

## PL Series

- Load life 2,000 hours at 105°C
- Large size for PCB board mounting hole type



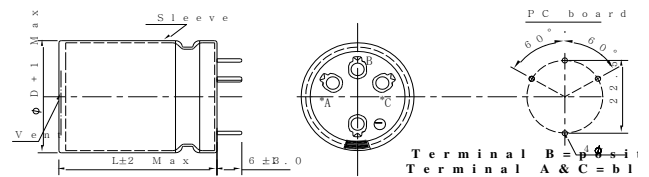
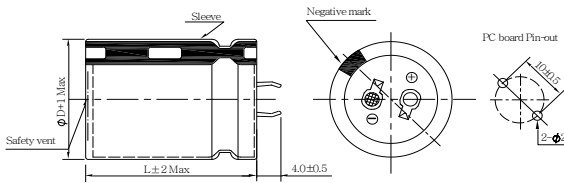
### ◆ SPECIFICATIONS

Item	Performance Characteristics																																										
Category Temperature Range	-40 ~ +105°C	-25 ~ +105°C																																									
Working Voltage Range	16 ~ 100Vdc	160 ~ 600Vdc																																									
Capacitance Range	560 ~ 47,000µF	39 ~ 2,700µF																																									
Capacitance Tolerance	±20% (at 25°C and 120Hz)																																										
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100 ~ 250</th> <th>350 ~ 450</th> <th>475~600</th> </tr> </thead> <tbody> <tr> <td>tanδ(Max)</td> <td>0.35</td> <td>0.35</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table>										Rated Voltage (V)	16	25	35	50	63	80	100 ~ 250	350 ~ 450	475~600	tanδ(Max)	0.35	0.35	0.25	0.25	0.25	0.20	0.15	0.15	0.20													
	Rated Voltage (V)	16	25	35	50	63	80	100 ~ 250	350 ~ 450	475~600																																	
tanδ(Max)	0.35	0.35	0.25	0.25	0.25	0.20	0.15	0.15	0.20																																		
The above values should be increased by 0.02 for every additional 1000µF																																											
Leakage Current	I=0.02CV or 3000µA, whichever is smaller I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V) Impress the rated voltage for 5 minutes																																										
Low Temperature Characteristics Impedance Ratio(MAX)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160 ~ 250</th> <th>400</th> <th>420 ~ 600</th> </tr> </thead> <tbody> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>6</td> <td>5</td> <td>5</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> <td>4</td> <td>4</td> <td>8</td> </tr> </tbody> </table>										Rated voltage (V)	16	25	35	50	63	80	100	160 ~ 250	400	420 ~ 600	Z(-40°C)/Z(+20°C)	15	10	8	6	6	5	5	—	—	—	Z(-25°C)/Z(+20°C)	—	—	—	—	—	—	—	4	4	8
	Rated voltage (V)	16	25	35	50	63	80	100	160 ~ 250	400	420 ~ 600																																
	Z(-40°C)/Z(+20°C)	15	10	8	6	6	5	5	—	—	—																																
Z(-25°C)/Z(+20°C)	—	—	—	—	—	—	—	4	4	8																																	
(at 120Hz)																																											
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 2,000 hours at 105°C.																																										
	Capacitance change		≒ ±20% of the initial value																																								
	Dissipation factor(tanδ)		≒ 200% of the specified value																																								
Leakage current		≒ specified value																																									
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 500 hours at 105°C without voltage applied.																																										
	Capacitance change		≒ ±20% of the initial value																																								
	Dissipation factor(tanδ)		≒ 200% of the specified value																																								
Leakage current		≒ 200% of the specified value																																									
Others	Conforms to JIS-C-5101-4 (1998), characteristic W																																										

### ◆ DIMENSIONS (mm)

Terminal Code : ND : Standard

Terminal Code :K6 (ø35)



### ◆ PART NUMBER SYSTEM ( Example : 500V 100µF )

P	L	2	H	1	0	1	M	N	D	2	5	4	5						
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Special Request

Size code(2545 : 25×45)

Terminal length code

Lead forming Type code

Capacitance tolerance code(M:±20%)

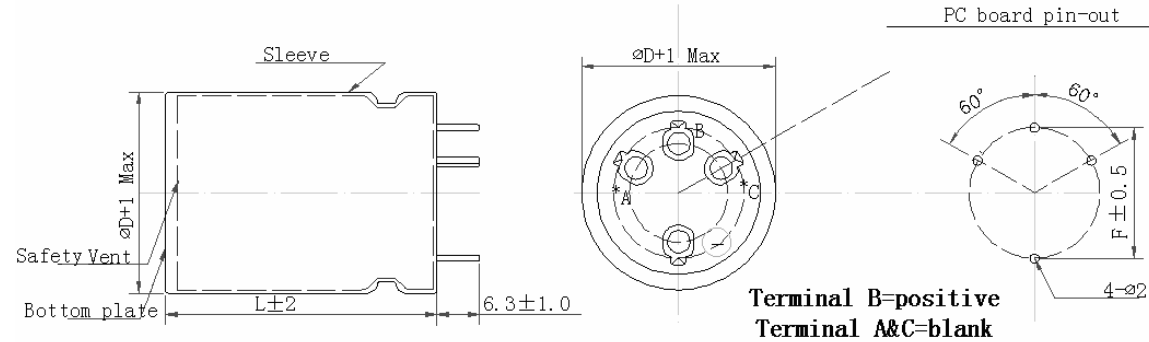
Capacitance code (100µF)

Voltage code (500V)

Series code (PL)

## Aluminum Electrolytic Capacitor

<b>Customer</b>	<b>Digi-Key</b>	<b>SERIES</b>	<b>PL</b>	<b>NO.:</b>	<b>PUBLISH DATE</b>	<b>2022-03-25</b>
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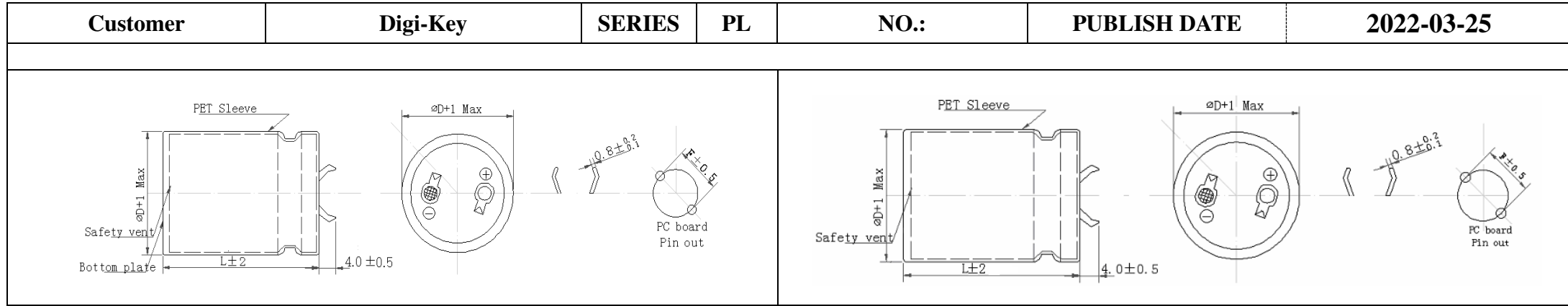


No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tan $\delta$ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	ESR @25°C (m $\Omega$ max/ 120Hz)	Impedance @20°C (m $\Omega$ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
															D $\phi$	L	a	d	F	
1	PL2G152MK64575	/	1500 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	3100	/	/	/	2000	45	75	/	/	22.5	---

※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Black.	张洪斌	曾爱娥	梁慧妍

## Aluminum Electrolytic Capacitor



**FIG-1**

**FIG-2**

No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @105°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
															D Φ	L	a	d	F	
1	PL2W181VND2240R	/	180 μF	10%~20%	450 V	/	-25~+105	/	/	1200	/	1310	860	2000	22	40	/	/	10	FIG-1
2	PL2W151VND2241A	/	150 μF	10%~20%	450 V	/	-25~+105	/	/	1300	1859	/	/	2000	22	41	/	/	10	FIG-1
3	PL2W471MN63540E	/	470 μF	±20%	450 V	/	-25~+105	/	/	2010	/	282	/	2000	35	40	/	/	10	FIG-1
4	PL2W221VND2245R	/	220 μF	10%~20%	450 V	/	-25~+105	/	/	/	3250	/	/	2000	22	45	/	/	10	FIG-1
5	PL1H332MND2235	/	3300 μF	±20%	50 V	/	-40~+105	/	/	2235	/	/	/	2000	22	35	/	/	10	FIG-1
6	PL2C122MND3041	/	1200 μF	±20%	160 V	/	-25~+105	/	/	2315	/	/	/	2000	30	41	/	/	10	FIG-1
7	PL2D561MND2241	/	560 μF	±20%	200 V	/	-25~+105	/	/	1450	/	/	/	2000	22	41	/	/	10	FIG-1
8	PL2D681MND2245	/	680 μF	±20%	200 V	/	-25~+105	/	/	1630	/	/	/	2000	22	45	/	/	10	FIG-1
9	PL2E182MND3561	/	1800 μF	±20%	250 V	/	-25~+105	/	/	2700	/	/	/	2000	35	61	/	/	10	FIG-1
10	PL2G101MND2225	/	100 μF	±20%	400 V	/	-25~+105	/	/	580	/	/	/	2000	22	25	/	/	10	FIG-1
11	PL2G102MND3570	/	1000 μF	±20%	400 V	/	-25~+105	/	/	2400	/	/	/	2000	35	70	/	/	10	FIG-1



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12	PL2G681MND3545	/	680 $\mu$ F	$\pm$ 20%	400 V	/	-25~+105	/	/	1900	/	/	/	2000	35	45	/	/	10	FIG-1
13	PL2S151MND2240	/	150 $\mu$ F	$\pm$ 20%	420 V	/	-25~+105	/	/	740	/	/	/	2000	22	40	/	/	10	FIG-1
14	PL2S181MND2245	/	180 $\mu$ F	$\pm$ 20%	420 V	/	-25~+105	/	/	900	/	/	/	2000	22	45	/	/	10	FIG-1
15	PL2S221MND2245	/	220 $\mu$ F	$\pm$ 20%	420 V	/	-25~+105	/	/	880	/	/	/	2000	22	45	/	/	10	FIG-1
16	PL2S331MND3041	/	330 $\mu$ F	$\pm$ 20%	420 V	/	-25~+105	/	/	1250	/	/	/	2000	30	41	/	/	10	FIG-1
17	PL2W181MND2245	/	180 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	750	/	/	/	2000	22	45	/	/	10	FIG-1
18	PL2W271MND3030	/	270 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1300	/	/	/	2000	30	30	/	/	10	FIG-1
19	PL2W271MND3031	/	270 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	850	/	/	/	2000	30	31	/	/	10	FIG-1
20	PL2W331MND3051	/	330 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1310	/	/	/	2000	30	51	/	/	10	FIG-1
21	PL2W681MND3550	/	680 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1850	/	/	/	2000	35	50	/	/	10	FIG-1
22	PL2W391MND2553	/	390 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	2110	/	/	/	2000	25	53	/	/	10	FIG-1
23	PL2W121MND2230R	/	120 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	820	/	1200	1000	2000	22	30	/	/	10	FIG-1
24	PL2G331MND2545Y	/	330 $\mu$ F	$\pm$ 20%	400 V	/	-25~+105	/	/	1280	/	/	/	2000	25	45	/	/	10	FIG-2
25	PL2W151MND2235R	/	150 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1020	/	/	/	2000	22	35	/	/	10	FIG-1
26	PL2W181MND2241AR	/	180 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	2250	1350	/	/	2000	22	41	/	/	10	FIG-1
27	PL2D221MND2225R	/	220 $\mu$ F	$\pm$ 20%	200 V	/	-25~+105	/	/	820	/	/	/	2000	22	25	/	/	10	FIG-1
28	PL2D152MND3050E	/	1500 $\mu$ F	$\pm$ 20%	200 V	/	-25~+105	/	/	2770	/	133	/	2000	30	50	/	/	10	FIG-1
29	PL2W151MND2530R	/	150 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	900	/	/	1210	2000	25	30	/	/	10	FIG-1
30	PL2G680MND2220R	/	68 $\mu$ F	$\pm$ 20%	400 V	/	-25~+105	/	/	450	/	/	/	2000	22	20	/	/	10	FIG-1
31	PL2W391MND2548Y	/	390 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1600	/	400	/	2000	25	48	/	/	10	FIG-2
32	PL2W271MND2250	/	270 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1300	/	840	/	2000	22	50	/	/	10	FIG-1
33	PL2W331MND2551	/	330 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1310	/	700	/	2000	25	51	/	/	10	FIG-1
34	PL2W391MND3040	/	390 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1500	/	580	360	2000	30	40	/	/	10	FIG-1
35	PL2W101MND2225RP	/	100 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	700	/	2400	1360	2000	22	25	/	/	10	FIG-1
36	PL2W391MND2550Y	/	390 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1670	/	610	400	2000	25	50	/	/	10	FIG-2
37	PL2G561MND3045Y	/	560 $\mu$ F	$\pm$ 20%	400 V	/	-25~+105	/	/	1700	/	/	/	2000	30	45	/	/	10	FIG-2
38	PL2G221MND2235Y	/	220 $\mu$ F	$\pm$ 20%	400 V	/	-25~+105	/	/	1180	/	/	/	2000	22	35	/	/	10	FIG-2



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39	PL2W561MND3045Y	/	560 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	2030	5800 @75°C	/	280	2000	30	45	/	/	10	FIG-2
40	PL2G271MND2245Y	/	270 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	1250	/	/	/	2000	22	45	/	/	10	FIG-2
41	PL2W331MND2545Y	/	330 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1390	/	500	/	2000	25	45	/	/	10	FIG-2
42	PL2S271MND2541	/	270 $\mu$ F	$\pm 20\%$	420 V	/	-25~+105	/	/	1130	/	/	/	2000	25	41	/	/	10	FIG-1
43	PL2W221MND2530	/	220 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1340	/	800	/	2000	25	30	/	/	10	FIG-1
44	PL2W181MND2530R	/	180 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1000	/	/	/	2000	25	30	/	/	10	FIG-1
45	PL2G821MN63560R	/	820 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	2300	/	/	/	2000	35	60	/	/	10	FIG-1
46	PL2H471MND3550RY	/	470 $\mu$ F	$\pm 20\%$	500 V	/	-25~+105	/	/	2190	/	/	/	2000	35	50	/	/	10	FIG-2
47	PL2G471MND2550	/	470 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	1940	/	/	330	2000	25	50	/	/	10	FIG-1
48	PL2G681MND3050RY	/	680 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	2150	/	/	220	2000	30	50	/	/	10	FIG-2
49	PL2W271MND3030RSY	/	270 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1200	/	/	/	2000	30	30	/	/	10	FIG-2
50	PL2W101MND2531	/	100 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	600	/	/	/	2000	25	31	/	/	10	FIG-1
51	PL2W911MND4045AER	/	910 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	2700	/	/	200	2000	40	45	/	/	10	FIG-1
52	PL2G471MND3043Y	/	470 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	1940	/	/	/	2000	30	43	/	/	10	FIG-2
53	PL2D332MND3560	/	3300 $\mu$ F	$\pm 20\%$	200 V	/	-25~+105	/	/	5000	/	/	/	2000	35	60	/	/	10	FIG-1
54	PL2G331MND3030Y	/	330 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	1490	/	/	310	2000	30	30	/	/	10	FIG-2
55	PL2G471MN63545	/	470 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	1900	/	/	/	2000	35	45	/	/	10	FIG-1
56	PL2W391MND2550AY	/	390 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1600	/	/	/	2000	25	50	/	/	10	FIG-2
57	PL2W221MND2240Y	/	220 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1150	/	/	/	2000	22	40	/	/	10	FIG-2
58	PL2W221MND2545RP	/	220 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1000	/	1060	/	2000	25	45	/	/	10	FIG-1
59	PL2W281MND3025Y	/	280 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1350	/	/	/	2000	30	25	/	/	10	FIG-2
60	PL2S181MND2535	/	180 $\mu$ F	$\pm 20\%$	420 V	/	-25~+105	/	/	970	/	/	/	2000	25	35	/	/	10	FIG-1
61	PL2G181MND2530	/	180 $\mu$ F	$\pm 20\%$	400 V	/	-25~+105	/	/	1050	/	/	/	2000	25	30	/	/	10	FIG-1
62	PL2W871MND3060Y	/	870 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	2840	/	/	/	2000	30	60	/	/	10	FIG-2
63	PL2W821MND3060B1RY	/	820 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	2900	/	/	/	2000	30	60	/	/	10	FIG-2
64	PL2W471MND3040	/	470 $\mu$ F	$\pm 20\%$	450 V	/	-25~+105	/	/	1750	/	435	/	2000	30	40	/	/	10	FIG-1



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65	PL2G391MND2545Y	/	390 $\mu$ F	$\pm$ 20%	400 V	/	-25~+105	/	/	1320	/	/	/	2000	25	45	/	/	10	FIG-2
※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.																				
REMARKS:										APPROVED BY				CHECKED BY				PREPARED BY		
Sleeve Color: Black. Suffix Y represents assembly without gasket.										张洪斌				曾爱娥				梁慧妍		