

NFC Series

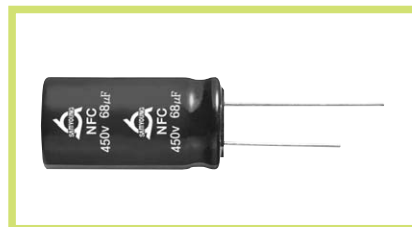
• 105°C 5,000Hrs assured.

- Non-solvent proof.
- High ripple , Long Life.
- For SMPS, IP-Board, Adaptor
- RoHS compliant.
- Halogen-free capacitors are also available.

KMF
(KMX)

→
Long Life

NFC

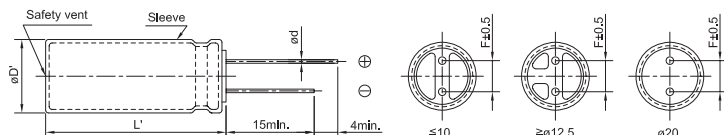


SPECIFICATIONS

Item	Characteristics													
Rated Voltage Range	160 ~ 400 V _{DC}	450 V _{DC}												
Operating Temperature Range	-40 ~ + 105°C	-25 ~ + 105°C												
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)													
Leakage Current	<table border="1"> <thead> <tr> <th>C · V \ Time</th> <th>After 1 minute</th> <th>After 5 minutes</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>Where, I:Max. Leakage current(μA) C:Nominal capacitance (μF) V:Rated voltage (V_{DC})(at 20°C)</p>		C · V \ 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			
C · V \ Time	After 1 minute	After 5 minutes												
≤ 1000	I = 0.1CV + 40	I = 0.03CV + 15												
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Dissipation Factor (Tanδ)	<table border="1"> <thead> <tr> <th>Rated Voltage(V_{DC})</th> <th>160~250</th> <th>400~450</th> </tr> </thead> <tbody> <tr> <td>Tanδ(Max.)</td> <td>0.20</td> <td>0.24</td> </tr> </tbody> </table> <p>(at 20°C, 120Hz)</p>		Rated Voltage(V _{DC})	160~250	400~450	Tanδ(Max.)	0.20	0.24						
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Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <thead> <tr> <th>Rated Voltage(V_{DC})</th> <th>160~250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>5</td> <td>6</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>6</td> <td>6</td> <td>—</td> </tr> </tbody> </table> <p>(at 120Hz)</p>		Rated Voltage(V _{DC})	160~250	400	450	Z(-25°C)/Z(+20°C)	3	5	6	Z(-40°C)/Z(+20°C)	6	6	—
Rated Voltage(V _{DC})	160~250	400	450											
Z(-25°C)/Z(+20°C)	3	5	6											
Z(-40°C)/Z(+20°C)	6	6	—											
Load Life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied at 105°C for 5,000 hours.</p> <p>Capacitance change ≤ ±20% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value</p>													
Shelf Life	<p>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.</p> <p>Capacitance change ≤ ±20% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ 500% of the initial specified value</p>													
Others	Satisfied characteristics KS C IEC 60384-4													

DIMENSIONS OF NFC Series

Unit(mm)



Marking : DARK BROWN SLEEVE, SILVER INK

øD	8	10	12.5	16	18	20	22
ød	0.6	0.6	0.6	0.8	0.8	0.8	0.8
F	3.5	5.0	5.0	7.5	7.5	7.5	10.0
øD'	øD + 0.5 max.						
L'	L + 2.0 max.						

※ ø8 x 20L, øD' ≤ øD + 0.5 and L' ≤ L + 1.5



MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

RATINGS OF NFC Series

V _{DC}		160		200	
Items μF	ø D × L (mm)	Rated ripple current (mArms/105°C, 120Hz)		ø D × L (mm)	Rated ripple current (mArms/105°C, 120Hz)
22	8 × 20	135		8 × 20	135
	10 × 20	192		10 × 20	192
33	10 × 20	236		12.5 × 20	262
47	12.5 × 20	312		12.5 × 20	312
68	12.5 × 25	409		12.5 × 25	409
				8 × 50	320
82	8 × 50	360		16 × 20	462
100	16 × 25	548		16 × 25	548
150	16 × 25	701		16 × 25	701
220	16 × 31.5	876		18 × 31.5	906
330	18 × 31.5	1,110			

V _{DC}		250		350	
Items μF	ø D × L (mm)	Rated ripple current (mArms/105°C, 120Hz)		ø D × L (mm)	Rated ripple current (mArms/105°C, 120Hz)
10	8 × 20	95		8 × 20	90
	10 × 20	130		10 × 20	126
22	12.5 × 20	214		12.5 × 20	207
33	12.5 × 25	285		16 × 20	284
				8 × 50	245
47	8 × 50	250		16 × 25	364
	12.5 × 25	340			
68	16 × 25	452		16 × 31.5	472
100	16 × 31.5	591		18 × 31.5	591
150	18 × 31.5	748		18 × 40	760
220	18 × 40	951		22 × 45	970
330	20 × 40	1,196			

V _{DC}		400		450	
Items μF	ø D × L (mm)	Rated ripple current (mArms/105°C, 120Hz)		ø D × L (mm)	Rated ripple current (mArms/105°C, 120Hz)
3.3				8 × 20	60
				10 × 20	70
4.7				12.5 × 20	93
6.8	8 × 20	80			
10	10 × 20	126		12.5 × 25	147
22	12.5 × 25	225		16 × 25	241
				8 × 50	230
27	8 × 50	240		16 × 25	267
33	16 × 20	284		16 × 31.5	319
47	16 × 25	364		18 × 25	368
68	16 × 31.5	472		18 × 31.5	473
82	18 × 31.5	536		18 × 35.5	537
100	18 × 35.5	611		18 × 40	602
120	18 × 40	680		18 × 40	659
150	18 × 40	760		20 × 40	757
180	20 × 40	855		22 × 50	892
220	22 × 45	996			

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap. (μF)	Freq. (Hz)	120	1k	10k	100k
3.3 ~ 100		1.00	1.25	1.50	1.75
	120 ~ 330	1.00	1.15	1.30	1.40