

## NXP(LXZ) Series

• 105°C 2,000 ~ 5,000Hrs assured.

- Low Impedance.
- For SMPS, IP-Board, Adaptor.
- RoHS compliant.
- Halogen-free capacitors are also available.
- AEC-Q200 compliant : Please contact us for more details, test data, information.

Solvent-proof

NXL (LXV)

NXP (LXZ)

Low Imp. Downsized



## SPECIFICATIONS

Item	Characteristics														
Rated Voltage Range	6.3 ~ 50 V <sub>DC</sub>														
Operating Temperature Range	-55 ~ +105°C														
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)														
Leakage Current	I = 0.01CV (µA) or 3µA, whichever is greater. Where, I:Max. Leakage current(µA) C:Nominal capacitance(µF) V:Rated voltage(V <sub>DC</sub> ) (at 20°C, 2 minutes)														
Dissipation Factor (Tanδ)	<table border="1"> <tr> <td>Rated Voltage(V<sub>DC</sub>)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>TANδ(Max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table> <p>When the capacitance exceeds 1,000µF, 0.02 shall be added every 1,000µF increase. (at 20°C, 120Hz)</p>	Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50	TANδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10
Rated Voltage(V <sub>DC</sub> )	6.3	10	16	25	35	50									
TANδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10									
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) at 105°C for the specified period of time.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>Tanδ</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>≤ The initial specified value</td> </tr> </table> <table border="1"> <tr> <td>∅ D</td> <td>Life Time</td> </tr> <tr> <td>∅ 5, 6.3</td> <td>2,000 hours</td> </tr> <tr> <td>∅ 8</td> <td>3,000 hours</td> </tr> <tr> <td>∅ 10 ~</td> <td>5,000 hours</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	Tanδ	≤ 200% of the initial specified value	Leakage Current	≤ The initial specified value	∅ D	Life Time	∅ 5, 6.3	2,000 hours	∅ 8	3,000 hours	∅ 10 ~	5,000 hours
Capacitance change	≤ ±20% of the initial value														
Tanδ	≤ 200% of the initial specified value														
Leakage Current	≤ The initial specified value														
∅ D	Life Time														
∅ 5, 6.3	2,000 hours														
∅ 8	3,000 hours														
∅ 10 ~	5,000 hours														
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> <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>Tanδ</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	Tanδ	≤ 200% of the initial specified value	Leakage Current	≤ The initial specified value								
Capacitance change	≤ ±20% of the initial value														
Tanδ	≤ 200% of the initial specified value														
Leakage Current	≤ The initial specified value														
Others	Satisfied characteristics KS C IEC 60384-4														

## DIMENSIONS OF NXP(LXZ) Series

Unit(mm)

Marking : DARK BROWN SLEEVE, SILVER INK

∅D	5	6.3	8	10	12.5	16	18
∅d	0.5	0.5	0.6	0.6	0.6	0.8	0.8
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
∅D'	∅D + 0.5 max.						
L'	L + 1.5 max.			L + 2.0 max.			

※ ∅10 x 12L, L' ≤ L + 1.5

## RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap.(µF) \ Freq.(Hz)	120	1k	10k	50k	100k
22 ~ 180	0.40	0.75	0.90	0.93	1.00
220 ~ 560	0.50	0.85	0.94	0.96	1.00
680 ~ 1,800	0.60	0.87	0.95	0.97	1.00
2,200 ~ 3,900	0.75	0.90	0.95	0.97	1.00
4,700 ~ 18,000	0.85	0.95	0.98	0.99	1.00

RATINGS OF NXP(LXZ) Series

V <sub>DC</sub> ∅D×L(mm)	6.3				10				16			
	μF	IMP.		Ripple	μF	IMP.		Ripple	μF	IMP.		Ripple
		20°C	-10°C			20°C	-10°C			20°C	-10°C	
5 × 11	150	0.50	1.0	175	100	0.50	1.0	175	47	0.50	1.0	175
6.3 × 11	330	0.25	0.50	290	220	0.25	0.50	290	100	0.25	0.50	290
6.3 × 15	470	0.18	0.36	400	330	0.18	0.36	400	220	0.18	0.36	400
8 × 11.5	680	0.12	0.24	555	470	0.12	0.24	555	330	0.12	0.24	555
8 × 15	1,000	0.090	0.18	730	680	0.090	0.18	730	470	0.090	0.18	730
8 × 20	1,200	0.080	0.16	810	1,000	0.080	0.16	810	560	0.080	0.16	810
10 × 12	820	0.090	0.18	760	680	0.090	0.18	760	470	0.090	0.18	760
10 × 12.5	820	0.090	0.18	760	680	0.090	0.18	760	470	0.090	0.18	760
10 × 16	1,200	0.068	0.14	1,050	1,000	0.068	0.14	1,050	680	0.068	0.14	1,050
10 × 20	1,500	0.052	0.10	1,220	1,200	0.052	0.10	1,220	1,000	0.052	0.10	1,220
10 × 25	2,200	0.045	0.090	1,440	1,500	0.045	0.090	1,440	1,200	0.045	0.090	1,440
10 × 30	2,700	0.037	0.074	1,690	1,800	0.037	0.074	1,690	1,500	0.037	0.074	1,690
12.5 × 20	3,300	0.038	0.076	1,660	2,200	0.038	0.076	1,660	1,500	0.038	0.076	1,660
12.5 × 25	3,900	0.030	0.060	1,950	3,300	0.030	0.060	1,950	2,200	0.030	0.060	1,950
12.5 × 30	4,700	0.025	0.050	2,310	3,900	0.025	0.050	2,310	2,700	0.025	0.050	2,310
12.5 × 35	5,600	0.022	0.044	2,510	4,700	0.022	0.044	2,510	3,300	0.022	0.044	2,510
12.5 × 42.5	6,800	0.019	0.038	2,870	5,600	0.019	0.038	2,870	3,900	0.019	0.038	2,870
16 × 20	5,600	0.031	0.064	2,210	3,900	0.031	0.064	2,210	2,700	0.031	0.064	2,210
16 × 25	6,800	0.024	0.048	2,560	5,600	0.024	0.048	2,560	3,900	0.024	0.048	2,560
16 × 31.5	8,200	0.021	0.042	3,010	6,800	0.021	0.042	3,010	4,700	0.021	0.042	3,010
16 × 35.5	10,000	0.019	0.038	3,150	8,200	0.019	0.038	3,150	5,600	0.019	0.038	3,150
18 × 20	6,800	0.031	0.062	2,490	5,600	0.031	0.062	2,490	3,900	0.031	0.062	2,490
18 × 25	10,000	0.023	0.046	2,740	6,800	0.023	0.046	2,740	4,700	0.023	0.046	2,740
18 × 31.5	12,000	0.021	0.042	3,330	8,200	0.021	0.042	3,330	5,600	0.021	0.042	3,330
18 × 35.5	15,000	0.019	0.038	3,680	10,000	0.019	0.038	3,680	8,200	0.019	0.038	3,680
18 × 40	18,000	0.018	0.036	3,800	12,000	0.018	0.036	3,800	10,000	0.018	0.036	3,800

V <sub>DC</sub> ∅D×L(mm)	25				35				50			
	μF	IMP.		Ripple	μF	IMP.		Ripple	μF	IMP.		Ripple
		20°C	-10°C			20°C	-10°C			20°C	-10°C	
5 × 11	47	0.50	1.0	175	33	0.50	1.0	175	22	0.70	1.4	155
6.3 × 11	82	0.30	0.60	260	47	0.25	0.50	265	33	0.45	0.90	170
6.3 × 11	100	0.25	0.50	290	56	0.25	0.50	290	47	0.45	0.90	180
6.3 × 15	150	0.18	0.36	400	100	0.18	0.36	400	68	0.31	0.62	360
8 × 11.5	220	0.12	0.24	555	150	0.12	0.24	555	100	0.18	0.36	485
8 × 15	330	0.090	0.18	730	220	0.090	0.18	730	120	0.16	0.32	635
8 × 20	390	0.080	0.16	810	270	0.080	0.16	810	180	0.12	0.24	730
10 × 12	330	0.090	0.18	760	220	0.090	0.18	760	120	0.16	0.32	620
10 × 12.5	330	0.090	0.18	760	220	0.090	0.18	760	120	0.16	0.32	620
10 × 16	470	0.068	0.14	1,050	330	0.068	0.14	1,050	180	0.13	0.26	850
	680	0.068	0.14	1,130								
10 × 20	680	0.052	0.10	1,220	470	0.052	0.11	1,220	220	0.088	0.18	1,050
	820	0.052	0.10	1,320								
10 × 25	820	0.045	0.090	1,440	560	0.045	0.090	1,440	330	0.073	0.15	1,250
10 × 30	1,000	0.037	0.074	1,690	680	0.037	0.074	1,690	390	0.054	0.11	1,500
12.5 × 20	1,000	0.038	0.076	1,660	680	0.038	0.076	1,660	390	0.059	0.12	1,480
12.5 × 25	1,500	0.030	0.060	1,950	1,000	0.030	0.060	1,950	560	0.044	0.088	1,840
					1,500	0.030	0.060	2,200				
12.5 × 30	1,800	0.025	0.050	2,310	1,200	0.025	0.050	2,310	680	0.039	0.078	2,220
12.5 × 35	2,200	0.022	0.044	2,510	1,500	0.022	0.044	2,510	820	0.033	0.066	2,290
12.5 × 42.5	2,700	0.019	0.038	2,870	1,800	0.019	0.038	2,870	1,000	0.029	0.058	2,500
16 × 20	1,800	0.031	0.064	2,210	1,200	0.031	0.064	2,210	680	0.048	0.096	1,840
16 × 25	2,700	0.024	0.048	2,560	1,800	0.024	0.048	2,560	1,000	0.034	0.068	2,240
16 × 31.5	3,300	0.021	0.042	3,010	2,200	0.021	0.042	3,010	1,200	0.028	0.056	2,700
16 × 35.5	3,900	0.019	0.038	3,150	2,700	0.019	0.038	3,150	1,500	0.026	0.052	2,800
18 × 20	2,200	0.031	0.062	2,490	1,800	0.031	0.100	2,490	820	0.042	0.084	1,980
18 × 25	3,300	0.023	0.046	2,740	2,200	0.023	0.046	2,740	1,200	0.029	0.058	2,610
18 × 31.5	3,900	0.021	0.042	3,330	2,700	0.021	0.042	3,330	1,800	0.027	0.054	2,750
18 × 35.5	4,700	0.019	0.038	3,680	3,300	0.019	0.038	3,680	2,200	0.025	0.050	2,900
18 × 40	5,600	0.018	0.036	3,800	3,900	0.018	0.036	3,800	2,700	0.022	0.044	3,200

Rated Ripple Current (mArms/105°C, 100kHz)  
 Impedance (Ω max./100kHz)  
 Nominal Capacitance(μF)

NXP(LXZ) Series