

## NP Series

- Standard non-polarized series
- Designed for use in circuits with reversing polarity
- Load life of 1000 hours at 85°C
- Solvent-proof
- Rohs compliance.

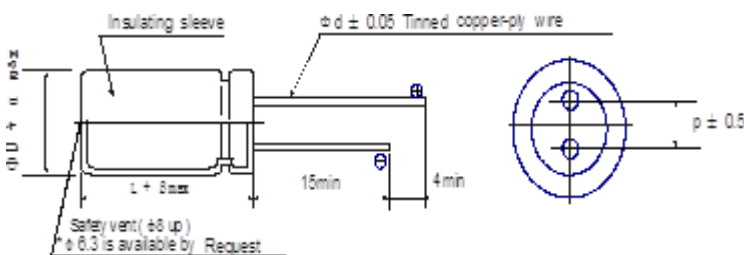


### ■ SPECIFICATIONS

Item	Characteristics																											
Operating Temperature Range	- 40 ~ +85°C																											
Voltage Range	6.3 ~ 100 V.DC																											
Nominal Cap. Range	0.47 ~ 4700 μF																											
Capacitance Tolerance	- 20% ~ + 20% (at 20°C, 120Hz)																											
Leakage Current	$I = 0.03CV$ or $3(\mu A)$ whichever is greater.(after 5 min.) where, I: Max Leakage Current(μA), C: Nominal Capacitance(μF), V: Rated Voltage(V) (at 20°C)																											
Dissipation Factor (tanδ) ( at 120Hz, +20°C )	<table border="1"> <tr> <td>WV</td> <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> <td>tanδ</td> <td>0.24</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.10</td> </tr> </table>	WV	6.3	10	16	25	35	50	63	100	tanδ	0.24	0.20	0.17	0.15	0.14	0.12	0.12	0.10									
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tanδ	0.24	0.20	0.17	0.15	0.14	0.12	0.12	0.10																				
Low Temp. Impedance Stability at 120Hz	<table border="1"> <tr> <td>W. V .</td> <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> <td>Z(- 25°C) / Z(+ 20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(- 40°C) / Z(+ 20°C)</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	W. V .	6.3	10	16	25	35	50	63	100	Z(- 25°C) / Z(+ 20°C)	4	3	2	2	2	2	2	2	Z(- 40°C) / Z(+ 20°C)	10	8	6	5	4	4	3	3
W. V .	6.3	10	16	25	35	50	63	100																				
Z(- 25°C) / Z(+ 20°C)	4	3	2	2	2	2	2	2																				
Z(- 40°C) / Z(+ 20°C)	10	8	6	5	4	4	3	3																				
High Temp. Load Test	85°C 1,000 hours, at rated voltage, during which the polarity of DC voltage is reversed for each 500 hours, the capacitor shall meet the following limits: Capacitance change ... $\leq \pm 20\%$ of the initial measured value Tan δ ... $\leq 150\%$ of the initial specified value DC leakage current ... $\leq$ the initial specified value																											
High Temp. Non-Load Test	After storage for 500 hours at 85°C with no voltage applied, voltage treatment of JIS-C-5102 article 4-4 is to be given and then measurement shall be made, at which time requirements specified in the table "High temperature loading" can be met.																											

Note : Some cleaning solvents may adversely affect the capacitors . Consult us about the suitable type of cleaning solvents to be used.

### ● DRAWING



Unit :mm

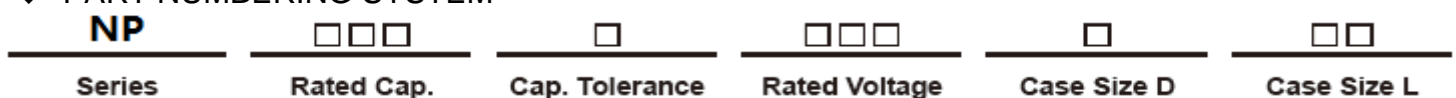
ΦD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8
β	1.0			1.5			
α	0.5						

### ▼ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

Freq.(HZ)	60(50)	120	300	1K	10K
0.47~ 47	0.75	1.00	1.35	1.55	2.00
68 ~ 680	0.80	1.00	1.25	1.34	1.50
1000 ~4700	0.85	1.00	1.10	1.13	1.15

### ◆ PART NUMBERING SYSTEM



# Aluminum Electrolytic Capacitors



## NP Series

### STANDARD RATINGS

wV(Vdc) Parameter Cap (μF)	6.3		10		16		25		35		50		63		100	
	ΦDxL (mm)	Ripple current (mAmps)	ΦDxL (mm)	Ripple current (mAmps)	ΦDxL (mm)	Ripple current (mAmps)	ΦDxL (mm)	Ripple current (mAmps)	ΦDxL (mm)	Ripple current (mAmps)	ΦDxL (mm)	Ripple current (mAmps)	ΦDxL (mm)	Ripple current (mAmps)	ΦDxL (mm)	Ripple current (mAmps)
0.47											5X11	10			5X11	11
1											5X11	12			5X11	15
2.2											5X11	20	5X11	20	6.3X11	25
3.3											5X11	26	5X11	27	6.3X11	35
4.7							5X11	30	5X11	30	5X11	33	6.3X11	35	6.3X11	45
10					5X11	40	5X11	45	5X11	50	6.3X11	60	6.3X11	60	8X11.5	70
22			5X11	50	5X11	60	6.3X11	70	6.3X11	80	8X11.5	90	8X11.5	100	10X16	130
33	5X11	60	5X11	60	5X11	80	6.3X11	90	8X11.5	100	8X11.5	110	10X12.5	140	13X20	170
47	5X11	70	5X11	80	6.3X11	110	6.3X11	120	8X11.5	130	10X12.5	140	10X16	190	13X20	230
68	6.3x11	80	6.3x11	110	8x11.5	120	8x11.5	130	10x12.5	140	10x16	190	10x20	230	16x20	240
100	6.3X11	120	6.3X11	140	8X11.5	170	8X11.5	190	10X16	210	10X20	250	13X20	310	16X25	380
220	8X11.5	200	8X11.5	210	10X12.5	260	10X16	280	13X20	370	13X25	430	16X25	500	18X36	610
330	8X11.5	240	10X16	300	10X16	360	13X20	420	13X20	480	16X25	560	16X31.5	690		
470	10X12.5	340	10X16	400	10X20	450	13X20	520	13X25	620	16X31.5	760	18X36	900		
680	10x12.5	400	10x20	450	10x20	520	16x20	620	16x25	760						
1000	10X12	590	13X20	690	13X25	790	16X25	950	16X31.5	1000						
2200	13X25	1000	16X25	1100	16X31.5	1350	18X36	1450								
3300	16X25	1300	16X31.5	1400	18X36	1600										
4700	16X31.5	1500	18X36	1700												

