

**NO. : RD20200418015**

**TO: Ozdisan**

**APPROVAL SHEET No. : T-0621A**

**Series No.: MRS**

**Specification No.:**

**RoHS**

**APPROVAL SHEET  
FOR AL. ELECTROLYTIC CAPACITORS**

| No. | (Customer No.) | (Koshin Part No.)    | Description | ΦD x L  |
|-----|----------------|----------------------|-------------|---------|
| 1   |                | MRS-035V220ME054-T/R | 35V22μF     | 6.3X5.4 |

**APPROVED BY:**

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**PLEASE SIGN RETURN US ONE COPY OF THE APPROVAL SHEET**

**DESIGNED BY: JIANGYANFEI CHECKED BY: JIANGYUANYUAN APPROVED BY:HUANGXUEHUI**

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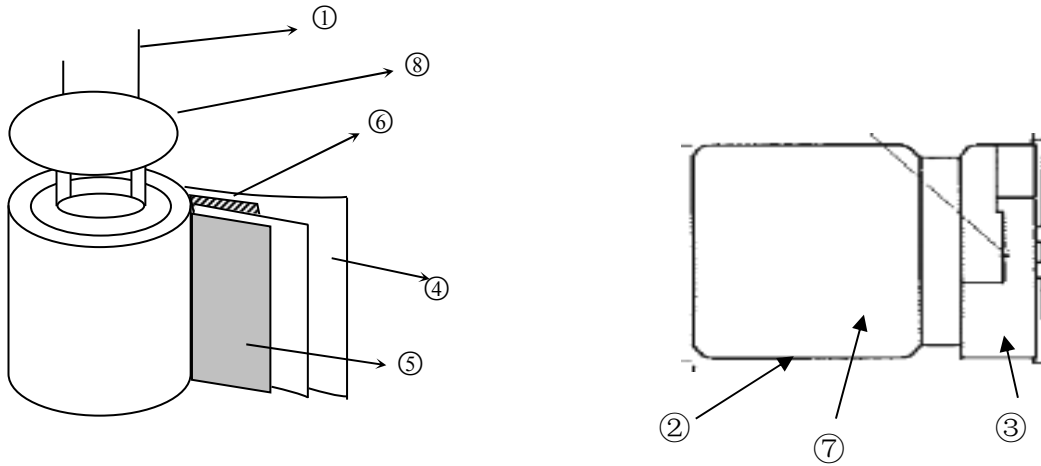
**E-mail: [koshin@koshin.com.hk](mailto:koshin@koshin.com.hk)**

**DATE: 2020-4-18**

**KOSHIN**

**DJS-DS-0013**

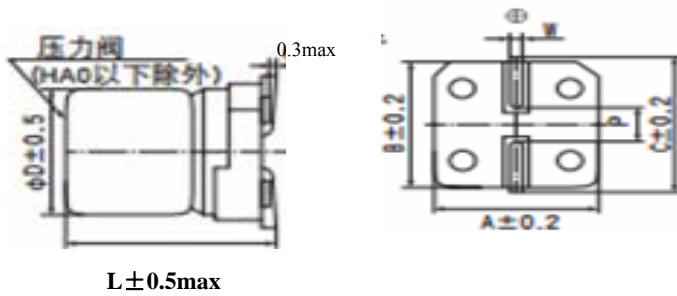
1. Inner conformation drawing and inner constitute parts (curtness drawing):



| No.: | Composing Part  | Material      |
|------|-----------------|---------------|
| ①    | Lead Wire       | Fe+Al+Cu+Sn   |
| ②    | Case            | Aluminum      |
| ③    | Base Plate      | PPA           |
| ④    | Paper           | Cellulose     |
| ⑤    | Anode Foil      | Aluminum Foil |
| ⑥    | Cathode Foil    | Aluminum Foil |
| ⑦    | Chemical liquid | GBL           |
| ⑧    | Seal            | Rubber        |

# KOSHIN

Standard Size map:



Lead spacing and Diameter

Unit: mm

| $\Phi D$ | L   | A   | B   | C   | W       | P $\pm 0.2$ |
|----------|-----|-----|-----|-----|---------|-------------|
| 6.3      | 5.4 | 6.6 | 6.6 | 7.2 | 0.5-0.8 | 1.9         |

Coefficient of Frequency for Ripple Current

| Capacitance( $\mu F$ ) \ Frequency (Hz) | 120  | 1K   | 10K  | 100K |
|---|------|------|------|------|
|   | 1.0  | 1.00 | 1.50 | 1.75 |
| 2.2 to 10                               | 1.00 | 1.30 | 1.40 | 1.50 |
| 22 to 1,500                             | 1.00 | 1.05 | 1.08 | 1.08 |



# KOSHIN INTERNATIONAL LIMITED

ELECTROLYTIC CAPACITORS

Web Site: <http://www.koshin.com.hk>

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## TEST REPORT OF ELECTROLYTIC CAPACITORS SAMPLE

|                |           |                      |                      |     |
|----------------|-----------|----------------------|----------------------|-----|
| DATE :         | 2020/4/18 | Quantity :           | 20                   | PCS |
| Customer:      | Ozdisan   | Customer'S part No.: |                      |     |
| Ratings :      | 35V 22    | Part No.:            | MRS-035V220ME054-T/R |     |
| Series :       | MRS       | Case Size:           | D6.3XL5.4(±0.5max)   |     |
| Marking Color: | Blue      | Load Life:           | 2000                 | hrs |

| Capacitance Tolerance at 120Hz/20°C | Max.Tan δ at 120 Hz 20°C | Max.Leakage Current(μ A) After 2 min. | Max.Impedance (Ω) At 100KHz/20°C | Max. Ripple Current(mArms) At 120Hz/85°C | Working Temp. (°C) | Surge. Volt. (V) |
|-------------------------------------|--------------------------|---------------------------------------|----------------------------------|--|--------------------|------------------|
| ±20%                                | 14%                      | 7.7                                   | /                                | 45                                       | -40+85             | 43.8             |

| NO.  | Capacitance (μ F) | Tan δ | Impedance (Ω) | Leakage Current(μ A) | Remarks |
|------|-------------------|-------|---------------|----------------------|---------|
| 1    | 20.91             | 7.06  |               | 0.51                 |         |
| 2    | 20.88             | 6.64  |               | 0.59                 |         |
| 3    | 20.91             | 6.73  |               | 0.51                 |         |
| 4    | 21.18             | 6.76  |               | 0.62                 |         |
| 5    | 20.76             | 6.65  |               | 0.56                 |         |
| 6    | 20.84             | 6.82  |               | 0.49                 |         |
| 7    | 20.95             | 6.57  |               | 0.49                 |         |
| 8    | 20.83             | 6.74  |               | 0.53                 |         |
| 9    | 20.67             | 6.50  |               | 0.32                 |         |
| 10   | 20.69             | 6.61  |               | 0.33                 |         |
| AVE. | 20.86             | 6.71  | #DIV/0!       | 0.50                 |         |
| MAX. | 21.18             | 7.06  | 0.00          | 0.62                 |         |
| MIN. | 20.67             | 6.50  | 0.00          | 0.32                 |         |

TESTED BY: JiangYun

CHECKED BY: Jiangyuanyuan

APPROVED BY: Huangxuehui

版次: 1.0 修改次号: 00 生效日期: 2008.10.10

DJS-SD-0010



## Series MRS Capacitor

### 1. Our part No. :

For example :

|             |               |             |            |                       |
|-------------|---------------|-------------|------------|-----------------------|
| <u>MRS</u>  | <u>035V</u>   | <u>220</u>  | <u>M</u>   | <u>E054</u>           |
| Series code | rated voltage | capacitance | tolerance  | case size symbol      |
| MRS         | 35v           | 22 $\mu$ F  | $\pm 20\%$ | $\Phi 6.3 \times 5.4$ |

### 2 Marking:

Include company's brand series code, rated voltage, capacitance and polarity

### 3. Specifications:

3.1 Temperature range : -40 ~+85°C

#### 3.2 Electrical characteristics

3.2.1 Capacitance tolerance :  $\pm 20\%$

3.2.2 Tangent of loss angle ( $\tan \delta$ ) : (At 20°C, 120Hz)

| Rated voltage (V)    |           | 4    | 6.3  | 10   | 16   | 25   | 35   | 50   | 63   | 100  | 160-250 | 400-450 |
|----------------------|-----------|------|------|------|------|------|------|------|------|------|---------|---------|
| $\tan \delta$ (max.) | B052-G100 | 0.42 | 0.26 | 0.30 | 0.26 | 0.16 | 0.14 | 0.12 | 0.12 | 0.12 | -       | -       |
|                      | H135-K215 | -    | 0.38 | 0.34 | 0.30 | 0.26 | 0.22 | 0.18 | 0.14 | 0.10 | 0.20    | 0.25    |

3.2.3 Leakage current ( $\mu$  A) :

| Rated voltage (VDC)        | 4-100   | 160-450                                  |
|----------------------------|---|--|
| Leakage Current ( $\mu$ A) | Less than 0.01CV or 3 $\mu$ A, whichever is large<br>(at 20°C, 2 minutes) | —  |
|                            | Less than 0.03CV or 4 $\mu$ A, whichever is large<br>(at 20°C, 1 minutes) | 0.04CV +100 $\mu$ A (at 20°C, 1 minutes) |

Note: I : Leakage current ( $\mu$  A) , C : Capacitance ( $\mu$  F) , V : Rated DC working voltage (V)



| NO  | ITEM       | TEST METHOD   | SPECIFICATION   |
|-----|------------|---|---|
| 2.6 | Surge test | Rated surge voltage shall be applied (switch on) for $30 \pm 5$ second and then shall be applied (switch off) with discharge for 5.5min at room temperature. This cycle shall be repeated for 1000 cycles. Duration of one cycle is $6 \pm 0.5$ minutes | <p>Capacitance change:<br/>within <math>\pm 15\%</math> of the initial specified value.</p> <p>Dissipation factor:<br/>Less than specified value.</p> <p>Leakage current:<br/>Within initial specified value.</p> |

**3. Mechanical characteristics**

| NO       | ITEM          | TEST METHOD   | SPECIFICATION       |            |                    |                     |          |     |     |     |       |            |                    |                     |          |     |     |     |  |
|----------|---------------|---|---------------------|------------|--------------------|---------------------|----------|-----|-----|-----|-------|------------|--------------------|---------------------|----------|-----|-----|-----|--|
| 3.1      | Lead strength | <p>(A) Tensile strength:<br/>wire lead terminal:</p> <table border="1" style="margin-left: 20px; border-collapse: collapse; width: 80%;"> <tr> <td style="text-align: center;">d(mm)</td> <td style="text-align: center;"><math>\leq 0.5</math></td> <td style="text-align: center;"><math>0.5 &lt; d \leq 0.8</math></td> <td style="text-align: center;"><math>0.8 &lt; d \leq 1.25</math></td> </tr> <tr> <td style="text-align: center;">load(kg)</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">2.0</td> </tr> </table> <p>The capacitor shall withstand the constant tensile force specified between the body and each lead for 10 seconds without damage either mechanical or electrical.</p> <p>(B) Bending strength:<br/>wire lead terminal:</p> <table border="1" style="margin-left: 20px; border-collapse: collapse; width: 80%;"> <tr> <td style="text-align: center;">d(mm)</td> <td style="text-align: center;"><math>\leq 0.5</math></td> <td style="text-align: center;"><math>0.5 &lt; d \leq 0.8</math></td> <td style="text-align: center;"><math>0.8 &lt; d \leq 1.25</math></td> </tr> <tr> <td style="text-align: center;">load(kg)</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">0.5</td> <td style="text-align: center;">1.0</td> </tr> </table> <p>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 <math>90^\circ</math> in the opposite direction and back the original position. Performance of capacitor shall not have change and leads shall be undamaged.</p> | d(mm)               | $\leq 0.5$ | $0.5 < d \leq 0.8$ | $0.8 < d \leq 1.25$ | load(kg) | 0.5 | 1.0 | 2.0 | d(mm) | $\leq 0.5$ | $0.5 < d \leq 0.8$ | $0.8 < d \leq 1.25$ | load(kg) | 0.5 | 0.5 | 1.0 | <p>When the capacitance is measured, there shall be no intermittent contacts, or open-or short-circuiting.</p> <p>There shall be no such mechanical damage as terminal damage etc.</p> |
| d(mm)    | $\leq 0.5$    | $0.5 < d \leq 0.8$  | $0.8 < d \leq 1.25$ |            |                    |                     |          |     |     |     |       |            |                    |                     |          |     |     |     |  |
| load(kg) | 0.5           | 1.0   | 2.0                 |            |                    |                     |          |     |     |     |       |            |                    |                     |          |     |     |     |  |
| d(mm)    | $\leq 0.5$    | $0.5 < d \leq 0.8$  | $0.8 < d \leq 1.25$ |            |                    |                     |          |     |     |     |       |            |                    |                     |          |     |     |     |  |
| load(kg) | 0.5           | 0.5   | 1.0                 |            |                    |                     |          |     |     |     |       |            |                    |                     |          |     |     |     |  |

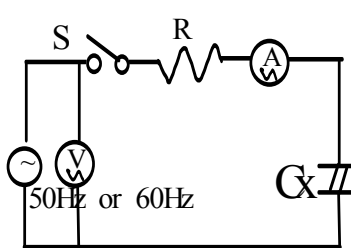
| NO. | ITEM                 | TEST METHOD   | SPECIFICATION   |
|-----|----------------------|---|---|
| 3.2 | Vibration resistance | The frequency of the vibration shall vary uniformly within the range 10 to 55 Hz with the amplitude of 0.75 mm, completing the cycle in the interval of one minute.<br>The capacitor shall be securely mounted by its leads with hold the body of capacitor.<br>The capacitor shall be vibrated in three mutually perpendicular directions for a period of 2 hours in each direction. | Capacitance : no unsteady.<br><br>Appearance : no abnormal.<br><br>Capacitance change:<br><br>within $\pm 5\%$ of initial measured value. |
| 3.3 | Solder ability       | The leads are dipped in the solder bath of Sn at $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for $2 \pm 0.5$ seconds. The dipping depth should be set at 1.5~2.0 mm.  | The solder alloy shall cover the 95% or more of dipped lead's area.   |

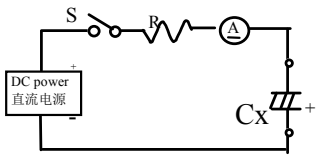
#### 4. Reliability

:

| NO. | ITEM                      | TEST METHOD  | SPECIFICATION  |
|-----|---------------------------|--|--|
| 4.1 | Soldering heat resistance | The leads immerse in the solder bath of Sn at $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for $10 \pm 1$ seconds until a distance of 1.5~2.0 mm from the case. | No visible damage or leakage of electrolyte.<br><br>Capacitance change:<br>Within $\pm 5\%$ of the initial measured value<br><br>Tan $\delta$ :<br>Less than specified value.<br><br>Leakage current:<br>Less than specified value |
| 4.2 | Damp head ( steady state) | Subject the capacitor to $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 90% to 95% relative humidity for 504 hours.  | Capacitance change:<br>Within $\pm 20\%$ of the initial measured value<br>Tan $\delta$ :<br>Less than 1.2 specified value.<br>Leakage current:<br>Less than specified value<br>Impedance:<br>Less than 1.2 specified value.        |

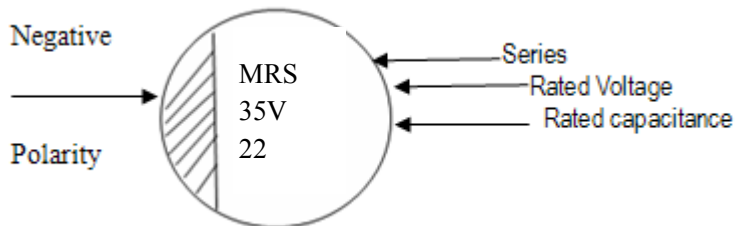


| NO.   | ITEM                       | TEST METHOD   | SPECIFICATION  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
|---|----------------------------|---|--|-----------------|--------------------|--------|---------------------------------------|-------|---|------|---|-----|---|-------|------------------------|---|---|
| 4.3   | Load life                  | The following specifications shall be satisfied when the capacitors are restores to 20°C after the rated voltage is applied for 2,000 hours at 85°C.  | Capacitance change(4-6.3V):<br>Within±30% of the initial specified value.<br>Capacitance change(10-100V):<br>Within±25% of the initial specified value.<br>Capacitance change(160-450V):<br>Within±20% of the initial specified value. |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| 4.4   | Shelf life                 | The following specifications shall be satisfied when the capacitors are restores to 20°C after exposing them for 1,000 hours at 85°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum for 30 minutes, at least 24 hours and not more than 48 hours before the measurements   | Dissipation factor(4-100V):<br>Less than 300% of the initial specified value.<br>Dissipation factor(160-450V):<br>Less than 200% of the initial specified value.<br><br>Leakage current:<br>The initial specified value or less.       |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| 4.5   | Storage at low temperature | The capacitor shall be stored at temperature of -40°C ± 3°C for 16 hours, during which time be subjected to standard atmospheric conditions for 16 hours or more. After which measurements shall be made.   | Capacitance change:<br>Within ± 10% of the initial value.<br><br>Tan δ :less than specified value<br><br>Leakage current:<br>Less than specified value.<br><br>Appearance: no Abnormal.  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| 4.6   | Pressure relief            | AC test:<br>Applied voltage: AC voltage not exceeding 0.7 times of the rated direct voltage or 250V AC whichever is the lower.<br><br>Frequency: 50Hz or 60Hz.<br>Series resistor :refer to the table below <table border="1" style="margin-top: 10px; width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Capacitance(C)</th> <th style="width: 50%;">Series resistor</th> </tr> </thead> <tbody> <tr> <td><math>C &lt; 1\mu\text{F}</math></td> <td>1000 Ω</td> </tr> <tr> <td><math>1\mu\text{F} &lt; C \leq 10\mu\text{F}</math></td> <td>100 Ω</td> </tr> <tr> <td><math>10\mu\text{F} &lt; C \leq 100\mu\text{F}</math></td> <td>10 Ω</td> </tr> <tr> <td><math>100\mu\text{F} &lt; C \leq 1000\mu\text{F}</math></td> <td>1 Ω</td> </tr> <tr> <td><math>1000\mu\text{F} &lt; C \leq 10000\mu\text{F}</math></td> <td>0.1 Ω</td> </tr> <tr> <td><math>10000\mu\text{F} &lt; C</math></td> <td>*</td> </tr> </tbody> </table> <p style="margin-top: 5px;">* Resistance is equivalent to half impedance by test frequency.</p> | Capacitance(C)   | Series resistor | $C < 1\mu\text{F}$ | 1000 Ω | $1\mu\text{F} < C \leq 10\mu\text{F}$ | 100 Ω | $10\mu\text{F} < C \leq 100\mu\text{F}$ | 10 Ω | $100\mu\text{F} < C \leq 1000\mu\text{F}$ | 1 Ω | $1000\mu\text{F} < C \leq 10000\mu\text{F}$ | 0.1 Ω | $10000\mu\text{F} < C$ | * | AC test circuit<br> <p style="margin-top: 10px;">             ⊙ : AC power<br/>             S : Switch<br/>             ⊙ : AC voltage meter<br/>             ⊙ : AC current meter<br/>             R : protection resistor<br/>             CX : testing capacitor           </p> |
| Capacitance(C)                              | Series resistor            |   |  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| $C < 1\mu\text{F}$                          | 1000 Ω                     |   |  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| $1\mu\text{F} < C \leq 10\mu\text{F}$       | 100 Ω                      |   |  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| $10\mu\text{F} < C \leq 100\mu\text{F}$     | 10 Ω                       |   |  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| $100\mu\text{F} < C \leq 1000\mu\text{F}$   | 1 Ω                        |   |  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| $1000\mu\text{F} < C \leq 10000\mu\text{F}$ | 0.1 Ω                      |   |  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |
| $10000\mu\text{F} < C$                      | *                          |   |  |                 |                    |        |                                       |       |   |      |   |     |   |       |                        |   |   |

| NO. | ITEM            | TEST METHOD  | SPECIFICATION   |
|-----|-----------------|--|---|
| 4.6 | Pressure relief | <p>DC test:<br/>Send the following electricity while applying the inverse voltage.</p> <p>Where case size:<br/> <math>D \leq 22.4\text{mm}</math>: 1 A d.c.max<br/> <math>D &gt; 22.4\text{mm}</math>: 10 A d.c.max</p> <p>Note: 1.This requirement applies to capacitors with a diameter of 8 mm or more.<br/>           2. When the pressure relief device does not open even 30 minutes after commencement of test, the test may be ended.</p>              | <p>DC test circuit</p>  <p>S : Switch<br/>           A : DC current meter<br/>           Cx: testing capacitor</p> <p>The pressure relief device shall open in such a way as to avoid any damage of fire or explosion of capacitor elements (terminal and metal foil etc.) or cover.</p> |
| 4.7 | Temp cycle      | <p>LSL temperature(°C): <math>-40 \pm 3</math> time(H): 0.5H/timeX5 times USL temperature(°C): <math>85 \pm 2</math> time(H): 0.5H/timeX5 times Judgement: CAP: <math>\Delta C/C \leq \pm 10\%</math>, Appearance no Abnormal. No electrolyte leakage.</p>   |   |
| 4.8 | Thermal shock   | <p>dry heat temperature (°C): <math>85 \pm 2</math> time(H): 16 moist heat temperature(°C): 55 time(H): 24/<br/>           cold temperature(°C): <math>-40 \pm 2</math> time(H): 2/ moist heat temperature(°C): 55 time(H): 24 :<br/>           Judgement: CAP, <math>\Delta C/C \leq \pm 10\%</math>, Tan <math>\delta</math> :Less than 1.2 specified value, Leakage current: Less than specified value. Appearance no Abnormal. No electrolyte leakage.</p> |   |

5. Marking For example:

5.1. Marking on capacitors includes:



- 1>. Series
- 2>. Rated voltage
- 3>. Rated capacitance (u F)
- 4>. Polarity

5.2. Marking color: Blue

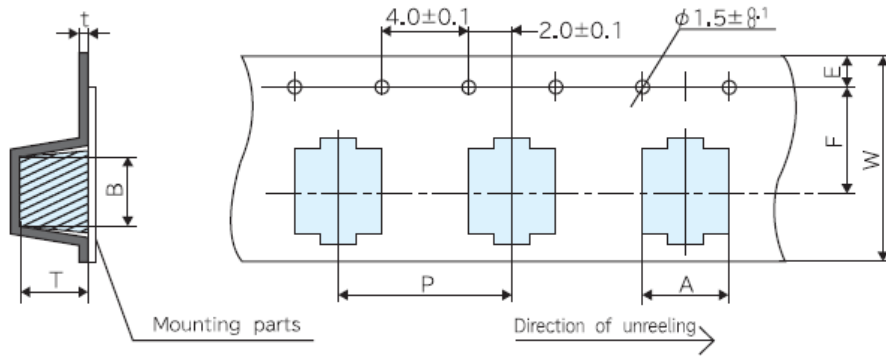
5.3. Case color: Silver

Detergent needing attention

Hydrogen carbide liquid and halogen liquid can cause Aluminium Electrolytic Capacitor to corrode. Some of Safe and Unsafe detergent are as follows

| <b>Safe</b>     | <b>Unsafe</b>                              |
|-----------------|--|
| Dimethylbenzene | 1,1,2-trichloroethane                      |
| Ethanol         | 1,2,2- trichloroethane                     |
| Butanol         | Tetrachloroethylene                        |
| Methanol        | Chloroform(colorless volatilizable liquid) |
| Propanol        | Dichloromethane                            |
| Detergent       | Trichloroethylene                          |

## Carrier Pack Taping Specification:



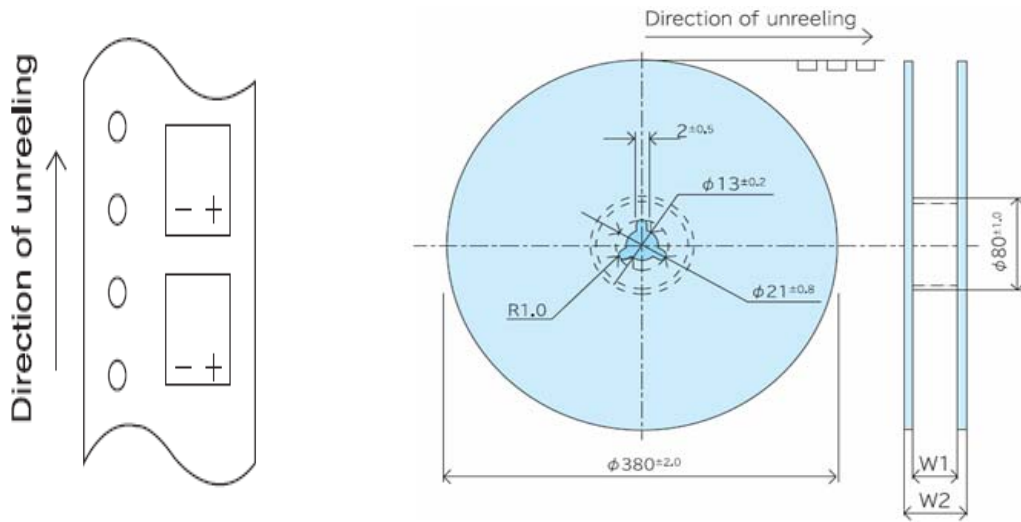
Product size table

Unit: mm

| Dimension<br>Size Code | A       | B       | W  | F   | E        | P  | t      | T       |
|------------------------|---------|---------|----|-----|----------|----|--------|---------|
| φ 6.3X5.4              | 7.0±0.2 | 7.0±0.2 | 16 | 7.5 | 1.75±0.1 | 12 | 0.6max | 5.7±0.2 |

Polarity:

Package for SMD Type:



| Size Code | W1(mm) | W2(mm)   | Qty(pcs/reel) |
|-----------|--------|----------|---------------|
| φ 6.3     | 18±0.5 | 22.5±1.0 | 1000          |

| Surface Mount Aluminum Electrolytic Capacitor Specification |  |                          |  |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|---|--|--------------------------|--|--------------------------|---------|-------------|----------|---|---|---|---|---|-------------|-----|-----|-----|-----|-----|---------|
| Series  | MRS  | 35 V 22 $\mu$ F          | Part No.   | MRS-035V220ME054-T/R     |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
| Customer No.  | /  |                          | Case size  | $\Phi$ D 6.3X L5.4       |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
| Specification   | Items  |                          | Standard   |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | Operating temperature range  |                          | - 40 ~ + 85 $^{\circ}$ C                                 |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | Capacitance tolerance  |                          | $\pm$ 20% ( 20 $^{\circ}$ C , 120Hz )                    |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | Dissipation factor (MAX)   |                          | ( Less than ) 14% ( 20 $^{\circ}$ C , 120Hz )            |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | Leakage current (MAX)  |                          | ( Less than ) 7.7 $\mu$ A ( 20 $^{\circ}$ C 35 V 2 min ) |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | E S R (MAX)  |                          | /  |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | Ripple current (MAX)   |                          | 45 mArms ( 120Hz , 85 $^{\circ}$ C )                     |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | Load life  |                          | 2000 hrs   |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
| Outline   | Marking color  |                          | Blue   |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | ( Dimensions )   |                          |  |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
|   | <p style="text-align: right;">Unit:mm</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><math>\Phi</math>D</th> <th>L</th> <th>A</th> <th>B</th> <th>C</th> <th>W</th> <th>P<math>\pm</math>0.2</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">6.3</td> <td style="text-align: center;">5.4</td> <td style="text-align: center;">6.6</td> <td style="text-align: center;">6.6</td> <td style="text-align: center;">7.2</td> <td style="text-align: center;">0.5~0.8</td> <td style="text-align: center;">1.9</td> </tr> </tbody> </table> |                          |  |                          |         |             | $\Phi$ D | L | A | B | C | W | P $\pm$ 0.2 | 6.3 | 5.4 | 6.6 | 6.6 | 7.2 | 0.5~0.8 |
| $\Phi$ D  | L  | A                        | B  | C                        | W       | P $\pm$ 0.2 |          |   |   |   |   |   |             |     |     |     |     |     |         |
| 6.3   | 5.4  | 6.6                      | 6.6  | 7.2                      | 0.5~0.8 | 1.9         |          |   |   |   |   |   |             |     |     |     |     |     |         |
| Recorder  | (The first edition) :2020-4-18   |                          |  |                          |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |
| Wrote by: Mengxiaocong                                      |  | Checked by: Jianguanyuan |  | Approved by: Huangxuehui |         |             |          |   |   |   |   |   |             |     |     |     |     |     |         |