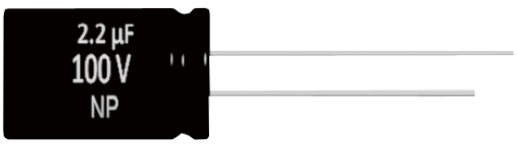
NP Series

- Standard non-polarized series
- Designed for use in circuits with reversed polarity
- Endurance: 2000 hours at 105℃
- Sleeve color: White Print in Black Sleeve



Series Features:

Item	Characteristics											
Operating Temperature Range(℃)	-40～+105						-25～+105					
Voltage Range(V)	6.3～100						160～250					
Capacitance Range(µF)	0.47-3300						0.47-47					
Capacitance Tolerance (20℃,120HZ)	±20%											
Leakage current(µA) (20℃)	I≤0.03CV or 3µA,Whichever is greater(after 2mintes)											
	C:Nominal Capacitance(µF) V:Rated Voltage(V)											
Dissipation Factor (20℃,120HZ)	R.v.(v)	6.3	10	16	25	35	50	63	100	160	200	250
	Tanδ	0.25	0.25	0.2	0.16	0.15	0.13	0.12	0.10	0.15	0.15	0.2
	When nominal capacitance exceeds 1,000 µF,add 0.02 to the value above for each 1,000µF increase											
Stability at low Temperature (Impedance Ratio at 120Hz)	R.V.(V)	6.3	10	16	25	35	50	63	100	160	200	250
	Z-25℃/Z+20℃	4	3	2	2	2	2	2	2	2	2	3
	Z-40℃/Z+20℃	10	8	6	5	4	4	3	3	-	-	-
Load Life (+105℃ 2000h)	The following specification shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2,000 hours at 105℃ ,however the polarization shall be reversed every 250 hours											
	Capacitance Change	Within ±20% of the initial measured Value.										
	Dissipation Factor	≤200% of the initial specified Value										
	Leakage current	≤The initial specified value										
Shelf Life (+105℃ 1000h)	The following specification shall be satisfied when the capacitors are restored to 20℃ after exposing them for1000h at 105℃ without Voltage applied.											
	Capacitance Change	Within ±20% of the initial measured Value										
	Dissipation Factor	≤200% of the initial specified Value										
	Leakage current	≤200% of the initial specified Value										

Frequency Coefficient

Freq.(HZ) / Cap.(µF)	50(60)	120	400	1K	10K	50K-100K
CAP≤10	0.8	1	1.3	1.45	1.65	1.7
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
1000 < CAP	0.8	1	1.11	1.17	1.25	1.28

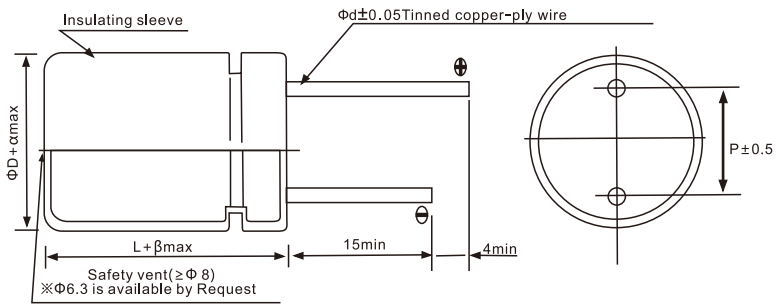
Temperature Coefficieng

Temperature (℃)	40	60	70	85	105
Factor	2.4	2.1	1.78	1.65	1

NP Series

Dimensions (mm)

ΦD	5	6.3	8	10	13	16	18	20	22
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	10
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	0.8
β	1.0			2.0					
α	0.5								



Ratings

R.V.(V)	6.3		10		16		25		35		50		63	
Freq.(HZ) / Cap.(μF)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)
0.47											5×11	10	5×11	11
1											5×11	15	5×11	16
2.2											5×11	23	5×11	23
3.3											5×11	24	6.3×11	25
4.7											5×11	31	6.3×11	31
10							5×11	34	5×11	43	6.3×11	47	6.3×11	51
22			5×11	54	5×11	57	6.3×11	65	6.3×11	72	8×12	83	8×12	87
33			5×11	56	5×11	70	6.3×11	83	8×12	95	8×12	98	10×13	126
47			5×11	77	6.3×11	93	6.3×11	95	8×12	114	10×13	135	10×16	162
100	6.3×11	113	6.3×11	115	8×12	150	8×12	162	10×13	194	10×20	239	13×20	288
220	6.3×11	162	8×12	186	10×13	248	10×13	272	10×20	365	13×20	428	13×25	459
330	8×12	230	10×13	248	10×16	321	10×20	401	13×20	452	13×25	504		
470	10×13	303	10×16	353	10×20	415	13×20	482	13×25	594	16×32			
1000	10×20	590	13×20	637	13×20	662								
2200	13×20	771	16×25	905	16×32	995								
3300	16×25	878	18×40	1175										

Ripple Current (mArms)at105℃,120HZ

NP Series

Ratings

R.V.(V)	100		160		200		250	
Cap.(μF) \ Freq.(HZ)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)	ΦDxL (mm)	Ripple Current (mArms)
0.47	5×11	13	5×11	15	6.3×11	19	6.3×11	25
1	5×11	19	6.3×11	23	8×12	25	8×12	29
2.2	5×11	31	8×12	34	8×12	38	10×13	43
3.3	6.3×11	35	8×12	39	10×13	41	10×16	51
4.7	8×12	42	10×13	47	10×16	50	10×20	79
10	8×12	64	10×16	80	10×20	86	10×20	117
22	10×16	126	13×21	140	13×21	162	13×25	202
33	10×16	171	13×21	207			16×25	275
47	10×20	176	13×25	225				
100	16×25	383						
220	16×25	468						

Ripple Current (mArms)at105℃,120HZ