



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,  
Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: [tstsales@mail.taisaw.com](mailto:tstsales@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

## Product Specifications Approval Sheet

Product Description: SAW Filter 2442 MHz SMD 1109(BW=79MHz)

TST Part No.: TA2530A

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

Customer signature required

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

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

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

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

Checked by: \_\_\_\_\_ Anne Chen *Anne Chen*

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

Date: \_\_\_\_\_ 2019 . 05. 22

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 Filter 2442MHz SMD1.1x0.9mm ( 79MHz BW)

MODEL NO.:TA2530A

REV. NO.:1

### A. MAXIMUM RATING:

1. Input Power Level : 25dBm (2402.5~2481.5MHz) (Ta=+50deg C,5000h )
2. DC Voltage : 5V
3. Operating Temperature: -30°C to +85°C
4. Storage Temperature: -40°C to +100°C
5. Moisture Sensitivity Level: Level 1
- 6 .ESD 50V(MM) 100V(HBM)

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance :  $Z_s = 50 \parallel 8.2nH \ \Omega$  (Single-ended)

Terminating load impedance :  $Z_L = 50 \parallel 6.2nH \ \Omega$  (Single-ended)

| Item                                               | Unit       | Min. | Typ. | Max. | Note       |
|----------------------------------------------------|------------|------|------|------|------------|
| <b>Center Frequency</b> <b>Fc</b>                  | MHz        | -    | 2442 |      | -          |
| <b>Insertion Loss</b> (2402.5~2421.5MHz) <b>IL</b> | dB(*1)(*2) | -    | 1.1  | 1.8  | CH1        |
| <b>Insertion Loss</b> (2407.5~2471.5MHz) <b>IL</b> | dB(*1)(*2) |      | 1.0  | 1.6  | CH2 to 11  |
| <b>Insertion Loss</b> (2457.5~2476.5MHz) <b>IL</b> | dB(*1)(*2) |      | 1.1  | 1.7  | CH12       |
| <b>Insertion Loss</b> (2462.5~2481.5MHz) <b>IL</b> | dB(*1)(*2) |      | 1.2  | 2.0  | CH13       |
| <b>Insertion Loss</b> (2402.5~2481.5MHz) <b>IL</b> | dB(*1)(*2) | -    | 1.2  | 1.7  | +25°C      |
| <b>Amplitude Ripple</b> (2402.5~2481.5MHz)         | dB         | -    | 0.8  | 2.6  | Any 19 MHz |
| <b>Input VSWR</b> (2402.5~2481.5MHz)               |            |      | 1.3  | 2.0  |            |
| <b>Output VSWR</b> (2402.5~2481.5MHz)              |            |      | 1.2  | 2.0  |            |
| <b>Attenuation</b> (reference level from 0 dB)     |            |      |      |      |            |

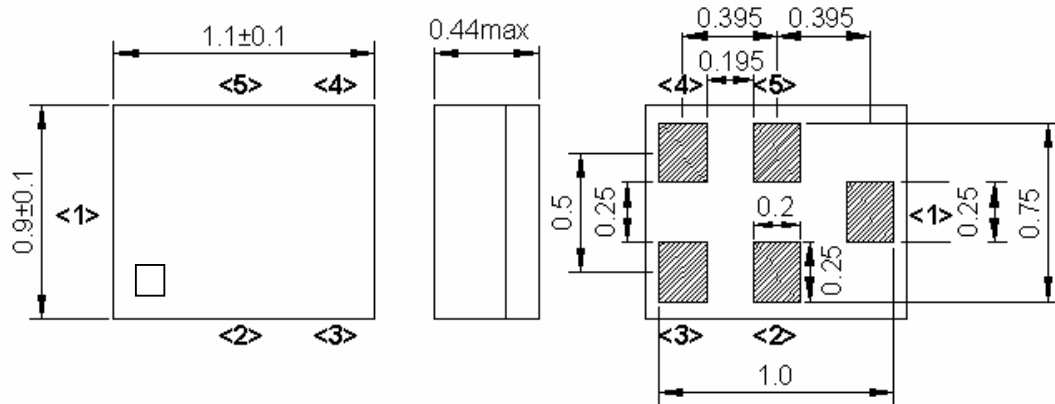
|                 |        |    |    |   |              |
|-----------------|--------|----|----|---|--------------|
| 699 ~ 960 MHz   | dB     | 33 | 37 | - | -            |
| 1425 ~ 2170 MHz | dB     | 25 | 28 | - | -            |
| 2300 ~ 2370 MHz | dB(*3) | 28 | 37 | - |              |
| 2370 ~ 2375 MHz | dB(*3) | 10 | 35 | - |              |
| 2375 ~ 2380 MHz | dB(*3) | 5  | 22 | - |              |
| 2500 ~ 2505 MHz | dB(*3) | 3  | 22 | - | -30 to+85°C- |
|                 | dB(*3) | 12 | 22 | - | +25°C        |
| 2505 ~ 2510 MHz | dB(*3) | 9  | 35 | - | -            |
| 2510 ~ 2570 MHz | dB(*3) | 21 | 34 | - |              |
| 2570 ~ 2690 MHz | dB     | 30 | 33 | - |              |
| 2690 ~ 7500 MHz | dB     | 27 | 32 | - |              |
| 4900 ~ 5805 MHz | dB     | 35 | 41 | - |              |
| 7200 ~ 7500 MHz | dB     | 30 | 39 | - |              |

(\*1) Specification of insertion loss excludes loss that comes from the test board.

(\*2) Integrated Insertion Loss over 19MHz CH BW.

(\*3) Integrated attenuation over 5MHz CH BW.

## C.OUTLINE



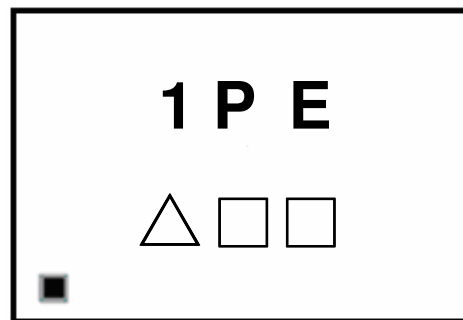
## DRAWING

### Pin assignment

| Pin No. | Pin name | Description |
|---------|----------|-------------|
| 1       | In       | Input       |
| 2       | GND      | Ground      |
| 3       | GND      | Ground      |
| 4       | Out      | Output      |
| 5       | GND      | Ground      |

**Figure 1. Dimensions and Pin assignment**

Top View (Mass Production)



Marking name : 1 PE

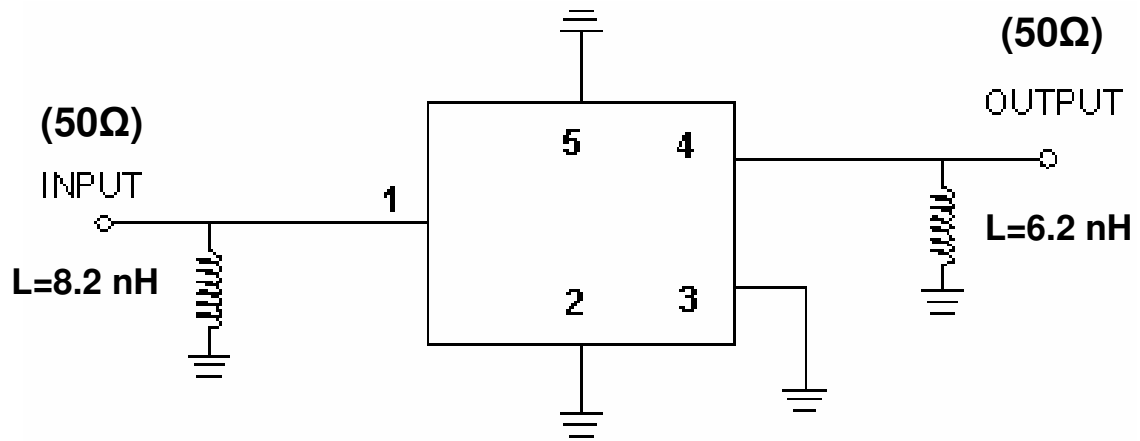
△ : Date Code

□ □ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

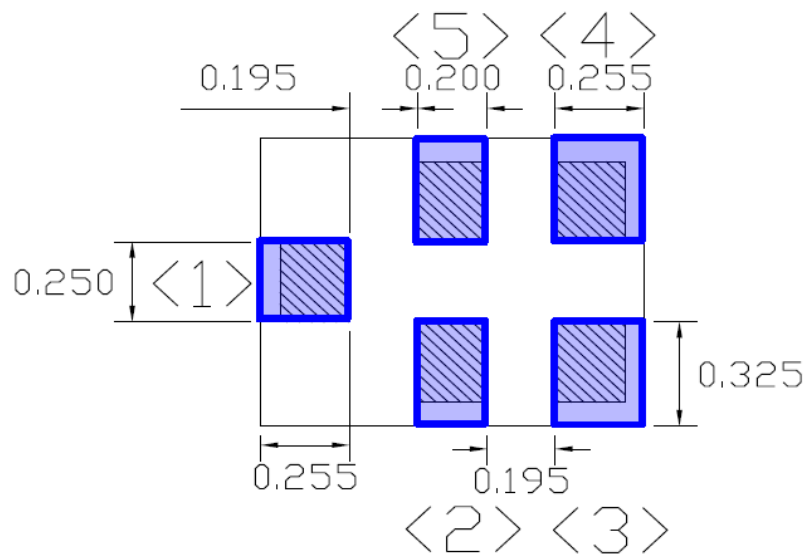
### Product date Code (EIAJ)

| Year        | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2017 / 2021 | A   | B   | C   | D   | E   | F   | G   | H   | J   | K   | L   | M   |
| 2018 / 2022 | N   | P   | Q   | R   | S   | T   | U   | V   | W   | X   | Y   | Z   |
| 2019 / 2023 | a   | b   | c   | d   | e   | f   | g   | h   | j   | k   | l   | m   |
| 2020 / 2024 | n   | p   | q   | r   | s   | t   | u   | v   | w   | x   | y   | z   |

#### D.MEASUREMENT CIRCUIT:

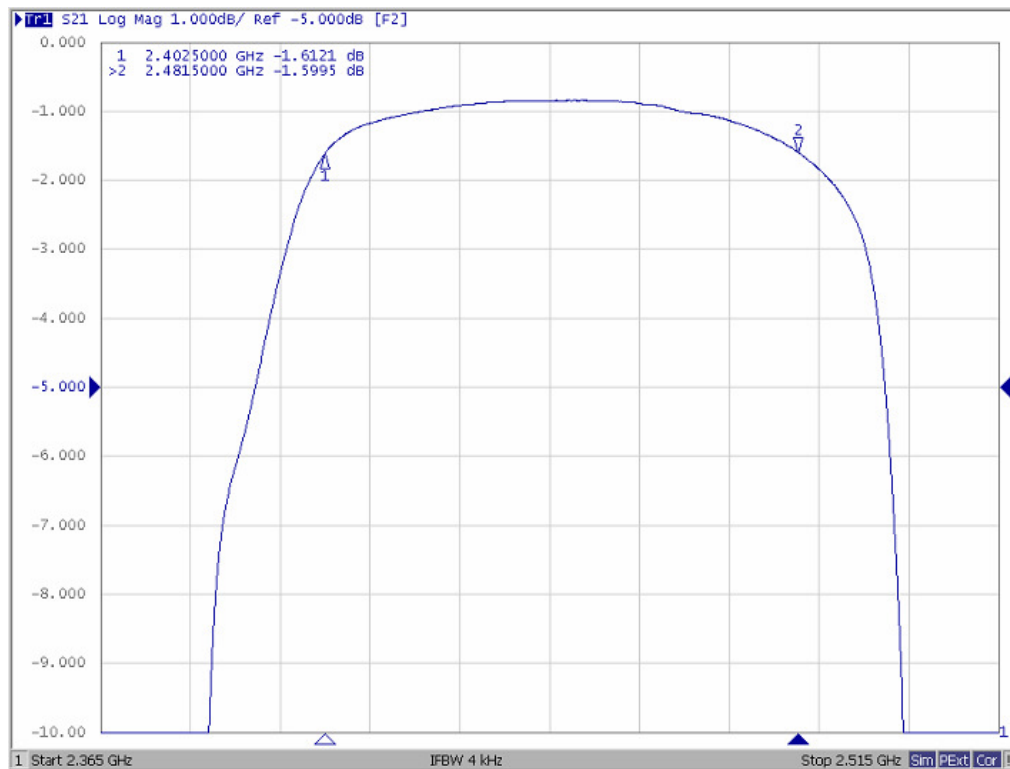
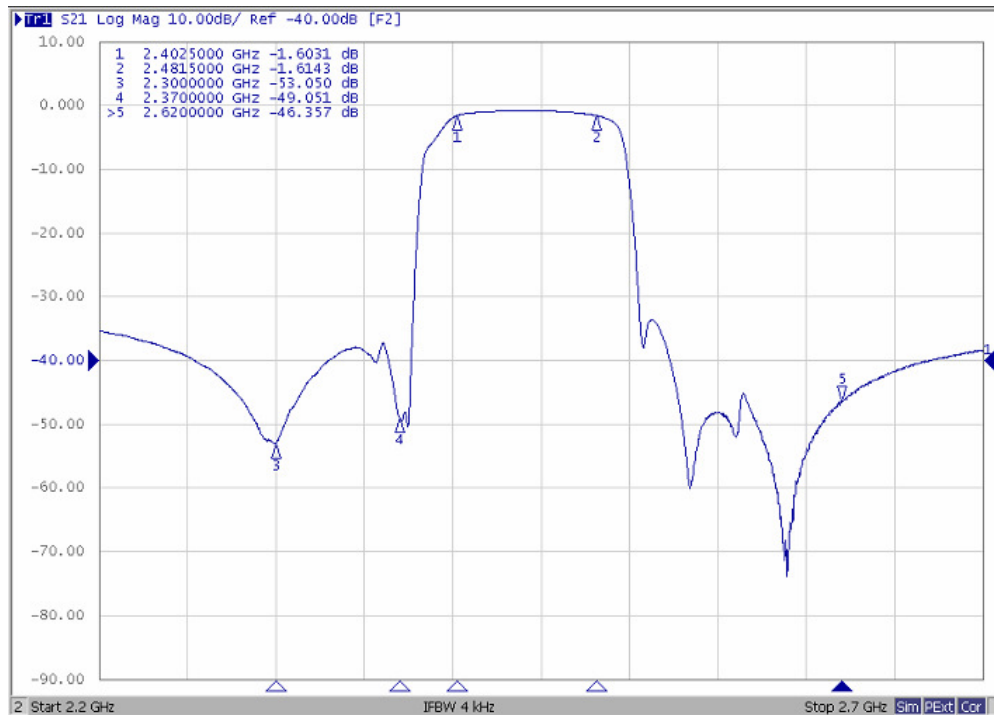


#### E.PCB Footprint :

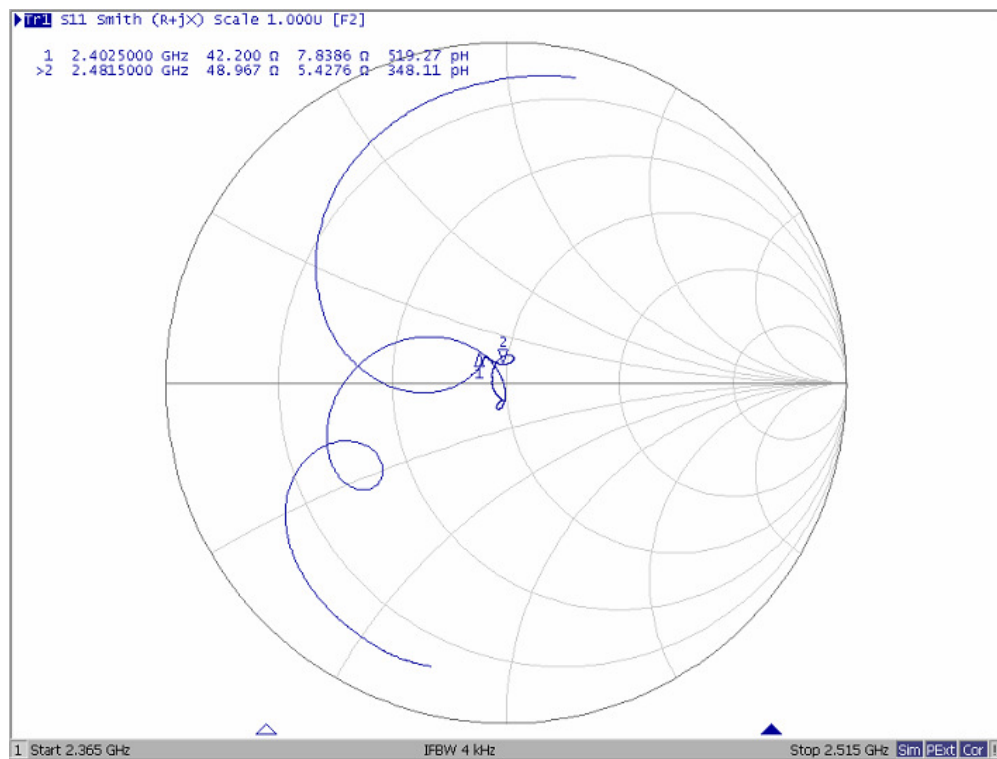
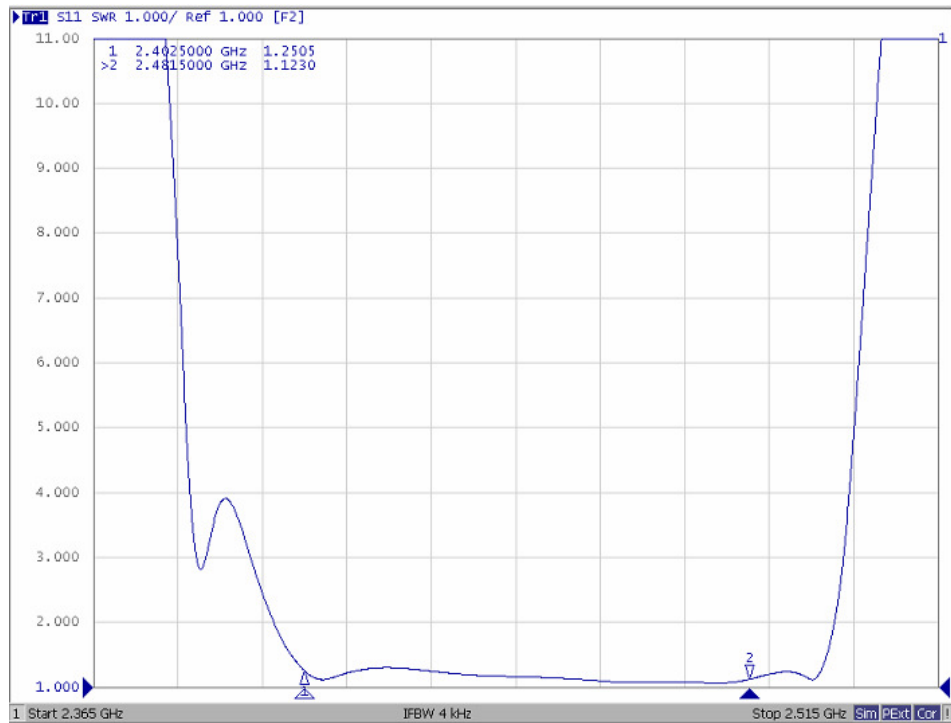


## F.Frequency Characteristics

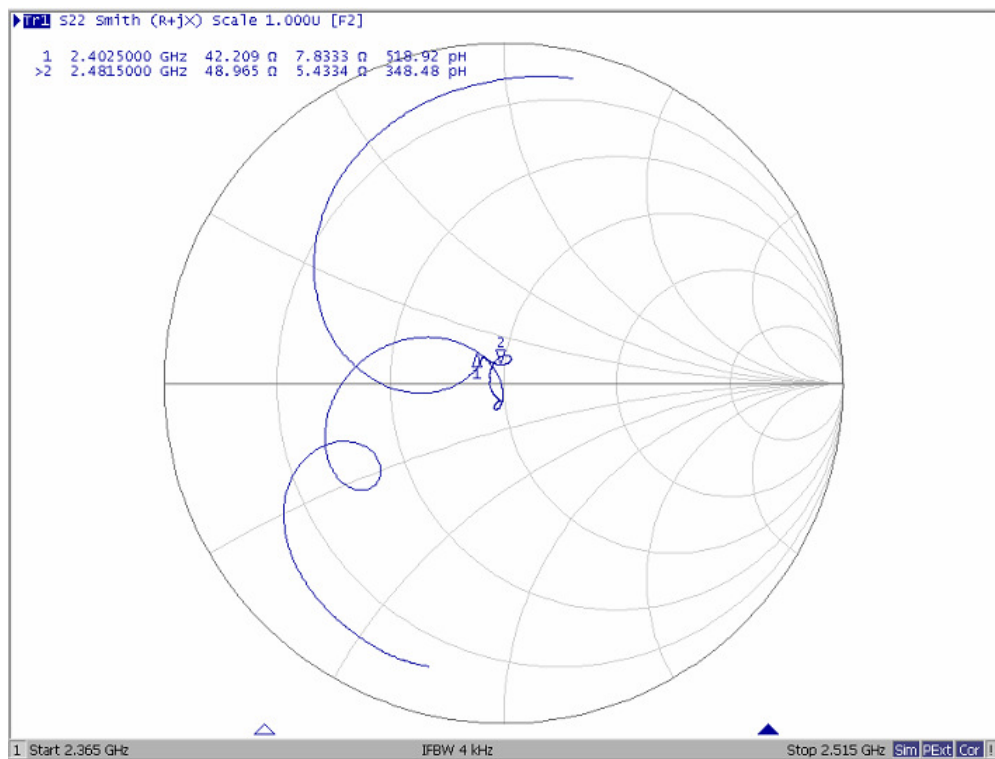
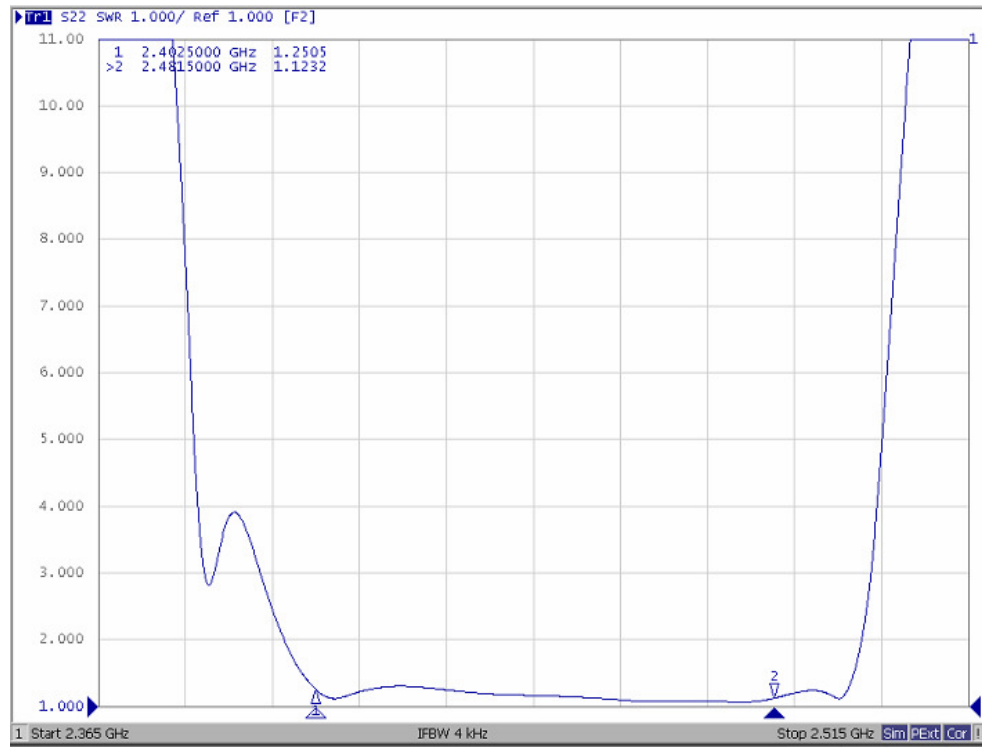
### Passband



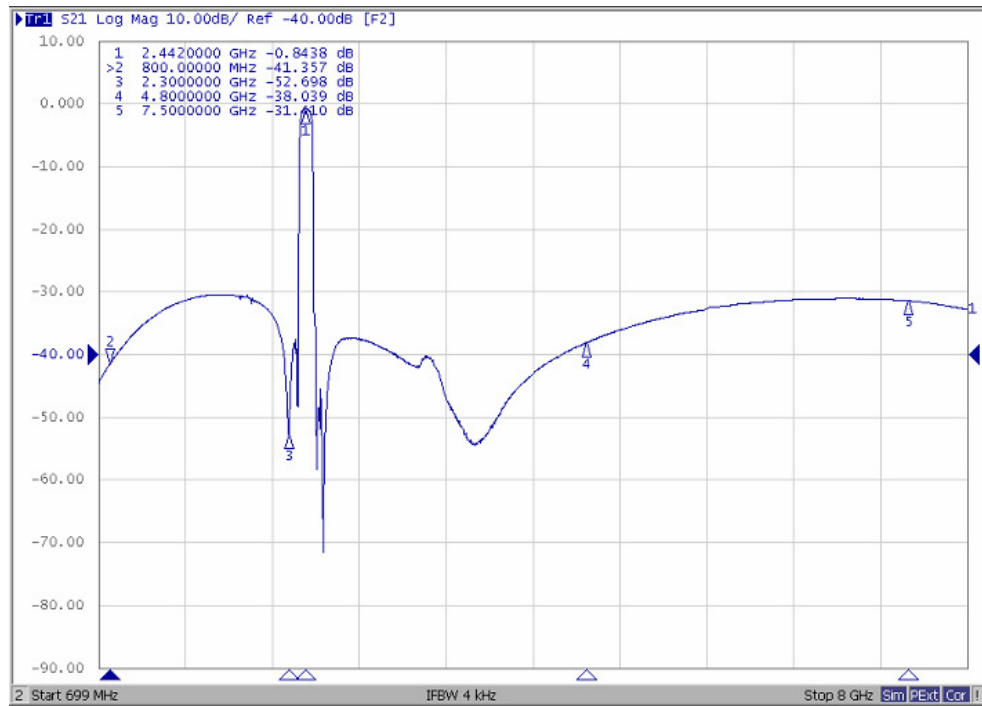
## Input Port



## Output Port



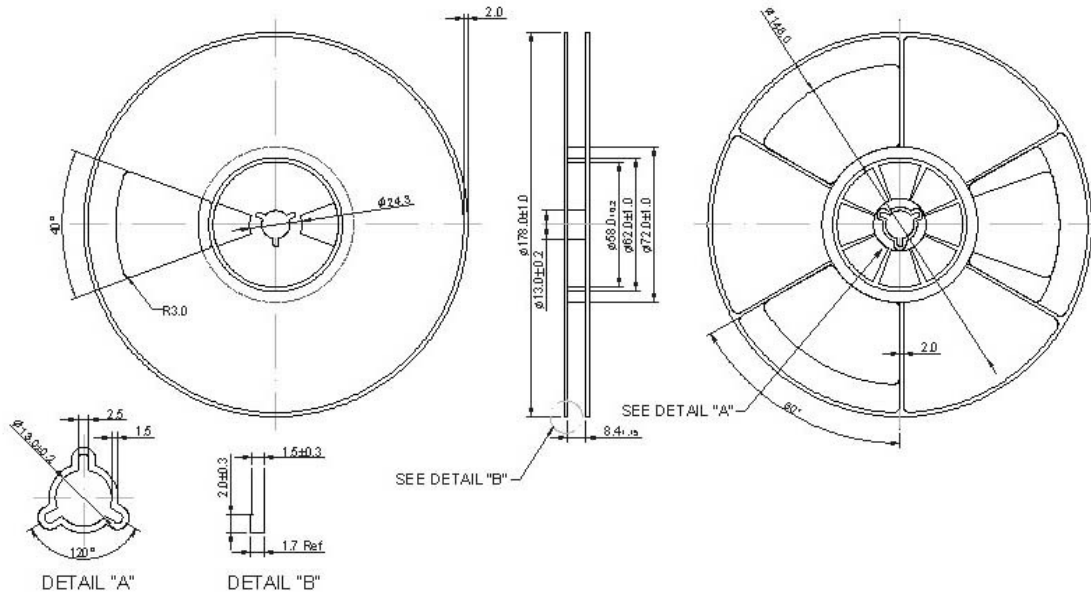
## Wide



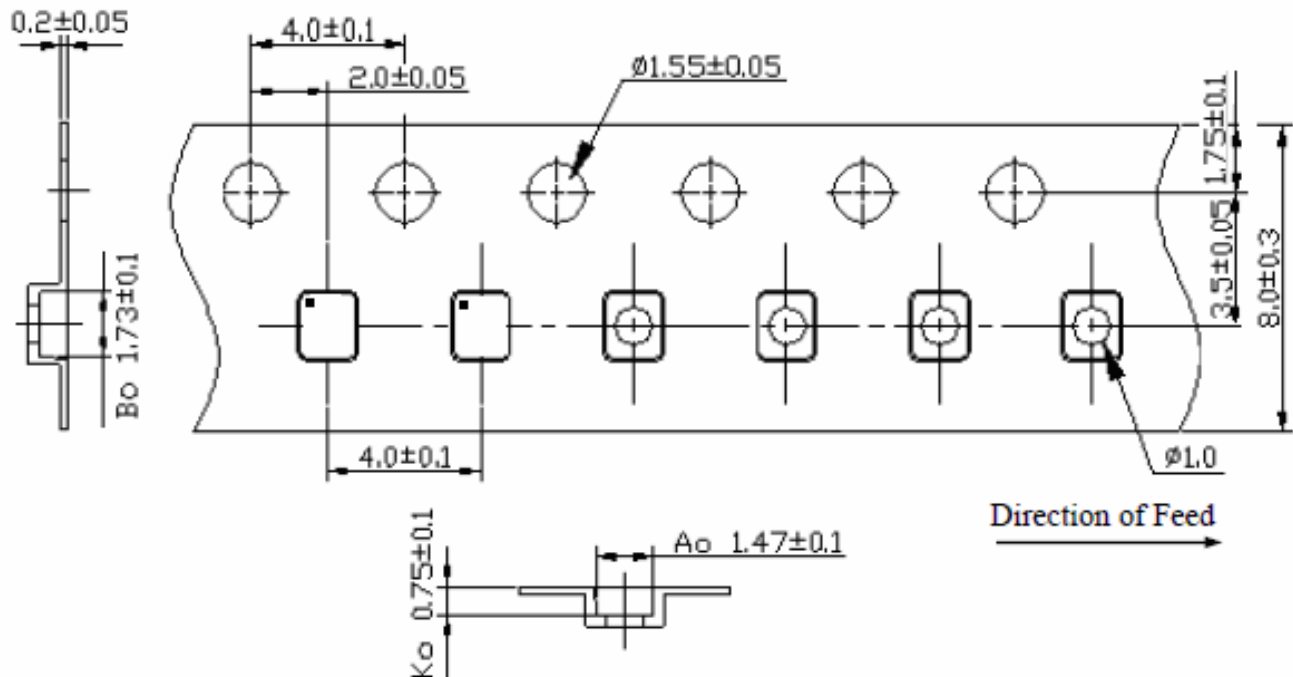
## G. PACKING:

### 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 245~260°C peak (min. 10sec).
4. Time : 2 times.

