

# 产品承认书

|      |                        |
|------|------------------------|
| 产品代码 | 184EC013               |
| 产品系列 | HA                     |
| 产品规格 | 400V1000uF(-20 ~ +20%) |
| 产品尺寸 | 51X80                  |

|    |                          |    |    |     |
|----|--------------------------|----|----|-----|
| 客户 |                          | 供方 | 拟制 | 杨偲浩 |
| 品名 | 铝电解电容器                   |    | 审核 | 薛子文 |
| 型号 | 400V1000uF ± 20% 51X80MM |    | 批准 | 刘军军 |
| 日期 | 2023年8月31日               | 需方 | 确认 |     |
|    |                          |    | 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 HA (105°C 2000h) 系列电解电容器产品的规定。

The product specification is adapted to H A (105°C 2000h) series Aluminum Electrolytic Capacitors of K N S C H A Technolo

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

| 额定电压<br>Rated<br>Voltage<br>(V.D.C)    | 浪涌电压<br>Surge<br>Voltage<br>(V.D.C) | 额定容量<br>Rated<br>Capacitance<br>(uF) | 容量偏差<br>Capacitance<br>Tolerance<br>(%) | 损耗角正切<br>Dissipation<br>Factor (Max)<br>(%) | 等效串联电阻<br>(典型值)<br>TYP ESR<br>(mΩ) | 漏电流<br>Leakage Current<br>(mA, MAX)<br>5min | 最大纹波电流<br>Maximum ripple<br>current (A)<br>120Hz 105°C |
|--|-------------------------------------|--------------------------------------|---|---|------------------------------------|---|--|
| 400                                    | 450                                 | 1000                                 | -20 ~ +20%                              | 15  | 110.0                              | 1.90  | 2.1  |
| at 120Hz 20°C                          |                                     |                                      |   |   |                                    |   |  |
| 气候类别 Environmental Category: 25/105/21 |                                     |                                      |   | 工作温度  | -25/+105°C                         | 储存条件  | 温度≤35°C;湿度≤75%RH                                       |

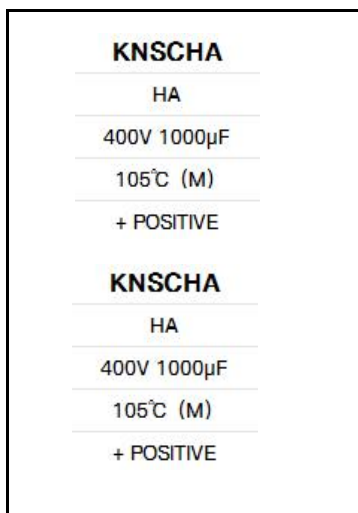
## 3、性能特性 Specifications

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

### 续表

| No. | 项目 Item   | 特性 Characteristics   |
|-----|---|--|
| 8   | 耐久性<br>Endurance(105°C)                               | 时间(Time): 2000h<br>电压: 额定电压 (叠加规定纹波电流) 试验后常温放置16h 测定<br>Applied Voltage: maximum value of DC voltage overlapped by an allowable ripple current.<br>The capacitors shall then be removed from the test chamber and stabilized at room temperature for 16 hrs. after.<br>漏电流: 不超过规定值<br>Leakage Current: Not more than the specified value<br>电容量变化: 初始值的-20~+20%以内<br>Capacitance change: within -20~+20% of the initial value<br>损耗角正切: 不超过规定值的2.0 倍<br>Dissipation Factor: Not more than 200% of the specified value                                    |
| 9   | 浪涌<br>Surge   | 施加电压: 450VDC 温度: 105±3°C<br>Test Voltage Test Temperature<br>周期: 6±0.5min 30±5sec 充电<br>A period: 6±0.5min (charging for 30±5sec)<br>充电电阻: 1000W 回数: 1000 times<br>Series protective resistance The number of times<br>漏电流: 不超过规定值<br>Leakage Current: Not more than the specified value<br>电容量变化: 初始值的±15%以内<br>Capacitance change: within ±15% of the initial value<br>损耗角正切: 不超过规定值的1.75 倍<br>Dissipation Factor: Not more than 175% of the specified value   |
| 10  | 压力释放<br>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。<br>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<br>Storage at upper category temperature (105°C) | 时间(Time): 1000h<br>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<br>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<br>漏电流: 不超过规定值<br>Leakage Current: Not more than the specified value<br>电容量变化: 初始值的±20%以内<br>Capacitance change: within ±20% of the initial value<br>损耗角正切: 不超过规定值的2.0 倍<br>Dissipation Factor: Not morn than 200% of the specified value GGS0712-16 |
| 12  | 绝缘耐压<br>insulation withstanding voltage               | 2500VAC 施加于短路的端子和套管之间, 1分钟不破坏<br>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



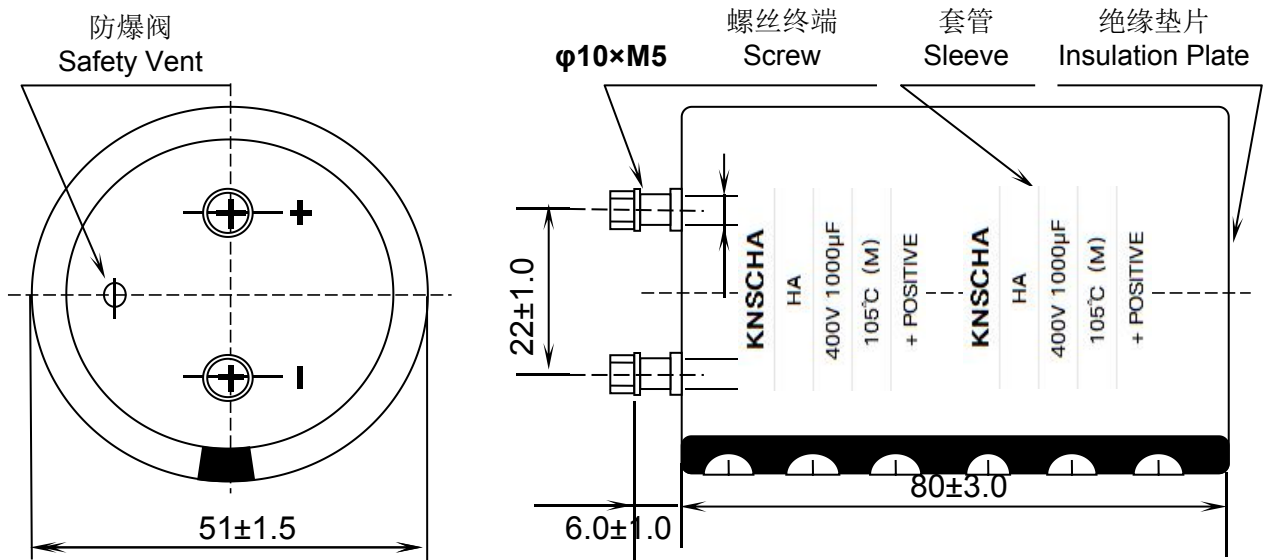
← 商标 Brand

← 产品系列 Products series

← 额定电压 Rated voltage & 静电容量 Capacitance

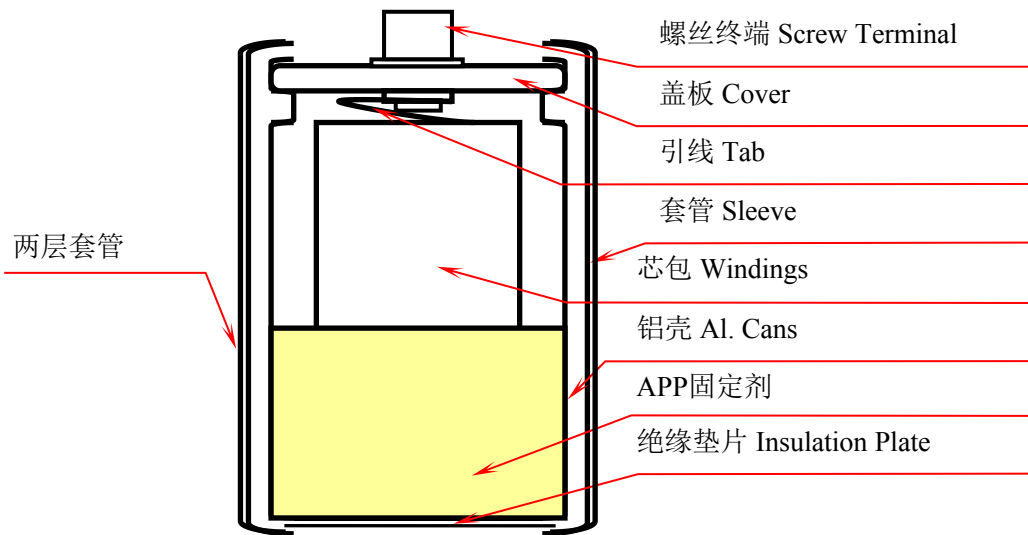
← 最高使用温度 Max. Temperature

## 5、外型图 Dimensions

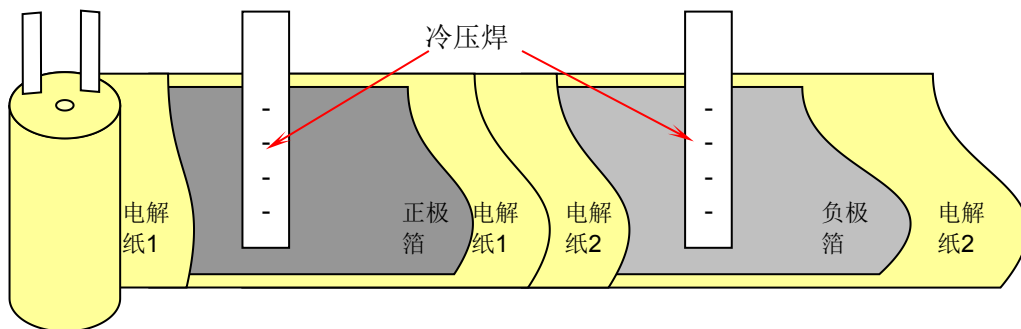


## 6、构造图及材料表(Frame drawing and material table)

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 新联配件            |
| 2  | 套管 Sleeve          | 聚氯乙烯 Polyvinyl Chloride                 | 苏州顺鹏有限公司             |
| 3  | 封口板 End seal board | 组合盖板 Cover                              | 托普电子 新印塑胶            |
| 4  | 垫片 Bottom plate    | 聚氯乙烯 Polyvinyl Chloride                 | 新联电子 金马电子            |
| 5  | 隔离纸 Separator      | 电解电容器纸<br>Electrolytic Capacitors Paper | 浙江仙鹤                 |
| 6  | 引线条 Lead Tab       | 铝 Aluminum                              | 飞乐天和                 |
| 7  | 正极箔 Anode Foil     | 铝 Aluminum                              | 新疆众和 东阳光             |
| 8  | 负极箔 Cathode Foil   | 铝 Aluminum                              | 飞乐天和                 |
| 9  | 电解液 Electrolyte    | 有机溶剂 Organic Solvent                    | 自配<br>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) | 1K   | 10K  | ≥50K |
|-----------------|------|----------|------|------|------|
| 系数 Coefficient  | 0.80 | 1.00     | 1.25 | 1.30 | 1.50 |

### 7-2 温度系数 Temperature Coefficient

| 温度(°C) Temperature | 40  | 55  | 85  | 105 |
|--------------------|-----|-----|-----|-----|
| 系数 Coefficient     | 2.0 | 1.7 | 1.3 | 1.0 |

## 8、包装 Packaging

### 8-1 包装数 Packaging Quantity

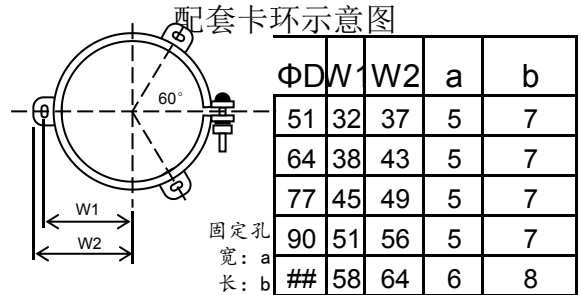
电容器尺寸: 51X80      50 只  
Capacitor case code: 51X80      50 只

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

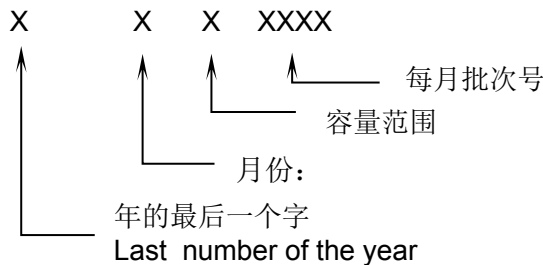
瓦楞纸 Corrugated Cardboard

### 8-3 包装箱尺寸 Dimensions of Packaging Box

尺寸 Dimensions: 330\*330\*260 mm      卡环总高: 30mm;



## 9、生产日期的表示方法 Production date code



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