

## NP Series

+105°C, Non-polar(无极性)

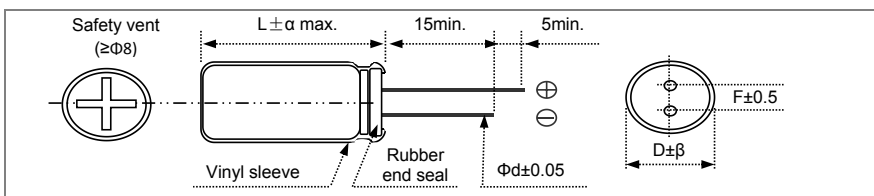
### FEATURES 特点

1. Non-polarized.
2. Suitable for use in polarity and change circuits.

### SPECIFICATIONS 规格表

Item 项目	Performance Characteristics 特性参数									
Operation Temperature Range 工作温度范围	-40 to +105°C									
Rated Working Voltage Range 额定电压范围	6.3 to 100V									
Nominal Capacitance Range 静电容量范围	0.47 to 1000μF									
Capacitance Tolerance 静电容量允许偏差	±20%(120Hz, +20°C)									
Leakage Current 漏电流	LC ≤ 0.03CV or 3(μA) Whichever is greater after 5 minutes application of rated working voltage at +20°C 施加额定工作电压充电5分钟后读数, 二者取大值。 [C: 静电容量(μF), V: 额定电压(V)]									
Dissipation Factor (tan δ) 损失角正切值 (120Hz, +20°C)	Working Voltage(V)	6.3	10	16	25	35	50	63	100	
	tan δ(max)	0.26	0.24	0.22	0.20	0.16	0.14	0.12	0.10	
Low Temperature characteristics 温度特性(阻抗比)	Impedance ratio max. at 120 Hz 阻抗比最大值									
	Working Voltage(V)	6.3	10	16	25	35	50	63	100	
	Z(-25°C)/ Z(+20°C)	4	3	2	2	2	2	2	2	2
	Z(-40°C)/ Z(+20°C)	8	6	4	4	3	3	3	3	3
High Temperature Loading (Endurance) 高温负荷寿命(耐久性)	Test conditions 试验条件					Post test requirements at +20°C 试验后特性应满足如下要求				
	Duration 持续时间	1,000 hours				Leakage current 漏电流	≤ Initial specified value 初始规格值			
	Ambient temp. 环境温度	+105°C				Cap. Change 静电容量变化率	within ±20% of initial measured value 初始测试值的±20%内			
	Applied voltage 施加电压	Rated DC working voltage to each Polarity every 250 hours at +105°C 每个极性施加额定工作电压250小时				D.F.(tan δ) 损失角正切值	≤ 200% of initial specified value 2倍初始规格值			
Before test requirement: Resumed 16 hours at normal temperature 测试前将电容在常温中放置16小时										
Shelf Life 高温储存寿命	Test conditions 试验条件					Post test requirements at +20°C 试验后特性应满足如下要求				
	Duration 持续时间	1,000 hours				Leakage current 漏电流	≤ Initial specified value 初始规格值			
	Ambient temp. 环境温度	+105°C				Cap. Change 静电容量变化率	within ±20% of initial measured value 初始测试值的±20%内			
	Applied voltage 施加电压	(None) 无				D.F.(tan δ) 损失角正切值	≤ 200% of initial specified value 2倍初始规格值			
* (Before the measurements, the capacitor shall be pretreated by applying DC working voltage for 30min, after discharged and then stored under standard atmospheric conditions for 24-48 hours) 测试前应将电容在常温中施加工作电压30分钟, 放电后在标准气压下放置24~48小时										
Other 其他	JIS C-5101 (IEC 60384)									

### CASE SIZE TABLE 尺寸图 (Unit : mm)



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

### Multiplier for Ripple Current vs. Frequency 纹波电流频率修正系数

Frequency Coefficient 频率系数

Cap(μF)	50 Hz	120 Hz	300 Hz	1KHz	10KHz~
≤47	0.75	1.00	1.35	1.57	2.00
68~22	0.80	1.00	1.23	1.34	1.50
≥560	0.85	1.00	1.10	1.13	1.15

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**STANDARD RATINGS 标准品一览表**

Voltage(Code)		6.3V(0J)		10V(1A)		16V(1C)		25V(1E)	
Cap.(μF)	Code	Case Size	R.C	Case Size	R.C	Case Size	R.C	Case Size	R.C
1	001								
4.7	4P7							5×11	23
10	010					5×11	30	5×11	34
22	022			5×11	42	6.3×12	51	6.3×12	55
33	033	5×11	46	6.3×12	57	6.3×12	63	8×12	79
47	047	6.3×12	61	6.3×12	67	8×12	89	10×13	100
100	101	8×12	104	10×13	125	10×13	139	10×16	164
220	221	10×13	168	10×16	204	10×20	276	13×25	336
330	331	10×16	229	10×20	275	13×21	346	13×25	414
470	471	10×20	300	13×21	371	13×25	460	16×25	543
1000	102	13×25	550	16×25	668	16×25	746	16×30	871

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size ΦD x L(mm)

Voltage(Code)		35V(1V)		50V(1H)		63V(1J)		100V(2A)	
Cap.(μF)	Code	Case Size	R.C	Case Size	R.C	Case Size	R.C	Case Size	R.C
0.47	P47			5×11	8			5×11	10
1	001			5×11	12			5×11	15
2.2	2P2			5×11	18			6.3×12	22
3.3	3P3			5×11	22	6.3×12	26	8×12	32
4.7	4P7	5×11	25	6.3×12	29	6.3×12	31	8×12	39
10	010	6.3×12	40	8×12	51	8×12	53	10×13	64
22	022	8×12	68	10×13	82	10×16	96	10×20	114
33	033	10×13	89	10×16	107	10×20	129	13×21	164
47	047	10×13	111	10×20	146	10×20	157	13×25	200
100	101	10×20	196	13×25	264	13×25	275	16×25	304
220	221	13×25	364	16×25	443	16×30	486		
330	331	16×25	493	16×30	593				
470	471	16×25	586						

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size ΦD x L(mm)

Specifications are subject to change without notice. Should a safety or technical concern arise regarding the product, please be sure to contact our sales offices or agents immediately