

# 产品承认书

产品代码	184EC010
产品系列	SB
产品规格	450V4700uF(-20 ~ +20%)
产品尺寸	76X115

客户		供方	拟制	杨偲浩
品名	铝电解电容器		审核	薛子文
			批准	刘军军
型号	450V4700uF $\pm$ 20% 76X115MM	需方	确认	
日期	2023年8月31日		批准	

## 1、适用范围

本规格书适用于广东科尼盛电子科技有限公司 SB(85°C 2000h)系列电解电容器产品的规定。

## 2、电气特性 Electrical characteristics (表1)

额定电压 Rated Voltage (V.D.C)	浪涌电压 Surge Voltage (V.D.C)	额定容量 Rated Capacitance ( $\mu$ F)	容量偏差 Capacitance Tolerance (%)	损耗角正切 Dissipation Factor (Max) (%)	等效串联电阻 TYP ESR (m $\Omega$ )	漏电流 Leakage Current (mA, MAX) 5min	最大纹波电流 Maximum ripple current (A) 120Hz 85°C
450	500	4700	-20 ~ +20%	15	26.0	4.40	10
at 120Hz 20°C							
气候类别 Environmental Category: 25/85/21		工作温度	-25/+85°C	储存条件	温度 $\leq$ 35°C;湿度 $\leq$ 75%RH		

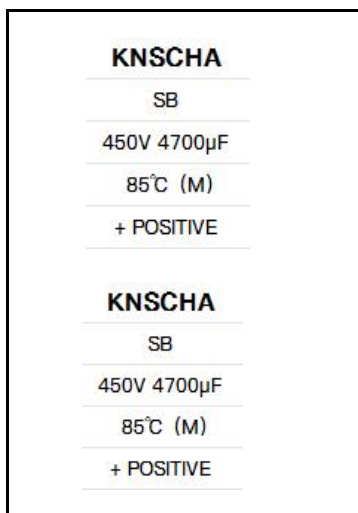
## 3 性能特性 Specifications

No.	项目 Item	特性 Characteristics
1	外观检查 Visual examination, marking(Non-Destructive)	外观: 无任何异常 Appearance: no remarkable abnormality
2	外形尺寸 Dimensions (Non-Destructive)	见外形图 See to dimensions
3	漏电流 Leakage current (Non-Destructive)	见表1 See to table 1
4	容量 Capacitance (Non-Destructive)	见表1 See to table 1
5	损耗角正切 Tangent of the loss angle(Non-Destructive)	见表1 See to table 1
6	振动 Vibration	频率范围 Frequency range: 10-55Hz 振幅: 0.75mm Total Amplitude: 0.75mm 条件: X.Y.Z 方向各2 小时 Direction and duration of vibration: 3 orthogonal directions mutually each for 2 hours Total 6 hours 静电容量测试时无接触不良, 断线及短路, 端子无机机械损伤 Capacitance: During the test, measured value to be stabilized Appearance: No remarkable abnormality 静电容量变化: 初始值的-5~+5%以内 Capacitance change: Within -5~+5% of the initial value
7	稳态湿热 Dump heat	温度: 40 $\pm$ 2°C 湿度: 90-95%Rh 时间: 21 天 Test Temperature :40 $\pm$ 2°C Relative Hwmidity:90-95%Rh Test time: 21 天 试验后常温放置1-2 小时 To expose in the atmospheric condition for 1 to 2 hours after completion of test 漏电流: 不超过规定值 Leakage current: Not more than the specified value 静电容量变化: 初始值的-10~+10%以内 Capacitance change: Within -10~+10%of the initial value 损耗角正切: 不超过规定值 Dissipation Factor: Not more than the specified value 绝缘电阻 (使用金属箔法): 大于100M $\Omega$ Insulation Resistance (Using metal foil) : $\geq$ 100M $\Omega$

## 续表

No.	项目 Item	特性 Characteristics
8	耐久性 Endurance(85°C)	时间(Time): 2000h 电压: 额定电压 (叠加规定纹波电流) 试验后常温放置16h 测定 Applied Voltage: maximum value of DC voltage overlapped by an allowable ripple current. The capacitors shall then be removed from the test chamber and stabilized at room temperature for 16 hrs. after. 漏电流: 不超过规定值 Leakage Current: Not more than the specified value 电容量变化: 初始值的-30~+30%以内 Capacitance change: within -30~+30% of the initial value 损耗角正切: 不超过规定值的2.0 倍 Dissipation Factor: Not more than 200% of the specified value
9	浪涌 Surge	施加电压: 500VDC 温度: 85±3°C Test Voltage Test Temperature 周期: 6±0.5min 30±5sec 充电 A period: 6±0.5min (charging for 30±5sec) 充电电阻: 1000W 回数: 1000 times Series protective resistance The number of times 漏电流: 不超过规定值 Leakage Current: Not more than the specified value 电容量变化: 初始值的±15%以内 Capacitance change: within ±15% of the initial value 损耗角正切: 不超过规定值的1.75 倍 Dissipation Factor: Not more than 175% of the specified value
10	压力释放 Pressure relief	电容器上加 10A 逆向直流电, 防爆壳正常作动, 无金属片飞散, 起火, 爆炸。 The capacitor is shall be connected in inverse polarity, and applied DC current at 10A constant, The pressure relief device shall open in such a way as to avoid any danger of fire or explosion of capacitor elements (Terminal
11	高温贮存 Storage at upper category temperature (85°C)	时间(Time): 1000h 电压处理: 常温下电容器串联保护电阻(1KW), 加额定电压 30 分钟, 施加后放电, 常温放置 16h Condition: Following this period the capacitors shall be removed from the test chamber and be allowed to stabilize at room temperature. Next they shall be connected to a series limiting resistor (1KW), with DC. Rated Voltage 漏电流: 不超过规定值 Leakage Current: Not more than the specified value 电容量变化: 初始值的±20%以内 Capacitance change: within ±20% of the initial value 损耗角正切: 不超过规定值的2.0 倍 Dissipation Factor: Not morn than 200% of the specified value GGS0712-16
12	绝缘耐压 insulation withstanding voltage	2500VAC 施加于短路的端子和套管之间, 1分钟不破坏 A voltage of 2500VAC is applied for one minute between the terminals shorted each other and the insulating sleeve covering the case, there shall not be damaged

## 4、标识 Marking



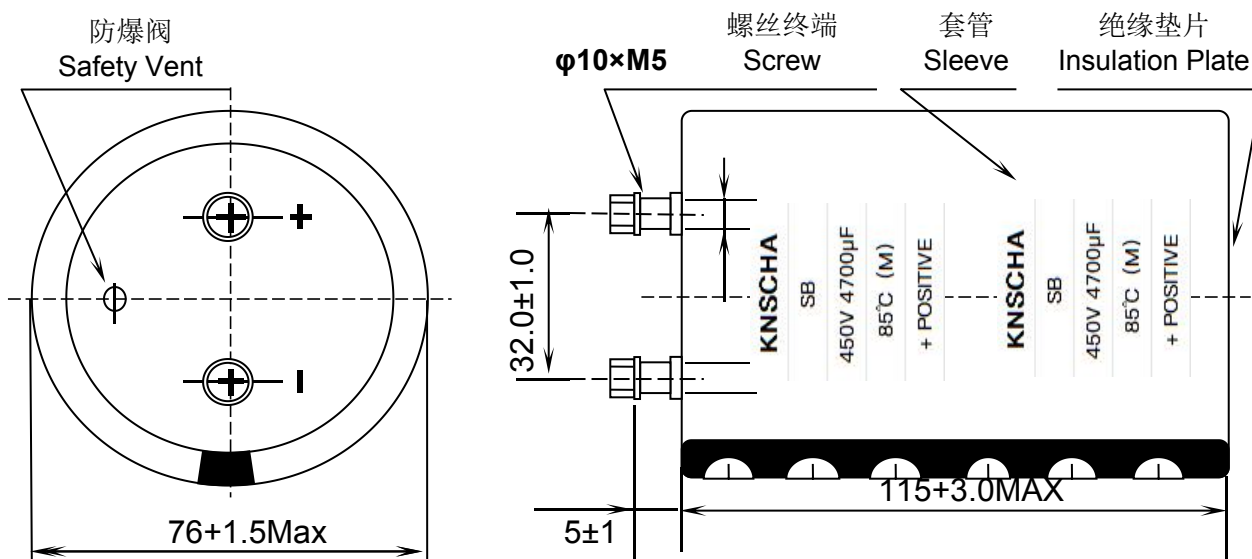
← 商标 Brand

← 产品系列 Products series

← 额定电压 Rated voltage & 静电容量 Capacitance

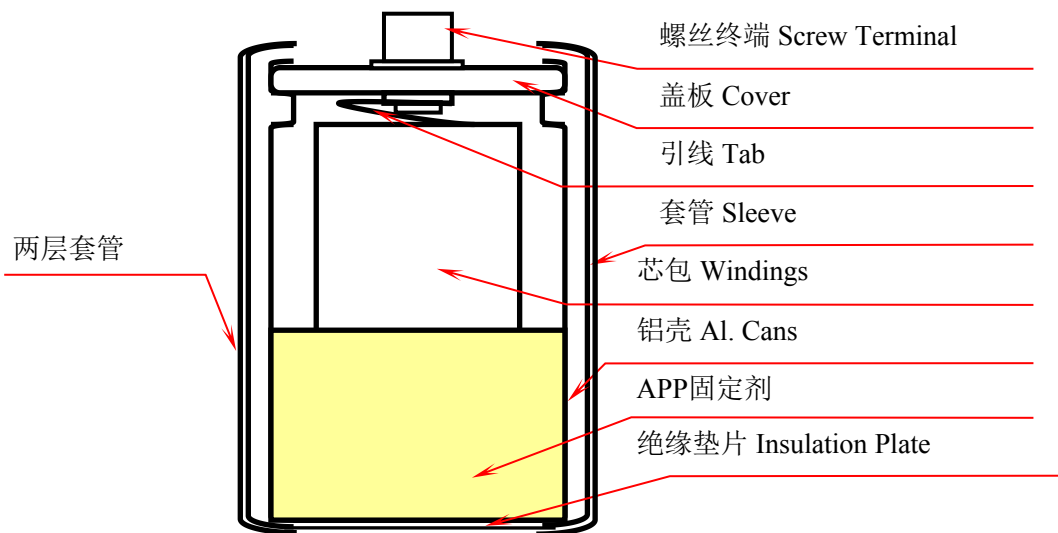
← 最高使用温度 Max. Temperature

## 4、外型图 Dimensions

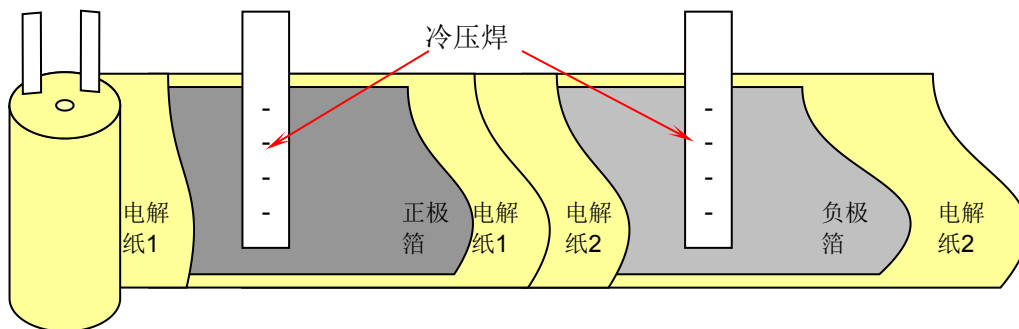


## 6、构造图及材料表(Frame drawing and material table)

### 6-1 构造图(Frame drawing)



### 6-2 工艺芯包分解图 (Element drawing)



### 6-3 材料表 (Material table)

No	构成部件 Parts	材质 Material	厂家 Maker
1	铝壳 Case	铝 Aluminum	临安奥星 LINAN AOXING
2	套管 Sleeve	聚氯乙烯 Polyvinyl	苏州顺鹏 SUZHOU SHUNPENG
3	封口板 End seal board	组合盖板 Cover	溧阳鑫晨 LIYANG XINCHEN
4	垫片 Bottom plate	聚氯乙烯 Polyvinyl	新联电子 XINLIAN DIANZI
5	隔离纸 Separator	电解电容器纸 Electrolytic Capacitors Paper	NKK 浙江凯恩 ZHEJIANG KAIEN
6	引线条 Lead Tab	铝 Aluminum	飞乐天和 FEILE TIANHE
7	正极箔 Anode Foil	铝 Aluminum	新疆众和 XINJIANG ZHONGHE 东阳光 DONGYANGGUANG
8	负极箔 Cathode Foil	铝 Aluminum	飞乐天和 FEILE TIANHE
9	电解液 Electrolyte	有机溶剂 Organic Solvent	自配 ZIPEI
10	螺丝 Screw	铜 Copper	江海金属 JIANGHAI JINSHU

## 7、纹波电流系数 Multiplier for ripple current

### 7-1 频率系数 Frequency Coefficient

频率(Hz)Frequency	50	100(120)	500	1K	≥10K
系数 Coefficient	0.80	1.00	1.20	1.30	1.50

### 7-2 温度系数 Temperature Coefficient

温度(°C) Temperature	40	55	70	85
系数 Coefficient	2.0	1.70	1.4	1.0

7-3 使用寿命 Useful life ≥200000h at 40°C

## 8、包装 Packaging

### 8-1 包装数 Packaging Quantity

电容器尺寸: 76X115 15 只  
Capacitor case code: 76X115 15 只

### 8-2 包装箱材质 Material of Packaging Box

瓦楞纸 Corrugated Cardboard

### 8-3 包装箱尺寸

Dimension of Packaging Box 480\*300\*180 mm

## 9、生产日期的表示方法 Production date code

