KNSCHA®
全球高端电容器制造商

东莞市科尼盛电子有限公司
DONGGUAN KNSCHA ELECTRONICS CO., LTD.

规格承认书
Specification for approval

客户名称: (Customer Name)	
产品名称: (Product Name)	铝电解电容 Aluminum Electrolytic Capacitor
客户料号： (Customer part number)	
科尼盛料号： (KNSCHA number)	03EC1734 03EC1734
型号规格: (Specifications)	KNSCHA SHG 450V10μF Φ10*13L KNSCHA SHG 450V10μF Φ10*13L

制 造 (Manufacture)			客 户 (Customer)		
Approval			Approval		
拟 制 (Fiction)	审 核 (Chief)	核 准 (Approval)	检 验 (Inspect)	审 核 (Chief)	核 准 (Approval)
刘淑芬	刘军军	徐贵南			

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SHG Series

Aluminum Electrolytic Capacitors

Item Name	Rating	Case size	KNSCHA Lifetime
03EC1734	SHG450V10μF	Φ10*13L	5000 hours

1. Operating Temp. Range

-40℃ ～ +105℃

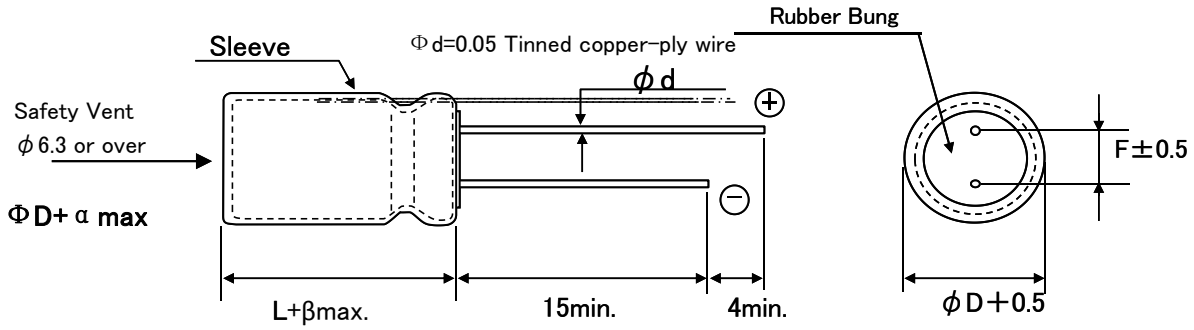
2. Electrical Characteristics

See Table 1.

【Table 1】

Rated Voltage VDC	Surge Voltage VDC	Nominal Static Capacitance (μF)	Tolerance on Capacitance (%) 20℃ 120Hz	Dissipation Factor (tan δ)max 20℃ 120Hz	Leakage Current 5min. 20℃ (μA)max	Permissible Ripple Current (mArms)max 105℃100KHz	Impedance(Ω) 100KHZ 20℃
450	500	10	-20～+20	0.20	120	240	/

3. Dimensions



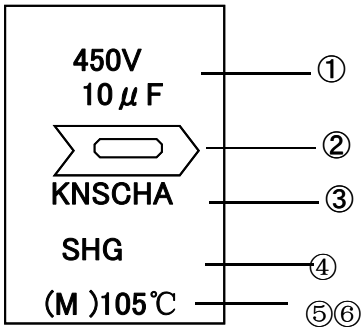
Unit(mm)

φD+0.5Max	L±1.5Max	F±0.5	d±0.05
10	13	5.0	0.6

4. Marking

Following items are printed with white color on coffee color sleeve

Example of Marking



① Rated voltage & Nominal Capacitance
② Polarity (negative)
③ Trade Mark
④ series
⑤ Symbol of Capacitance Tolerance (M)
⑥ Max Operating Temp.

5.MULTIPLIER FOR RIPPLE CURRENT

①. Frequency Coefficient

Freq.(Hz) / Cap(μF)	120Hz	1KHz	10KHz	100KHz or more	
0.1-47	0.75	0.80	0.85	0.90	1.00
68-680	0.80	0.85	0.90	0.95	1.00
1000-22000	0.85	0.87	0.89	0.92	1.00

②. Temperature Coefficient

Ambient Temperature(℃)	40	60	70	85	105
Coefficient	2.40	2.10	1.78	1.65	1.00

6. Characteristics

<table>
<tr><th>No.</th><th>Item</th><th>Performance</th><th>Test Method</th></tr>
<tr><td>1</td><td>Leakage Current</td><td>I= 120 μA (I=0.02CV+30)
I= Max Leakage Current
C=Ctatic Capacitor: V=Rated Voltage</td><td>Protection Resistor : 1000±10Ω
Applied Volt : Rated Voltage
Mesauring time : 2minutes</td></tr>
<tr><td>2</td><td>Static Capacitance</td><td>8 ～ 12 μF</td><td>Measured Frequency : 120Hz±20%

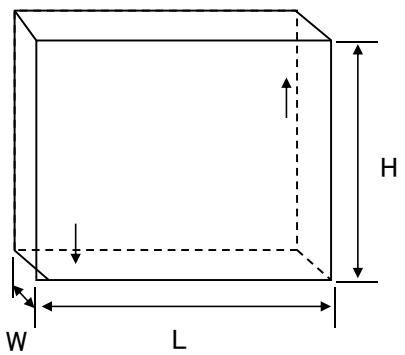
Measured Voltage
≤ 0.5Vrms, 1.5 ～ 2.0VDC</td></tr>
<tr><td>3</td><td>Dissiption Factor (tanδ)</td><td>0.20 and Under</td><td>Same as condition of Capacitors</td></tr>
<tr><td>4</td><td>High Temp. Load Charac- teristics</td><td>Leakage Current: ≦the value specified in Table 1
Cap. Change: ≦±20% of initial value
Dissipation Factor: ≦200% of value specified in Table
Appearance: No remarkable abnormality</td><td>Test Temp. : 105±2℃
Applied voltage: Rated voltage
Test Time :5,000 hours
+72, −0 hours</td></tr>
<tr><td>5</td><td>High Temp. no load Charac- teristics</td><td>Leakage Current: ≦the value specified in Table 1
Cap. Change: ≦±20% of initial value
Dissipation Factor: ≦200% of value specified in Table
Appearance: No remarkable abnormality</td><td>Test Temp. : 105±2℃
No voltage applied
Test Time :1000 hours
+24, −0 hurs</td></tr>
<tr><td>6</td><td>Terminal Strength</td><td>Tensile Strength: 45N {4.5kg}
Bending Strength: 25N {2.5kg}</td><td>Keeping time
Tensile 1～5sec
Bending 30±5sec</td></tr>
<tr><td>7</td><td>Impedance Ratio</td><td>W V: 450
Z−25℃/Z+20℃: 6
Z−40℃/Z+20℃: −</td><td></td></tr>
<tr><td>8</td><td>Temperature Charac − teristics</td><td>Stage 2,3: Impedance Ratio: less than the value mentioned in 5−7,
Stage 5: Cap, Change: ≦±25% against value in stage 4
After the capacitor is held at tempereture of each stage and reaches temperature stability, measure performance.
Stage 1: 20±2
Stage 2: −25±3;
Stage 3: −25±3;
Stage 4: 20±2
Stage 5: 105±2
Stage 6: 20±2</td><td></td></tr>
<tr><td>9</td><td>Surge Voltage</td><td>Item: Perforemance
Leakage Current: ≤ the initial specified value
Cap, Change: ≤ ±15% against value before test
Dissipation Factor: ≤ the initial specified value
Appearance: No remakable abnormality
Test Temp. 15～35℃ Test volt. Surge Volt.Specified in 2
Voltage apply. 1,000times of chage for 30±5sec, under frequency of 6±0.5sec, and discharge for 5min30sec.</td><td></td></tr>
</table>

6-2. Characteristics

<table>
<tr><th>No.</th><th>Item</th><th>Performance</th><th>Test Method</th></tr>
<tr><td>10</td><td>Vibration Resistance</td><td colspan="2"><table><tr><td>Capacitance</td><td>Stability required</td></tr><tr><td>Cap. Change</td><td>≤±5% of the initial specified value</td></tr><tr><td>Appearance</td><td>No remarkable abnormality</td></tr></table>Frequency : 10～55Hz/1min. Width of vibration, 1.5mm Direction and duration X, Y and Z directions, each for 2 hours (Total 9 hours)</td></tr>
<tr><td>11</td><td>Solderbility</td><td>3/4 area of surrounding directions of surface should be covered with new solder.</td><td>Solder: Sn-Ag, Sn-Cu Type
Soldering Temp : 240±5℃
Dipping degree : 2～2.5mm
Flux : Ethanol solution (JIS K8101) or Isopropylalchol (JIS K8839) solution of Rosin (JIS K5902)</td></tr>
<tr><td>12</td><td>Resistance to Soldering</td><td><table><tr><td>Leakage Current</td><td>≦ Initial specified value</td></tr><tr><td>Cap. Change</td><td>≦±10% of initial value</td></tr><tr><td>Dissipation Factor</td><td>≦ Initial specified in value</td></tr><tr><td>Appearance</td><td>No remarkable abnormality</td></tr></table></td><td>Soldering Temp. 260±5℃
Soldering Time .2~3sec.</td></tr>
<tr><td>13</td><td>Resistance to Humidity</td><td><table><tr><td>Leakage Current</td><td>≦ Initial specified value</td></tr><tr><td>Cap. Change</td><td>≦±15% of initial value</td></tr><tr><td>Dissipation Factor</td><td>≦ Initial spesified value</td></tr><tr><td>Appearance</td><td>No remarkable abnormality</td></tr></table></td><td>Test Temp. : 40±2℃
Humidity 90～95%
Test Time : 500 ± 8 hours
After the above condition,restored to normal temp, and then measured.</td></tr>
<tr><td>14</td><td>Perssure valve moment charact-erstics</td><td>There must not be thing ignition, scattering the resolution that that case works safely</td><td>Dcmethod: impress the reverse voltage and of 1A, I cancel an electric current.</td></tr>
</table>

7 Packing method

Packaging shape, size, quantity



Component size	Quanity per
10*13	10000pcs.

8 Related Standards JIS C 5141

9 Marking on packing box

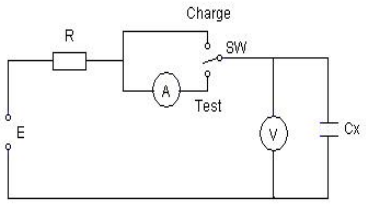
① Item name
② Series name
③ Rated Voltage
④ Nominal Static Capacitance
⑤ Case size
⑥ Lot No.
⑦ Quantity

10 Leakage current

<Condition>

Connecting the capacitor with a protective resistor (1kΩ±10Ω) in series for

2 minutes, and then, measure leakage curre



<Criteria

I : Leakage current (μA)

I (μA)≤0.02CV+15(μA)

measurement circuit refer to right drawing.

C: Capacitance (μF)

11 Soldeing

11-1 Soldering by soldering iron

Temperature of iron top : 270～350℃

Operating time : within 3 sec.

11-2 Flow soldering.

Preheat : PCB surface temperature 120℃±5℃

Solder Temp : 260℃±5℃

Solder Dipping Temp. : 2～4sec.

12 Cleaning of PC boad after soldering

Using follwing solvents is possible but make sure followingcondition

Solvent

IPA or Alcoholic agent like Pinealpha ST-100S, Cleanthrough 750H, 750L, 710M, 750K, or Technocare FRW-14～17

① Cleaning should be made by ultrasonic within 5min, at the temperature less then 60℃.

② Control of pollution is necessary (conductivity,pH, specific gravity, water volume)

③ Please do not keep near cleaning agent. Please do not store in air-tight container. Please let it dry by hot air at the temperature less than maximum operating temp.

13 The situation of using

Please do not use a condenser in the next use environment.

① One circumference environment(weatherability) condition.

(a) Direct water,salt water and environment oil works or become a dew condensation state.

(b) Environment full of harmful gas (a hydrogen chloride, sulfurous acid. nitrous acid hydrochloric acid, ammonia).

(c) Ozone, infrared rays and the environment where radioactive rays are done collation of

② Vibration shock condition is extreme environment more than rule ranges of delivery specifications.

14 A country of origin

A country of origin of an KNSCHA SHG series alminum electrolysis condenser of specifications: China

15 Effective life for storage

Storage conditions:

① Temperature range must be between 5-35℃

② Relative humidity must be less than 75%

③ Must be stored indoor

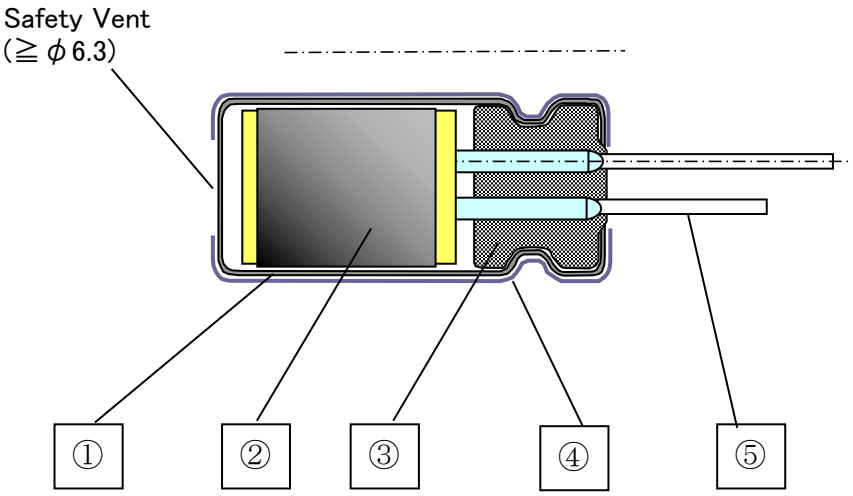
④ Must be free from water, oil or salt water

⑤ Must be free from toxic gasses (hydrogen sulfide, sulfurous acid, chlorine, ammonium, etc.)

⑥ Must be free from ozone, ultraviolet rays or any other radiation

⑦ Must be kept in capacitor original package

Aluminum Electrolytic Capacitor
SHG Series Structure



No.	Name	Material
①	Case	Aluminum
②	Element (Electrode)	High Purity Aluminum foil
	(Separator)	Manila hemp pulp
	(Electrolyte)	---
③	Rubber Bung	Synthetic Rubber
④	Sleeve	PET
⑤	Lead Wire	Tin plated Steel Wire

Controls of ozone layer destructive chemical materials

Regulated materials : CFCs, Halon, Carbon Tetrachloride, 1.1.1-Trichloroethane

The products and parts do not include the above materials

The products and parts are not used the above materials on process.

The products and parts are not used PBBOs (Poly Bromo Bi-phenyl Oxides).

All materials are mentioned as existing chemical material in the "Law of examine and control of Production of Chemical Material"

The products are not listed in Appendix 1 of Export Trade Rule and Regulation

A condenser of this series supports RoHS regulation.

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

KNSCHA:

189RV0036 FZ100UF35V90RV0145 RVT22UF50V67RV0028 RVT4.7UF100V67RV0118 VT10UF16V167RV0128 189RV0063 225RV0026 225RV0041 FZ220UF50V90RV0126 RVT100UF35V34RV0158 XT100UF10V90RV0060 126RV0008 225RV0029 225RV0058 225RV0065 MEB105J63V82CB0235 MPX472K31C2KN15600 SHG330UF50V01EC2021 01EC4294SHC1000UF25V RVT100UF16V67RV0016 126RV0004 MMK103J3AC3KN156G2 178MU0009 225RV0031 RVE100UF35V67RV0072 RVT100UF50V67RV0040 MPP104J2J15AJ22600 MPX155K31D7KN15800 XT220UF50V90RV0078 XT47UF35V90RV0081