

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	LSK450M477S402S1AA(203EC1353)
型 号 规 格 Product Type	450V/470 μ F 5000Hours@105 $^{\circ}$ C 插件,30xL40mm PET咖啡银字
日 期 Date	2024年10月17日

制 造 Manufacture	
核 准 APPROVAL	制 作 PREPARED
王 伟	刘 国 华

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

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KNSCHA ELECTRONICS CO., LIMITED

IATF16949:2016 ISO9001:2015 ISO14001:2015

Aluminum Electrolytic Capacitors

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



Film Capacitors

- Source Manufacturer
- 10+ Years Experience



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KNSCHA

Empowering The World

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.

KNSCHA

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特性/ Features

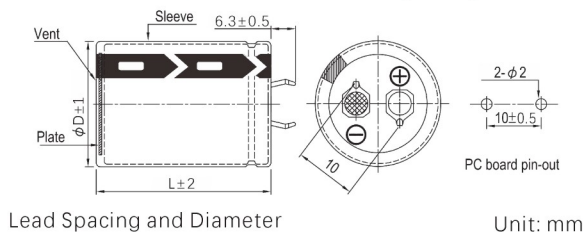
- Long Life
- Load Life: 5000 hours at 105°C
- RoHS compliant
- 长寿命品
- 105°C 负荷寿命 5000 小时
- 符合 RoHS 指令



■ 表1 规格表 Specifications

项目 Items	性 能 Performance															
工作温度范围 Category Temperature Range	16~500V															
	-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	80	100	200	220	250	400	420	450	500	
	损失角正切值 Tanδ (max)	0.50	0.45	0.40	0.35	0.30	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	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	80	100	200	220	250	400	420	450	500
	阻抗比 Impedance Ratio	Z(-25℃)/Z(+20℃)	4	3	3	2	2	2	2	4	4	4	8	8	8	8
耐久性 Endurance	保证寿命时间 Test Time		5,000 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 5,000 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 5,000 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)



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

■ 表3 纹波电流与频率修正系数
Ripple Current and Frequency Multipliers

Freq.(Hz)		60	120	500	1K	10K
Rated Volt.(Vdc)						
Coefficient	16~100	0.9	1.00	1.05	1.10	1.15
	200~250	0.8	1.00	1.20	1.30	1.50
	400~500	0.8	1.00	1.20	1.25	1.40

■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.(Vdc)	16		25		35		50		63		80		100									
Surge Volt.(Vdc)	20		32		44		63		79		100		125									
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.								
560													22×25	1010								
680													22×30	1190								
820											22×25	1090	22×35	1330								
													25.4×25	1260								
1000									22×25	1100	22×30	1290	22×40	1560								
													25.4×30	1520								
													30×25	1470								
1200									22×25	1170	22×35	1480	22×45	1760								
											25.4×25	1320	25.4×35	1760								
1500									22×30	1410	22×40	1700	22×50	2000								
													25.4×25	1380	25.4×30	1740	25.4×40	2030				
																	30×25	1580	30×30	1890		
1800							22×25	1280	22×35	1620	22×45	1910	25.4×45	2290								
													25.4×30	1630	25.4×35	1860	30×25	2190				
																	30×25	1680	35×30	2050		
2200							22×30	1520	22×40	1850	25.4×45	2220	30×40	2520								
													25.4×25	1460	25.4×30	1750	30×30	2020	35×35	2480		
																	30×25	1660				
2500													35×35	2762								
2700							22×25	1770	22×45	2100	30×35	2500	30×45	2860								
													25.4×30	1760	25.4×35	2030	35×30	2180	35×40	2870		
													35×30	2010								
3300					22×30	1540	22×40	2020	25.4×40	2330	30×40	2690	35×45	3250								
															25.4×30	1870						
															30×25	1720	30×30	2150	35×35	2600		
3900					22×35	1770			25.4×45	2580	30×45	2940	35×50	3560								
															25.4×25	1550	30×35	2460	35×40	3000		
4700			22×30	1550	22×40	2010	25.4×40	2430	30×40	2820	35×45	3440										
					25.4×30	1870	30×30	2220	35×35	2770												
5600			22×35	1770	22×45	2250	25.4×45	2720	30×45	3220	35×50	3720										
					25.4×25	1560	25.4×35	2180	30×35	2580					35×40	3200						
					30×25	1800	35×30	2350														
6800	22×30	1660	22×40	2020	22×50	2490	30×40	3010	35×45	3610												
					25.4×30	1880	25.4×40	2450							35×35	2910						
					30×30	2280																
8200	22×30	1790	22×45	2270	25.4×45	2800	30×50	3630	35×50	3940												
															25.4×25	1670	25.4×35	2180	30×35	2690	35×40	3360
			30×25	1920																		
10000	22×35	2080	22×50	2560	30×40	3040	35×45	3790														
															25.4×30	2070	25.4×40	2530	35×30	2780		
															30×30	2380						
12000	22×40	2360	25.4×45	2790	30×45	3380	35×50	4060														
															25.4×35	2370	30×35	2700	35×35	3300		
															30×25	2130	35×30	2760				
15000	22×45	2690	30×40	3130	35×40	3880																
															25.4×40	2720	35×30	3000		35×45	4400	
															30×30	2540						
18000	25.4×45	3060	30×45	3520	35×45	4400																
															30×35	3020	35×35	3500				
															35×30	3090						
22000	25.4×50	3390	30×50	3920																		
															30×40	3460	35×40	3950				
															35×30	3310						
27000	30×45	3880	35×50	4720																		
															35×35	3850						
33000	30×50	4330																				
															35×40	4330						
39000	35×45	4960																				
47000	35×50	5490																				

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)	200		220		250		400		420		450		500			
Surge Volt.(Voc)	250		270		300		450		470		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.		
47													22×25	440		
56													22×30	510		
68													22×30	560		
													25.4×25	550		
82							22×25	640	22×25	610	22×25	600	22×35	680		
													25.4×30	640		
													30×25	630		
100							22×30	740	22×30	740	22×30	730	22×40	770		
											25.4×25	720	25.4×35	740		
													30×25	690		
120							22×30	790	22×35	860	22×35	840	22×50	870		
							25.4×25		25.4×25	750	25.4×30	870	25.4×35	810		
													30×30	810		
150							22×35	920	22×40	980	22×40	970	25.4×45	970		
							25.4×30	950	25.4×30	900	25.4×30	890	30×35	960		
											30×25	900				
											35×35	900	35×30	920		
180							22×40	1050	22×45	1090	22×40	1080	25.4×50	1100		
							25.4×35	1100	25.4×35	1050	25.4×35	1030				
							30×25	970	30×25	930	30×30	1080	35×30	1000		
220					22×25	970	22×50	1280	22×50	1210	25.4×40	1170	25×50	1100		
							25.4×35	1120	25.4×40	1190	30×30	1100	30×45	1220		
							30×30	1170	30×30	1120	35×25	1040	35×40	1210		
							35×25	1100	35×25	1050						
270	22×25	1090	22×25	1040	22×30	1180	25.4×45	1400	25.4×45	1340	25.4×50	1430	35×40	1320		
							30×35	1360	30×35	1300	30×30	1100				
							35×30	1330	35×30	1270	35×30	1250				
330	22×30	1310	22×30	1260	22×35	1370	25.4×45	1480	30×40	1470	30×45	1450	35×45	1500		
							25.4×50	1550								
					25.4×25	1140	30×35	1430	35×35	1450	35×35	1430				
							30×40	1550								
							35×30	1350								
390	22×30	1320	22×35	1470					30×45	1640	30×50	1750	35×55	1730		
			25×25	1210					35×40	1680	35×40	1660				
470	22×35	1540	22×40	1640	22×45	1740	30×50	1890	30×50	1810	35×45	1850				
	25.4×30		25×30	1470	25.4×35	1610	35×40	1780	35×40	1710						
				30×25	1340											
560	22×40	1750	22×45	1860	22×50	1920	35×45	1980	35×50	2070	35×50	2040				
			25×35	1710	25.4×40	1830										
	25.4×30	1540	30×30	1630	30×30	1630										
			30×25	1410	35×25	1480										
680	22×45	1960	22×50	2050	25.4×45	2040	35×50	2190								
	25.4×35	1790	25.4×40	1940	30×35	1900										
			30×30	1710	35×30	1800										
	30×25	1460	35×25	1540												
820	22×50	2150	25.4×45	2160	25.4×50	2240										
	25.4×40	2030	30×35	1990	30×40	2150										
	30×30	1770	35×30	1890	35×30	1810										
	35×25	1590														
1000	25.4×45	2260	25.4×50	2370	30×45	2390										
	30×35	2060	30×40	2260	35×35	2380										
	35×30	1930	35×35	2150												
1200	30×40	2340	30×45	2510	30×50	2620										
	35×35	2220	35×40	2480	35×40	2390										
1500	30×45	2600	30×50	2750	30×50	2920										
	35×40	2560	35×40	2500												
1800	35×45	2850	35×50	3040												
2200	35×50	3140														

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

表5 产品编码说明 Part Numbering System

L	SK	200	M	687	R35	4	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																										
KSK Series	范例Example:		M=±20%	范例Example:		范例Example:																													
	<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>25x35</td><td>R35</td></tr></table>		Dim.(mm)	Symbol	25x35	R35	咖啡体银字 Coffee 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																																		
Dim.(mm)	Symbol																																		
25x35	R35																																		

△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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