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CUSTOMER: 深圳市安品科研科技有限公司 DATE: July 24,2023

SPECIFICATION

DESCRIPTION: Aluminium Electrolytic Capacitors

- AISHI P/N: ERS1KM471L25C36T
- SERIES: RS
- ITEM: 100 V 470 μ F (Φ 16 × 25)

CUSTOMER P/N:

No.: CRS-JD-23070723

APPROVED BY

Please Return One Copy with Your Approval

| PREPARED BY | CHECKED BY | APPROVED BY |
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● 变更记录 Change Records

| 编号 No. | 更改原因 Explanation of changes | 更改内容 Content | 修订人 Reviser | 生效日期 Effective date |
|-----------------|--------------------------------|--------------|----------------|------------------------|
| CRS-JD-23070723 | | | | 2023/07/24 |
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| С | USTOMER 深圳市安品科研科技有限公司 | | | | | | | IES | R | S | DA | ATE | | | 202 | 23/0 |)7/2 | 24 |
|-----|-----------------------|------------------|---------------------|--------------------------------------|------------------|------------------|-----------------------------|--------------------------|--------------------|-------------------------------------|--------------------------------|---------------------|----|-------|-------|-------|------|-----------------------|
| | FIG-1 | | | | | | | | | | | | | | | | | |
| | | | | | | | TABLE- | 1 | | | | | | | | | | |
| No. | Customer Part No. | Aishi Part No. | Capacitance (µF) | Tolerance on Rated Capacitance | Rated Voltage | Surge Voltage | Operating Temp. Range | Tanō (120Hz) (Max) | Leakage Current | Max Ripple Current (mArms) | Impedance (Ω)Max at 20 | Endurance at 105 | Di | imens | sions | s (mm | 1) | Appearance Drawing |
| | | | | (%) | (vuc) | (vuc) | () | (IVIAX) | (μΑ)(211111.) | at105 100kHz | 100kHz | | ΦD | L | α | d | F | NU. |
| 1 | | ERS1KM471L25C36T | 470 | -20,+20 | 100 | 125 | -40~+105 | 0.08 | 470 | 1640 | 0.05 | 10000 | 16 | 25 | 2 | 0.8 | 7.5 | FIG-1 |

1 概述 SCOPE

RS

This specification covers"RS series" miniature single-ended aluminium electrolytic capacitors AISHI reserves the right of final interpretation for this technical specification.

2 参考标准 APPLICABLE SPECIFICATION

This specification consulted the institute of IEC 60384-1,IEC 60384-4,GB/T 2693 and GB/T 5993.

3 工作温度范围 OPERATING TEMPERATURE RANGE

Operating temperature range is the range of ambient temperature at which the capacitor can be operated continuously at rated voltage.

4 测试环境 CONDITION OF TEST

15 ~35 45%~75% 86kPa~106kPa

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows:

Ambient temperature15to 35Relative humidity45% to 75%Air pressure86kPa to 106kPa

If there may be doubt on the results, measurements shall be made within the following limits: Ambient temperature : 20±1

Relative humidity : 60% to 67% Air pressure : 86kPa to 106kPa

| File Description | | Approval Sheet | | | | | | |
|------------------|----------------------|----------------|--|--|--|--|--|--|
| Component P/N | RS Version 01 Page 1 | | | | | | | |
| | STANDARD MANUAL | | | | | | | |

5 产品特性 PRODUCT CHARACTERISTICS

5.1电气特性 Electrical Characteristics

| 序号 No. | 项目 Item | 测试方法 Test method | 性能 Performance |
|--------|--------------------|--|--|
| 5.1.1 | Rated voltage | + Voltage: DC voltage + peak ripple voltage Rated voltage | See TABLE-1 |
| 5.1.2 | Capacitance | Measuring frequency: 120Hz±20% Measuring circuit: Series equivalent circuit Measuring voltage: 0.5Vrms or less +1.5 to 2.0 VDC | 容量偏差: -20%~+20% Capacitance tolerance: -20%~+20% |
| 5.1.3 | Dissipation factor | Testing conditions are the same as 5.1.2 for capacitance. | DF 1 DF: See TABLE-1 |
| 5.1.4 | Leakage current | The rated voltage shall be applied across the capacitor and its protective resistor shall be $1000\pm100\Omega$. The leakage current shall then be measured after an electrification period of schedule time.Measurement circuit: $\underbrace{S1 \qquad Rs}_{=} \\ \underbrace{Rs}_{=} \\ \underbrace{Rs}_{=} \\ \underbrace{Rs}_{=} \\ \underbrace{Rs}_{=} \\ \underbrace{Protective resistor(1000\pm100\Omega)}_{DC ammeter} \\ DC voltmeter \\ S1: Switch \\ S2: Protective switch for an ammeter \\ \underbrace{Rs}_{=} \\ $ | 6.3V~120V: I≤0.01CV或3μA, 取较大值(2分钟后) 6.3V~120V: I≤0.01CV or 3μA Whichever is greater (after 2 min) I: 漏电流 (μA) C: 容量 (μF) V: 额定工作电压 (V) I: Leakage current(μA) C: Capacitance(μF) V: Rated voltage (V) |

| File Description | Approval Sheet | | | | | | |
|------------------|----------------------|--|--|--|--|--|--|
| Component P/N | RS Version 01 Page 2 | | | | | | |
| | STANDARD MANUAL | | | | | | |

| | | 1 | 20±2 | | |
|-------|----------------|-----------------------|--|------------------------------------|--|
| | | 2 | -25, -40 ⁺⁰ ℃ | 2h | Sten 2 [.] |
| | | 3 | 20±2 | 15min. | Impedance value ratio to the value at step 1 shall be not |
| | | 4 | 105 ⁺³ ℃ | 2h | more than the value given in TABLE-2. |
| | | | | | Variation of capacitance Within ±20% of the initial value. |
| | | | | | |
| 5.1.5 | Temperature | | | | |
| | characteristic | | | | |
| | | Step 1: C | apacitance and impe | edance shall be | |
| | | Step 2: At | fter the capacitor bei | ng stored for 2 | |
| | | hours,imp | bedance shall be mea | asured at thermal $4 + 20\%$ | |
| | | Step 4:Af | ter the capacitor beir | ng stored for 105 2 | |
| | | hours, ca measurer | pacitance shall be m ment shall be made a | easured. The at thermal stability. | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | A | | | Capacitance change:Within \pm 20% of the initial value Dissipation factor: |
| | | Applicatio | . 1000 times of charge | ge stated at ging for 30±5 sec., | Not more than 200% of the specified value in TABLE-1. |
| | | dischargir | ng with a period of 5. | 5±0.5 min | To satisfy No. 5.1.4 . |
| | | And the c | erature: 15 -35 | red under standard | |
| | | atmosphe | eric conditions to obtain the measurements sha | ain thermal stability, | |
| | | | | | |
| 5.1.6 | Surge test | Test circu | uit | | |
| | 0 | | + | R | Ок |
| | | | | | |
| | | | | | ծ լ |
| | | | DC Power | 5 | |
| | | | | | l Y |
| | | | ۱ | | |
| | | | | | - |
| | | Note: This | s requirement is app | licable only to instan | taneous over voltage which may be applied to terminals |
| | | of capacit | tor, therefore, not ap | plicable to such over | r voltages as often applied. |
| | | | | | |

| File Description | Approval Sheet | | | | | | | |
|------------------|----------------------|--|--|--|--|--|--|--|
| Component P/N | RS Version 01 Page 3 | | | | | | | |
| | STANDARD MANUAL | | | | | | | |

5.2 机械特性 Mechanical Performance

| 序号 No. | 项目 Item | | | | 特性 Performance | | | |
|--------|----------------------------|---|---|---|----------------|-----|-----|-----------------------|
| | | | | | | | | When the capacitor is |
| | | | 1.0 | measured, there shall be no | | | | |
| | | | ť | 5 | 1 | 0 | 20 | or short-circuiting. |
| | | | | mechanical damage. | | | | |
| 5.2.1 | Terminal | | 0.45 | 0.5 | 0.6 | 0.8 | 1.0 | |
| | strength | | 2 | .5 | | 5 | 10 | |
| | | | | | | | | |
| 5.2.2 | Resistance to vibration | 振幅峰-峰值 Direction an 3 orthogona Vibration fre Peak to pea Sweep rate | d duration of al directions n equency rang ak amplitude: :10 to 55 to | When the capacitor is measured there shall be no intermittent contacts, or open or short circuiting There shall be no visible mechanical damage. | | | | |
| 5.2.3 | Solderability | Temperatur Dipping time This specific standard ati | e of solder: 2 e: 2±0.5sec. cation shall b mospheric cc | At least 90% of circumferential surface of the dipping portion of terminal shall be covered with new solder. | | | | |

| File Description | | Approval Sheet | | | | | | |
|------------------|----------------------|----------------|--|--|--|--|--|--|
| Component P/N | RS Version 01 Page 4 | | | | | | | |
| | STANDARD MANUAL | | | | | | | |

5.3 耐久性测试 Endurance Performance

| 序号 No. | 项目 Item | 测试方法 Test method | 特性 Performance |
|--------|---|---|--|
| 5.3.1 | Resistance to soldering heat | Solder bath method Solder bath temperature : 260±5 Immersion time : 10±1sec. Printed wiring board: 1.6mm | Variation of capacitance: Within ±10% of the initial value. Dissipation factor: Not more than the specified value in TABLE-1. Leakage current: To satisfy No. 5.1.4 . Appearance: No remarkable abnormality. |
| 5.3.2 | Resistance to damp heat (steady state) | Test temperature : 40±2°C Test time : 240±8h Relative humidity: 90~95% After completion of test, the capacitor shall be subjected to standard atmospheric conditions for 1 to 2 hours, after which measurements shall be made. | Variation of capacitance: Within ±10% of the initial value. Dissipation factor: Not more than the specified value in TABLE-1. Leakage current: To satisfy No. 5.1.4 . Appearance: No remarkable abnormality. |
| 5.3.3 | Load life test | 105 2 , Application of the rated voltage and the rated ripple current, Test temperature:105 2 Testing time: refer to TABLE-1 life requirements. | Variation of capacitance: Within ±20% of the initial value.(6.3V,10V:±30%) Dissipation factor: Not more than 200% of the specified value Leakage current: Not more than the specified value in No. 5.1.4 . Appearance: No remarkable abnormality. |

| File Description | Approval Sheet | | | | | | |
|------------------|----------------------|--|--|--|--|--|--|
| Component P/N | RS Version 01 Page 5 | | | | | | |
| STANDARD MANUAL | | | | | | | |



| | | 1000+48 | |
|-------|-----------------|--|--|
| 5.3.4 | Shelf life test | The capacitors are stored without voltage load at $105\pm2^{\circ}$ for $1000^{+4.8}_{-0}$ h and then resumed 16 hours. | Variation of capacitance: Within ±20% of the value before test. (6.3V,10V: ±30%) Dissipation factor: Not more than 200% of the specified value Leakage current: Not more than 200% of the specified value in No. 5.1.4. Appearance: No remarkable appormality |
| 5.3.5 | Safety vent | 以下试验只适用于铝壳直径≥Φ8产品。 The following tests only apply to those products with vent products at diameter≥Φ8 with vent. 在电容器两极施加反向直流电压,其中通过的电流为 1A, 在测试时防爆装置应能在30分钟内动作。 DC Application test: The capacitor shall be subjected to a reverse DC voltage. The current flowing through the capacitor shall be 1A. If the vent does work with the voltage applied for 30 minutes, the test is considered to be passed. | The safety vent is actuated under the test conditions, thereby preventing terminals, metal pieces, etc, of the capacitor from scattering due to burst, the case from separating from the seal packing, or the capacitor from producing flame. |

※ TABLE-2:阻抗比 Max. Impedance Ratio

| Rated voltage (Vdc) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 120 |
|---------------------------|-----|----|----|----|----|----|----|----|-----|-----|
| z -25 / z 20 | 4 | 3 | 2 | | | | | 3 | | |

※ TABLE-3: 纹波电流频率因子 RIPPLE CURRENT FREQUENCY COEFFICIENT

| Freq.(Hz) Cap.(µF) | 120 | 1k | 10k | 100k |
|-----------------------|------|------|------|------|
| Cap.<220 | 0.40 | 0.75 | 0.90 | 1.00 |
| 220≪Cap.<680 | 0.50 | 0.85 | 0.94 | 1.00 |
| 680≪Cap.<2200 | 0.60 | 0.87 | 0.95 | 1.00 |
| 2200≪Cap.<4700 | 0.75 | 0.90 | 0.95 | 1.00 |
| Cap.≥4700 | 0.85 | 0.95 | 0.98 | 1.00 |

| File Description | Approval Sheet | | | | | |
|------------------|----------------|---------|----|------|---|--|
| Component P/N | RS | Version | 01 | Page | 6 | |
| STANDARD MANUAL | | | | | | |

6 标记 MARKING

6.1 在电容器体上应注明如下内容:

| 1712L | |
|--------------|--------------|
| RS | 105 ℃ |
| YyWw⊡I | PET (Yy |
| ⊔ PET | |
| VuE | |
| | 1 |

A

Ww "Z Y J S"

6.1 The Following Items Shall Be Marked Indelibly On The Capacitor:

- (1) Manufacture's name or trade mark.
- (2) Series rated temperature
- (3) Date code- AIHUA code -sleeve material

∕AiSHi

RS 105℃ YyWw□PET (Yy denotes last two digit of years and Ww

denotes the week in which the capacitor been manufactured, \Box denotes the code of AIHUA, AIHUA code: " Z, Y, J, S, W......" PET denotes the sleeve material)

(4) Voltage / Capacity

(5) Negative polarity



6.2 标记颜色 Color

Sleeve color: Violet Marking color: White

6.3: 纹波电流温度系数 RIPPLE CURRENT TEMPERATURE COEFFICIENT

105℃ max.capacitors

| Capacitor ambient temperature | 65℃以下 | 75 ℃ | 85 ℃ | 95 ℃ | 105 ℃ |
|--|-------------|--------------|-------------|-------------|--------------|
| Guide limit of max. $	riangle Tx$ | 25 ℃ | 20 °C | 15 ℃ | 10 ℃ | 5℃ |
| Temperature coefficient(Actualrmsripple / Ratedrmsmax. ripple) | 2.23 | 2 | 1.73 | 1.41 | 1.00 |

NOTE: Temperature coefficient is not used in life formula but for reference.

| File Description | Approval Sheet | | | | | |
|------------------|----------------|---------|----|------|---|--|
| Component P/N | RS | Version | 01 | Page | 7 | |
| STANDARD MANUAL | | | | | | |



7 物料编码 PART NO SYSTEM



1 Category code

| Turne | Code |
|------------------------|------|
| туре | 1th |
| Electrolytic Capacitor | F |

②Series code

| Sorioo nomo | Code | | |
|-------------|------|-----|--|
| Series name | 2th | 3th | |
| RS | R | S | |

| 6.3 | 0 | J |
|-----|---|---|
| 10 | 1 | А |
| 16 | 1 | С |
| 25 | 1 | E |
| 35 | 1 | V |
| 40 | 1 | G |
| 50 | 1 | Н |
| 63 | 1 | J |
| 80 | 1 | В |
| 100 | 1 | K |
| 120 | 2 | В |
| 140 | 2 | А |
| 160 | 2 | С |
| 180 | 2 | L |
| 200 | 2 | D |
| 220 | 2 | Ν |
| 250 | 2 | E |
| 300 | 2 | М |
| 315 | 2 | F |
| 350 | 2 | V |
| 380 | 2 | Р |
| 400 | 2 | G |
| 420 | 2 | Т |
| 450 | 2 | W |
| 500 | 2 | Н |
| 550 | 2 | J |

③Voltage code

4th

0

WV (V)

4

Code

5th

G

| ④Capacitance tolerance code | | | | |
|-----------------------------|------|--|--|--|
| Tel (0/) | Code | | | |
| 101.(%) | 6th | | | |
| -10~+10 | K | | | |
| -20~+20 | М | | | |
| -10~+30 | Q | | | |
| -5~+15 | Т | | | |
| -10~+20 | V | | | |
| 0~+20 | A | | | |
| -5~+20 | С | | | |
| -20~-10 | В | | | |
| -5~+5 | D | | | |
| 0~+10 | E | | | |
| -20~-5 | F | | | |
| -15~+5 | N | | | |
| -20~0 | G | | | |
| -15~+15 | Н | | | |

| 5 Capacitance code | | | | | | |
|--------------------|--------------|------|-----|--|--|--|
| Cap (uE) | | Code | | | | |
| Сар (µР) | 7th | 8th | 9th | | | |
| 0.10 | R | 1 | 0 | | | |
| 0.22 | R | 2 | 2 | | | |
| 0.33 | R | 3 | 3 | | | |
| 0.47 | R | 4 | 7 | | | |
| 0.68 | R | 6 | 8 | | | |
| 1 | 0 | 1 | 0 | | | |
| 1.5 | 1 | R | 5 | | | |
| 2.2 | 2 | R | 2 | | | |
| 3.3 | 3 | R | 3 | | | |
| 4.7 | 4 | R | 7 | | | |
| 5.6 | 5 | R | 6 | | | |
| 6.8 | 6 | R | 8 | | | |
| 8.2 | 8 | R | 2 | | | |
| 10 | 1 | 0 | 0 | | | |
| 12 | 1 | 2 | 0 | | | |
| 15 | 1 | 5 | 0 | | | |
| 18 | 1 | 8 | 0 | | | |
| 22 | 2 | 2 | 0 | | | |
| 33 | 3 | 3 | 0 | | | |
| 47 | 4 | 7 | 0 | | | |
| 56 | 5 | 6 | 0 | | | |
| 68 | 6 | 8 | 0 | | | |
| 82 | 8 | 2 | 0 | | | |
| 100 | 1 | 0 | 1 | | | |
| 150 | 1 | 5 | 1 | | | |
| 220 | 2 | 2 | 1 | | | |
| 330 | 3 | 3 | 1 | | | |
| 470 | 4 | 7 | 1 | | | |
| 560 | 5 | 6 | 1 | | | |
| 680 | 6 | 8 | 1 | | | |
| 820 | 8 | 2 | 1 | | | |
| 1000 | 1 | 0 | 2 | | | |
| 1500 | 1 | 5 | 2 | | | |
| 2200 | 2 | 2 | 2 | | | |
| 3300 | 3 | 3 | 2 | | | |
| 4700 | 4 | 7 | 2 | | | |
| 6800 | 6 | 8 | 2 | | | |
| 10000 | 1 | 0 | 3 | | | |
| 22000 | 2 | 2 | 3 | | | |
| 33000 | 3 | 3 | 3 | | | |
| 68000 | 6 | 8 | 3 | | | |
| (8)Sleeve | ®Sleeve code | | | | | |
| | | Code | | | | |
| Sleeve | Sleeve 16th | | | | | |
| PVC | C | | | | | |
| PET | | T | | | | |
| | I | | | | | |

$\textcircled{6}{Size \ code}$

| ΦD | Code |
|------|------|
| ΨD | 10th |
| 4 | С |
| 5 | D |
| 6.3 | E |
| 8 | F |
| 10 | G |
| 11 | Н |
| 12 | J |
| 12.5 | W |
| 13 | К |
| 14 | Х |
| 16 | L |
| 18 | М |
| 19 | Z |
| 20 | N |
| 22 | 0 |
| 25 | Р |
| 30 | Q |
| 35 | R |
| 40 | Y |
| 51 | S |
| 63.5 | Т |
| 76 | U |
| 90 | V |

| | Cor | 10 |
|-----|------|------|
| L | 11th | 12th |
| 5 | 0 | 5 |
| 7 | 0 | 7 |
| 9 | 0 | 9 |
| 10 | 1 | 0 |
| 11 | 1 | 1 |
| 12 | 1 | 2 |
| 13 | 1 | 3 |
| 14 | 1 | 4 |
| 16 | 1 | 6 |
| 20 | 2 | 0 |
| 25 | 2 | 5 |
| 30 | 3 | 0 |
| 31 | 3 | 1 |
| 35 | 3 | 5 |
| 40 | 4 | 0 |
| 45 | 4 | 5 |
| 46 | 4 | 6 |
| 50 | 5 | 0 |
| 60 | 6 | 0 |
| 80 | 8 | 0 |
| 100 | A | 0 |
| 115 | В | 5 |
| 120 | С | 0 |
| 130 | D | 0 |
| 140 | E | 0 |

160

200

G

κ

0

0

⑦Terminal code

| Specification | Code | | Size |
|-------------------------------|------|------|------|
| Specification | 13th | 14th | 15h |
| Bulk packing | 0 | - | - |
| 编带Taping F=5mm (Φ4~Φ8) | Ρ | 5 | 0 |
| Taping F=2.5mm (Φ4~Φ5) | х | 2 | 5 |
| | | 5 | 0 |
| Tanad Chaisht | | 3 | 5 |
| raped Straight- | В | 2 | 5 |
| раск | | 2 | 0 |
| | | 1 | 5 |
| Lead Cut L=3.6mm | С | 3 | 6 |
| Lead Cut L=11.0mm | С | В | 0 |
| Lead Forming & cut L=4.5mm | F | 4 | 5 |
| Kink & cut L=4.5mm | J | 4 | 5 |
| Long lead wire (-30mm) | G | - | - |
| Horizontal forming | L | G | 1 |

| File Description | Approval Sheet | | | | | | | |
|------------------|----------------|----------------------|--|--|--|--|--|--|
| Component P/N | RS | RS Version 01 Page 8 | | | | | | |
| STANDARD MANUAL | | | | | | | | |

8 加工型式 LEAD FORMING TYPE

 文华集团 AISHi

8.1 编带 Taping

PIN Code: Χ ΦD=4~5



PIN Code: B ΦD=4~8



| File Description | Approval Sheet | | | | | | |
|------------------|----------------------|--|--|--|--|--|--|
| Component P/N | RS Version 01 Page 9 | | | | | | |
| STANDARD MANUAL | | | | | | | |

PIN Code: B ΦD=10~12.5



DIMENSIONS(mm)

| | | | | | | | | | CASE SIZ | ZE | | | | |
|---|--------|----------|----------|----------|----------|----------|------------|-------|------------------------------------|----------------------------|--------------|----------------------------------|--------------------|---------------|
| Items | Symbol | 4x 4x | (5 (7 | 5× 5× | (5 (7 | 5) 5) | x11 x12 | 6.3x5 | 6.3x7 6.3x9 6.3x11 6.3x12 | 8x5 8x7 8x11 8x12 | 8x16 8x20 | 10x12 10x13 10x16 10x20 | 12.5x16 12.5x20 | Tolerance |
| Lead forming symbol | | х | В | х | В | х | В | В | В | В | В | В | В | |
| Lead-wire diameter | Φd | 0.4 | 45 | 0.4 | 45 | (|).5 | 0.45 | 0.5 | 0.45/0.5 | 0.5/0.6 | 0.6 | 0.6 | ±0.05 |
| Pitch of componet | Р | 12 | .7 | 12 | .7 | 1 | 2.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 15.0 | ±1.0 |
| Feed hole pitch | P0 | 12 | .7 | 12 | .7 | 1 | 2.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 15.0 | ±0.2 |
| Hole center to lead | P1 | 5.1 | 5.6 | 5.1 | 5.4 | 5.1 | 5.4 | 5.1 | 5.1 | 4.6 | 4.6 | 3.85 | 5.0 | ±0.7 |
| Hole center to component | P2 | 6.3 | 35 | 6.3 | 35 | 6 | .35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 7.5 | ±1.0 |
| Lead to lead distance | F | 2.5 | 1.5 | 2.5 | 2.0 | 2.5 | 2.0 | 2.5 | 2.5 | 3.5 | 3.5 | 5.0 | 5.0 | ±0.5 |
| Height of component from tape center | Н | 18 | 5.5 | 18 | 5.5 | 1 | 8.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | ±0.75 |
| Tape width | W | 18 | 6.0 | 18 | .0 | 1 | 8.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | ±0.5 |
| Hold down tape width | W0 | 11 | .0 | 11 | .0 | 1 | 1.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | min |
| Feed hole position | W1 | 9. | 0 | 9. | .0 | ę | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | +0.75 -0.5 |
| Hole down tape position | W2 | 1. | 5 | 1. | 5 | 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | max |

| File Description | Approval Sheet | | | | | | | | |
|------------------|-----------------------|----------|-------|----|--|--|--|--|--|
| Component P/N | RS Version 01 Page 10 | | | | | | | | |
| | | STANDARD | MANUA | ۹L | | | | | |

PIN Code: P ΦD=4~8





DIMENSIONS(mm)

| | | | Case Sise | | | | | | | | |
|---|--------|------------|-----------|------|------|-------|-------|--------|----------------------------|--------------|---------------|
| Items | Symbol | 4x5 4x7 | 5x5 | 5x7 | 5x11 | 6.3x5 | 6.3x7 | 6.3x11 | 8x5 8x7 8x11 8x12 | 8x16 8x20 | Tolerance |
| Lead forming symbol | | Ρ | Р | Ρ | Ρ | Ρ | Ρ | Ρ | Ρ | Ρ | |
| Lead-wire diameter | Φd | 0.45 | 0.45 | 0.45 | 0.5 | 0.45 | 0.5 | 0.5 | 0.45/0.5 | 0.5/0.6 | ±0.05 |
| Pitch of componet | Ρ | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | ±1.0 |
| Feed hole | P0 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | ±0.2 |
| Hole center to lead | P1 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | ±0.7 |
| Hole center to component | P2 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | ±1.0 |
| Lead to lead distance | F | 1.5 | 2.0 | 2.0 | 2.0 | 2.5 | 2.5 | 2.5 | 3.5 | 3.5 | ±0.5 |
| Lead to lead distance | F1 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | ±0.5 |
| Height of component from tape center | Н | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | 18.5 | ±0.75 |
| Lead-wire clinch height | H0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | ±0.5 |
| Tape width | W | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | ±0.5 |
| Hold down tape width | W0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | min |
| Feed hole position | W1 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | +0.75 -0.5 |
| Hole down tape position | W2 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | max |

| File Description | Approval Sheet | | | | | | | |
|------------------|----------------|-----------------------|--|--|--|--|--|--|
| Component P/N | RS | RS Version 01 Page 11 | | | | | | |
| STANDARD MANUAL | | | | | | | | |

8.2 端子切脚或成型 Lead Cut& Lead Forming



| File Description | Approval Sheet | | | | | | | |
|------------------|----------------|-----------------------|--|--|--|--|--|--|
| Component P/N | RS | RS Version 01 Page 12 | | | | | | |
| STANDARD MANUAL | | | | | | | | |

9 包装PACKING

包装标签内容 Label on the packaging box or bag (The following items shall be marked on the label)

(Inside box or bag) :

Series

P/N Rated capacitance Rated voltage

编带产品按下图包装 Taped Packing



散包装按下图包装方式 Bulk Packing



carton

| File Description | Approval Sheet | | | | | | | |
|------------------|----------------|-----------------------|--|--|--|--|--|--|
| Component P/N | RS | RS Version 01 Page 13 | | | | | | |
| STANDARD MANUAL | | | | | | | | |

10 其它说明 OTHER REMARKS

10.1铝电解电容器使用注意事项

Important Information On The Application Of Aluminium Electrolytic Capacitors

1 直流铝电解电容器应按正确的极性使用 DC aluminium electrolytic capacitors are normally polarized

When reverse voltage is applied on DC aluminium electrolytic capacitor the circuit will be short out and the capacitor will be damaged due to abnormal current flows through the capacitor. Please use non-polar types of capacitors the positive voltage is applied on the cathode terminal.

2 在额定工作电压以下使用 Use capacitor within rated voltage

When capacitor is used at higher voltage than the rated voltage, leakage current may increase and characteristics may be deteriorated and damaged in a short period. Please take extra caution that the peak voltage should not exceed the rated voltage.

3 作快速充放电使用 Sudden charge and discharge

When aluminium electrolytic capacitors for general purpose-use are employed in rapid charge and discharge its life may be shortened resulted from capacitance decrease, heat rise, etc.

4 电容器储存 Storage of the capacitor

We recommend the following conditions for storage: Ambient temperature: 5~35 ,Ambient humidity: 75%RH;

If storage life 12 months, the products need to be charged again before using: If storage time three years, the products need to be discarded; Expiry date: calculating from the date marked on the sleeve; Please keep capacitors in the original package; Avoid storing the capacitors under such circumstances: With water and oil or damp & dewing location

With toxic gases such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, bromine and methane

Leakage current tends to increase when capacitors have been stored for long period of time. The higher storage Temp.rise, the higher leakage current increase. Please take caution when selecting the storage location. The leakage current will decrease gradually as voltage is applied to the capacitor. The capacitor is subjected to aging before using where increased leakage may cause problems in the circuit.

5 施加纹波电流应小于额定值 Use capacitor within rated ripple current

If excessive ripple current is applied on the capacitor, excessive heat will be generated inside, the capacitance be reduced and capacitor's life shall be shortened. Rated voltage has been marked on the capacitor; therefore, the peak value of the ripple voltage should be less than the rated voltage.

| File Description | | Approval Sheet | | | | | | |
|------------------|----|-----------------------|--|--|--|--|--|--|
| Component P/N | RS | RS Version 01 Page 14 | | | | | | |
| STANDARD MANUAL | | | | | | | | |

6 使用环境温度 Ambient temperature

Life of aluminium electrolytic capacitor is affected by the ambient temperature. It is generally known that the life doubles for each decrease in temperature.

7 引出线强度 Tensile strength of lead wire

When a strong force is applied to the lead wires or terminals, stress is put on the internal connections, which may result in short circuit, open circuit or leakage current increase. Therefore it is not advisable to bend or handle a capacitor after it has been to the PC board.

8 焊接过程耐热性 Heat resistance at the soldering process

During soldering process, secondary shrinkage or sleeve crack may occur when soldering temperature is too high or soldering time is too long.

9 电路板的安装孔孔距及安装位置 Hole pitch and position of PC board

When designing a PC board, its hole pitch should be designed to coincide with the lead pitch(lead spacing) of the specified in the catalog or specifications. When a capacitor is forcibly inserted into an unmatched hole pitch, a will put on the leads and which could result in a short circuit or increased leakage current.

10 关于焊接以后的清洗 Cleaning after soldering

The aluminium electrolytic capacitors should be free of halogenated solvents during board cleaning after soldering. Use solvent proof capacitors when halogenated solvents are used.

After cleaned with the solvent which can guarantee the quality of capacitors, the capacitors should not be kept in solvent environments of non-ventilated places. Let the capacitors after cleaning dry with hot blast fully above 10 mins and the temperature of hot blast should not be over than specified upper limit of that of capacitors.

(11) 关于固定剂、镀层(涂层剂)以及PCB Concerning adhesives、coating materials(coating agent) and PCB.

Do not use halogen-containing adhesives, coating materials(coating agent) and PCB to fix aluminum electrolytic capacitors.

Do not cover up all the sealing area of capacitors with adhesives or coating materials(coating agent), make coverage only partial.

12 符合 RoHS RoHS Compliance

Completely in accordance with the latest standard of RoHS or relevant agreements reached by both parts if customer has special requirements.

| File Description | Approval Sheet | | | | |
|------------------|----------------|---------|----|------|----|
| Component P/N | RS | Version | 01 | Page | 15 |
| STANDARD MANUAL | | | | | |

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