

# Chip Type Aluminum Electrolytic Capacitors

## PN Chip Type Series



- Bi-polarized
- Reflow soldering is available
- Available for high density surface mounting
- Adapted to the RoHS directive (2002/95/EC).

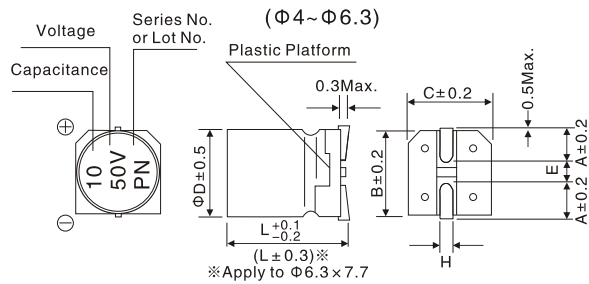
### Specifications

Item	Characteristics						
Operating Temperature Range	-40°C~+85°C						
Rated Voltage Range	6.3V ~ 50V						
Nominal Capacitance Range	0.1 μ F ~ 100 μ F						
Capacitance Tolerance	M (± 20%) (20°C, 120Hz)						
Leakage Current	I ≤ 0.05CV or 10(μ A), whichever is greater. C:Nominal capacitance (μ F) V:Rated voltage(V) (20°C, after 2 minutes)						
Dissipation Factor (Max)	WV	6.3	10	16	25	35	50
	tan δ	0.24	0.20	0.17	0.17	0.15	0.15
(20°C, 120Hz)							
Low Temperature Stability (Impedance Ratio)	WV	6.3	10	16	25	35	50
	Z(-25°C)/Z(+20°C)	4	3	2	2	2	2
	Z(-40°C)/Z(+20°C)	8	6	4	4	3	3
(120Hz)							
Load Life	After 1000 hours' application of rated voltage at 85°C, the capacitors shall meet the following requirement:						
	Capacitance change	Within ± 20% of the initial value.					
	Dissipation factor	Not more than 200% of the initial specified value.					
	Leakage current	Not more than the initial specified value.					
Shelf Life	After storage for 1000 hours at +85°C, the capacitors shall meet the requirement of load life above .						
Rated Ripple Current & Frequency Multipliers	Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10kHz	
	Multiplier	0.70	1.00	1.17	1.36	1.50	

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### ■ Dimensions



	(mm)			
	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 7.7
A	1.8	2.1	2.4	2.4
B	4.3	5.3	6.6	6.6
C	4.3	5.3	6.6	6.6
E	1.0	1.3	2.2	2.2
L	5.4	5.4	5.4	7.7
H	0.5~0.8			

### ■ Nominal capacitance, rated voltage, rated ripple current and case size table

WV Item μ F	6.3		10		16		25		35		50	
	D × L mm	I~	D × L mm	I~	D × L mm	I~	D × L mm	I~	D × L mm	I~	D × L mm	I~
0.1											4 × 5.4	1.0
0.22											4 × 5.4	2.0
0.33											4 × 5.4	2.8
0.47											4 × 5.4	4.0
1.0											4 × 5.4	8.4
2.2									4 × 5.4	8.4	5 × 5.4	13
3.3							5 × 5.4	12	5 × 5.4	16	5 × 5.4	17
4.7					4 × 5.4	12	5 × 5.4	16	5 × 5.4	18	6.3 × 5.4	20
10			4 × 5.4	17	5 × 5.4	23	6.3 × 5.4	27	6.3 × 5.4	29	6.3 × 7.7	36
22	5 × 5.4	28	6.3 × 5.4	33	6.3 × 5.4	37	6.3 × 7.7	50	6.3 × 7.7	54		
33	6.3 × 5.4	37	6.3 × 5.4	41	6.3 × 5.4	49	6.3 × 7.7	61				
47	6.3 × 5.4	45	6.3 × 7.7	61	6.3 × 7.7	75						
100	6.3 × 7.7	82	↑ Rated ripple current (mA rms)(85°C, 120Hz)									