

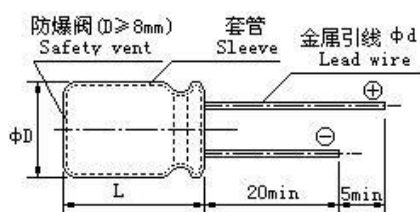
## NP

- Non-polarized
- Endurance 2000 hours at 105°C
- Comply with the RoHS

## SPECIFICATIONS

Category Temperature	-40+105°C								
Voltage Range	6.3-100V.DC								
Capacitance Tolerance	±20%(120Hz,20°C)								
Leakage Current	I≤0.03CV(μA) or 3μA, whichever is greater (2 minutes)								
Dissipation Factor (120hz、20°C)	WV	6.3	10	16	25	35	50	63	100
	tgδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
When nominal capacitance is over 1000 μF, tanδ shall be added 0.02 to the list value with increase of every 1000 μF.									
Stability at Low Temperature (120Hz)	WV	6.3	10	16	25	35	50	63	100
	Z <sub>-25°C</sub> /Z <sub>+20°C</sub>	4	3	2	2	2	2	2	2
	Z <sub>-40°C</sub> /Z <sub>+20°C</sub>	8	6	4	3	3	3	3	3
Endurance	In an environment of +105°C, apply the operating voltage with ripple current for 2000 hours (the polarity needs to exchange every 250 hours), after 16 hours of recovery, the product performance meets the following requirements:								
	Capacitance Change	Within ±20%of initial measured							
	Dissipation Factor	≤200% of initial specified value							
	Leakage Current	≤initial specified value							
Shelf Life	In an environment of +105°C, apply the operating voltage with ripple current for 1000 hours, and after 16 hours of recovery, the product performance meets the following requirements:								
	Capacitance Change	Within ±20%of initial measured							
	Dissipation Factor	≤200% of initial specified value							
	Leakage Current	≤200% of initial specified value							

## DRAWING & DIMENSIONS (Unit: mm)



ΦD	5	6.3	8	10	13	16	18
F±0.5	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd±0.05	0.5	0.5	0.5	0.6	0.6	0.8	0.8
L	(L<20) ±1.5			(L≥20) ±2.0			
D	(D<20) ±0.5			(D≥20) ±1.0			

## FREQUENCY COEFFICIENT OF ALLOWABLE RIPPLE CURRENT

Capacitance(μF)	Frequency(Hz)			
	50	120	1K	≥10K
Capacitance≤47	0.75	1.00	1.57	2.00
68≤Capacitance≤220	0.80	1.00	1.34	1.50
Capacitance≥330	0.85	1.00	1.13	1.15

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### NOMINAL CAPACITANCE, RATED VOLTAGE & DIMENSIONS

	6.3V (0J)			10V (1A)		
	Dimensions (mm)	Ripple Current (mA)	Part Number	Dimensions (mm)	Ripple Current (mA)	Part Number
22				5X11	42	NP1A220M0511BBH00000
33	5X11	46	NP0J330M0511BBH00000	6.3X12	57	NP1A330M6L12CBH00000
47	6.3X12	61	NP0J470M6L12CBH00000	6.3X12	67	NP1A470M6L12CBH00000
100	8X12	104	NP0J101M0812DBH00000	10X13	125	NP1A101M1013EBH00000
220	10X13	168	NP0J221M1013EBH00000	10X16	204	NP1A221M1016EBH00000
330	10X16	229	NP0J331M1016EBH00000	10X20	275	NP1A331M1020EBH00000
470	10X20	330	NP0J471M1020EBH00000	13X20	371	NP1A471M1320EBH00000
1000	13X25	550	NP0J102M1325EBH00000	16X25	668	NP1A102M1625FBH00000

	16V (1C)			25V (1E)		
	Dimensions (mm)	Ripple Current (mA)	Part Number	Dimensions (mm)	Ripple Current (mA)	Part Number
4.7				5X11	23	NP1E4R7M0511BBH00000
10	5X11	30	NP1C100M0511BBH00000	5X11	34	NP1E100M0511BBH00000
22	6.3X12	51	NP1C220M6L12CBH00000	6.3X12	55	NP1E220M6L12CBH00000
33	6.3X12	63	NP1C330M6L12CBH00000	8X12	79	NP1E330M0812DBH00000
47	8X12	89	NP1C470M0812DBH00000	10X13	100	NP1E470M1013EBH00000
100	10X13	139	NP1C101M1013EBH00000	10X16	164	NP1E101M1016EBH00000
220	10X20	279	NP1C221M1020EBH00000	13X25	336	NP1E221M1325EBH00000
330	13X20	346	NP1C331M1320EBH00000	13X25	414	NP1E331M1325EBH00000
470	13X25	460	NP1C471M1325EBH00000	16X25	543	NP1E471M1625FBH00000
1000	16X25	746	NP1C102M1625FBH00000	16X30	871	NP1E102M1630FBH00000

Rated ripple current: (105°C, 120Hz)

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### NOMINAL CAPACITANCE, RATED VOLTAGE & DIMENSIONS

	35V (1V)			50V (1H)		
	Dimensions (mm)	Ripple Current (mA)	Part Number	Dimensions (mm)	Ripple Current (mA)	Part Number
2.2				5X11	18	NP1H2R2M0511BBH00000
3.3				5X11	22	NP1H3R3M0511BBH00000
4.7	5X11	25	NP1V4R7M0511BBH00000	6.3X12	29	NP1H4R7M6L12CBH00000
10	6.3X12	40	NP1V100M6L12CBH00000	8X12	51	NP1H100M0812DBH00000
22	8X12	68	NP1V220M0812DBH00000	10X13	82	NP1H220M1013EBH00000
33	10X13	89	NP1V330M1013EBH00000	10X16	107	NP1H330M1016EBH00000
47	10X13	111	NP1V470M1013EBH00000	10X20	146	NP1H470M1020EBH00000
100	10X20	196	NP1V101M1020EBH00000	13X25	164	NP1H101M1325EBH00000
220	13X25	364	NP1V221M1325EBH00000	16X25	443	NP1H221M1625FBH00000
330	16X25	493	NP1V331M1625FBH00000	16X30	593	NP1H331M1630FBH00000
470	16X25	586	NP1V471M1625FBH00000			

	63V (1J)			100V (2A)		
	Dimensions (mm)	Ripple Current (mA)	Part Number	Dimensions (mm)	Ripple Current (mA)	Part Number
2.2				6.3X12	22	NP2A2R2M6L12CBH00000
3.3	6.3X12	26	NP1J3R3M6L12CBH00000	8X12	32	NP2A3R3M0812DBH00000
4.7	6.3X12	31	NP1J4R7M6L12CBH00000	8X12	39	NP2A4R7M0812DBH00000
10	8X12	53	NP1J100M0812DBH00000	10X13	64	NP2A100M1013EBH00000
22	10X16	96	NP1J220M1016EBH00000	10X20	114	NP2A220M1020EBH00000
33	10X20	129	NP1J330M1020EBH00000	13X20	164	NP2A330M1320EBH00000
47	10X20	157	NP1J470M1020EBH00000	13X25	200	NP2A470M1325EBH00000
100	13X25	275	NP1J101M1325EBH00000	16X25	304	NP2A101M1625FBH00000
220	16X30	486	NP1J221M1630FBH00000			

Rated ripple current: (105°C, 120Hz)