00