

## PW Series

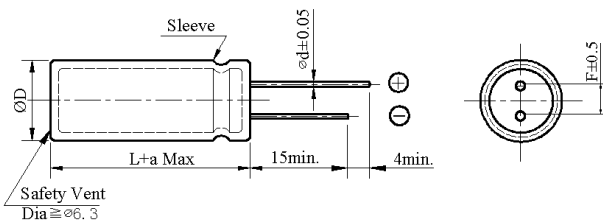
- Downsize and high ripple version of PF series
- Load life 2,000 hours at 105°C



### SPECIFICATIONS

Item	Performance Characteristics	
Category Temperature Range	-25 ~ +105°C	
Working Voltage Range	160 ~ 600Vdc	
Capacitance Range	10 ~ 470 μF	
Capacitance Tolerance	±20% (at 25°C and 120Hz)	
Dissipation Factor (tanδ) (at 25°C, 120Hz)	Rated Voltage (V)	160 ~ 250      400 ~ 600
	tanδ(Max)	0.15              0.20
Leakage Current	I=0.03CV + 10μA I : Leakage current (μA)   C : Rated capacitance (μF)   V : Rated voltage (V) Impress the rated voltage for 2 minutes	
Low Temperature Characteristics Impedance Ratio(MAX)	Rated voltage (V)	160 ~ 250    400    420    450    475    500    550    600
	Z(-25°C)/Z(+20°C)	3            5            6            6            6            6            6            6
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 the rated voltage applied for 1,000 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)



ΦD	12.5	16	18
ΦD	ΦD + 0.5 Max		
Φd	0.6	0.8	0.8
F	5.0	7.5	7.5
a	≅ 35 L+1.5Max ≧ 40 L+2.0 Max		L+1.5 Max

### PART NUMBER SYSTEM( Example : 500V 22 μF )

P W 2 H 2 2 0 M N N 1 2 3 0

Special Request

Size code(1230 : 12.5×30)

Lead length code

Lead forming Type code

Capacitance tolerance code(M: ±20%)

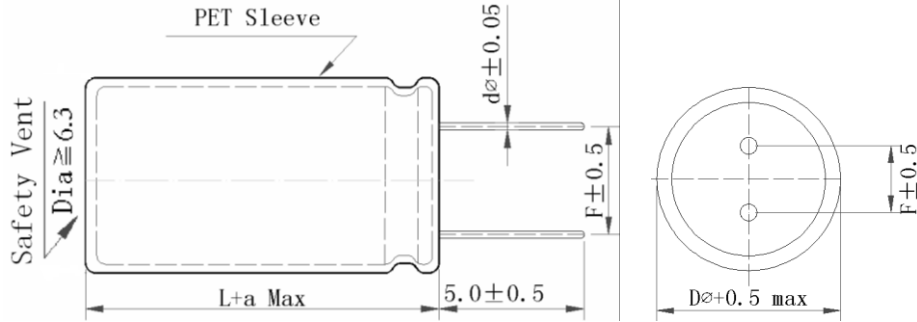
Capacitance code (22μF)

Voltage code(500V)

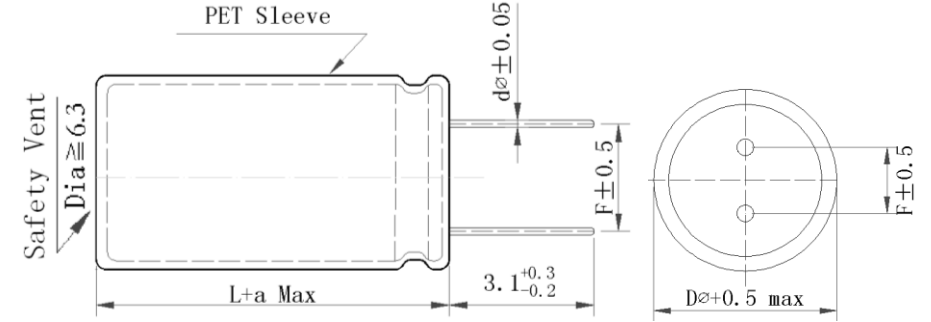
Series code(PW)

## Aluminum Electrolytic Capacitor

<b>Customer</b>	<b>Digi-Key</b>	<b>SERIES</b>	<b>PW</b>	<b>NO.:</b>	<b>PUBLISH DATE</b>	<b>2022-03-25</b>
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**FIG-1**



**FIG-2**

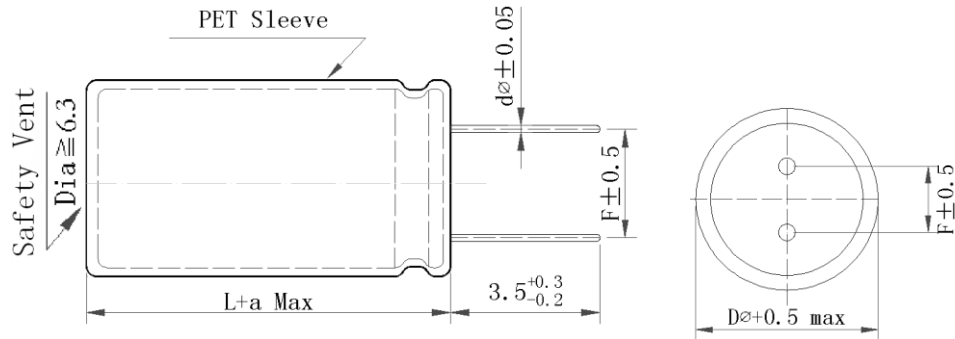
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	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	PW2E181MC51630	/	180 μF	±20%	250 V	/	-25~+105	/	/	680	/	/	/	2000	16	30	/	/	7.5	FIG-1
2	PW2E220MCE1212F3	/	22 μF	±20%	250 V	/	-25~+105	/	/	/	600	/	/	3000	12.5	12	/	/	5	FIG-2

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

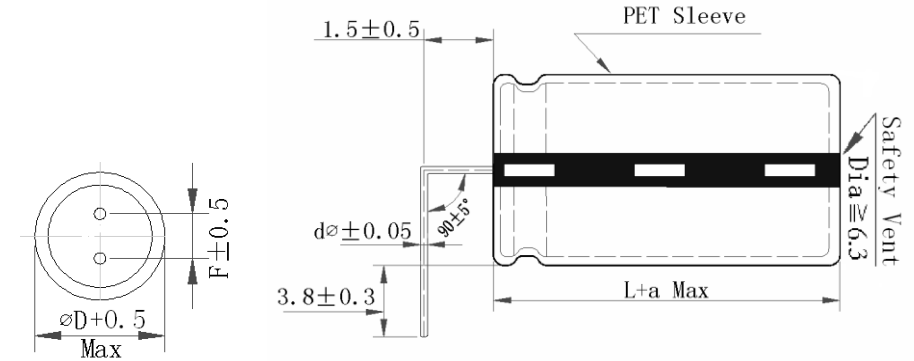
<b>REMARKS:</b> Sleeve Color: Black. Suffix F3 indicates the life of the capacitor is 3000 hrs.	<b>APPROVED BY</b>  张洪斌	<b>CHECKED BY</b>  曾爱娥	<b>PREPARED BY</b>  梁慧妍
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## Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	PW	NO.:	PUBLISH DATE	2022-03-25
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**FIG-1**



**FIG-2**

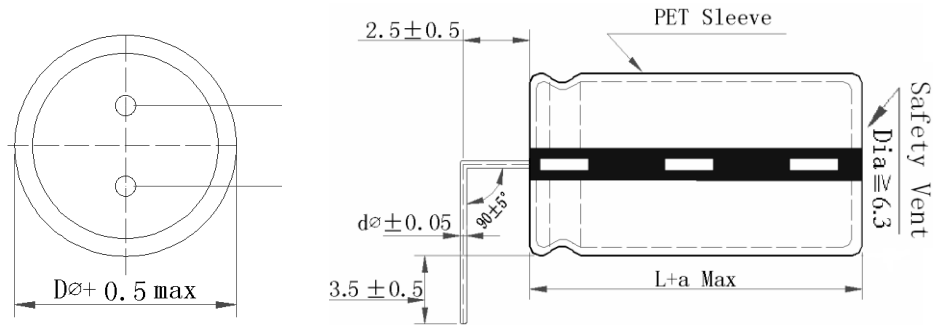
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	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	PW2W181MCM1845E	/	180 μF	±20%	450 V	/	-40~+105	/	/	860	/	/	1100	2000	18.5	45	/	/	7.5	FIG-1
2	PW2W680MRT1636F3R	/	68 μF	±20%	450 V	/	-25~+105	/	/	600	/	/	/	3000	16	36	/	/	7.5	FIG-2
3	PW2W680MRT1832	/	68 μF	±20%	450 V	/	-25~+105	/	/	550	/	/	/	2000	18	32	/	/	7.5	FIG-2
4	PW2W470MRT1625R	/	47 μF	±20%	450 V	/	-25~+105	/	/	350	/	/	/	2000	16	25	/	/	7.5	FIG-2
5	PW2W101MRT1840F3R	/	100 μF	±20%	450 V	/	-25~+105	/	/	850	/	/	/	3000	18	40	/	/	7.5	FIG-2

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

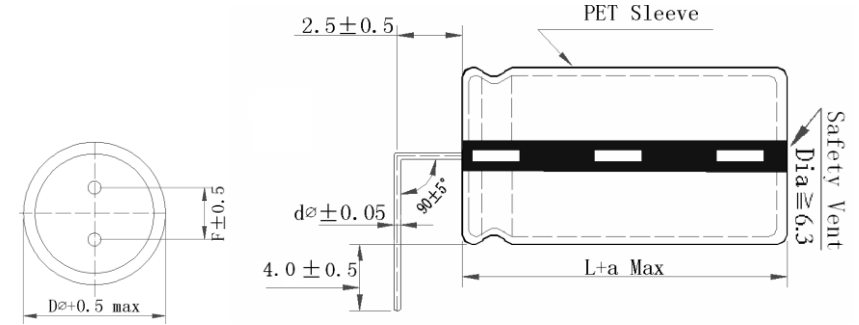
REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Black. Suffix F3 indicates the life of the capacitor is 3000 hrs.	张洪斌	曾爱娥	梁慧妍

## Aluminum Electrolytic Capacitor

<b>Customer</b>	<b>Digi-Key</b>	<b>SERIES</b>	<b>PW</b>	<b>NO.:</b>	<b>PUBLISH DATE</b>	<b>2022-03-25</b>
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**FIG-1**



**FIG-2**

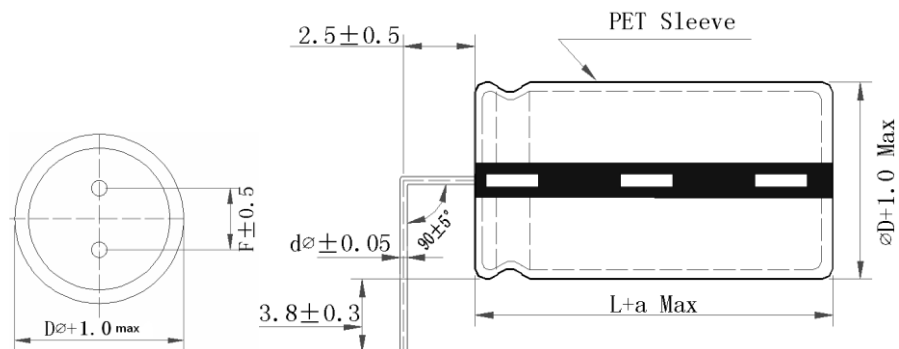
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	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	PW2W470MS31632	/	47 μF	±20%	450 V	/	-25~+105	/	/	430	/	4000	3850	2000	16	32	/	/	7.5	FIG-1
2	PW2W560MS31635	/	56 μF	±20%	450 V	/	-25~+105	/	/	500	/	/	/	2000	16	35	/	/	7.5	FIG-1
3	PW2D560MSD1020	/	56 μF	±20%	200 V	/	-25~+105	/	/	/	760	/	/	2000	10	20	/	/	5	FIG-2
4	PW2E330MSD1020	/	33 μF	±20%	250 V	/	-25~+105	/	/	/	375	/	/	2000	10	20	/	/	5	FIG-2

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

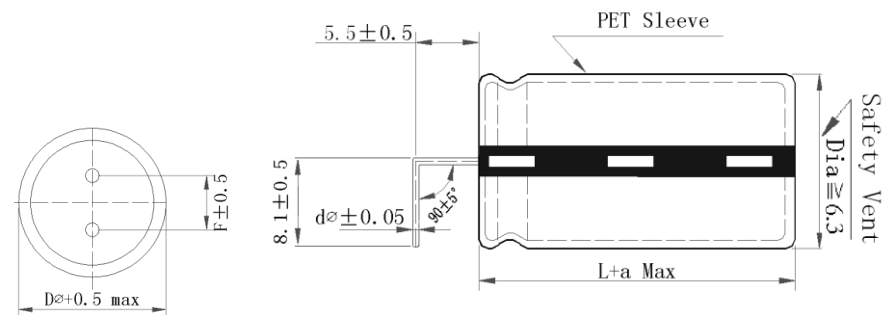
<b>REMARKS:</b>	<b>APPROVED BY</b>	<b>CHECKED BY</b>	<b>PREPARED BY</b>
Sleeve Color: Black.	张洪斌	曾爱娥	梁慧妍

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**FIG-1**



**FIG-2**

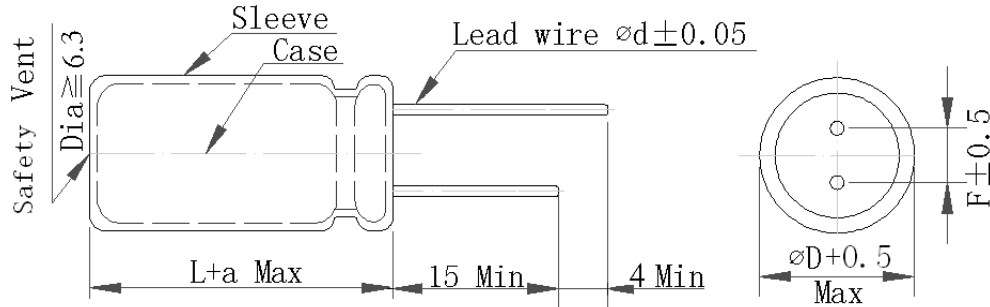
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	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	PW2W121MST1840	/	120 μF	±20%	450 V	/	-25~+105	/	/	850	/	2510	/	2000	18	40	/	/	7.5	FIG-1
2	PW2G101MU01632E	/	100 μF	±20%	400 V	/	-25~+105	/	/	550	/	/	700	2000	16	32	/	/	7.5	FIG-2
3	PW2H470MU01632	/	47 μF	±20%	500 V	/	-25~+105	/	/	550	/	/	/	2000	16	32	/	/	7.5	FIG-2

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

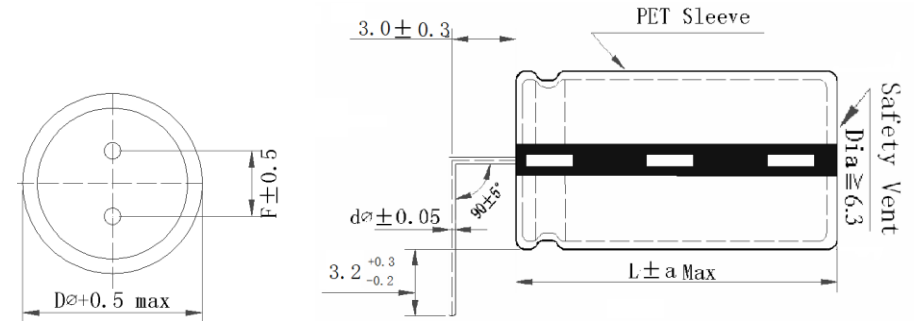
<b>REMARKS:</b>	<b>APPROVED BY</b>	<b>CHECKED BY</b>	<b>PREPARED BY</b>
Sleeve Color: Black.	张洪斌	曾爱娥	梁慧妍

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**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
															DΦ	L	a	d	F	
1	PW2C680MNN1220	/	68 μF	±20%	160 V	/	-25~+105	/	/	770	/	/	/	2000	12.5	20	/	/	5	FIG-1
2	PW2P121MNN1236	/	120 μF	±20%	220 V	/	-25~+105	/	/	750	/	/	/	2000	12.5	36	/	/	5	FIG-1
3	PW2E221MNN1830	/	220 μF	±20%	250 V	/	-25~+105	/	/	810	/	/	/	2000	18	30	/	/	7.5	FIG-1
4	PW2G101MNN1630	/	100 μF	±20%	400 V	/	-25~+105	/	/	530	/	/	/	2000	16	30	/	/	7.5	FIG-1
5	PW2G330MNN1620	/	33 μF	±20%	400 V	/	-25~+105	/	/	350	/	/	/	2000	16	20	/	/	7.5	FIG-1
6	PW2G470MNN1230	/	47 μF	±20%	400 V	/	-25~+105	/	/	300	/	/	/	2000	12.5	30	/	/	5	FIG-1
7	PW2G680MNN1825	/	68 μF	±20%	400 V	/	-25~+105	/	/	440	/	/	/	2000	18	25	/	/	7.5	FIG-1
8	PW2G8R2MNN0816	/	8.2 μF	±20%	400 V	/	-25~+105	/	/	80	/	/	/	2000	8	16	/	/	3.5	FIG-1
9	PW2G470MNN1632	/	47 μF	±20%	400 V	/	-25~+105	/	/	250	/	/	/	2000	16	32	/	/	7.5	FIG-1
10	PW2G820MNN1625EF3J	/	82 μF	±20%	400 V	/	-25~+105	/	/	650	/	/	620	3000	16.5	25	/	/	7.5	FIG-1
11	PW2S121MNN1830	/	120 μF	±20%	420 V	/	-25~+105	/	/	600	/	/	/	2000	18.5	30	/	/	7.5	FIG-1
12	PW2S151MNN1835	/	150 μF	±20%	420 V	/	-25~+105	/	/	720	/	/	/	2000	18	35	/	/	7.5	FIG-1



# Taiwan Chinsan Electronic Ind., Co., Ltd.

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TEL: +886 2 2995 0535 <http://www.chinsan.com/products/>

13	PW2S181MNN1845P5	/	180 $\mu$ F	$\pm$ 20%	420 V	/	-25~+105	/	/	900	2000	/	500	2000	18	45	/	/	7.5	FIG-1
14	PW2W101MNN1635A4	/	100 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	520	/	/	/	2000	16	35	/	/	7.5	FIG-1
15	PW2W101MNN1830	/	100 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	580	/	/	/	2000	18	30	/	/	7.5	FIG-1
16	PW2W121MNN1835	/	120 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	600	/	/	/	2000	18	35	/	/	7.5	FIG-1
17	PW2W151MNN1840	/	150 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	1050	/	/	/	2000	18.5	40	/	/	7.5	FIG-1
18	PW2W220MNN1625	/	22 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	250	/	/	/	2000	16	25	/	/	7.5	FIG-1
19	PW2W330MNN1618	/	33 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	350	/	/	/	2000	16	18	/	/	7.5	FIG-1
20	PW2W470MNN1236	/	47 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	420	/	/	/	2000	12.5	36	/	/	5	FIG-1
21	PW2W470MNN1818	/	47 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	350	/	/	/	2000	18.5	18	/	/	7.5	FIG-1
22	PW2W560MNN1240	/	56 $\mu$ F	$\pm$ 20%	450 V	/	-25~+105	/	/	500	/	/	/	2000	12.5	40	/	/	5	FIG-1
23	PW2H101MNN1836A4ES	/	100 $\mu$ F	$\pm$ 20%	500 V	/	-25~+105	/	/	600	/	/	700	2000	18	36	/	/	7.5	FIG-1
24	PW2H121MNN1845AEF3	/	120 $\mu$ F	$\pm$ 20%	500 V	/	-25~+105	/	/	900	/	600	/	3000	18	45	/	/	7.5	FIG-1
25	PW2D330MVW1016F3R	/	33 $\mu$ F	$\pm$ 20%	200 V	/	-25~+105	/	/	/	650	/	/	3000	10	16	/	/	5	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 F3 indicates the life of the capacitor is 3000 hrs. Suffix J indicates the limit of external diameter is 16.5+0.5mm(Max). Suffix P5 : indicates Back PET sleeve.	张洪斌	曾爱娥	梁慧妍