No,ST11E-0024A

SPECIFICATIONS
for Aluminum Electrolytic Capacitors

SHH25V100uF Φ6.3X11L

SHH1E101M-6.311

User's Product Name:

User's Drawing No.

Manufacturer's Drawing No,ST11E-0024A

Issuing date : JUN 17, 2014

Receipt Stamp

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SHH Series

Aluminum Electrolytic Capacitors

Item Name	Rating	Case size	SHELL LIFE
SHH1E101M-6.311	SHH25V100uF	Φ6.3X11L	5000 hours

1. Operating Temp. Range

SHH25V100uF

101M-6.311 | -40℃ ～ +105℃

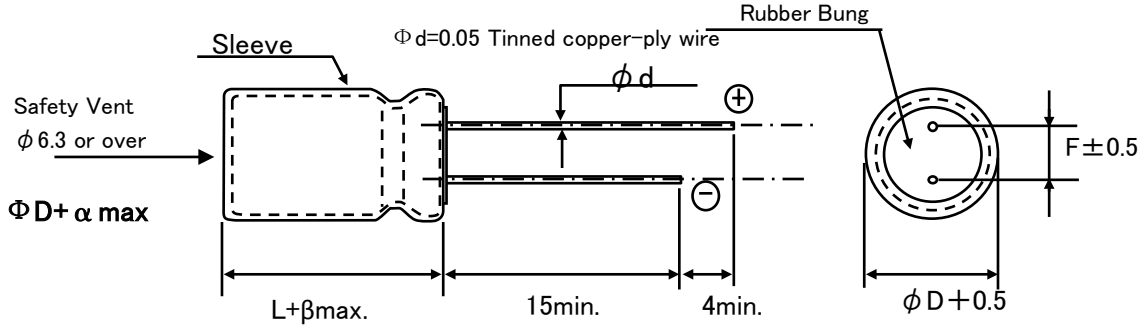
2. Electrical Characteristics

See Table 1.

【Table 1】

Rated Voltage VDC	Surge Voltage VDC	Nominal Static Capacitance (μF)	Tolerance on Capacitance (%)	Dissipation Factor (tan δ)max 20℃ 120Hz	Leakage Current 2min. 20℃ (μA)max	Impedance(Ω) 100KHz 20℃	Impedance(Ω) 100KHz -10℃	Permissible Ripple Current (mArms)max 105℃100KHz
25	31	100	-20～+20	0.14	25	0.14	0.55	340

3. Dimensions



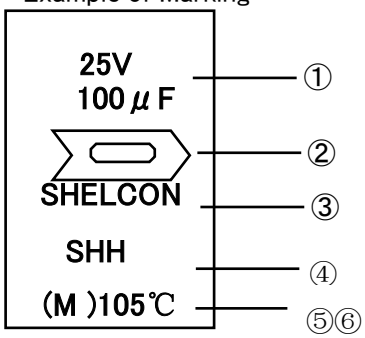
Unit(mm)

φD+0.5Max	L+1.5Max	F±0.5	d±0.05
6.3	11	2.5	0.5

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
100	0.40	0.70	0.90	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

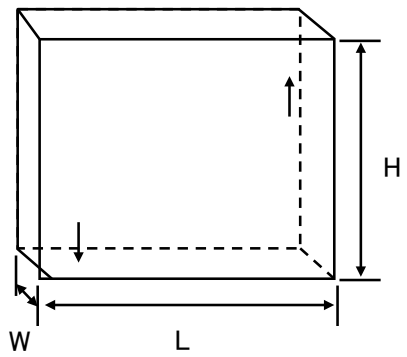
No.	Item	Performance	Test Method
1 SHH25V SHH1E101M-6.311	Leakage Current	I= 25.0 μA (I=0.01CV) I= Max Leakage Current C=Ctatic Capacitor: V=Rated Voltage	Protection Resistor : 1000±10Ω Applied Volt : Rated Voltage Mesauring time : 2minutes
2	Static Capacitance	80 ～ 120 μF	Measured Frequency : 120Hz±20% Measured Voltage ≤ 0.5Vrms, 1.5 ～ 2.0VDC
3	Dissiption Factor (tanδ)	0.14 and Under	Same as condition of Capacitors
4	High Temp. Load Charac- teristics	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	Test Temp. : 105±2℃ Applied voltage: Rated voltage Test Time :5,000 hours +72, -0 hours
5	High Temp. no load Charac- teristics	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	Test Temp. : 105±2℃ No voltage applied Test Time :1000 hours +24, -0 hurs
6	Terminal Strength	Tensile Strength: 45N {4.5kg} Bending Strength: 25N {2.5kg}	Keeping time Tensile 1～5sec Bending 30±5sec
7	Impedance Ratio	W V: 25 Z(-25℃)/Z(+20℃): 3 Z(-40℃)/Z(+20℃): 6	
8	Temperature Charac - teristics	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: -40±3; Stage 4: 20±2 Stage 5: 105±2 Stage 6: 20±2
9	Surge Voltage	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.

6-2. Characteristics

No.	Item	Performance	Test Method
10 SHH25V SHH1E101M-6.311	Vibration Resistance	Capacitance: Stability required Cap. Change: ≤±5% of the initial specified value Appearance: No remarkable abnormality Frequency : 10～55Hz/1min. Width of vibration, 1.5mm Direction and duration X, Y and Z directions, each for 2 hours (Total 9 hours)	
11	Solderbility	3/4 area of surrounding directions of surface should be covered with new solder.	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)
12	Resistance to Soldering	Leakage Current: ≦ Initial specified value Cap. Change: ≦±10% of initial value Dissipation Factor: ≦ Initial specified in value Appearance: No remarkable abnormality	Soldering Temp. 280±5℃ Soldering Time . 10±1sec.
13	Resistance to Humidity	Leakage Current: ≦ Initial specified value Cap. Change: ≦±15% of initial value Dissipation Factor: ≦ Initial spesified value Appearance: No remarkable abnormality	Test Temp. : 40±2℃ Humidity 90～95% Test Time : 500 ± 8 hours After the above condition,restored to normal temp, and then measured.
14	Perssure valve moment charact-erstics	There must not be thing ignition, scattering the resolution that that case works safely	Dcmethod: impress the reverse voltage and of 1A, I cancel an electric current.

7 Packing method

5-1 Packaging shape, size, quantity



Component size	Quanity per
6.3X11	20000pcs.

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 Soldeing

8-1 Soldering by soldering iron

SHH25V1(Temperature of iron top : 270～350℃

H1E101M-6.311 Operating time : within 3 sec.

8-2 Flow soldering.

Preheat : PCB surface temperature 120℃±5℃

Solder Temp : 260℃±5℃

Solder Dipping Temp. : 2～4sec.

11 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.

12 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.

13 A country of origin

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

14 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

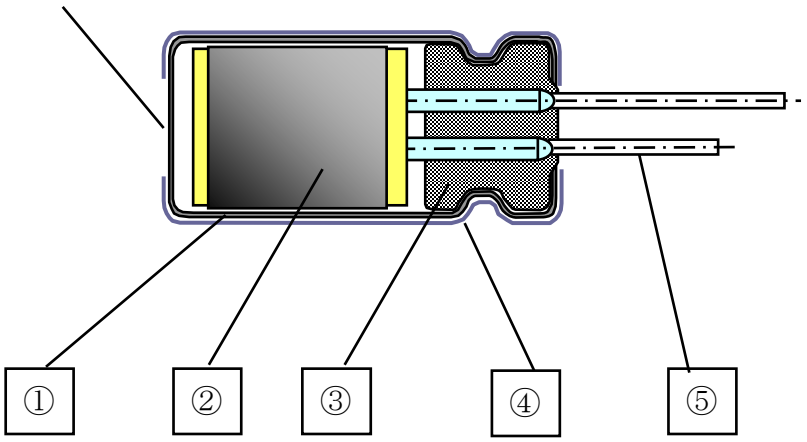
⑤ Must be free from toxic gasses (hydrogen sulfide, sulfurous acid, chlorine, ammonium, etc.)

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

⑦ Must be kept in capacitor original package

Aluminum Electrolytic Capacitor
SHH Series Structure

SHH25V100uF
SHH1E1Safety Vent
(≧φ6.3)



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.