

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	基板自立型牛角铝电解电容器 Snap-in Aluminum Electrolytic Capacitors
客 户 料 号 Customer P/N	
科 尼 盛 料 号 KNSCHA P/N	LSG250M477S303S1AA(203EC1288)
型 号 规 格 Product Type	250V/470 μ F 2000Hours@105 $^{\circ}$ C 插件,30xL30mm PET黑体银字
日 期 Date	2024年10月17日

制 造 Manufacture	
核 准 APPROVAL	制 作 PREPARED

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

🌐 网址: www.knscha.com ✉ 邮箱: sales@knscha.com

☎ 电话: 0769-81035570 83698067 📠 传真: 0769-83861559

🏢 营业中心: 东莞市寮步镇香市科技产业园松湖智谷研发中心A3栋8层
8th floor,Building A3,Songshan Lake Intelligent Valley,Dongguan,
Guangdong,China

🏠 总部基地: 广东省东莞市东坑镇农横路7号汇金展拓科技园
Building 3, No.7 Nongheng Road, Dongkeng Town, Dongguan,
Guangdong Province, China

🏠 杭州分公司: 浙江省杭州市余杭区临平余之城1栋20楼
🏠 厦门办事处: 福建省厦门市集美区厦门软件园三期F12栋901-8室

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KNSCHA ELECTRONICS CO., LIMITED

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Aluminum Electrolytic Capacitors

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



Film Capacitors

- Source Manufacturer
- 10+ Years Experience



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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.

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.

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+86(769)83698067

www.knscha.cn

8th floor, Building A3, Songshan Lake Intelligent Valley, Dongguan, Guangdong, China

Building 3, No.7 Nongheng Road, Dongkeng Town, Dongguan, Guangdong Province, China

+86(769)83861559

cathy@knscha.com

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特性/ Features

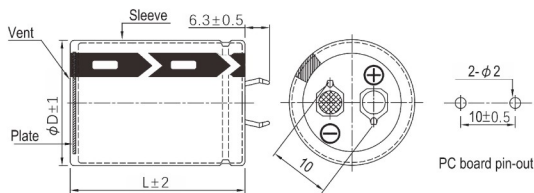
- 105°C standard series for general purposes
- Load Life: 2000 hours at 105°C
- RoHS compliant
- 一般用途品
- 105°C 负荷寿命 2000 小时
- 符合 RoHS 指令



■ 表1 规格表 Specifications

项目 Items	性 能 Performance																	
工作温度范围 Category Temperature Range	16~100V								160~450V									
	-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℃)	测试时间 Time	2 分钟后 after 2 minutes						5 分钟后 after 2 minutes										
	漏电流 Leakage Current	I ≤ 0.03CV or 3(mA/毫安) 之中任一较小值以下 whichever is smaller						I ≤ 3√CV or 0.94 (mA/毫安) 之中任一较小值以下 whichever is smaller										
	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	16	25	35	50	63	71	80	100	160	180	200	250					
	损失角正切值 Tanδ (max)	0.40	0.48	0.46	0.30	0.20	0.20	0.20	0.20	0.15	0.15	0.15	0.15					
	额定电压 Rated Voltage	315	350	400	420	450												
	损失角正切值 Tanδ (max)	0.15	0.15	0.25	0.25	0.25												
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	16	25	35	50	63	71	80	100	160	180	200	250	315	350	400	420	450
	阻抗比 Impedance Ratio	Z(-25℃)/Z(+20℃)	4	3	3	2	2	2	2	2	4	4	4	4	8	8	8	8
		Z(-40℃)/Z(+20℃)	15	10	8	6	6	6	5	5								
耐久性 Endurance	保证寿命时间 Test Time	2,000 hours																
	静电容量变化率 Capacitance Change	≤ 初始值的± 20% Within ±20% of initial value																
	损失角正切值 Tanδ	≤ 初始规格值的200% Less than 200% of specified value																
	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	≤ 初始值的± 20% Within ±20% of initial value																
	损失角正切值 Tanδ	≤ 初始规格值的200% Less than 200% of specified value																
	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

ΦD±1	22,25.4						30,35					
L±2	25	30	35	40	45	50	30	35	40	45	50	

■ 表3 纹波电流与频率补正系数

Ripple Current and Frequency Multipliers

Freq.(Hz)		60	120	500	1K	100K
Rated Volt.(Vdc)						
Coefficient	≤ 100	0.8	1.00	1.2	1.2	1.2
	≥ 160	0.8	1.00	1.2	1.3	1.4

表4 标准品一览表 Standard Size

Dimension and Permissible Ripple Current

Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Rated Volt.(Voc)	16		25		35		50		63		71		80	
Surge Volt.(Voc)	20		32		44		63		79		89		100	
Item Cap.(μ F)	D $\times$ L	R. C.	D $\times$ L	R. C.	D $\times$ L	R. C.	D $\times$ L	R. C.	D $\times$ L	R. C.	D $\times$ L	R. C.	D $\times$ L	R. C.
1000													22x25	1560
2200							22x25	1930	22x30	2300	22x40	1595	22x40	2500
3300							22x35	2380	22x30	2500	22x45	2072	22x50	3000
									22x40	2690			25.4x40	3230
													30x30	3000
4700					22x30	2430	22x40	3010	25.4x40	3370	25.4x50	2779	30x40	4100
5600					22x35	2500	25.4x40	3500						
6800			22x30	2560	22x40	2890	25.4x40	3870	25.4x50	4330	30x45	3008	30x50	5140
8200			22x35	2810	22x45	3290	30x50	4370	30x45	4800	35x45	3568	35x45	5830
10000	22x25	2810	22x40	3160	25.4x35	3300	30x50	4920	30x50	5470				
					25.4x40	3590								
					25.4x45	3590								
12000	22x30	3286	22x40	3480	25.4x45	4010	30x50	5600	35x50	6300				
15000	22x35	3576	22x50	4000	30x40	4080	35x45	6440						
18000	22x40	4101	25.4x45	4660	30x45	5180	35x50	6710						
22000	22x40	4520												

制品尺寸与容许纹波电流一览表

尺寸: 直径(ϕD) $\times$ 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°C

Dimension and Permissible Ripple Current

Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Rated Volt.(Voc)	100		160		180		200	
Surge Volt.(Voc)	125		200		200		250	
Item Cap.(μ F)	D $\times$ L	R. C.	D $\times$ L	R. C.	D $\times$ L	R. C.	D $\times$ L	R. C.
100							22 $\times$ 25	360
150							22 $\times$ 25	500
220							22 $\times$ 25	600
330							22 $\times$ 25	890
470			22 $\times$ 30	1110	22 $\times$ 25	1450	22 $\times$ 35	1100
560			22 $\times$ 25	1580	22 $\times$ 30	1660	22 $\times$ 30	1660
							25.4 $\times$ 25	1560
							25.4 $\times$ 35	1700
680			22 $\times$ 30	1830	22 $\times$ 35	1450	22 $\times$ 35	1870
			22 $\times$ 40	2220	22 $\times$ 30	1660	22 $\times$ 45	1870
							25.4 $\times$ 30	1770
820			22 $\times$ 35	2060	22 $\times$ 40	2110	22 $\times$ 40	2110
							25.4 $\times$ 30	2030
			25.4 $\times$ 25	1890	25.4 $\times$ 30	1940	25.4 $\times$ 40	2170
							30 $\times$ 25	1720
1000	22 $\times$ 30	2020	22 $\times$ 40	2330	22 $\times$ 45	2380	22 $\times$ 50	2450
	25.4 $\times$ 25	2000	25.4 $\times$ 30	2150	25.4 $\times$ 35	2240	25.4 $\times$ 40	2300
			30 $\times$ 25	1900	30 $\times$ 25	1900	30 $\times$ 30	1950
			30 $\times$ 40	2403				
1200			22 $\times$ 45	2610	22 $\times$ 50	2690	25.4 $\times$ 45	2580
			22 $\times$ 50	2690	25.4 $\times$ 40	2520	30 $\times$ 35	2230
			25.4 $\times$ 35	2450	30 $\times$ 30	2140	35 $\times$ 25	1940
					35 $\times$ 25	1940		
1500			25.4 $\times$ 40	2820	25.4 $\times$ 45	2880	25.4 $\times$ 50	2940
			25.4 $\times$ 45	2880	25.4 $\times$ 50	2940	30 $\times$ 40	2580
			30 $\times$ 30	2390	30 $\times$ 35	2490	35 $\times$ 30	2250
			35 $\times$ 25	2170				
			25.4 $\times$ 50	3220	30 $\times$ 40	2820	30 $\times$ 45	2920
1800			30 $\times$ 35	2730				
			30 $\times$ 40	2820				
			35 $\times$ 30	2470				
			30 $\times$ 45	3230	30 $\times$ 45	3230	30 $\times$ 50	3110
2200	22 $\times$ 45	2000	35 $\times$ 35	2790	30 $\times$ 50	3310		
	25.4 $\times$ 40	2200	35 $\times$ 45	3164	35 $\times$ 35	2790	35 $\times$ 40	2920
					35 $\times$ 40	2920		
2700			30 $\times$ 50	3660	35 $\times$ 45	3330	35 $\times$ 45	3330
			35 $\times$ 40	3230				
3300	25.4 $\times$ 45	3000	35 $\times$ 45	3680				
4700	30 $\times$ 50	4000						
6800	35 $\times$ 50	6010						

制品尺寸与容许纹波电流一览表

尺寸: 直径(ϕD) $\times$ 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°C

Dimension and Permissible Ripple Current

Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 120 Hz, 105°C

Rated Volt.(Vdc)	250		315		350		400		420		450			
Surge Volt.(Voc)	300		365		400		450		470		500			
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.		
47											22×25	147		
68							22×25	565			22×30	670		
82							22×25	620			22×35	760		
100							22×30	715			22×25	710		
											22×35	840		
120							22×25	750	22×25	780	22×30	820		
							22×35	887			22×40	940		
150	22×25	1000			22×25	840	22×30	800	22×30	910	22×35	940		
							22×40	924	25.4×25	890	25.4×25	890		
											25.4×40	1120		
180	22×25	1140	22×25	910			22×30	960	22×35	1030	22×40	1050		
							25.4×25	940	25.4×30	1000	25.4×30	1000		
							25.4×35	1112			25.4×45	1225		
220	22×30	1180	22×30	1060	22×30	1060	22×35	1090	22×40	1160	22×45	1190		
							25.4×30	1070	22×45	1190	25.4×35	1160		
					25.4×25	1040	25.4×35	1152	25.4×35	1160	30×25	1110		
							25.4×40	1235	30×25	1110	30×30	1110		
											30×40	1404		
270			22×35	1200	22×35	1200	22×40	1240	22×50	1360	22×50	1360		
							22×45	1260	25.4×40	1320	25.4×40	1320		
			25.4×25	1150	25.4×30	1180	25.4×35	1230	30×30	1260	25.4×45	1350		
							30×25	1160			30×30	1260		
									30×35	1372	35×25	1260	30×40	1455
330	22×25	1210	22×40	1370	22×40	1370	22×50	1440	25.4×45	1490	25.4×40	1420		
					22×45	1400					25.4×40	1520		
					25.4×35	1360	30×30	1310			30×35	1450		
	22×40	1530	25.4×30	1300	30×25	1280	30×45	1450	30×35	1450	30×45	1644		
							35×25	1270			35×30	1450		
390	22×30	1380	22×45	1520	22×50	1560	25.4×45	1550	25.4×50	1660	30×40	1630		
			25.4×35	1480	25.4×40	1520			30×40	1630				
			30×25	1390	30×30	1430	30×35	1490	35×30	1580				
					35×25	1380								
470	22×35	1560	22×50	1720	25.4×45	1710	25.4×50	1740	30×45	1850	30×45	1850		
			25.4×40	1670			30×40	1690			30×50	1900		
	25.4×40	1780	30×30	1570			35×30	1580	35×35	1770	35×35	1770		
			35×25	1520			35×45	1935						
											35×50	2052		
560	22×40	1740	25.4×45	1860	25.4×50	1900	30×45	1910	30×50	2070	30×50	2070		
	25.4×30	1610			30×35	1780	35×35	1760			35×40	2020		
	25.4×45	1740			30×40	1840	35×45	1995	35×40	2020	35×45	2080		
	30×25	1420			35×30	1720								
680	22×45	1970	25.4×50	2100	30×45	2100	30×50	2150	35×45	2290	35×50	2360		
	25.4×35	1850	30×40	2030	35×35	1940	35×40	2030						
	25.4×40	1980	35×30	1900			35×50	2269						
820	25.4×40	2080	30×45	2310	30×50	2360	35×45	2300	35×50	2590				
	25.4×45	2130												
	30×30	1770	35×35	2130	35×40	2230	35×50	2370						
	35×25	1600												
1000	25.4×50	2400	30×50	2610	35×45	2540								
	30×35	2030	35×40	2460										
	30×45	2495												
1200	30×40	2310	35×45	2780	35×50	2860								
	30×45	2380												
	35×35	2060												
1500	30×50	2730												
	35×40	2410												
1800	35×45	2720												
2200	35×50	3100												

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°C

表5 产品编码说明 Part Numbering System

L	SG	450	M	227	R30	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																								
基板自立型铝电解电容器 Snap-in Aluminum Electrolytic Capacitors	KSG Series	范例Example:	M=±20%	范例Example:	范例Example:	黑体银字 Black body silver print																											
		<table><tr><th>Voltage</th><th>Symbol</th></tr><tr><td>6.3V</td><td>6R3</td></tr><tr><td>10V</td><td>010</td></tr><tr><td>250V</td><td>250</td></tr></table>	Voltage	Symbol	6.3V		6R3	10V	010	250V	250		<table><tr><th>Cap.</th><th>Symbol</th></tr><tr><td>0.1μF</td><td>104</td></tr><tr><td>2.2μF</td><td>225</td></tr><tr><td>33μF</td><td>336</td></tr><tr><td>470μF</td><td>477</td></tr><tr><td>6800μF</td><td>688</td></tr><tr><td>82000μF</td><td>829</td></tr></table>	Cap.	Symbol	0.1μF	104	2.2μF	225	33μF	336	470μF	477	6800μF	688	82000μF	829	<table><tr><th>Dim.(mm)</th><th>Symbol</th></tr><tr><td>25x30</td><td>R30</td></tr></table>	Dim.(mm)	Symbol	25x30	R30	
		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																																
Dim.(mm)	Symbol																																
25x30	R30																																

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[EKHE451VSN102MR60Z](#) [TDA63V4700M22*50 V](#) [152EC0325](#) [HP221M450N350AP4](#) [152EC0329](#) [LAO-50V103MS45PX#B](#) [152EC0566](#)
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[TLS315VS470M30*30 VS](#) [ELXS451VSN181MQ30S](#) [152EC0337](#) [TDA35VS4700M22*30 VS](#) [KN221M40025*30A](#) [152EC0328](#)
[450USC470MEFCSN35X45](#) [152EC0332](#) [152EC0339](#) [KS331M45030*50A](#) [152EC0344](#) [152EC0341](#) [TDC450VS330M30*30 VS](#)
[TDC420V730M35*35LO](#) [EKP157M2WN35SZSHP](#)