

LNH Series

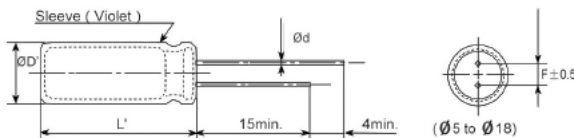
- Downsizing and high-ripple current
- Endurance with ripple current: +125°C 3000 hours
- Suit for automobile modules and networking equipment and other high temperature applications...
- RoHs Compliant



◆ SPECIFICATIONS

Items	Characteristics											
Category Temperature Range	-40 ~ +125°C						-25 ~ +125°C					
Rated Voltage Range	6.3 ~ 100 Vdc						160 ~ 450 Vdc					
Capacitance Tolerance	±20%(M)						(at 20°C, 120Hz)					
Leakage Current	6.3 to 100Vdc : I=0.01CV(μA) or 3μA, which is greater.						160 to 450Vdc : I≤0.04CV +100μA					
	Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage(V) (at 20°C after 1 minutes)											
Dissipation Factor (tan δ)	Rated Voltage (Vdc)	6.3v	10v	16v	25v	35v	50v	63v	80v	100v	160 to 250v	350 ~ 450v
	tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08	0.20	0.24
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase . (at 20°C, 120Hz)											
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage (Vdc)		6.3 to 100v			160 to 250v			350 to 450v			(at 120Hz)
	Z(-25°C)/Z(+20°C)		2max			3			6			
	Z(-40°C)/Z(+20°C)		3max			6			6			
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 3000 hours at 125°C.											
	Capacitance change		≤±20% of the initial value.									
	D.F. (tan δ)		≤150% of the initial specified value.									
	Leakage current		≤ The initial specified value.									
Shelf Life	The following specifications shall be satisfied when the capacitors performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C after exposing them for 1000hours at 125°C without voltage applied.											
	Capacitance change		≤±20% of the initial value.									
	D.F. (tan δ)		≤200% of the initial specified value.									
	Leakage current		≤The initial specified value.									

◆ DIMENSIONS [mm]



φD	5	6.3	8	10	12.5	16	18	22	
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	
φD'						φD+0.5max.			
L'						L+2.0max.			

◆ RATED RIPPLE CURRENT MULTIPLIERS

FREQUENCY COEFFICIENT

Freq.(Hz) μF	120	1K	10K	100K
6.8 ~ 180	0.40	0.75	0.90	1.00
220 ~ 560	0.44	0.85	0.94	1.00
680 ~ 1800	0.60	0.87	0.95	1.00
2200 ~ 3900	0.75	0.90	0.95	1.00
4700 ~	0.85	0.95	0.98	1.00

Part number system for Radial type:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		L	N	H	2	G	1	0	0	E	G	0	2	0	M
Type of series					Voltage code(V)		Capacitance code(μF)			Sleeve material	Diameter (mm)	The length(mm)		Capacitance tolerance	

◆ Standard Rating of LNH Series (6.3v-100v)

WV (Vdc)	Cap (μ F)	Case size ϕ D×L(mm)	IMP.(Ω max)100KHz		Ripple current mA/125°C, 100KHz
			20°C	-10°C	
6.3(0J)	150	5×11	0.30	1.00	318
	330	6.3×11	0.13	0.41	499
	560	8×11.5	0.072	0.22	766
	820	8×16	0.056	0.17	919
	1000	10×12.5	0.053	0.16	1136
	1200	10×16	0.038	0.12	1322
	1500	10×20	0.023	0.069	1682
	2200	10×25	0.022	0.066	1987
	3300	12.5×20	0.021	0.053	2181
	3900	12.5×25	0.018	0.045	2561
	4700	12.5×30	0.016	0.041	2902
	5600	16×20	0.018	0.045	3041
6800	16×25	0.016	0.043	3199	
10(1A)	100	5×11	0.30	1.00	415
	220	6.3×11	0.13	0.41	600
	470	8×11.5	0.072	0.22	1071
	680	10×12.5	0.053	0.16	1460
	1000	10×16	0.038	0.12	1811
	1200	10×20	0.023	0.069	2033
	1500	10×25	0.022	0.066	2330
	2200	12.5×20	0.021	0.053	2819
	3300	12.5×25	0.018	0.045	2958
	3900	12.5×30	0.016	0.041	3143
	4700	12.5×30	0.015	0.039	3568
	5600	16×25	0.016	0.043	3994
16(1C)	56	5×11	0.30	1.00	360
	120	6.3×11	0.13	0.41	507
	330	8×11.5	0.072	0.22	1007
	470	10×12.5	0.053	0.16	1227
	680	10×16	0.038	0.12	1691
	1000	10×20	0.023	0.069	2061
	1200	10×25	0.022	0.066	2172
	1500	12.5×20	0.021	0.053	2459
	2200	12.5×25	0.018	0.045	2653
	2700	12.5×30	0.016	0.041	3319
	3300	12.5×30	0.015	0.039	3568
	3900	16×25	0.016	0.043	3994
4700	16×25	0.015	0.041	4086	
6800	16×25	0.014	0.049	4233	
25(1E)	47	5×11	0.30	1.00	415
	100	6.3×11	0.13	0.41	646
	220	8×11.5	0.072	0.22	1108
	330	10×12.5	0.053	0.16	1497
	470	10×16	0.038	0.12	1691
	680	10×20	0.023	0.069	2144
	820	10×25	0.022	0.066	2459
	1000	12.5×20	0.021	0.053	2542
	1500	12.5×25	0.018	0.045	2653
	1800	12.5×30	0.016	0.041	3133
	2200	16×25	0.015	0.040	3568
	2700	16×25	0.015	0.039	3633
3300	16×35	0.014	0.039	4031	
3900	18×35	0.015	0.040	4086	
4700	18×40	0.014	0.037	4223	
35(1V)	33	5×11	0.30	1.00	415
	56	6.3×11	0.13	0.41	586
	150	8×11.5	0.072	0.22	1165
	220	10×12.5	0.053	0.16	1599
	330	10×16	0.038	0.12	1968
	470	10×20	0.023	0.069	2422
	560	10×25	0.022	0.066	2634
	680	10×20	0.021	0.053	2819
	1000	12.5×25	0.018	0.045	2967
	1200	12.5×30	0.016	0.041	3226
	1500	16×25	0.016	0.039	3522
	1800	16×25	0.016	0.043	3994
2200	16×35	0.015	0.039	4114	
2700	18×35	0.016	0.041	4317	
3300	18×40	0.015	0.039	4428	
50(1H)	22	5×11	0.34	1.18	415
	56	6.3×11	0.14	0.50	679
	100	8×11.5	0.074	0.22	1312
	120	8×11.5	0.061	0.18	1645
	150	10×12.5	0.061	0.18	1747
	180	10×12.5	0.046	0.14	1997
	220	10×16	0.042	0.12	2191
	270	10×20	0.030	0.090	2265
	330	10×25	0.028	0.085	2468
	470	12.5×20	0.027	0.068	2635
	680	12.5×30	0.021	0.052	2736
	820	16×20	0.023	0.059	3115
1000	16×25	0.021	0.056	3629	
2200	18×30	0.019	0.054	4285	
3300	18×30	0.019	0.054	4618	
3900	22×40	0.018	0.052	4889	
4700	22×40	0.018	0.052	5009	
63(1J)	15	5×11	0.88	3.5	336
	33	6.3×11	0.35	1.4	365
	56	8×11.5	0.22	0.88	572
	82	10×12.5	0.11	0.44	914
	120	10×16	0.076	0.31	1234
	180	10×20	0.056	0.23	1433
	220	10×25	0.046	0.19	1543
	270	12.5×20	0.041	0.13	1664
	390	12.5×25	0.031	0.093	2116
	470	12.5×30	0.028	0.084	2367
	560	16×25	0.023	0.072	2524
	680	16×25	0.025	0.075	2680
820	16×30	0.021	0.063	2902	
1000	16×30	0.019	0.057	3050	
1200	16×40	0.018	0.054	3217	
1500	18×35	0.018	0.054	3328	
1800	18×40	0.017	0.051	3596	
2200	18×40	0.017	0.050	3744	
2700	18×40	0.017	0.050	3938	
3300	22×35	0.016	0.049	4086	
3900	22×40	0.015	0.048	4170	
4700	22×40	0.015	0.048	4881	

◆ Standard Rating of LNH Series (6.3v-100v)

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/125°C, 100KHz
			20°C	-10°C	
80(1K)	68	10×12.5	0.17	0.66	914
	100	10×16	0.11	0.47	1100
	120	10×20	0.084	0.34	1247
	150	10×25	0.069	0.28	1451
	220	12.5×20	0.062	0.18	1728
	330	12.5×25	0.047	0.14	2042
	390	12.5×30	0.042	0.13	2236
	470	16×25	0.038	0.12	2570
	560	16×30	0.032	0.095	2829
	680	16×30	0.032	0.095	3087
	820	16×35	0.029	0.086	3517
	1000	18×35	0.027	0.081	3625
	1200	18×40	0.026	0.077	3769
	1500	18×40	0.026	0.076	3874
	1800	18×45	0.025	0.075	3921
	2200	18×45	0.025	0.075	4005
2700	22×25	0.023	0.073	4116	
3300	22×30	0.023	0.073	4326	
3900	22×40	0.022	0.073	4613	

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/125°C, 100KHz
			20°C	-10°C	
100 (2A)	6.8	5×11	1.4	5.6	402
	15	6.3×11	0.57	2.3	470
	27	8×11.5	0.36	1.4	600
	39	10×12.5	0.25	1.0	757
	47	10×12.5	0.17	0.66	877
	56	10×16	0.17	0.66	1192
	68	10×16	0.11	0.47	1247
	82	10×20	0.084	0.34	1377
	100	12.5×20	0.084	0.34	1553
	120	12.5×20	0.069	0.28	1599
	150	12.5×20	0.062	0.18	1756
	220	12.5×25	0.047	0.14	1876
	270	12.5×30	0.042	0.13	2403
	330	16×25	0.038	0.12	2643
	390	16×30	0.032	0.095	2773
	470	18×25	0.032	0.095	2931
	560	18×30	0.030	0.090	3050
	680	18×35	0.027	0.081	3495
	820	18×40	0.026	0.077	3698

◆ Standard Rating of LNH Series (160v-450v)

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Ripple current(mA/125°C)	
				120Hz	100KHz
160 (2C)	10	10×16	0.20	165	412
	22	10×20	0.20	213	532
	33	10×20	0.20	240	600
	47	10×20	0.20	296	740
	68	12.5×20	0.20	452	1130
	82	12.5×20	0.20	546	1365
	100	12.5×30	0.20	666	1665
	150	16×20	0.20	814	2035
	220	16×25	0.20	1126	2559
	330	18×30	0.20	1442	3277
200 (2D)	10	10×16	0.20	184	460
	22	10×20	0.20	258	645
	33	10×20	0.20	332	830
	47	12.5×20	0.20	416	1040
	68	12.5×20	0.20	522	1305
	82	16×20	0.20	583	1457
	100	16×20	0.20	670	1675
	150	16×25	0.20	896	2240
	220	18×30	0.20	1146	2604
	330	18×35	0.20	1520	3454
250 (2E)	10	10×20	0.20	213	532
	22	10×20	0.20	295	945
	33	12.5×20	0.20	388	1320
	47	12.5×20	0.20	481	1760
	68	16×20	0.20	601	1832
	82	16×20	0.20	675	1903
	100	16×25	0.20	777	2365
	150	18×30	0.20	1017	2542
220	18×30	0.20	1284	2918	

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Ripple current(mA/125°C)	
				120Hz	100KHz
350 (2V)	6.8	10×16	0.24	221	552
	10	10×20	0.24	245	612
	22	12.5×20	0.24	314	785
	33	16×20	0.24	462	1155
	47	16×20	0.24	536	1340
	68	16×25	0.24	638	1595
	82	18×25	0.24	712	1780
	100	18×25	0.24	850	2125
	120	18×30	0.24	906	2265
	150	18×35	0.24	1100	2750
400 (2G)	6.8	10×16	0.24	245	612
	10	10×20	0.24	314	785
	15	12.5×20	0.24	379	947
	22	12.5×20	0.24	462	1155
	33	16×20	0.24	536	1340
	47	16×25	0.24	638	1595
	68	18×25	0.24	712	1780
	82	18×25	0.24	850	2125
	100	18×30	0.24	906	2265
	120	18×35	0.24	1100	2750
150	18×40	0.24	1155	2887	
450 (2W)	6.8	10×20	0.24	314	785
	10	12.5×20	0.24	379	947
	15	12.5×25	0.24	462	1155
	22	16×20	0.24	536	1340
	47	16×25	0.24	712	1780
	68	18×30	0.24	850	2125
	82	18×35	0.24	906	2265
	100	18×40	0.24	1100	2750

- Taping, Cutting Products & other customized demands are available upon request.
- Please check with us about the specified actual demanding.