

## GM Series

- Large size for PCB board mounting hole type.



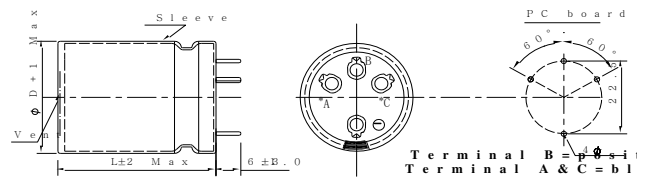
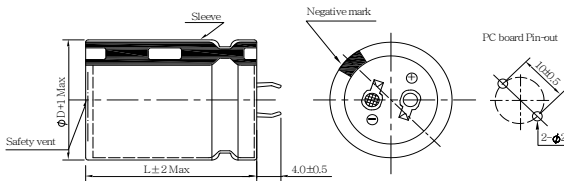
### SPECIFICATIONS

Item	Performance Characteristics											
Category Temperature Range	-40 ~ +85°C					-25 ~ +85°C						
Working Voltage Range	16 ~ 100Vdc					160 ~ 550Vdc						
Capacitance Range	820 ~ 68,000µF					47 ~ 3,300 µF						
Capacitance Tolerance	±20% (at 25°C and 120Hz)											
Dissipation Factor (tanδ) (at 25°C, 120Hz)	Rated Voltage (V)	16	25	35	50	63	80 ~ 100	160 ~ 250	350 ~ 450	500~550		
	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)	Rated voltage (V)	16	25	35	50	63	80	100	160 ~ 250	350	400	420 ~ 550
	Z(-40°C)/Z(+20°C)	15	10	8	6	6	5	5	—	—	—	—
	Z(-25°C)/Z(+20°C)	—	—	—	—	—	—	—	—	4	4	4
(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 85°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 1,000 hours at 85°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 : 400V 470µF )

G	M	2	G	4	7	I	M	N	D	3	0	5	0						
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Special Request

Size code(3050 : 30×50)

Terminal length code

Lead forming Type code

Capacitance tolerance code(M:±20%)

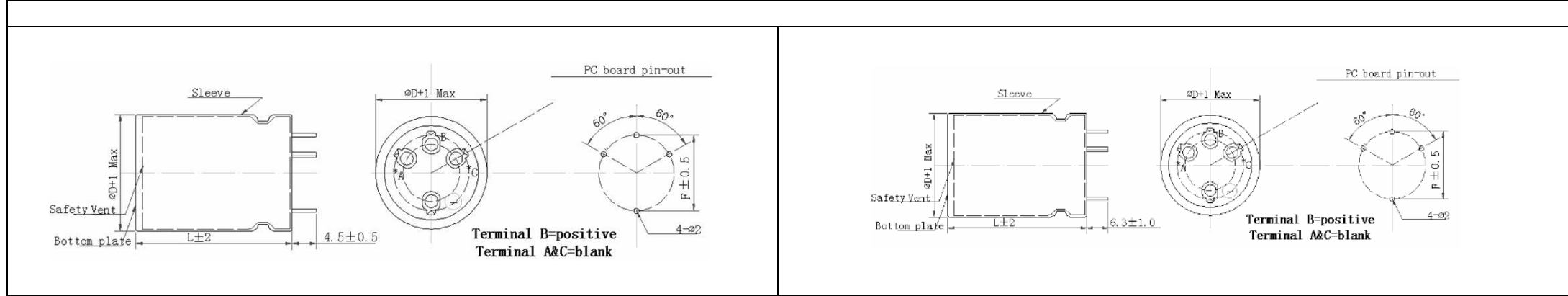
Capacitance code(470µF)

Voltage code(400V)

Series code (GM)

## Aluminum Electrolytic Capacitor

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

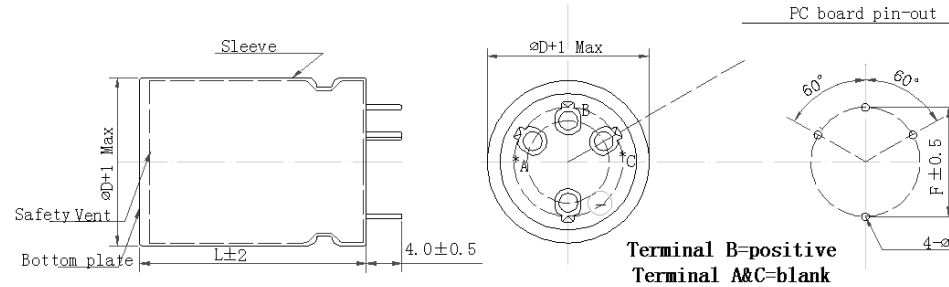
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 85°C 120Hz	Rated Ripple Current (mA rms) @ 85°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 85°C (Hours)	Dimensions (mm)					Appearance Drawing No
															D Φ	L	a	d	F	
1	GM2S152MK44570R	/	1500 μF	±20%	420 V	/	-25~+85	/	/	6500	/	/	/	2000	45	70	/	/	22.5	FIG-1
2	GM2W152MK64580	/	1500 μF	±20%	450 V	/	-25~+85	/	/	5600	/	/	/	2000	45	80	/	/	22.5	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: Dark Blue.	张洪斌	曾爱娥	梁慧妍

## Aluminum Electrolytic Capacitor

<b>Customer</b>	<b>Digi-Key</b>	<b>SERIES</b>	<b>GM</b>	<b>NO.:</b>	<b>PUBLISH DATE</b>	<b>2022-03-25</b>
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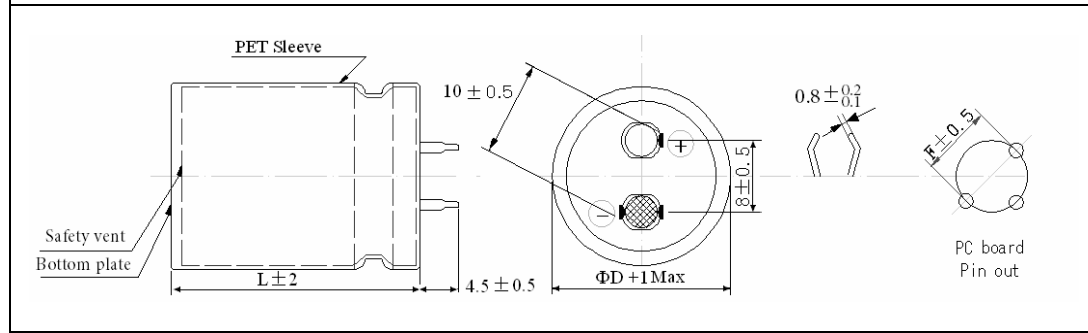
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tan $\delta$ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 85°C 120Hz	Rated Ripple Current (mA rms) @ 85°C 100kHz	ESR @25°C (m $\Omega$ max/ 120Hz)	Impedance @20°C (m $\Omega$ max/ 100kHz)	Endurance @ 85°C (Hours)	Dimensions (mm)					Appearance Drawing No
															D $\Phi$	L	a	d	F	
1	GM2G122MKD4570R	/	1200 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	5500	/	/	/	2000	45	70	/	/	22.5	---

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

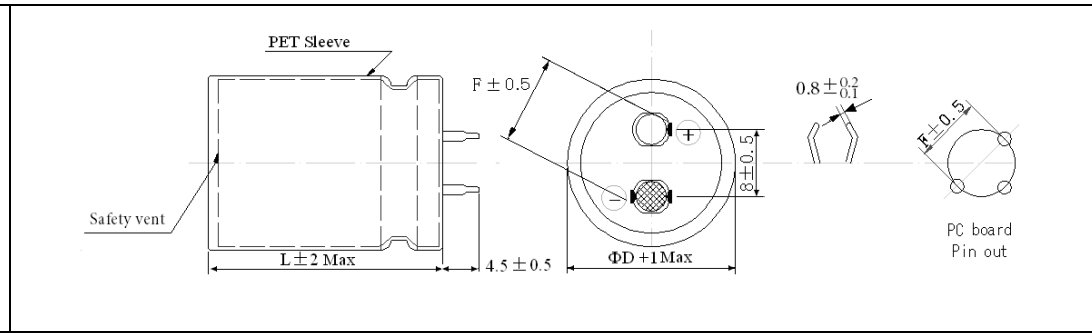
REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Dark Blue.	张洪斌	曾爱娥	梁慧妍

## Aluminum Electrolytic Capacitor

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



**FIG-2**

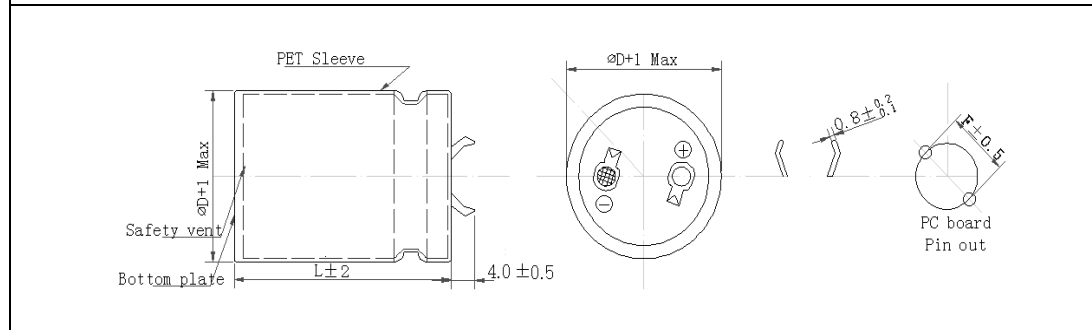
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 85°C 120Hz	Rated Ripple Current (mA rms) @ 85°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 85°C (Hours)	Dimensions (mm)					Appearance Drawing No
															D Φ	L	a	d	F	
1	GM2G391MW43045M	/	390 μF	±20%	400 V	/	-25~+85	/	/	2100	/	/	400	2000	30	45	/	/	10	FIG-1
2	GM2E182MW43555	/	1800 μF	±20%	250 V	/	-25~+85	/	/	4200	/	/	/	2000	35	55	/	/	10	FIG-1
3	GM2D102MW43040	/	1000 μF	±20%	200 V	/	-25~+85	/	/	3260	/	/	/	2000	30	40	/	/	10	FIG-1
4	GM2E152MW43551	/	1500 μF	±20%	250 V	/	-25~+85	/	/	3980	/	/	/	2000	35	51	/	/	10	FIG-1
5	GM2H681MW43551Y	/	680 μF	±20%	500 V	/	-25~+85	/	/	2800	/	/	/	2000	35	51	/	/	10	FIG-2

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

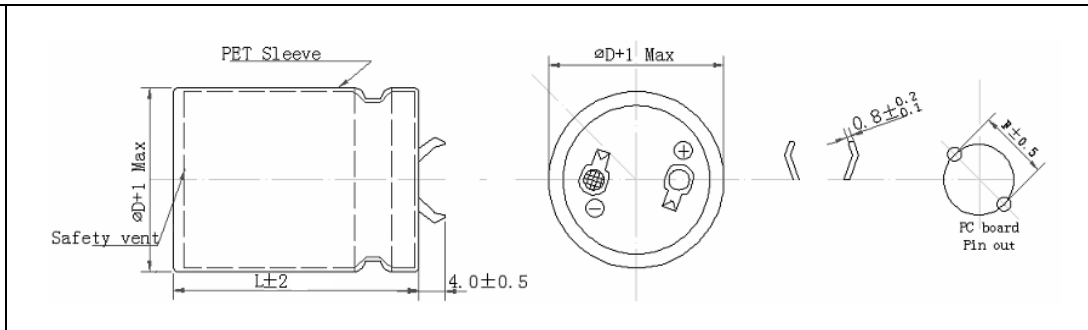
REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Dark Blue. Suffix Y represents assembly without gasket.	张洪斌	曾爱娥	梁慧妍

## Aluminum Electrolytic Capacitor

<b>Customer</b>	<b>Digi-Key</b>	<b>SERIES</b>	<b>GM</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) @ 85°C 120Hz	Rated Ripple Current (mA rms) @ 85°C 50kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 85°C (Hours)	Dimensions (mm)					Appearance Drawing No
															D Φ	L	a	d	F	
1	GM2W331MND3035R	/	330 μF	±20%	450 V	/	-25~+85	/	/	2400	/	/	/	2000	30	35	/	/	10	FIG-1
2	GM2C122MND3041	/	1200 μF	±20%	160 V	/	-25~+85	/	/	3050	/	/	/	2000	30	41	/	/	10	FIG-1
3	GM2D561MND2040	/	560 μF	±20%	200 V	/	-25~+85	/	/	1895	/	/	/	2000	20	40	/	/	10	FIG-1
4	GM2E681MND2245	/	680 μF	±20%	250 V	/	-25~+85	/	/	2260	/	/	200	2000	22	45	/	/	10	FIG-1
5	GM2G681MND3545	/	680 μF	±20%	400 V	/	-25~+85	/	/	2720	/	/	/	2000	35	45	/	/	10	FIG-1
6	GM2S151MND2235	/	150 μF	±20%	420 V	/	-25~+85	/	/	1320	/	/	/	2000	22	35	/	/	10	FIG-1
7	GM2S391MND2551	/	390 μF	±20%	420 V	/	-25~+85	/	/	1900	/	/	/	2000	25	51	/	/	10	FIG-1
8	GM2W121MND2235	/	120 μF	±20%	450 V	/	-25~+85	/	/	1000	/	/	/	2000	22	35	/	/	10	FIG-1
9	GM2W221MND2245	/	220 μF	±20%	450 V	/	-25~+85	/	/	1450	/	/	/	2000	22	45	/	/	10	FIG-1
10	GM2W391MND3045	/	390 μF	±20%	450 V	/	-25~+85	/	/	2000	/	/	/	2000	30	45	/	/	10	FIG-1
11	GM2W391MND3535	/	390 μF	±20%	450 V	/	-25~+85	/	/	2000	/	/	/	2000	35	35	/	/	10	FIG-1



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

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12	GM2W681MND3055	/	680 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	2410	/	/	/	2000	30	55	/	/	10	FIG-1
13	GM2W471MND3040Q	/	470 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	2410	/	/	/	2000	30	40	/	/	10	FIG-1
14	GM2D681MND2235P5	/	680 $\mu$ F	$\pm 20\%$	200 V	/	-25~+85	/	/	2000	/	/	/	2000	22	35	/	/	10	FIG-1
15	GM2S181MND2240	/	180 $\mu$ F	$\pm 20\%$	420 V	/	-25~+85	/	/	1280	/	/	/	2000	22	40	/	/	10	FIG-1
16	GM2H471MNN3551	/	470 $\mu$ F	$\pm 20\%$	500 V	/	-25~+85	/	/	2480	/	/	/	2000	35	51	/	/	10	FIG-1
17	GM2W181MND3031P5	/	180 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	/	2900	/	/	2000	30	31	/	/	10	FIG-1
18	GM2G221MND2540	/	220 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	1530	/	/	/	2000	25	40	/	/	10	FIG-1
19	GM2W151VND2235	/	150 $\mu$ F	10%~20%	450 V	/	-25~+85	/	/	1190	/	950	/	2000	22	35	/	/	10	FIG-1
20	GM2A152MNN2531	/	1500 $\mu$ F	$\pm 20\%$	100 V	/	-40~+85	/	/	2080	/	/	/	2000	25	31	/	/	10	FIG-1
21	GM2G271MND2245	/	270 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	1560	/	740	520	2000	22	45	/	/	10	FIG-1
22	GM2D331MND2031	/	330 $\mu$ F	$\pm 20\%$	200 V	/	-25~+85	/	/	1500	/	/	/	2000	20	31	/	/	10	FIG-1
23	GM2W102MND3565	/	1000 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	3500	/	/	/	2000	35	65	/	/	10	FIG-1
24	GM2W681MND3551	/	680 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	2600	/	/	/	2000	35	51	/	/	10	FIG-1
25	GM2G331MND2545	/	330 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	1730	/	/	/	2000	25	45	/	/	10	FIG-1
26	GM2G471MNN3540R	/	470 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	2400	/	480	/	2000	35	40	/	/	10	FIG-1
27	GM2S471MND3045Y	/	470 $\mu$ F	$\pm 20\%$	420 V	/	-25~+85	/	/	2154	/	/	/	2000	30	45	/	/	10	FIG-2
28	GM2D222MND3050Y	/	2200 $\mu$ F	$\pm 20\%$	200 V	/	-25~+85	/	/	4100	/	/	/	2000	30	50	/	/	10	FIG-2
29	GM2E821MND2545	/	820 $\mu$ F	$\pm 20\%$	250 V	/	-25~+85	/	/	2485	/	/	/	2000	25	45	/	/	10	FIG-1
30	GM2G101MNN2231	/	100 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	880	/	/	/	2000	22	31	/	/	10	FIG-1
31	GM2W471MNN3545Q	/	470 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	2500	/	/	/	2000	35	45	/	/	10	FIG-1
32	GM2G121MND2225	/	120 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	970	/	/	1130	2000	22	25	/	/	10	FIG-1
33	GM2W331MND2255R	/	330 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	1960	/	/	/	2000	22	55	/	/	10	FIG-1
34	GM2W221MND2245AR	/	220 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	1400	/	/	/	2000	22	45	/	/	10	FIG-1
35	GM2W101MND2235RP	/	100 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	930	/	/	/	2000	22	35	/	/	10	FIG-1
36	GM2G391MND2545	/	390 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	1769	/	/	/	2000	25	45	/	/	10	FIG-1
37	GM2W391MND3045	/	390 $\mu$ F	$\pm 20\%$	450 V	/	-25~+85	/	/	2000	/	/	/	2000	30	45	/	/	10	FIG-1
38	GM2E102MND3051RP	/	1000 $\mu$ F	$\pm 20\%$	250 V	/	-25~+85	/	/	3310	/	240	/	2000	30	51	/	/	10	FIG-1



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39	GM2G471MND3045P9	/	470 $\mu$ F	$\pm 20\%$	400 V	/	-25~+85	/	/	2400	/	/	/	2000	30	45	/	/	10	FIG-1
40	GM2G181VND2240	/	180 $\mu$ F	10%~20%	400 V	/	-25~+85	/	/	1329	/	/	/	2000	22	40	/	/	10	FIG-1

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

REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Dark Blue. Suffix Y represents assembly without gasket. Suffix P5 : indicates Black PET sleeve. Suffix P9 : indicates Black PET sleeve. Suffix Q indicates APP glue.	张洪斌	曾爱娥	梁慧妍