



# ALUMINUM ELECTROLYTIC CAPACITORS

## SKD

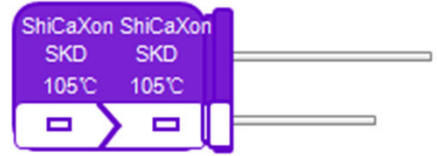
Low temperature resistant-55°C ~ +105°C低温品)  
Series

■ For general purpose, -55°C to +105°C, 2000 to 3000hours.

特点:低温-55°C to +105°C 2000~3000小时品.

■ Corresponding product to RoHS (2011/65/EU)

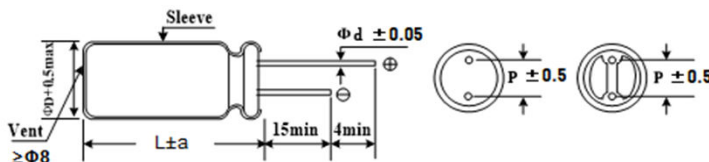
符合RoHS要求的相应产品(2011/65/EU)



### ■ SPECIFICATIONS(技术性能)

Item 项目	Performance Characteristics		性能								
Operating temperature range 温度范围	-55 to +105°C		-40 to +105°C								
Rated Working Voltage Range 电压范围	6.3 to 100V		160 to 450V								
Nominal Capacitance Range 容量范围	0.1 to 22000µF		1.0 to 330µF								
Capacitance Tolerance 容量偏差	±20(120Hz, +20°C)										
Leakage Current (MAX) (20°C) 泄漏电流	I=0.01CV or 3(µA) whichever is greater.		I=0.03CV+10(µA) or 3(mA), whichever is smaller.								
	After rated voltage applied for 2 min 者取较大值, 2分钟测试		After rated voltage applied for 2 min 两者取较小值, 2分钟测试								
Dissipation Factor 损耗角 (tanδ) (120Hz, 20°C)	Working Voltage(V)	6.3	10	16	25	35	50	63~100	160~250	350~450	
	tan δ(max)	0.28	0.24	0.2	0.16	0.14	0.12	0.10	0.15	0.20	
For capacitance value > 1000µF, add 0.02per another 1000µF. 容量每增加1000uF损耗角增加0.02											
Low Temperature Stability Impedance Ratio (MAX) 低温阻抗比	Z(120Hz)	6.3	10	16	25	35	50	63	100	160~250	350~450
	Z-25°C/Z+20°C	4	3	2	2	2	2	2	2	2	2
	Z-55°C/Z+20°C	10	8	6	4	3	3	3	3		
High Temperature Load Life 高温负载耐久性	After applying rated voltage for 2000~3000 hours at 105°C. the capacitors shall meet the following requirements. 在105°C环境下连续施加额定电压2000~3000小时后, 符合以下要求.										
	Capacitance Change 容量	Within ± 20 % of initial value 在初始值的±20%									
	Dissipation Factor 损耗角	Not more than 200% of the specified value 不超过标准值的200%									
	Leakage Current 泄漏电流	Initial specified value or less 标准值内									
	Life Time: 试验时间	ΦD(mm)	Φ5~Φ10				Φ13higher				
	Life(H)	2000				3000					
High Temperature Shelf Life 高温放置耐久性	After leaving capacitors under no load at 105°C for 1000 hours.the capacitors shall meet the same requirement as Endurance. 在105°C环境下不加负载放置1000小时后电性能同耐久性要求.										

### ◆ CASE SIZE TABLE(外形尺寸)



Unit:mm

ΦD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8
α	(L < 20)1.5 (L ≥ 20)2.0						

### ◆ RIPPLE CURRENT MULTIPLIER (纹波电流修正系数)

(1) Frequency Coefficient (频率系数)

Rated Voltage(V)	Freq. (Hz)				
	Cap(µf)	120	1k	10k	100K
6.3~100	≤47	1.0	1.55	1.80	2.00
	56~470	1.0	1.35	1.50	1.50
	≥560	1.0	1.10	1.15	1.15
160~450	0.47~220	1.0	1.35	1.50	1.50
	>220	1.0	1.35	1.50	1.50

(2) Temperature Coefficient(温度系数)

Temperature (°C)	-55	60	70	85	105
Factor	2.23	2.17	2.0	1.75	1.0



# ALUMINUM ELECTROLYTIC CAPACITORS

## SKD Low temperature resistant(-55°C ~ +105°C低温品) Series

◆DIMENSIONS Rated Capacitors, Voltage(Surge),Case Size,Ripple Current. 容量、电压(浪涌电压)、尺寸、纹波电流.

Cap (μF)	Rated (Surge) Voltage							
	6.3 (8)		10 (13)		16 (20)		25 (32)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
33							5x11	sh
47					5x11	110	6.3x11	130
100					6.3x12	180	8x12	230
220	5x11	140	6.3x12	200	8x12	260	8x12	310
330			8x12	250	8x12	310	10x13	380
470	6.3x12	230	10x13	460	10x16	560	10x20	680
1000	8x12	380	10x20	760	13x20	920	13x25	1090
2200	10x16	710	13x20	1000	13x25	1170	16x25	1400
3300	10x20	840	13x25	1260	16x25	1480	16x30	1750
4700	13x20	1090	16x25	1570	16x30	1780	18x35	2040
6800	13x25	1350	16x30	1890	18x35	2060		
10000	16x25	1650	18x35	2180				
15000	16x30	2010						
22000	18x35	2350						

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size ΦD X L (mm)

Cap(μF)	Rated (Surge) Voltage							
	35 (44)		50 (63)		63 (79)		100 (125)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1			5x11	1.3				
0.22			5x11	2.3				
0.33			5x11	3.5				
0.47			5x11	5			5x11	9
1			5x11	10			5x11	14
2.2			5x11	18			5x11	21
3.3			5x11	22			5x11	31
4.7			5x11	26			5x11	38
10			5x11	39	5x11	48	6.3x12	54
22			5x11	65	5x11	71	6.3x12	93
33			5x11	90	6.3x12	100	8x12	130
47	5x11	90	6.3x12	110	6.3x12	120	10x13	165
100	6.3x12	150	8x12	180	10x13	215	10x20	265
220	8x12	270	10x13	300	10x16	335	13x25	440
330	10x12	350	10x16	410	10x20	510	16x25	540
470	10x16	480	10x20	530	13x20	640	16x25	715
1000	13x20	810	13x25	950	16x25	930	18x35	985
2200	16x25	1260	16x30	1470	18x35	1610		
3300	16x30	1610	18x35	1770				
4700	18x35	1910						

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size ΦD X L (mm)



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## SKD

Low temperature resistant(-55℃ ~ +105℃ 宽温品)

Series

◆ DIMENSIONS Rated Capacitors, Voltage(Surge),Case Size,Ripple Current. 容量、电压(浪涌电压)、尺寸、纹波电流.

Cap(μF)	Rated (Surge) Voltage							
	160 (200)		200 (250)		250 (300)		350 (400)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1	6.3x12	17	6.3x12	17	6.3x12	17	6.3x12	18
2.2	6.3x12	25	6.3x12	25	6.3x12	29	8x12	31
3.3	6.3x12	36	6.3x12	36	8x12	42	10x13	38
4.7	6.3x12	43	8x12	50	8x12	50	10x16	50
10	10x13	70	10x16	80	10x16	88	10x20	82
22	10x20	130	10x20	140	13x20	155	13x20	130
33	10x20	180	13x20	190	13x20	190	16x25	195
47	13x20	220	13x20	220	13x25	230	16x25	230
100	16x25	335	16x25	335	16x30	365	18x30	375
220	16x30	540	16x30	575				
330	18x30	705						

Maximum Allowable Ripple Current (mA rms) at 105℃ 120Hz

Case Size ΦD X L (mm)

Cap(μF)	Rated (Surge) Voltage							
	400 (450)		450 (500)					
	Size	Ripple	Size	Ripple				
1	6.3x12	18	8x12	18				
2.2	8x12	30	10x13	29				
3.3	10x13	40	10x16	41				
4.7	10x16	50	10x20	49				
10	10x20	80	13x20	75				
22	13x25	145	16x25	115				
33	16x25	195	16x30	155				
47	16x30	250						

Maximum Allowable Ripple Current (mA rms) at 105℃ 120Hz

Case Size ΦD X L (mm)