KNSCHA

Empowering The World

广东科尼盛电子科技有限公司

KNSCHA ELECTRONICS CO.,LIMITED

IATF16949:2016 ISO9001:2015 ISO14001:2015

部品规格书

APPROVE SHEET

客 户 名 称 Customer Name	
产 品 名 称 Product Name	引线型铝电解电容器 Radial Type Aluminum Electrolytic Capacitors
客 户 料 号 Customer P/N	
科 尼 盛 料 号 KNSCHA P/N	DGA050M477H203S1AA(203EC1228)
型 号 规 格 Product Type	50V/470μF 2000Hours@105℃ 插件,D10xL20mm PET黑体银字
日期 Date	2024年11月12日

制 造 Manufacture	
核 准 APPROVAL	制 作 PREPARED
王涛	刘勇分

客 户 承 认 栏 CUSTOMER APPROVED		
核 准 APPROVED	确 认 CHECKED	经 办 DESIGNED

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Aluminum Electrolytic Capacitors

- Source Manufacturer
- 25+ Years Experience
- 7X24 Hours Online Service



Film Capacitors

- Source Manufacturer
- 10+ Years Experience



cULus EAC VDE CQC KC TÜV

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KNSCHA ELECTRONICS CO.,LIMITED is a manufacturing high-tech enterprise founded in 1987 with aluminum electrolytic capacitors and film capacitors as its core for automotive, renewable energy, industrial and consumer electronics.We are working on developing aluminum electrolytic capacitors and plastic film capacitors having higher performance and higher reliability and its product chain extends to multiple categories such as electric double layer capacitors,ceramic capacitors and resistors under the trademark “KNSCHA”, quickly responding to customer needs.

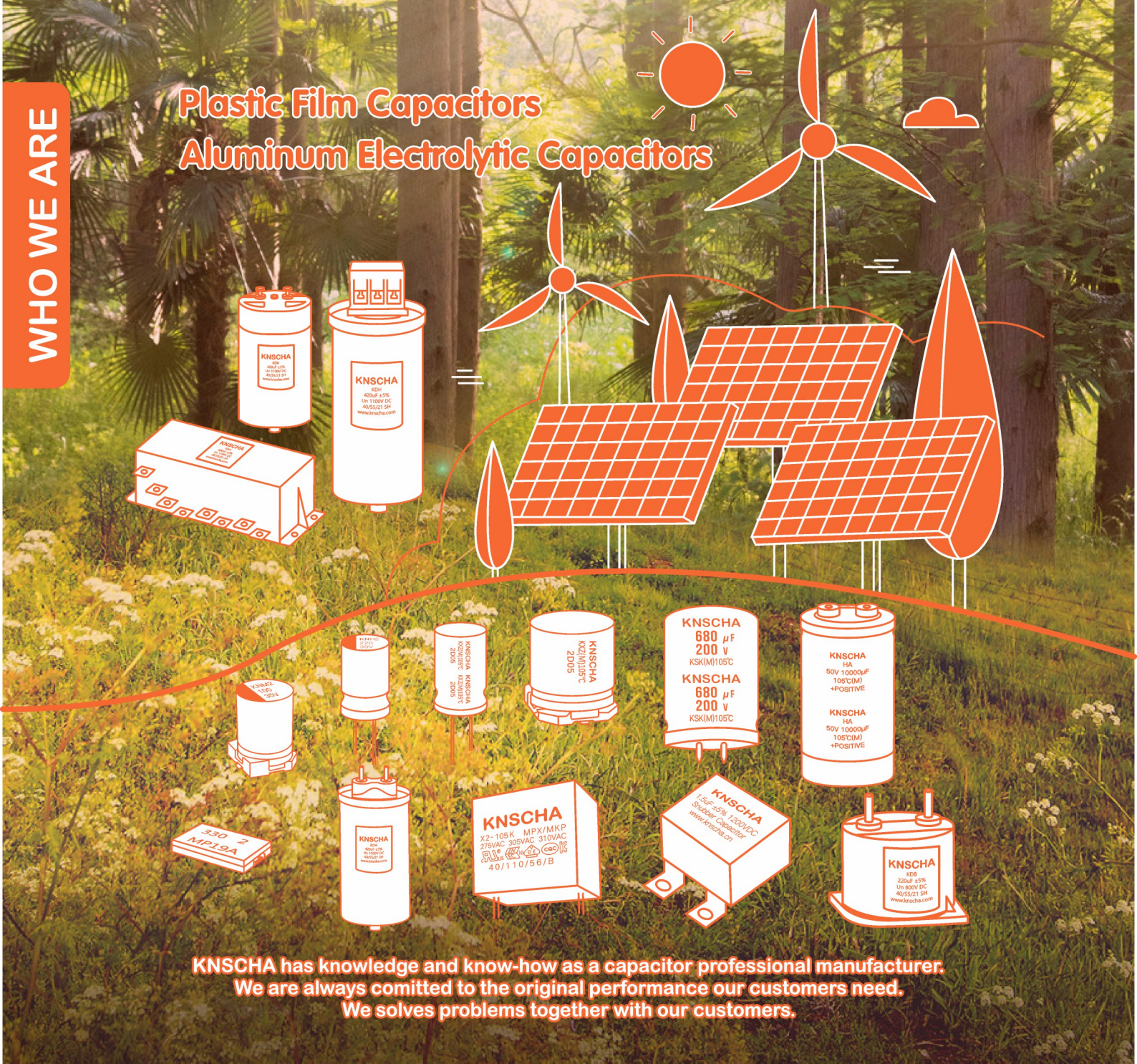
KNSCHA’s manufacturing facilities are located in Guangdong, Hunan and Jiangxi and employ over 380 peoples.Our state-of-art manufacturing facilities including R&D, testing labs, automated manufacturing, warehousing and customer service are operate with high quality standard, using Lean manufacturing processes with a comprehensive ISO 9001/14001 and IATF 16949 management systems.

Our products have obtained UL, VDE,TÜV, ENEC10, KTL, and CQC safety certification, and comply with SGS’s RoHS, Reach, AECQ-200 and National Grid Testing standards.

As a supporter of this advanced electronic industry, we are very pleased to have contributed to its development.

WHO WE ARE

Plastic Film Capacitors
Aluminum Electrolytic Capacitors



KNSCHA has knowledge and know-how as a capacitor professional manufacturer.
We are always comitted to the original performance our customers need.
We solves problems together with our customers.

KNSCHA

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KNSCHA ELECTRONICS CO.,LIMITED

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PRODUCT CHARACTERISTICS

KNSCHA P/N	Cap. (120Hz) (μF)	Cap. Tol. (%)	Rate Volt. (VDC)	Surge Volt. (VDC)	Temperature Range (℃)	Case Size ΦDxL(mm)	Leakage Current Max(uA)	Dissipation Factor (MAX)	Ripple Current (mA/rms at 120Hz,105℃)	ESR (Ω/at 100kHz,20℃)	Load Life (Hours)
DGA050M477H203S1AA	470	±20	50	63	-40~+105	10x20	235	0.12	760	/	2000

KGA Series Aluminum Electrolytic Capacitors

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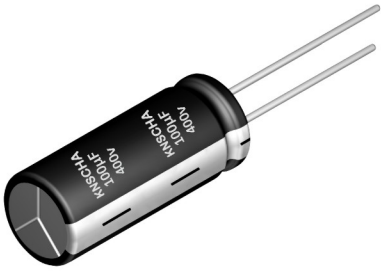
引线型Radial

特性/ Features

- 105℃ standard series for general purposes
- Load Life:2000 hours at 105℃
- RoHS compliant
- 105℃一般用途通用标准品
- 105℃负荷寿命2000小时
- 符合RoHS指令



ΦD < 13mm

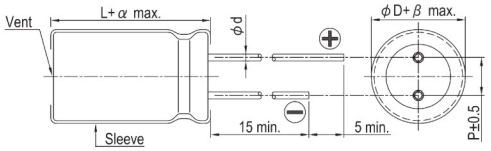


ΦD≥13mm

■表1 规格表 Specifications

项目 Items	性 能 Performance															
工作温度范围 Category Temperature Range	6.3~400V							450~650V								
	-40℃~+105℃							-25℃~+105℃								
额定静电容量容许误差值 Capacitance Tolerance	± 20% (120 Hz, 20℃)															
漏电流 Leakage Current(at 20℃)	额定电压 Rated voltage	≦100V							> 100V							
	测试时间 Time	2 分钟后 after 2 minutes							2 分钟后 after 2 minutes							
	漏电流 Leakage Current	I ≦ 0.01CV or 3(μA/微安) 之中任一个较大值以下whichever is greater							I≦0.03CV+10(μA/微安)							
	I = 漏电流(μA/微安)、C = 额定静电容量(μF/微法拉)、V = 额定直流工作电压(V/伏特) Where,C = rated capacitance in μF,V = rated DC working voltage in V															
损失角正切值 Tanδ (at 120 Hz, 20℃)	额定电压 Rated Voltage	6.3	10	16	25	35	50	63	100	160	200	220	250	350	400	
	损失角正切值 Tanδ (max)	0.24	0.2	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	0.12	0.15	0.15	0.20	
	额定电压 Rated Voltage	450	500	550	600	650										
	损失角正切值 Tanδ (max)	0.24	0.24	0.24	0.24	0.24										
	当额定静电容量大于1,000微法拉时，每增加1,000微法拉需加0.02。 When the capacitance exceeds 1,000μF,0.02 shall be added every 1,000μF increase.															
温度特性(120 Hz) Low Temperature Characteristics	阻抗比不可大于下表所列数值 Impedance ratio shall not exceed the values given in the table below.															
	额定电压 Rated Voltage		6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	500
	阻抗比 Impedance Ratio	Z(-25℃)/Z(+20℃)	5	4	3	2	2	2	2	2	3	3	4	4	6	15	15
		Z(-40℃)/Z(+20℃)	10	8	6	4	3	3	3	3	6	6	8	8	10		
耐久性 Endurance	保证寿命时间 Test Time	2,000 hours														
	静电容量变化率 Capacitance Change	≦6.3V							> 6.3V							
		≦初始值的+20%~-30% Within +20%~-30% of initial value							≦初始值的± 20% Within ±20% of initial value							
	损失角正切值 Tanδ	≦初始规格值的200%或0.4(取较大者) Less than 200% of specified value or 0.4 whichever is greater														
	漏电流 Leakage Current	≦初始规格值 Within specified value														
	*于 105℃环境中供给容许纹波电流值与额定电压 2,000 小时后，待制品回复至 20℃的环境中进行量测时，需满足上列要求。 *The above specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage applied with rated ripple current for 2,000 hours at 105℃.															
高温无负荷特性 Shelf Life Test	保证寿命时间 Test Time	1,000 hours														
	静电容量变化率 Capacitance Change	≦6.3V							> 6.3V							
		≦初始值的+20%~-30% Within +20%~-30% of initial value							≦初始值的± 20% Within ±20% of initial value							
	损失角正切值 Tanδ	≦初始规格值的200%或0.4(取较大者) Less than 200% of specified value or 0.4 whichever is greater														
	漏电流 Leakage Current	≦初始规格值 Within specified value														
	*于 105℃环境中不供给额定电压 1,000 小时后，待制品回复至 20℃的环境中进行量测时，需满足上列要求。 *The above specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied.															

■表2 外形尺寸 Dimensions(mm)



Lead Spacing and Diameter

Unit: mm

β	±0.5								
ΦD	5	6.3	8	10	12.5	13	16	18	22
Φd±0.05	0.5		0.6				0.8		
P±0.5	2	2.5	2.5/3.5	5.0			7.5		10
L±α	±1		±1.5/L≥40,α=±2.0				±2/L≥40,α=±2.5		±2.0

■表3 纹波电流与频率补正系数

Ripple Current and Frequency Multipliers

6.3V~100V

Cap.(μF) \ Freq.(Hz)		50	120	1K	100K
Coefficient	~47	0.75	1.00	1.57	2.00
	100~470	0.80	1.00	1.34	1.5
	1000~	0.85	1.00	1.13	1.15

160V~500V

F (Hz)	50	120	1K	100K
Coefficient	0.80	1.00	1.40	1.60

本产品目录之规格如有变更恕不另行通知(Cat. 2024C1) All product specifications in the catalog are subject to change without notice.

■表4 标准品一览表 Standard Size

Dimension and Permissible Ripple Current

Dimension: ϕDxL(mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Rated Volt.(Voc)	6.3		10		16		25		35		50		63	
Surge Volt.(Voc)	8		13		20		32		44		63		79	
Item / Cap.(μF)	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.
0.1			5×11								5×11	1.5		
0.22											5×11	3.5		
0.33											5×11	5.2		
0.47											5×11	8.5		
1											5×11	15		
2.2											5×11	24		
3.3											5×11	30		
4.7							5×11	30	5×11	31	5×11	36	6.3×11	37
6.8											5×11	40		
10					5×11	42	5×11	43	5×11	47	5×11	59	5×11	68
22			5×11	59	5×11	63	5×11	65	5×11	75	5×11	73	5×11	85
33	5×11	69	5×11	77	5×11	79	5×11	83	5×11	91	5×11	97	6.3×11	116
											6.3×11	107	8×12	121
47	5×11	78	5×11	87	5×11	94	5×11	97	5×11	109	6.3×11	145	6.3×11	133
68													6.3×11	160
100	5×11	111	5×11	139	5×11	129	5×11	135	6.3×11	169	8×12	218	10×12.5	254
					6.3×11	135	6.3×11	163	8×12	199	8×14	242		
220	5×11	156	5×11	182	6.3×11	218	8×12	290	8×12	290	10×12.5	333	10×16	399
	6.3×11	183	6.3×11	219							10×16	363	10×20	436
330	6.3×11	233	6.3×11	272	8×12	321	8×12	327	8×14	385	10×16	410	10×20	605
									10×12.5	411				
470	6.3×11	266	6.3×11	290	8×12	374	8×12	382	10×16	545	10×20	600	13×20	762
							8×16	451						
							10×12.5	448	10×20	602	13×20	762		
							10×16	520						
680			8×12	380			10×16	503	13×20	712	13×25	799	13×35.5	1004
820	6.3×12	299												
1000	8×12	460	10×12.5	586	10×16	617	10×20	750	13×20	968	13×25	1137	16×25.5	1573
2200	10×20	774	10×20	918	10×25	937	13×25	1307	16×25.5	1513	16×35.5	1890	18×35.5	1984
					13×20	1004					18×25.5	1694		
3300	10×20	908	13×20	1210	13×25	1404	13×31.5	1698	18×25.5	1815	18×35.5	2130		
							16×25.5	1694						
4700	13×20	1307	13×25	1513	13×31.5	1836	16×31.5	1880	18×35.5	2057	18×40	2205		
					16×25.5	1815								
					18×20.5	1815					20×40	2961		
5600											20×40	2300		
10000	16×25.5	1984	16×31.5	2178	18×35.5	2000								

制品尺寸与容许纹波电流一览表

尺寸：直径(ϕD)×长度(L)，(毫米/mm)
容许纹波电流：毫安/均方根值(mA/rms)，120 赫兹(Hz), 105℃

KGA Series

Aluminum Electrolytic Capacitors

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Dimension and Permissible Ripple Current

Dimension: ϕDxL(mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Rated Volt.(Voc)	100		160		200		250		350		400		450		500	
Surge Volt.(Voc)	125		200		250		300		400		450		500		550	
Item / Cap.(μF)	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.
0.47	5×11	8.6	5×11	7.9	5×11	8	5×11	8			6.3×11	14				
1	5×11	20	5×11	12	5×11	12	5×11	12	6.3×11	16	6.3×11	14	6.3×11	23	10×12.5	20
2.2	5×11	30	5×11	18	5×11	18	6.3×11	17	6.3×11	24	8×12	30	8×12	24	10×16	35
3.3	5×11	36	5×11	21	6.3×11	33	6.3×11	24	8×12	33	8×12	36	10×12.5	30	10×16	48
4.7	5×11	44	6.3×11	28	6.3×11	35	6.3×11	40	8×12	42	6.3×12	50	8×12	45	10×20	70
					8×12	51	8×12				8×12	50				
											8×14	50	10×16	36		
											10×12.5	50				
5.6							6.3×11	40								
6.8					8×12	61.9	8×12	54			8×12	80	8×16	39		
											8×14	67				
													8×13	35		
											10×12.5	71				
8.2											8×12	64	8×14	54		
											8×15	73				
10	6.3×11	75	6.3×15	48	8×12	66	10×12.5	85	10×16	73	8×12	94	8×13	94	13×20	98
											8×15	94	10×16	56		
			8×12	48	10×16	95	10×16	97			10×16	87	10×20	63		
											10×20	97	13×20	63		
15							8×16	110			10×12.5	120	13×16	86		
											10×16	96				
							12.5×20	100			10×20	120	13×20	94		
18											10×16	125				
22	8×12	126							13×20	123	10×17	120	13×25	119	12.5×25	130
									13×25	151	13×16	132				
									13×16	98	13×20	148	16×20.5	160	16×31.5	145
											13×25	157				
33	8×12	145	10×16	139	10×16	160	13×20	182	13×25	193	13×18	220	13×20	170	18×35.5	198
											13×20	210	16×20.5	180		
					10×20	157					13×25	260	16×25.5	194		
											16×20.5	260	16×31.5	211		
											16×25.5	288	18×20.5	194		
47	8×16	170	10×20	169	13×20	223	13×20	218	16×25.5	254	13×25	720 (100KHZ)	10×52	296	18×40	300
	10×12.5				13×25	248	13×25	238			16×25.5	300	16×25.5	243		
											18×20.5		16×35.5	339		
													18×25.5	310		
53													10×52	335		
56											13×25	530	18×25.5	350		
68					13×25	325					16×25.5	410	13×50	390	12.5×50	450
											16×31.5	450	18×25.5	580		
											18×20.5	410	18×35.5	508		
											18×25.5	435				
82											16×25.5	358	18×25.5	450		
											18×20.5	310	18×31.5	510		
											18×25.5	380	18×35.5	569		
											18×31.5	424				
100	10×20	315	13×16	280	13×20	300	16×25.5	387	16×31.5	510	14.5×37	585	18×35.5	566		
									18×35.5	484	16×35.5	450				
									14.5×37	400	18×25.5	380				
					16×20.5	330			18×25.5	380						
									18×31.5	429	18×31.5	429				
			13×25	363	16×25.5	377			22×22	420	18×35.5	484	18×40	605		
											22×22	420				
120					18×20.5	750					18×31.5	505	18×35.5	800	20×40	850
											22×25					
											18×35.5	534				
150											16×40	1000			20×40	900
											18×38	609				

制品尺寸与容许纹波电流一览表

尺寸：直径(ϕD)×长度(L)，(毫米/mm)
容许纹波电流：毫安/均方根值(mA/rms)，120 赫兹(Hz), 105℃

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KGA Series Aluminum Electrolytic Capacitors

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Dimension and Permissible Ripple Current

Dimension: ϕDxL(mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Rated Volt.(Vdc)	100		160		200		250		350		400		450		500	
Surge Volt.(Vdc)	125		200		250		300		400		450		500		550	
Item / Cap.(μF)	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.
180											18×35.5	800				
											22×30	800				
200											18×40	1000				
220	13×25	581	18×25.5	484	16×35.5	593	18×40	598			18×45	1020				
	16×20.5	581														
270			18×20.5	570												
330	16×25.5	714	18×35.5	726	22×35	700										
390					16×38.5	1000										
470	16×31.5	968			22×35	900										
1000	18×40	1573														

制品尺寸与容许纹波电流一览表

尺寸：直径(ϕD)×长度(L)，(毫米/mm)
容许纹波电流：毫安/均方根值(mA/rms)，120 赫兹(Hz), 105℃

Dimension and Permissible Ripple Current

Dimension: ϕDxL(mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Rated Volt.(Vdc)	220		550		600		650	
Surge Volt.(Vdc)	270		600		650		700	
Item / Cap.(μF)	D×L	R. C.	D×L	R. C.	D×L	R. C.	D×L	R. C.
4.7			10×12.5	100				
10			10×20	120				
15			13×16	110				
22							16×20.5	180
47					18×31.5	260	18×31.5	300
68			18×31.5	340			18×35.5	380
82							18×40	450
100							22×35	550
680	22×35	1800						

制品尺寸与容许纹波电流一览表

尺寸：直径(ϕD)×长度(L)，(毫米/mm)
容许纹波电流：毫安/均方根值(mA/rms)，120 赫兹(Hz), 105℃

■表5 产品编码说明 Part Numbering System

D	GA	650	M	826	N40	0	S1	A	A
电容器类别 Capacitors Name	系列名 Series Name	额定电压 Rated voltage	额定静电容量容许误差值 Capacitance tolerance	额定静电容量 Capacitance	制品尺寸 Case size	PET套颜色管 PET Sleeve color	加工形状 Processing shape	电气特性 Electrical characteristics	内部特征码 Internal use
引线型铝电解电容器 Leaded Aluminum Electrolytic Capacitors	KGA Series	范例Example:	M=±20%	范例Example:	范例Example:	黑体银字 Black body silver print			

Voltage	Symbol
6.3V	6R3
10V	010
250V	250

Cap.	Symbol
0.1μF	104
2.2μF	225
33μF	336
470μF	477
6800μF	688
82000μF	829

ϕDxL (mm)	Symbol
18x40	N40

⚠如需了解更详细之介绍，请联系我们
Note:For more details ,please contact us
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