

LNP Series 105 °C

Features

- LNP Series for crossover networks of high-pitched, mean and low-pitched sounds in high-fidelity sound systems
- The series offers excellent frequency characteristics and minimal capacitance deviation with frequency
- For detail specifications, please refer to Engineering Bulletin No. E110



Specifications

Item	Performance Characteristics																																			
Operating Temperature Range	-40°C to +105 °C	-25 °C to +105 °C																																		
Rated voltage Range	6.3 to 100 VDC	160 to 250 VDC																																		
Capacitance Range	0.47 to 1000 uF																																			
Capacitance Tolerance	±20 % (120 Hz, +20 °C)																																			
Leakage Current (+20 °C, max.)	1 ≤ 0.03 CV or 3 (uA) After 1 minutes whichever is greater measured with rat working voltage applied.																																			
Dissipation Factor (tan δ)	<table border="1"> <tr> <th>Working Voltage (VDC)</th> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <th>D.F. (%) max</th> <td>25</td> <td>25</td> <td>20</td> <td>15</td> <td>15</td> <td>13</td> <td>10</td> <td>10</td> </tr> </table>									Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	D.F. (%) max	25	25	20	15	15	13	10	10									
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	D.F. (%) max	25	25	20	15	15	13	10	10																											
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(+ 20 °C, at 120 Hz,)																																				
Low Temperature Characteristics (120 Hz)	Impedance ratio max.																																			
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For Capacitance Value 1000uF , add 0.5 per another 1000uF for -25 °C/+20 °C add 1 per another 1000uF for -40 °C/+20°C																																				
Load Life	Test conditions Duration time: 2000 Hrs Ambient temperature: +105 °C Applied voltage: Rated DC working voltage After test requirements: at + 20 % Dissipation Factor: ≤ 150 % of the initial specified value Leakage current: ≤ The initial specified value																																			
Shelf Life	Test conditions Duration time: 500 Hrs Ambient temperature: + 105°C Applied voltage: None After test requirements at +20 °C: Some limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																																			

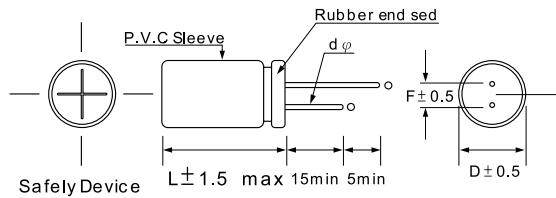
Multiplier for Ripple Current vs. Frequency

Multiplier for Ripple Current vs. Temperature

CAP(μF)\Hz		50(60)	120	400	1K	10K	50K-100K
Multi-plier	CAP ≤ 10	0.8	1	1.30	1.45	1.65	1.70
	10 < CAP ≤ 100	0.8	1	1.23	1.36	1.48	1.53
	100 < CAP ≤ 1000	0.8	1	1.16	1.25	1.35	1.38

Temperature °C	45	60	70	85	95	105
Multier	2.10	1.90	1.65	1.40	1.25	1.00

Diagram of Dimensions: (Unit: mm)



Dφ	5	6.3	8	10	13	16
F	2.0	2.5	3.5	5.0	5.0	7.5
dφ	0.5	0.5	0.5	0.8	0.8	1.0

Case Size

φD x L (mm)

W.V. uF	10 (13)	16 (20)	23 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)
0.47	→			→	5X11	5X11	5X11	5X11	6.3X11	6.3X11
1	→			→	5X11	5X11	5X11	6.3X11	8X11.5	8X11.5
2.2	→			→	5X11	5X11	5X11	8X11.5	8X11.5	10X12.5
3.3	→			→	5X11	6.3X11	6.3X11	8X11.5	10X12.5	10X16
4.7	→			→	5X11	6.3X11	8X11.5	10X12.5	10X16	10X20
10	→	→	5X11	5X11	6.3X11	6.3X11	8X11.5	10X16	10X20	10X20
22	→	5X11	6.3X11	6.3X11	8X11.5	8X11.5	10X16	13X20	13X20	13X25
33	5X11	6.3X11	6.3X11	8X11.5	8X11.5	10X12.5	13X20	13X20	13X20	16X25
47	5X11	6.3X11	6.3X11	8X11.5	10X12.5	10X16	13X20	13X25	13X25	-
100	6.3X11	6X11.5	8X11.5	10X12.5	10X20	13X20	13X25	-	-	-
220	8X11.5	10X12.5	10X12.5	10X20	13X25	13X25	-	-	-	-
330	10X12.5	10X12.5	10X16	13X20	16X25	-	-	-	-	-
470	10X12.5	10X16	13X20	13X25	-	-	-	-	-	-
1000	10X20	13X20	-	-	-	-	-	-	-	-

Maximum Ripple Current

(mA, 100 KHz at 105 °C)

W.V. μF	10 (13)	16 (20)	23 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)
0.47	→			→	11	12	14	17	21	28
1	→			→	17	18	21	25	28	34
2.2	→			→	25	26	34	38	42	50
3.3	→			→	27	28	39	43	47	57
4.7	→			→	34	34	47	52	56	89
10	→	→	34	43	52	57	71	89	95	135
22	→	57	65	73	89	95	135	150	180	220
33	64	70	80	100	105	135	220	230	265	320
47	76	95	95	120	150	180	240	265	-	-
100	125	160	160	230	265	320	425	-	-	-
220	215	275	305	410	480	575	-	-	-	-
330	345	375	450	505	650	-	-	-	-	-
470	410	485	540	655	-	-	-	-	-	-
1000	720	855	-	-	-	-	-	-	-	-