



# TAI-SAW TECHNOLOGY CO., LTD.

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## Product Specifications Approval Sheet

Product Description: SAW Tx Filter 836.5 MHz LTE Band 5 SMD 1.1x0.9 mm

(BW=25 MHz)

TST Parts No.: TA1692DB

Customer Part No.: \_\_\_\_\_

Customer signature required

Company: \_\_\_\_\_

Division: \_\_\_\_\_

Approved by : \_\_\_\_\_

Date: \_\_\_\_\_

Checked by: \_\_\_\_\_ Michael Yang *Michael*

Approved by: \_\_\_\_\_ Andy Yu *Andy Yu*

Date: \_\_\_\_\_ 2021/08/02

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.

**SAW Tx Filter 836.5 MHz LTE Band 5 SMD 1.1x0.9 mm (BW=25 MHz)**

MODEL NO.: TA1692DB

REV. No.: 2.0

**A. MAXIMUM RATING:**

1. Maximum Input Power: 13 dBm
2. DC voltage: 5 V
3. Operating Temperature: -40 °C to +105 °C
4. Storage Temperature: -40 °C to +105 °C
5. Moisture Sensitivity Level: Level 3 (MSL 3)
6. ESD: 100 V(MM), 200 V(HBM)



Electrostatic Sensitive Device (ESD)

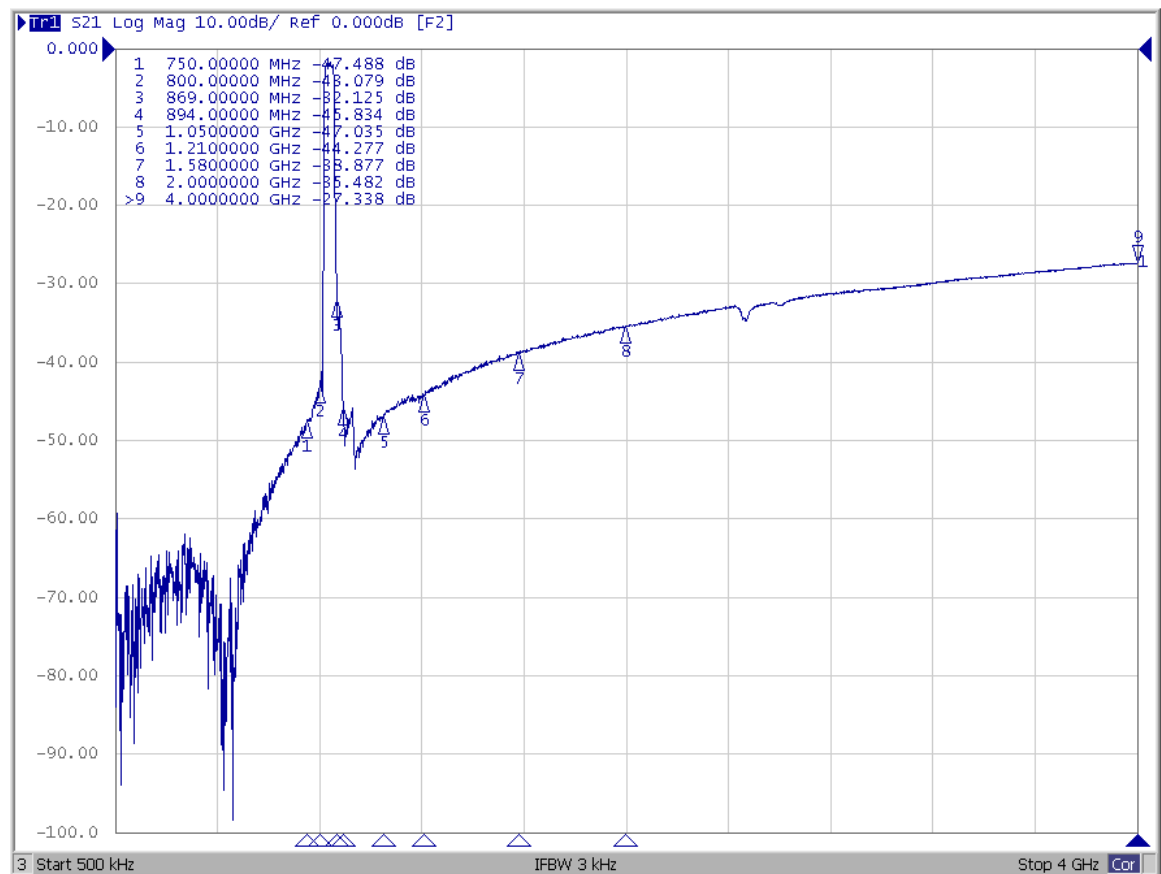
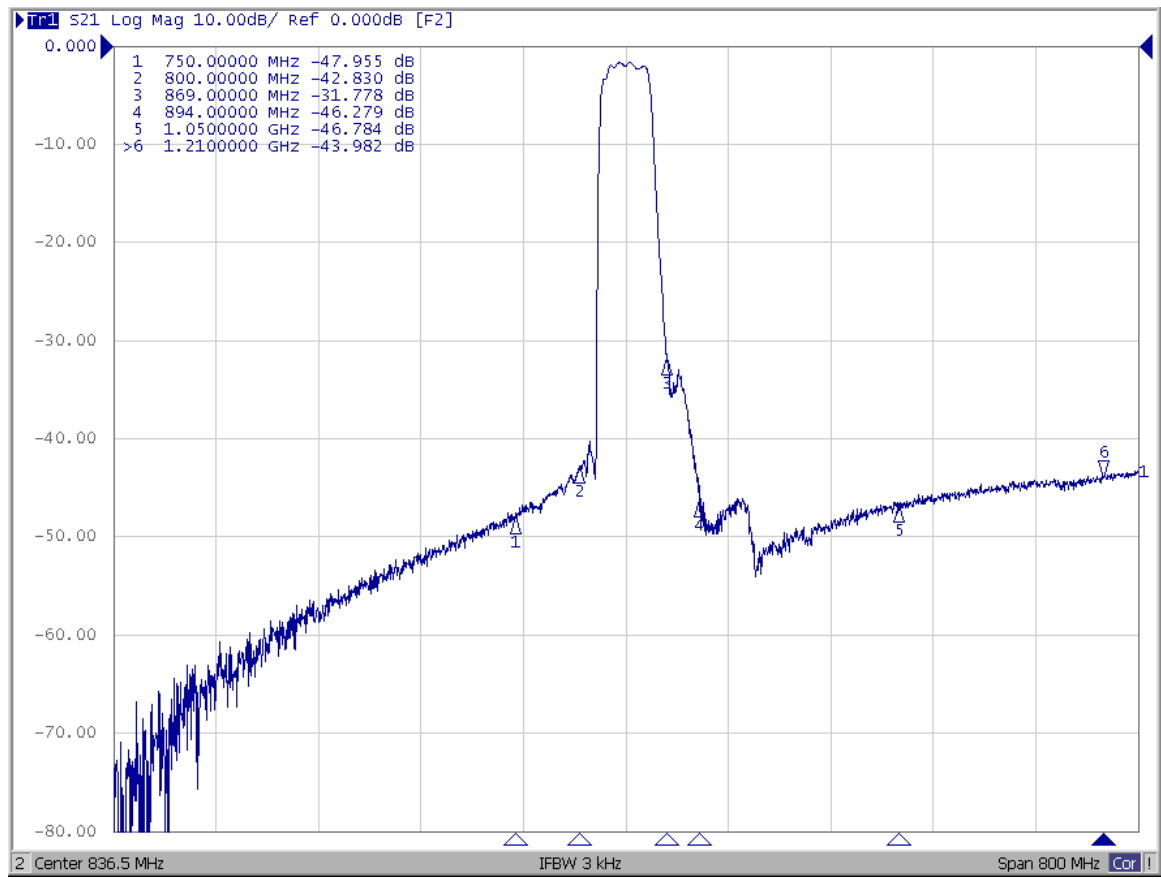
**B. ELECTRICAL CHARACTERISTICS:**

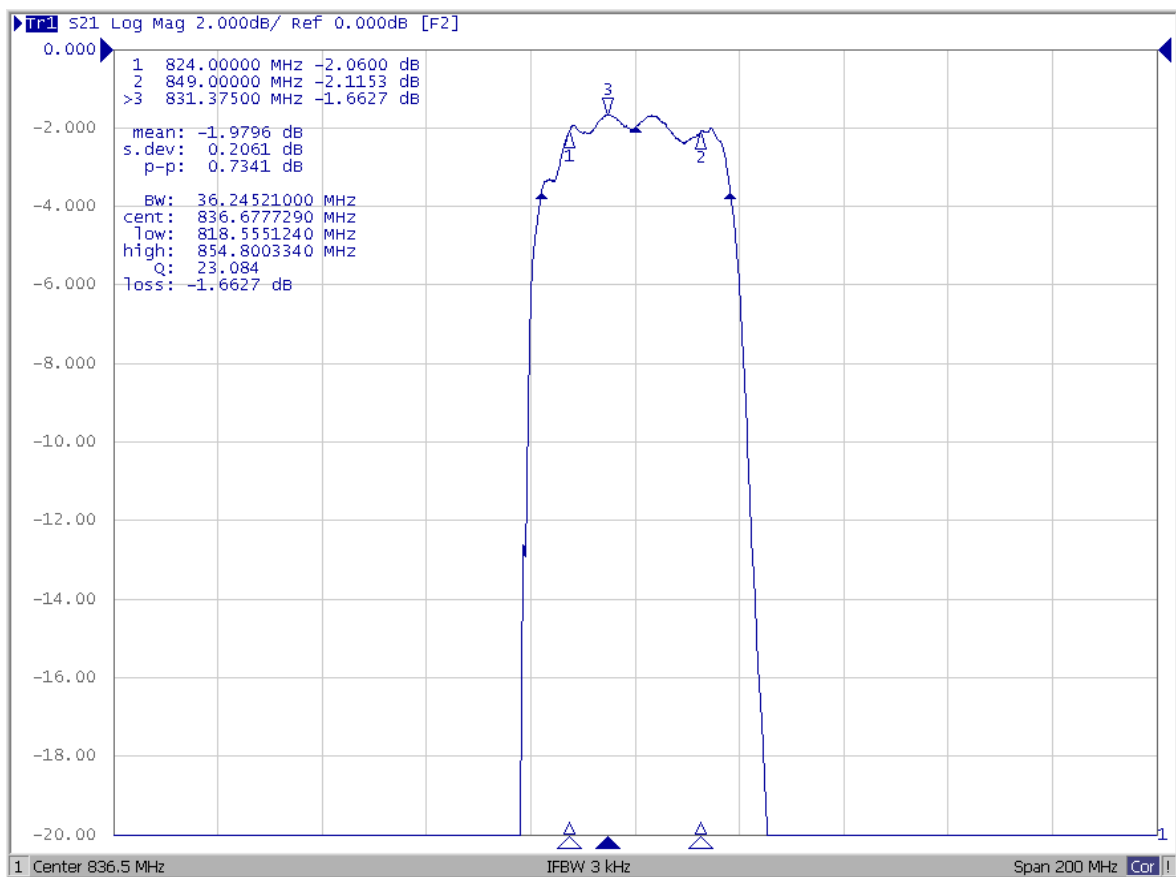
Terminating source impedance:  $Z_s = 50 \Omega$  (Single-ended)

Terminating load impedance:  $Z_L = 50 \Omega$  (Single-ended)

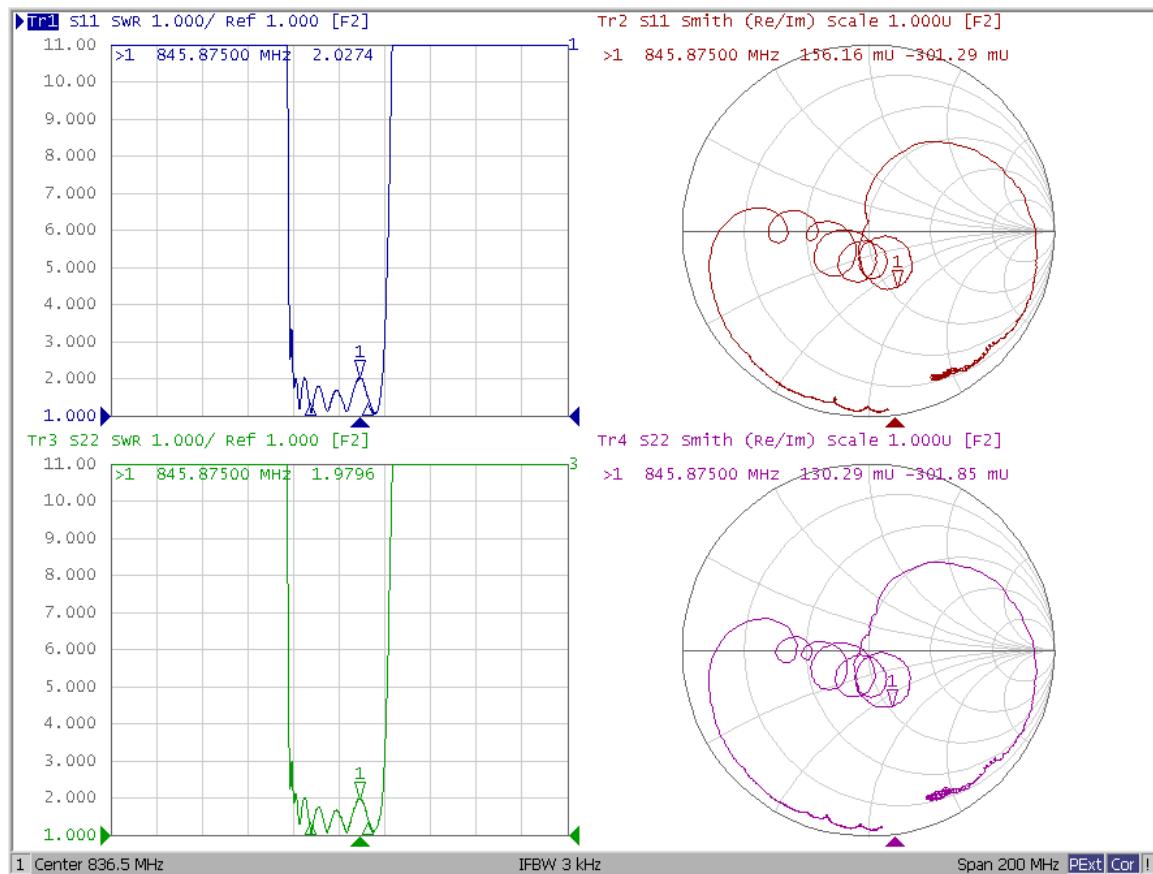
| Parameters Description                         | Unit              | Min. | Typ.  | Max. |
|------------------------------------------------|-------------------|------|-------|------|
| <b>Center Frequency</b> <b>Fc</b>              | MHz               | -    | 836.5 | -    |
| <b>Insertion Loss</b> (824~849 MHz) <b>IL</b>  | dB                | -    | 2.3   | 3.0  |
| <b>Amplitude Ripple</b> (824~849 MHz)          | dB <sub>p-p</sub> | -    | 0.8   | 1.5  |
| <b>VSWR</b> (824~849 MHz)                      | -                 | -    | 2.0   | 2.5  |
| <b>Attenuation</b> (Reference level from 0 dB) |                   |      |       |      |
| DC ~ 750 MHz                                   | dB                | 35   | 50    | -    |
| 750 ~ 800 MHz                                  | dB                | 28   | 44    | -    |
| 869 ~ 894 MHz                                  | dB                | 25   | 32    | -    |
| 894 ~ 1050 MHz                                 | dB                | 38   | 46    | -    |
| 1050 ~ 1210 MHz                                | dB                | 35   | 44    | -    |
| 1210 ~ 1580 MHz                                | dB                | 30   | 39    | -    |
| 1580 ~ 2000 MHz                                | dB                | 28   | 35    | -    |
| 2000 ~ 4000 MHz                                | dB                | 23   | 27    | -    |

### C. FREQUENCY CHARACTERISTIC:

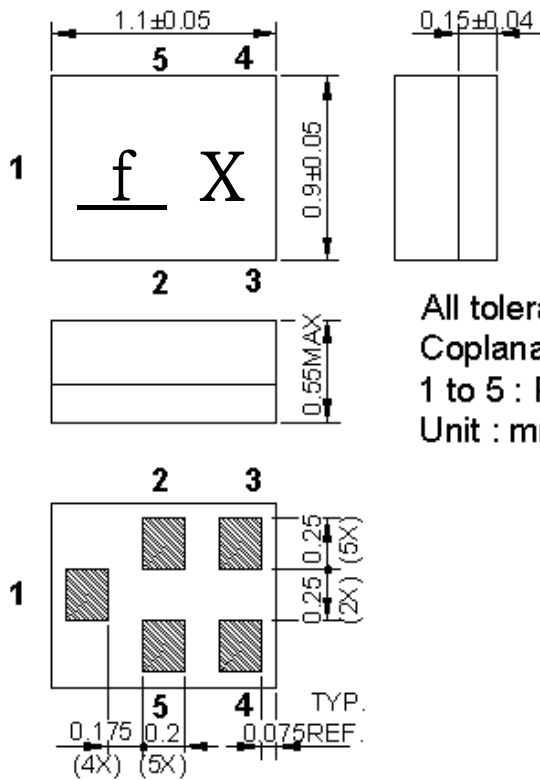




## Reflection Functions:



#### D. OUTLINE DRAWING:



All tolerances are  $\pm 0.05$  mm unless otherwise specified  
Coplanarity : 0.1 mm max.

1 to 5 : Pin No.

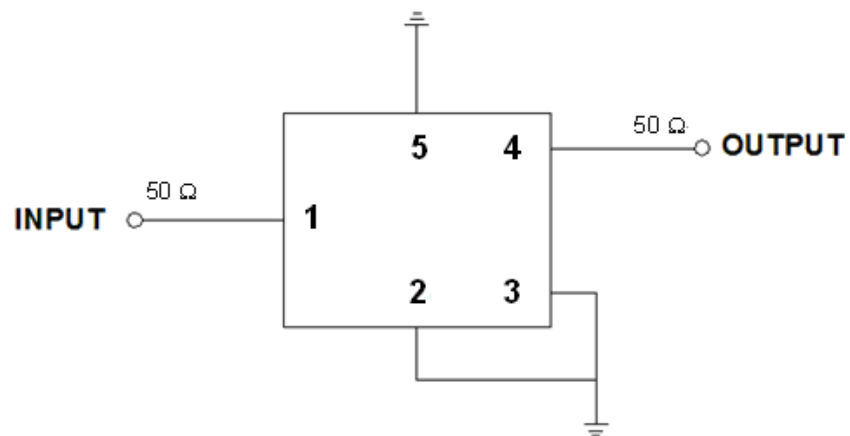
Unit : mm

| Pin No. | Symbol | Function |
|---------|--------|----------|
| 1       | IN     | Input    |
| 2       | GND    | Ground   |
| 3       | GND    | Ground   |
| 4       | OUT    | Output   |
| 5       | GND    | Ground   |

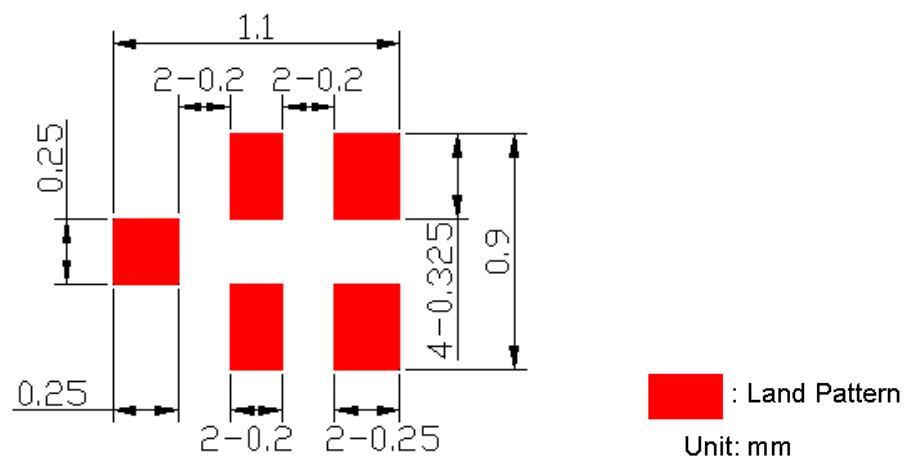
#### X : Year/Month Code (Follow the table)

| YEAR/Month | 1        | 2        | 3        | 4        | 5        | 6        | 7        | 8        | 9        | 10       | 11       | 12       |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2021       | A        | B        | C        | D        | E        | F        | G        | H        | J        | K        | L        | M        |
| 2022       | N        | P        | Q        | R        | S        | T        | U        | V        | W        | X        | Y        | Z        |
| 2023       | a        | b        | c        | d        | e        | f        | g        | h        | j        | k        | l        | m        |
| 2024       | n        | p        | q        | r        | s        | t        | u        | v        | w        | x        | y        | z        |
| 2025       | <u>A</u> | <u>B</u> | <u>C</u> | <u>D</u> | <u>E</u> | <u>F</u> | <u>G</u> | <u>H</u> | <u>J</u> | <u>K</u> | <u>L</u> | <u>M</u> |
| 2026       | <u>N</u> | <u>P</u> | <u>Q</u> | <u>R</u> | <u>S</u> | <u>T</u> | <u>U</u> | <u>V</u> | <u>W</u> | <u>X</u> | <u>Y</u> | <u>Z</u> |
| 2027       | <u>a</u> | <u>b</u> | <u>c</u> | <u>d</u> | <u>e</u> | <u>f</u> | <u>g</u> | <u>h</u> | <u>i</u> | <u>k</u> | <u>l</u> | <u>m</u> |
| 2028       | <u>n</u> | <u>p</u> | <u>q</u> | <u>r</u> | <u>s</u> | <u>t</u> | <u>u</u> | <u>v</u> | <u>w</u> | <u>x</u> | <u>y</u> | <u>z</u> |

### E. MEASUREMENT CIRCUIT:



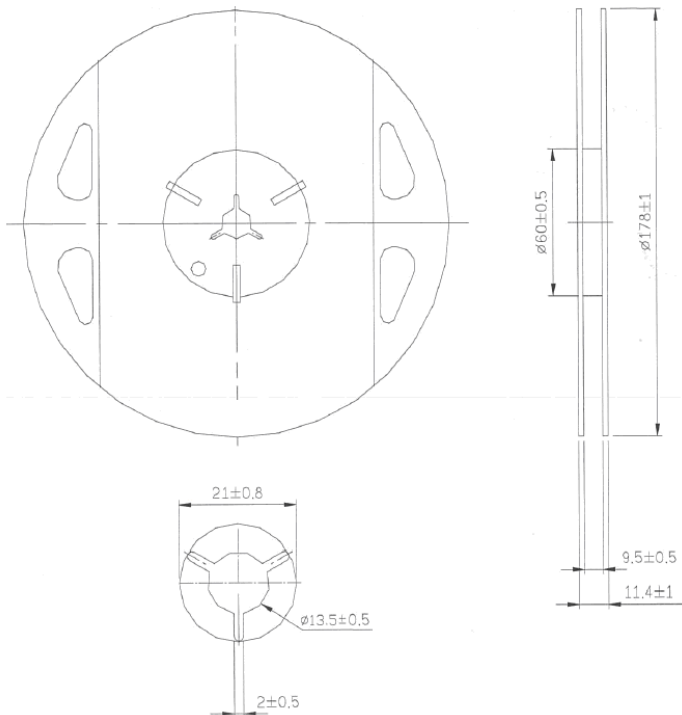
### F. PCB Footprint:



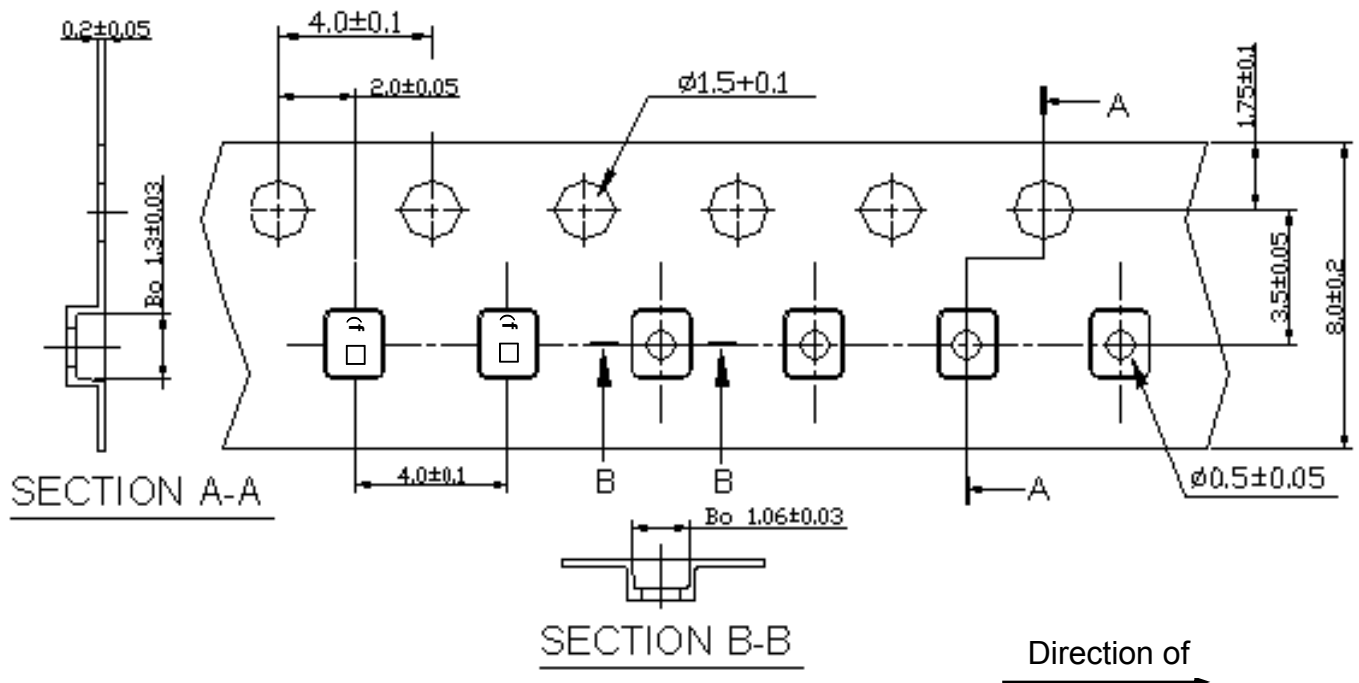
## G. PACKING:

### 1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



### 2. TAPE DIMENSION



#### H. Recommended Reflow Profile:

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (20~40sec).
4. Time: 2 times.

