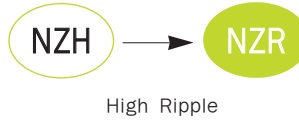


NZR Series

- 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°C												
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)												
Leakage Current	<table border="1"> <thead> <tr> <th>CV</th> <th>Time</th> <th>After 1 minute</th> <th>After 5 minute</th> </tr> </thead> <tbody> <tr> <td>≤ 1000</td> <td></td> <td>I=0.1CV+40</td> <td>I=0.03CV+15</td> </tr> <tr> <td>> 1000</td> <td></td> <td>I=0.04CV+100</td> <td>I=0.02CV+25</td> </tr> </tbody> </table>	CV	Time	After 1 minute	After 5 minute	≤ 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 minute									
	≤ 1000		I=0.1CV+40	I=0.03CV+15									
> 1000		I=0.04CV+100	I=0.02CV+25										
Where, I : Max. Leakage current(μA) C : Nominal capacitance(μF) V : Rated voltage(V _{DC}) (at 20°C)													
Dissipation Factor(Tanδ)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>450</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.24</td> </tr> </table>	Rated Voltage(V _{DC})	450	Tanδ(Max.)	0.24								
	Rated Voltage(V _{DC})	450											
Tanδ(Max.)	0.24												
(at 20°C, 120Hz)													
Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>450</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>6</td> </tr> </table>	Rated Voltage(V _{DC})	450	Z(-25°C)/Z(20°C)	6								
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Z(-25°C)/Z(20°C)	6												
(at 120Hz)													
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current is applied for 2,000 hours at 105°C.												
	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°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and 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

	10	12.5	16	18
øD	10	12.5	16	18
ød	0.6	0.6	0.8	0.8
F	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	
μF	Items	$\varnothing D \times L(\text{mm})$	Rated Ripple Current (mA _{rms} /105°C, 120Hz)
39		10 X 50	450
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
39 ~ 150		1.00	1.25	1.50	1.75	2.00