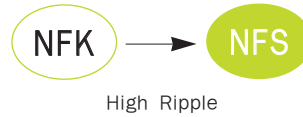


NFS Series

• 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												
> 1000	I = 0.04CV + 100	I = 0.02CV + 25												
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												
Tanδ(Max.)	0.20	0.24												
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 \varnothing D × L (mm)	Rated Ripple Current(mArms/105°C)				
			120Hz	1kHz	10kHz	50kHz	100kHz
200	22	8 × 20	120	240	270	285	300
		10 × 20	184	440	495	523	550
	33	12.5 × 20	300	560	630	665	700
	47	12.5 × 20	340	780	878	926	975
	68	12.5 × 20	369	880	990	1,045	1,100
		12.5 × 25	436	1,040	1,170	1,235	1,300
		12.5 × 30	550	775	1,395	1,473	1,550
100	16 × 25	600	1,304	1,467	1,549	1,630	
250	6.8	10 × 12	88	189	213	225	280
	10	10 × 16	165	224	288	304	320
	22	10 × 20	200	440	495	523	550
	33	12.5 × 20	250	476	612	646	680
	47	12.5 × 20	340	720	810	855	900
	68	16 × 25	540	1,080	1,215	1,283	1,350
	82	12.5 × 30	510	1,160	1,305	1,378	1,450
350	10	8 × 20	120	210	270	285	300
		10 × 20	135	245	315	333	350
	22	12.5 × 20	225	520	585	618	650
		12.5 × 25	270	544	612	646	680
	47	18 × 20	360	920	1,035	1,093	1,150
68	16 × 31.5	520	1,120	1,260	1,330	1,400	
400	8.2	8 × 20	105	293	376	397	418
	10	10 × 20	120	301	387	409	430
	22	12.5 × 25	250	624	702	741	780
	33	16 × 25	325	736	828	874	920
420	10	10 × 16	98	245	315	333	350
	22	12.5 × 20	215	384	432	456	480
	33	16 × 20	340	568	639	675	710
	47	18 × 20	375	600	675	713	750
	56	18 × 20	400	640	720	760	800
	68	18 × 25	500	840	945	998	1,050
	82	18 × 25	560	880	990	1,045	1,100
	100	18 × 31.5	700	1,136	1,278	1,349	1,420
		18 × 31.5	740	1,160	1,305	1,378	1,450
120	18 × 35.5	760	1,240	1,395	1,473	1,550	
150	18 × 40	800	1,304	1,467	1,549	1,630	
450	22	12.5 × 25	235	420	473	499	525
	33	16 × 20	340	568	639	675	710
	47	16 × 25	375	600	675	713	750
	68	18 × 25	500	840	945	998	1,050
	82	18 × 31.5	650	1,092	1,229	1,297	1,365
	100	18 × 35.5	750	1,260	1,418	1,496	1,575
	120	18 × 40	800	1,344	1,512	1,596	1,680
500	68	18 × 35.5	585	983	1,106	1,167	1,229
	82	18 × 40	653	1,097	1,234	1,303	1,371
	100	18 × 45	750	1,260	1,418	1,496	1,575