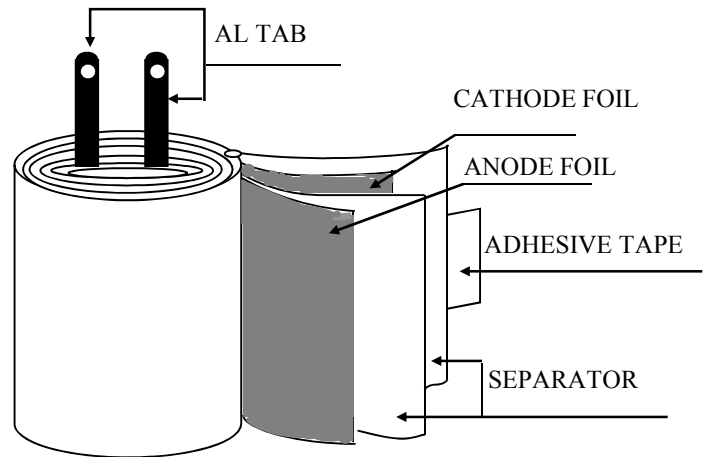
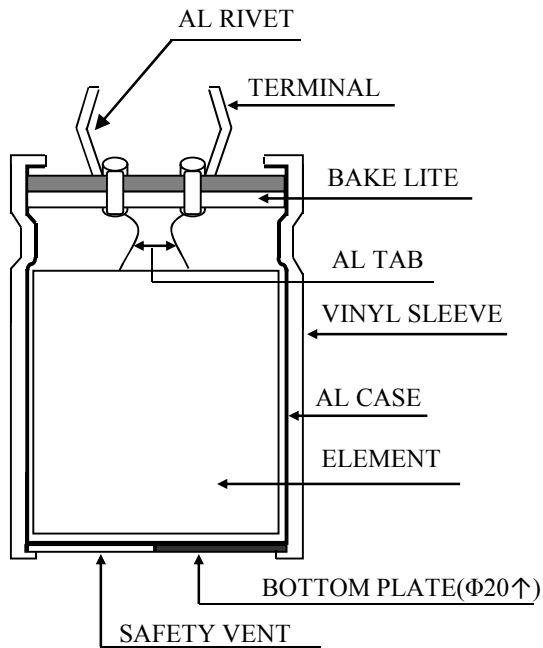




# KNSCHA Snap-in Type Aluminum Electrolytic Capacitors

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## LARGE SIZED TYPE CAPACITORS COMPONENT

PART NAME	MATERIALS
AL RIVET	ALUMINUM 99.9%
TERMINAL	SPCC
BAKE LITE	RUBBER+PAPER LAMINATE
AL TAB	ALUMINUM 99.9% OVER
SLEEVE	INK
	P.E.T (Polyethylene Terephthalate Resin)
AL CASE	ALUMINUM 99.5%
ANODE FOIL	FORMED ALUMINUM 99.9% OVER
CATHODE FOIL	FORMED ALUMINUM 98.4% OVER
SEPARATOR	INSULATION PAPER
ADHESIVE TAPE	POLY PROPYLENE FILM

# SMO Series

## 特征/FEATURES

- Withstanding 3000 hours application of rated ripple current at 105°C
- High ripple current, Long life and Ultra miniaturized
- Compliant to the RoHS directive
- 小型化、长寿命、高纹波电流、低阻抗品
- 105°C 3000时间保证品
- RoHs指令对策品

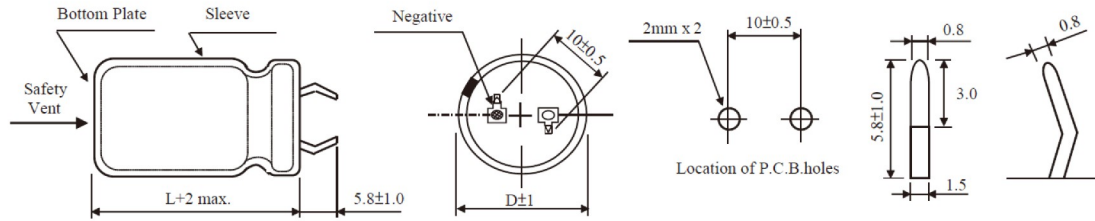


## 规格表/SPECIFICATIONS

项目 Items	特征 Characteristics					
温度范围 Category Temperat Range	-40°C ~ +105°C					
规格电压范围 Rated voltage range	200-450V.DC					
静电容量允许容差 Capacitance Tolerance	± 20% (20°C, 120Hz)					
漏电流 Leakage Current(MAX)	200-450V.DC					
	I=0.02CV以下 定格电压印加3分钟后 I=0.02CVwhichever is greater after 3 minutes application of rated voltage					
	I=漏电流 (µ A)		C=定格静电容量 (µ F)		V=定格电压 (V)	
	Leakage Current		Ratd Capacitance		Rated Voltage	
损耗角正接 (tan δ) Dissipation Factor(MAX)	定格电压 (V)	200	250	400	450	20°C
	Rated Voltage	0.18	0.15	0.20	0.20	120Hz
容量超过1000 µ F; 每超过1000 µ F, 损耗角增加0.02 Add 0.02 per 1,000 µ F for more than 1,000 µ F items.						
高温负荷特性 High Temp Load Test	105°C, 在规定的时间内, 印加定格电压与纹波电流后, 满足下列条件 After life test with ripple current at conditions stated in the table below, the capacitors shall meet the following requirements.					
	105°C 施加额定电压3000小时后满足下列条件 After 3000 hours, application of DC rated working voltage at + 105°C, capacitor shall meet the following limits.					
	静电容量变化率 Capacitance Change	初期值的 ± 25% Within ± 25%				
	损耗角正接 (tan δ) Dissipation Factor	规格值的200%以内 Not more than the specified value				
漏电流 Leakage Current(MAX)	规格值以下 Not more than the specified value					
低温特性 (抵抗比) Low Temperature Stability impedance Ratio MAX	规格电压 (V) Rated Voltage	200V	250V	400V	450V	
	Z(-25°C)/Z(20°C)	4	5	6	8	
	Z(-40°C)/Z(20°C)	8	9	10	12	
高温无负荷特性 High Temp Non- Load Test	After storage for 1000 hours at 105°C with no voltage applied, voltage treatment of JIS-C-5102 article 4-4 is to be given and then measurement shall be made, at which time requirements specified in the table "High Temperature Loading" can be met. 在105°C的条件下不加电压放置1000个小时, 按照JIS-C-5102中4-4的标准进行处理, 特性满足高温负荷特性					

# SMO Series

## 寸法图DIMENSIONS



★ Φ35mm: 3.5 ± 0.5mm The standard design has no plastic disc 标准的作业没有底座

### ▼ MULTIPLIER FOR RIPPLE CURRENT 纹波电流修正系数

#### (1) Frequency coefficient 频率系数

Freq.(Hz)	120	1K	10K	100K	(2) Temperature coefficient				
Cap(μF)					Ambient Temperature(°C) Coefficient	65	75	85	105
330 ~ 680	1.00	1.30	1.41	1.43		1.10	1.15	1.20	1.00
820 ~ 22000	1.00	1.20	1.25	1.30					

### 标准品一览表/STANDARD SIZE

定格电压 Rated voltage 200V(2D)					
定格静容量(μF) Rated Capacitance	外形尺寸 Size Φ D x L (mm)	定格电流 Rated ripple current m A r.m.s/105 °C, 120KHz	阻抗值 Impedance /100KHz/(Ω)		
			20 °C	-10 °C	
220	22*21	1100	0.690	4.900	
330	25*21	1250	0.620	5.200	
470	25*25	1550	0.430	4.900	
560	25*30	1680	0.400	4.600	
560	30*25	1750	0.380	4.200	
680	30*30	1780	0.350	3.300	
680	35*21	1850	0.330	3.300	
820	30*30	2100	0.310	3.000	
820	35*25	2100	0.280	2.200	
1000	35*25	2300	0.260	2.100	
1000	35*30	2300	0.240	2.000	
1200	35*30	2550	0.220	1.800	
1500	35*35	2650	0.200	1.700	
1800	35*40	2800	0.180	1.500	
2200	35*45	3100	0.160	1.500	
3300	35*60	3600	0.140	1.400	
定格电压 Rated voltage 250V(2E)					
定格静容量(μF) Rated Capacitance	外形尺寸 Size Φ D x L (mm)	定格电流 Rated ripple current m A r.m.s/105 °C, 120KHz	阻抗值 Impedance /100KHz/(Ω)		
			20 °C	-10 °C	
220	22*21	1250	0.620	5.200	
330	25*25	1550	0.430	4.900	
470	30*25	1680	0.400	4.600	
470	35*21	1750	0.380	4.200	
560	30*30	1780	0.350	3.300	
560	35*25	1850	0.330	3.300	
680	30*25	2100	0.310	3.000	
680	35*21	2100	0.280	2.200	
820	35*30	2300	0.260	2.100	
820	35*35	2300	0.240	2.000	
1000	35*35	2550	0.220	1.800	
1000	35*40	2650	0.200	1.700	
1200	35*40	2800	0.180	1.500	
1500	35*45	3100	0.160	1.500	
1800	35*50	3300	0.140	1.400	
2200	35*60	3500	0.120	1.200	
2200	35*65	3500	0.120	1.200	

# SMO Series

## 标准品一览表/STANDARD SIZE

定格电压 Rated voltage 400V(2G)				
定格静容量(μ F) Rated Capacitance	外形尺寸 Size Φ D×L (mm)	定格电流 Rated ripple current m A r.m.s./105℃,120KHz	阻抗值 Impedance /100KHz/(Ω)	
			20℃	-10℃
100	22*22	1020	1.75	5.90
100	22*25	1020	1.50	4.90
120	22*25	1050	1.45	4.90
150	25*25	1100	1.40	4.80
180	25*25	1150	1.38	4.90
220	25*25	1300	1.25	4.80
220	30*22	1350	1.20	4.80
220	30*25	1450	1.15	4.80
270	22*40	1750	1.10	4.60
270	25*30	1750	1.10	4.60
270	30*25	1850	1.10	4.60
270	35*22	1880	1.05	4.60
330	25*30	2000	1.00	4.30
330	30*25	2150	0.98	4.30
330	30*30	2200	0.95	4.30
390	30*30	2300	0.90	4.30
390	35*22	2350	0.80	4.30
470	35*30	2500	0.70	4.30
470	35*35	2550	0.60	4.30
560	35*35	2800	0.55	4.10
680	35*35	2950	0.45	3.90
820	35*40	3050	0.40	3.90
1000	35*50	3300	0.95	4.10
定格电压 Rated voltage 450V(2W)				
定格静容量(μ F) Rated Capacitance	外形尺寸 Size Φ D×L (mm)	定格电流 Rated ripple current m A r.m.s./105℃,120KHz	阻抗值 Impedance /100KHz/(Ω)	
			20℃	-10℃
82	25*25	1050	1.50	4.90
100	25*25	1130	1.45	4.90
120	25*25	1180	1.40	4.80
150	25*25	1250	1.38	4.90
180	25*30	1300	1.25	4.80
220	25*30	1450	1.05	4.80
220	25*40	1480	0.98	4.80
220	30*25	1480	0.98	4.80
220	35*22	1500	0.95	4.60
270	25*40	1650	0.90	4.60
270	35*22	1700	0.85	4.60
270	35*30	1730	0.80	4.30
330	35*30	1900	0.75	4.30
330	30*30	1950	0.70	4.30
330	35*25	2000	0.65	4.30
330	30*35	2150	0.60	4.30
470	35*30	2600	0.55	4.30
470	35*35	2700	0.45	4.30
560	35*35	2950	0.40	4.10
680	35*40	3050	0.38	3.90
820	35*45	3200	0.33	3.90
1000	35*55	3350	0.29	3.30