

JAMICON

KAIMEI ELECTRONIC CORP.

Customer : SCHUKAT
客 戶

Approval Sheet No : JSU003218040050-5
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 : JTK228M025S1GMK25L (Old PN: TKR222M1EI25M)

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 <input type="checkbox"/> KAIMEI ELECTRONIC (H.K.) LTD. |
| | 胡建明 | 潘開棟 |

ALUMINUM ELECTROLYTIC CAPACITOR SPECIFICATIONS

JSU003218040050-5

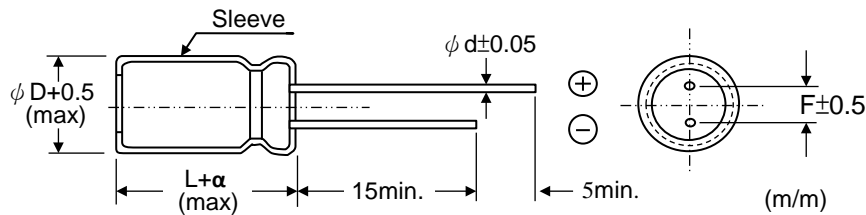
| | | | | |
|---------------------|-----------|--------------------|--------------|--------------------|
| Parts number system | | Reference standard | JIS C5101-4 | |
| JTK228M025S1GMK25L | | Rated value | 2200 μ F | 25 WV |
| DATE | 2018/4/25 | Dimensions | ϕ 12.5 | \times L 25 (mm) |

1. Electrical characteristics

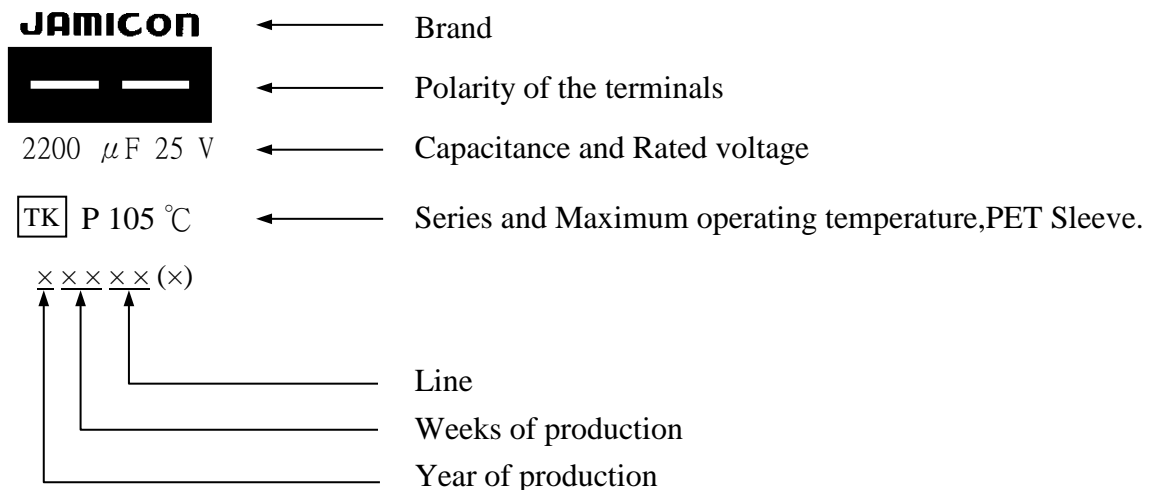
| | | | | |
|---|---|--------------|---------|----------------|
| (A)Operating temperature range | : | - 55 ~ + 105 | °C | |
| (B)Capacitance tolerance | : | - 20 ~ + 20 | % | 20°C 120Hz |
| (C)Capacitance | : | 2200 | μ F | |
| (D)Rated working voltage (WV) | : | 25 | V | |
| (E)Surge voltage (SV) | : | 32 | V | |
| (F)Leakage current | : | \leq 550 | μ A | 20°C 3 minutes |
| (G)Dissipation Factor ($\tan \delta$) | : | \leq 17 | % | 20°C 120Hz |
| (H)Ripple current | : | \leq 1370 | mA | 105°C 120Hz |

2. Dimensions and materials

| (mm) | | | | |
|----------|-------------|---|-----|--|
| D | ϕ 12.5 | L | 25 | |
| d | ϕ 0.6 | F | 5.0 | |
| α | 2.0 | | | |



3. Marking



4. Ripple current coefficients

| Frequency(Hz) | 60 | 120 | 10k | $\geq 10k$ |
|---------------|------------|------|------|------------|
| W.V. | Multiplier | | | |
| 6.3~25V | 0.85 | 1.00 | 1.10 | 1.20 |
| 35~100V | 0.80 | 1.00 | 1.15 | 1.25 |
| 160~250V | 0.75 | 1.00 | 1.25 | 1.40 |
| 350~450V | 0.70 | 1.00 | 1.30 | 1.80 |

| Temperature($^{\circ}$ C) | 65 | 85 | 105 |
|----------------------------|------|------|------|
| Multiplier | 1.75 | 1.40 | 1.00 |

5. Load life test

The rated voltage shall be applied continuously to the capacitor at a temperature of $+105^{\circ}\text{C}$ 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 : $\leq 200\%$ of initial specified value
 (C) Leakage current : \leq initial specified value

6. Shelf life test

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

- (A) Capacitance change : $\leq \pm 20\%$ of initial value
 (B) Dissipation factor : $\leq 200\%$ 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

- (A) $Z - 25^{\circ}\text{C} / Z + 20^{\circ}\text{C}$: 2 (Max)
 (B) $Z - 40^{\circ}\text{C} / Z + 20^{\circ}\text{C}$: 4 (Max)

9. Lead strength

- (A) Tensile strength : 1.0 kg

The capacitor shall withstand the constant tensile force specified between the body and each lead for 10 seconds without either mechanically or electrically.

- (B) bending strength : 0.5 kg

With the capacitor in a vertical position apply the load specified axially to each lead. the capacitor shall be rotated slowly from the vertical to the horizontal position.

back to the vertical position. the 90° in the opposite direction and back the original position. performance of capacitor shall not have changed and leads shall be undamaged.

10.Solderability

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

11.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 ± 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

12.Surge test

The capacitor shall be applied the surge voltage connected with the $1\text{k}\Omega$ 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

13.Safety vent

(A)Test condition (DC method)

Reverse voltage shall be applied. Then 1 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

| | | | |
|---------------|-----------|-------|-----------|
| ϕD (mm) | ≤ 16 | 18~35 | ≥ 40 |
| Space (mm) | 2min | 3min | 5min |