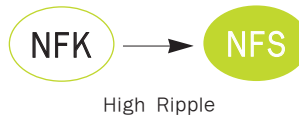


NFS Series

• 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.



SPECIFICATIONS

Item	Characteristics													
Rated Voltage Range	200~400 V _{DC}	420~500 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>200~250</th> <th>350~500</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})	200~250	350~500	Tanδ(Max.)	0.20	0.24						
Rated Voltage(V _{DC})	200~250	350~500												
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Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <thead> <tr> <th>Rated Voltage(V_{DC})</th> <th>200~250</th> <th>350~400</th> <th>420~500</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})	200~250	350~400	420~500	Z(-25°C)/Z(20°C)	3	5	6	Z(-40°C)/Z(20°C)	6	6	-
Rated Voltage(V _{DC})	200~250	350~400	420~500											
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 with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 105°C.</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 NFS Series

Unit(mm)

Marking : DARK BROWN 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 + 1.5 max.		L + 2.0 max.		

※ ø10 x 12L, L' ≤ L + 1.5

RATINGS OF NFS Series

V _{DC}	Cap.(μ F)	Case size ϕ D \times L (mm)	Rated Ripple Current(mArms/105°C)				
			120Hz	1kHz	10kHz	50kHz	100kHz
200	22	8 \times 20	120	240	270	285	300
		10 \times 20	184	440	495	523	550
	33	12.5 \times 20	300	560	630	665	700
	47	12.5 \times 20	340	780	878	926	975
	68	12.5 \times 20	369	880	990	1,045	1,100
		12.5 \times 25	436	1,040	1,170	1,235	1,300
	100	12.5 \times 30	550	775	1,395	1,473	1,550
16 \times 25		600	1,304	1,467	1,549	1,630	
250	6.8	10 \times 12	88	189	213	225	280
	10	10 \times 16	165	224	288	304	320
	22	10 \times 20	200	440	495	523	550
	33	12.5 \times 20	250	476	612	646	680
	47	12.5 \times 20	340	720	810	855	900
	68	16 \times 25	540	1,080	1,215	1,283	1,350
	82	12.5 \times 30	510	1,160	1,305	1,378	1,450
350	10	8 \times 20	120	210	270	285	300
		10 \times 20	135	245	315	333	350
	22	12.5 \times 20	225	520	585	618	650
		12.5 \times 25	270	544	612	646	680
	47	18 \times 20	360	920	1,035	1,093	1,150
68	16 \times 31.5	520	1,120	1,260	1,330	1,400	
400	8.2	8 \times 20	105	293	376	397	418
	10	10 \times 20	120	301	387	409	430
	22	12.5 \times 25	250	624	702	741	780
	33	16 \times 25	325	736	828	874	920
420	10	10 \times 16	98	245	315	333	350
	22	12.5 \times 20	215	384	432	456	480
	33	16 \times 20	340	568	639	675	710
	47	18 \times 20	375	600	675	713	750
	56	18 \times 20	400	640	720	760	800
	68	18 \times 25	500	840	945	998	1,050
	82	18 \times 25	560	880	990	1,045	1,100
	100	18 \times 31.5	700	1,136	1,278	1,349	1,420
		18 \times 31.5	740	1,160	1,305	1,378	1,450
120	18 \times 35.5	760	1,240	1,395	1,473	1,550	
150	18 \times 40	800	1,304	1,467	1,549	1,630	
450	22	12.5 \times 25	235	420	473	499	525
	33	16 \times 20	340	568	639	675	710
	47	16 \times 25	375	600	675	713	750
	68	18 \times 25	500	840	945	998	1,050
	82	18 \times 31.5	650	1,092	1,229	1,297	1,365
	100	18 \times 35.5	750	1,260	1,418	1,496	1,575
	120	18 \times 40	800	1,344	1,512	1,596	1,680
500	68	18 \times 35.5	585	983	1,106	1,167	1,229
	82	18 \times 40	653	1,097	1,234	1,303	1,371
	100	18 \times 45	750	1,260	1,418	1,496	1,575