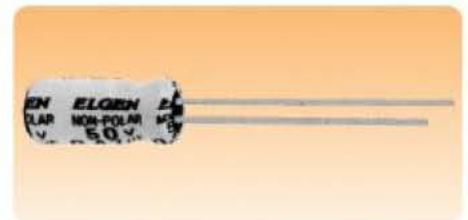


### NP Series

These are non-polar capacitors designed for circuits with reversing polarity.

Tolerance of  $\pm 10\%$  (K) if required can also be available on request

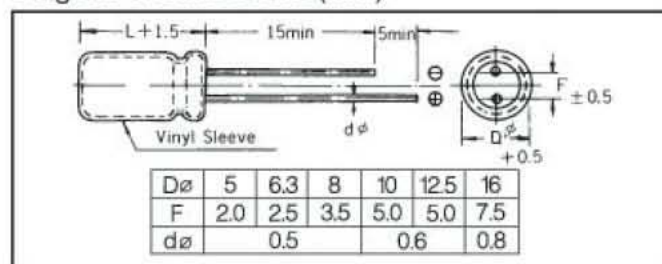


Violet

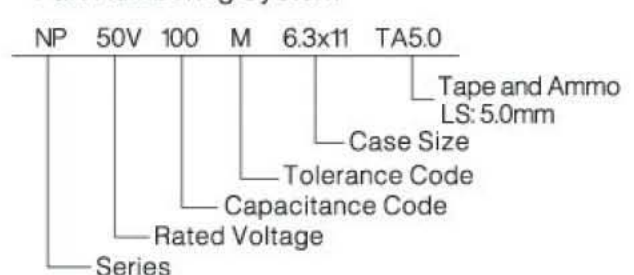
#### Characteristics

Voltage Range	10 - 100V							
Capacitance Range	0.47 - 1000 $\mu$ F							
Temperature Range	-40 + 85°C							
Capacitance Tolerance	-20 - +20% (at 20°C, 120Hz)							
Leakage Current	$I = 0.03 CV + 4 (\mu A)$ max. (After 5 minutes)							
Dissipation Factor (tan $\delta$ )	Rated voltage	10V	16V	25V	35V	50V	63V	100V
	tan $\delta$	0.20	0.16	0.16	0.14	0.14	0.12	0.12
Low Temperature Stability	Impedance ratio at 120Hz							
	Rated voltage	10V	16V	25V	35V	50V	63V	100V
	Z-25°C/Z20°C	3	2	2	2	2	2	2
Z-40°C/Z20°C	6	6	4	4	4	4	4	
Load Life	After 1000 hours application of rated voltage at 85°C the capacitor shall meet the following characteristics							
	Capacitance change	Within $\pm 20\%$ of initial value						
	D.F. (tan $\delta$ )	150% or less of initial specified value						
	Leakage current	initial specified value or less						

#### Diagram of Dimensions (mm)



#### Part Numbering System



#### Case Size of Standard Products

$\mu$ F \ WV	10	16	25	35	50	63	100
0.47					5x11		5x11
1					5x11		5x11
2.2					5x11		5x11
3.3					5x11	5x11	6.3x11
4.7					5x11	6.3x11	6.3x11
6.8					5x11	6.3x11	8x11.5
10				5x11	6.3x11	6.3x11	8x11.5
15			5x11	6.3x11	6.3x11	8x11.5	10x12.5
22		5x11	6.3x11	6.3x11	8x11.5	8x11.5	10x16
33	5x11	5x11	6.3x11	8x11.5	8x11.5	10x12.5	10x20
47	5x11	6.3x11	6.3x11	8x11.5	10x12.5	10x16	12.5x20
68	6.3x11	8x11.5	8x11.5	10x12.5	10x16	10x20	12.5x25
100	6.3x11	8x11.5	8x11.5	10x16	10x20	12.5x20	16x25
150	8x11.5	10x12.5	10x12.5	10x20	12.5x20	12.5x20	16x31.5
220	8x11.5	10x12.5	10x16	12.5x20	12.5x20	12.5x25	16x35.5
330	10x16	10x16	12.5x20	12.5x20	12.5x25	16x25	
470	10x16	10x20	12.5x20	12.5x25	16x25	16x35.5	
680	10x20	12.5x20	12.5x25	16x25	16x35.5		
1000	12.5x20	12.5x25	16x25	16x31.5			

#### Maximum Ripple Current (mA rms 85°C 120Hz)

$\mu$ F \ WV	10	16	25	35	50	63	100
0.47					10		12
1					16		19
2.2					23	25	30
3.3					31	32	39
4.7					39	40	45
6.8					48	50	58
10				55	62	65	80
15			60	63	70	86	98
22		64	70	75	89	115	130
33	70	80	85	98	125	140	185
47	87	95	105	130	150	190	235
68	110	130	140	170	200	240	290
100	135	175	190	230	250	300	430
150	180	230	250	290	350	445	550
220	240	300	320	400	460	560	710
330	315	380	450	490	600	770	
470	400	480	560	640	810	950	
680	570	650	750	880	1030		
1000	730	860	980	1150			