

# JAMICON

KAIMEI ELECTRONIC CORP.

Customer : SCHUKAT  
客 戶

Approval Sheet No : JSU003218050059-5  
承認書編號

System No. : PE48AA4  
表單編號

# APPROVAL SHEET

## 承 認 書

PRODUCT ALUMINUM ELECTROLYTIC CAPACITOR  
品 名 : 鋁 質 電 解 電 容 器

CUSTOMER P/N  
客戶產品編號 :


JAMICON P/N  
凱美產品編號 : THS477M450S1A5T50L (Old PN: HSW471M2WQ50M)

SIGNATURE ( 客戶承認欄 )

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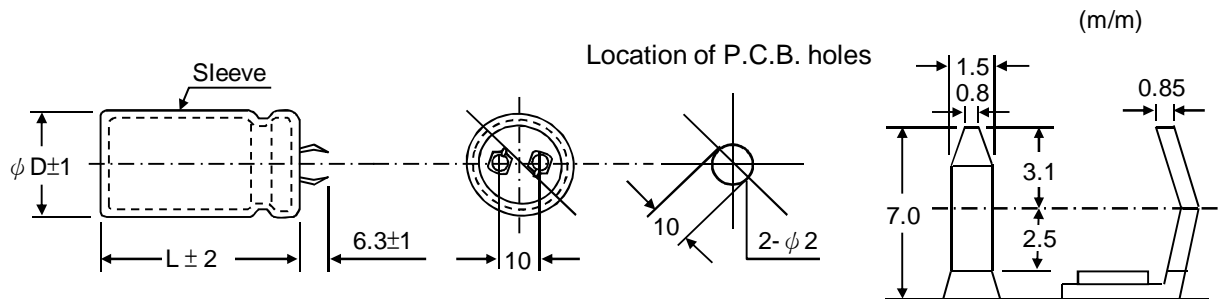
APPROVED 核准	CHECKED 確 認	DESIGNED 作 成
HQ	Factory 工廠	<input checked="" type="checkbox"/> SUZHOU KAIMEI ELECTRONIC LTD. <input type="checkbox"/> KAIMEI ELECTRONIC (H.K.) LTD.
	胡建明	潘開棟

Parts number system		Reference standard	JIS C5101-4
THS477M450S1A5T50L		Reted value	470 μF 450 WV
DATA	2018/5/23	Dimensions	φ 35 × L 50 (mm)

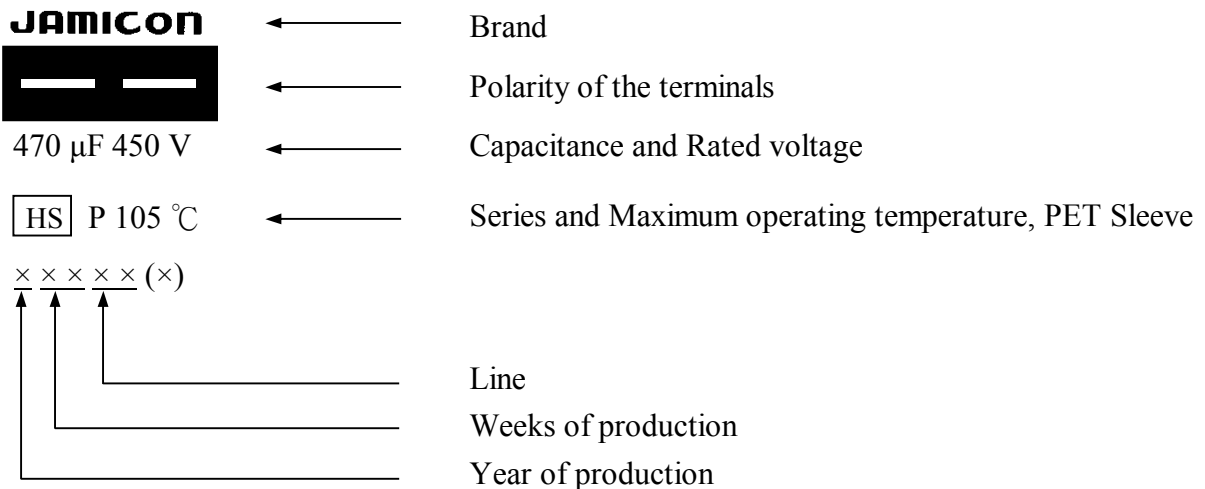
1. Electrical characteristics

(A)Operating temperature range	:	- 40 ~ + 105 °C	
(B)Capacitance tolerance	:	- 20 ~ + 20 %	20°C 120 Hz
(C)Capacitance	:	470 μF	
(D)Rated working voltage (WV)	:	450 V	
(E)Surge voltage (SV)	:	500 V	
(F)Leakage current	:	≦ 3000 μA	20°C 5 min
(G)Dissipation Factor (tanδ)	:	≦ 15 %	20°C 120 Hz
(H)Ripple current	:	< 2.12 A	105°C 120 Hz

2. Dimensions and materials



3. Marking



## 4. Ripple current coefficients

Frequency (Hz)	60	120	400	1k	10k
W.V.	Multiplier				
$\leq 100V$	0.80	1.00	1.10	1.20	1.20
$\geq 160V$	0.80	1.00	1.10	1.30	1.40

Temperature (°C)	40	60	70	85	105
Multiplier	2.50	2.20	2.00	1.80	1.00

## 5. Load life test

The rated voltage shall be applied continuously to the capacitor at a temperature of +105°C ripple current for 2000 hours, after 16 hours in room temperature, should do final measurements, the values are as following:

(DC + ripple peak voltage  $\leq$  rate working voltage)

(A)Capacitance change :  $\leq \pm 20$  % of initial value

(B)Dissipation factor :  $\leq 175$  % of initial specified value

(C)Leakage current :  $\leq$  initial specified value

## 6. Shelf life test

The capacitor without rated voltage at a temperature of +105°C for 1000 hours and then through the aging treatment ( reference JIS C5101-4 4.1 ), should do final measurements, the values are as following :

(A)Capacitance change :  $\leq \pm 20$  % of initial value

(B)Dissipation factor :  $\leq 175$  % of initial specified value

(C)Leakage current :  $\leq$  initial specified value

## 7. Low temperature storage test

The capacitor without rated voltage at the lowest operation temperature 16 hours, after 16 hours in room temperature, should do final measurements, the values are as following :

(A)Capacitance change :  $\leq \pm 10$  % of initial value

(B)Dissipation factor :  $\leq$  initial specified value

(C)Leakage current :  $\leq$  initial specified value

## 8. Low temperature stability

Impedance ratio at 120Hz

$Z - 25^\circ C / Z + 20^\circ C$  : 6 ( Max )

## 9. Solderability

Capacitor lead wire dipping in flux, and then dip in  $245\pm 3^{\circ}\text{C}$ , solder liquid for  $3\pm 0.5$  seconds, the substance is above the liquid solder 2mm, the dipping lead must be adherent 95% fresh tin at least.

## 10. Resistance to soldering heat

Put capacitor lead wire to dip  $260\pm 5^{\circ}\text{C}$  in solder liquor away the body 2mm, after  $10\pm 1$  seconds taken out, after two hours in room temperature, should do final measurements, the values are following:

- (A) Capacitance change :  $\leq \pm 10\%$  of initial value  
 (B) Dissipation factor :  $\leq$  initial specified value  
 (C) Leakage current :  $\leq$  initial specified value  
 (D) Visual : NO damage

## 11. Surge test

The capacitor shall be applied the surge voltage connected with the 1 k $\Omega$  resistor in room temperature, and shall be applied the surge voltage 1000 cycle, each for 30 seconds charge and 5 minutes 30 seconds discharge, the final test values should be as following:

- (A) Capacitance change :  $\leq \pm 15\%$  of initial value  
 (B) Dissipation factor :  $\leq$  initial specified value  
 (C) Leakage current :  $\leq$  initial specified value  
 (D) Visual : NO damage

## 12. Safety vent

## (A) Test condition (DC method)

Reverse voltage shall be applied. Then 10 A current shall be flowed.

## (B) Criteria

- (a) Safety vent shall be operated.  
 (b) Emission of flame shall not be found before and after venting.  
 (c) Terminal, lead wire, metal chip and so on shall not be flown apart and case shall not be separated before and after venting.  
 (d) Sealing part and case shall not be separated before and after venting.  
 (e) When capacitor is soldered, some space must be kept above the vent as per following list.

$\phi D$ (mm)	$\leq 16$	18~35	$\geq 40$
Space (mm)	2 min	3 min	5 min