



# 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 2140 MHz Band 1 Rx SMD 1.1x0.9 mm

TST Part No.: TA1845DN1224

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

|                             |
|-----------------------------|
| Customer signature required |
| Company: _____              |
| Division: _____             |
| Approved by : _____         |
| Date: _____                 |

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

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

Date: \_\_\_\_\_ 2020/11/23

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 change



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## SAW Filter 2140 MHz Band 1 Rx SMD 1.1x0.9 mm

MODEL NO.: TA1845DN1224

REV. NO.:1.0

### A. MAXIMUM RATING:

1. Operating temperature range: -30 °C to +105 °C
2. Storage temperature range: -40 °C to +85 °C
3. Maximum Input Power: +13 dBm
4. Maximum DC Voltage: +/-0 V
5. Moisture Sensitivity Level: Level 3(MSL3)

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

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

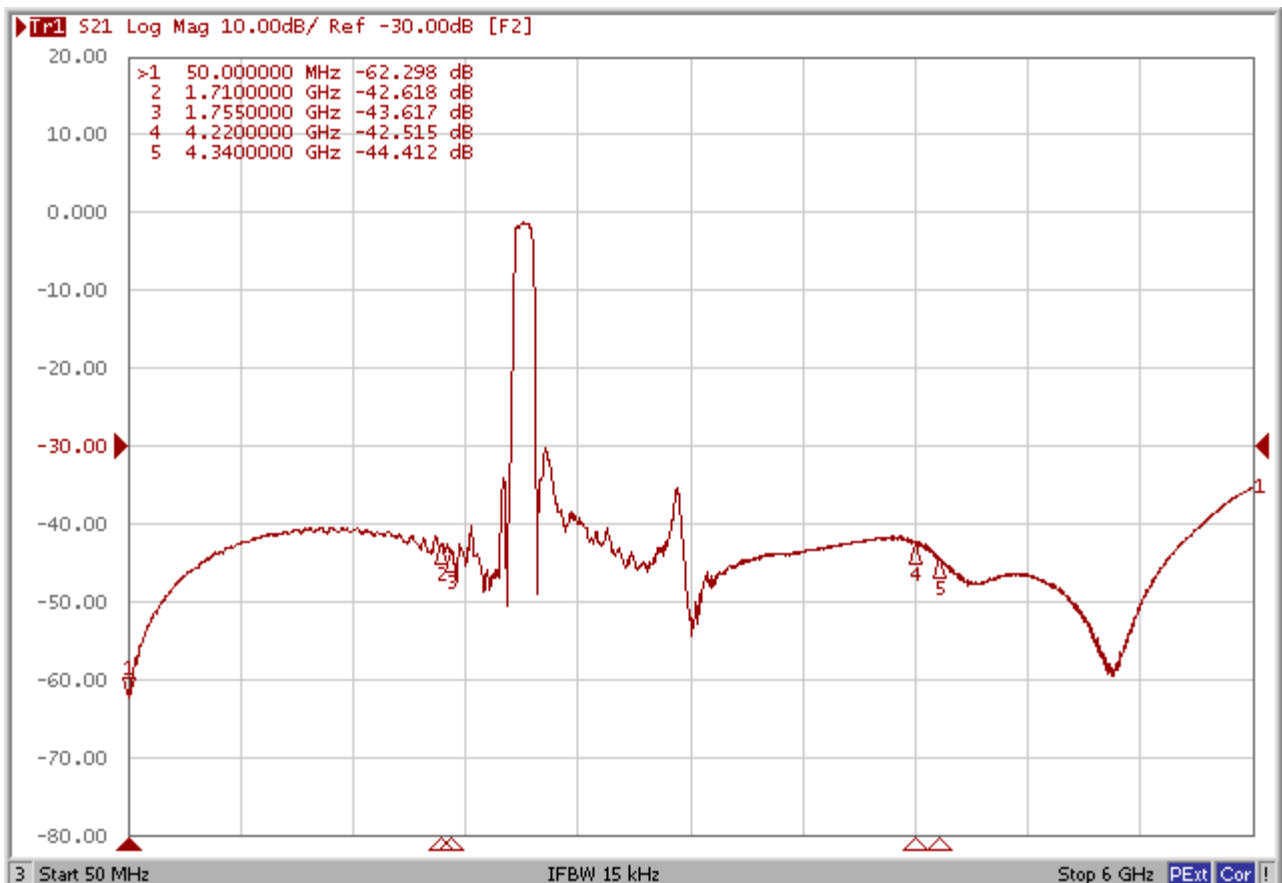
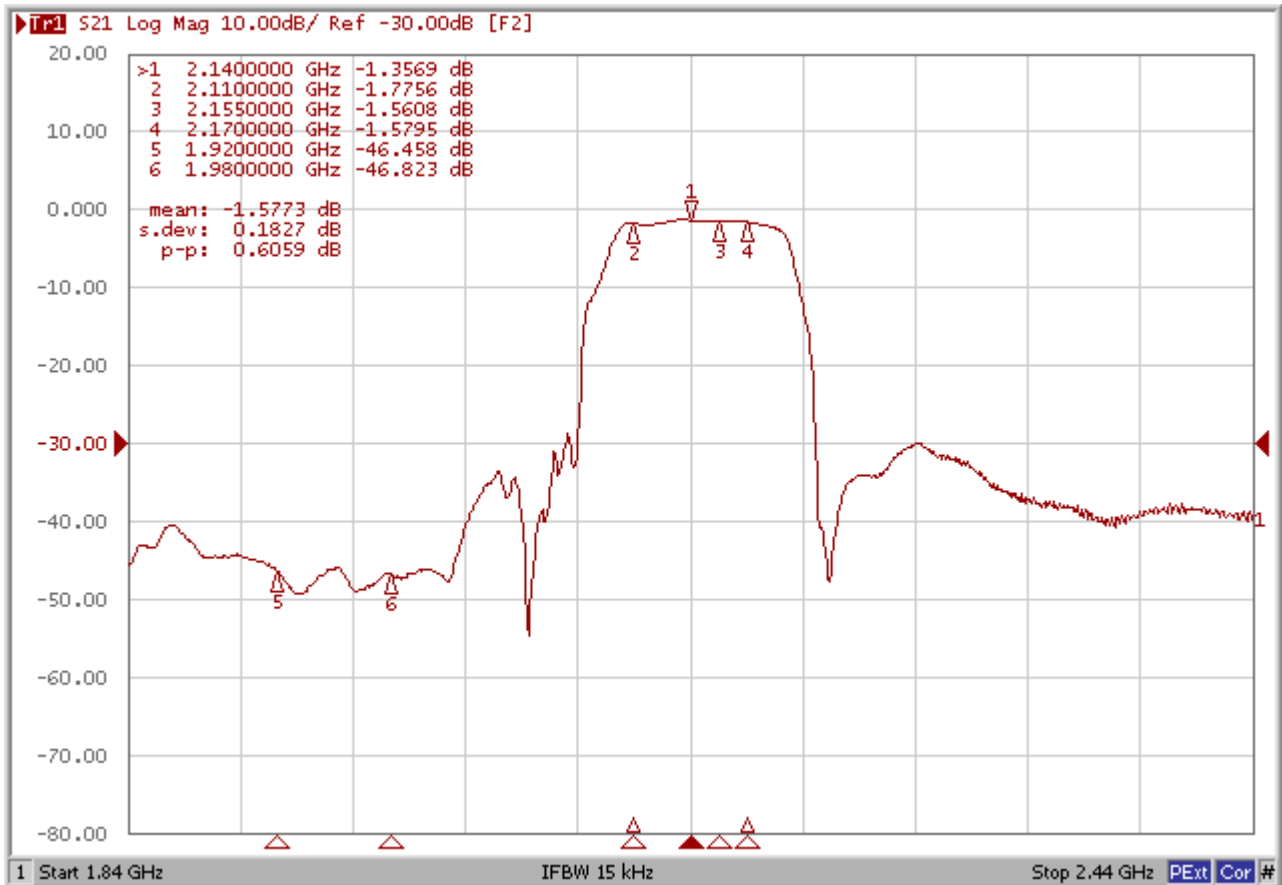
Terminating load impedance:  $Z_L = 50 \Omega$  (Single-ended)

| Parameters Description |               | Unit  | Min | Typical | -30 to +85 °C | -30 to +105 °C |
|------------------------|---------------|-------|-----|---------|---------------|----------------|
| Center Frequency       |               | MHz   | -   | 2140    | -             |                |
| Insertion Loss         | 2110~2170 MHz | dB    | -   | 1.9     | 2.5           | 2.7            |
|                        | 2110~2155 MHz | dB    | -   | 1.9     | 2.5           | 2.7            |
| Amplitude Ripple       | 2110~2170 MHz | dBp-p | -   | 0.6     | 1.5           | 1.7            |
|                        | 2110~2155 MHz | dBp-p | -   | 0.6     | 1.5           | 1.7            |
| SWR Input              | 2110~2170 MHz |       |     | 1.8     | 2.3           | 2.5            |
| SWR Output             | 2110~2155 MHz |       |     | 1.8     | 2.3           | 2.5            |
| <b>50-1710 MHz</b>     |               | dB    | 35  | 40      | -             |                |
| <b>1710-1755 MHz</b>   |               | dB    | 40  | 42      | -             |                |
| <b>1920-1980 MHz</b>   |               | dB    | 42  | 45      | -             |                |
| <b>4220-4340 MHz</b>   |               | dB    | 30  | 42      | -             |                |

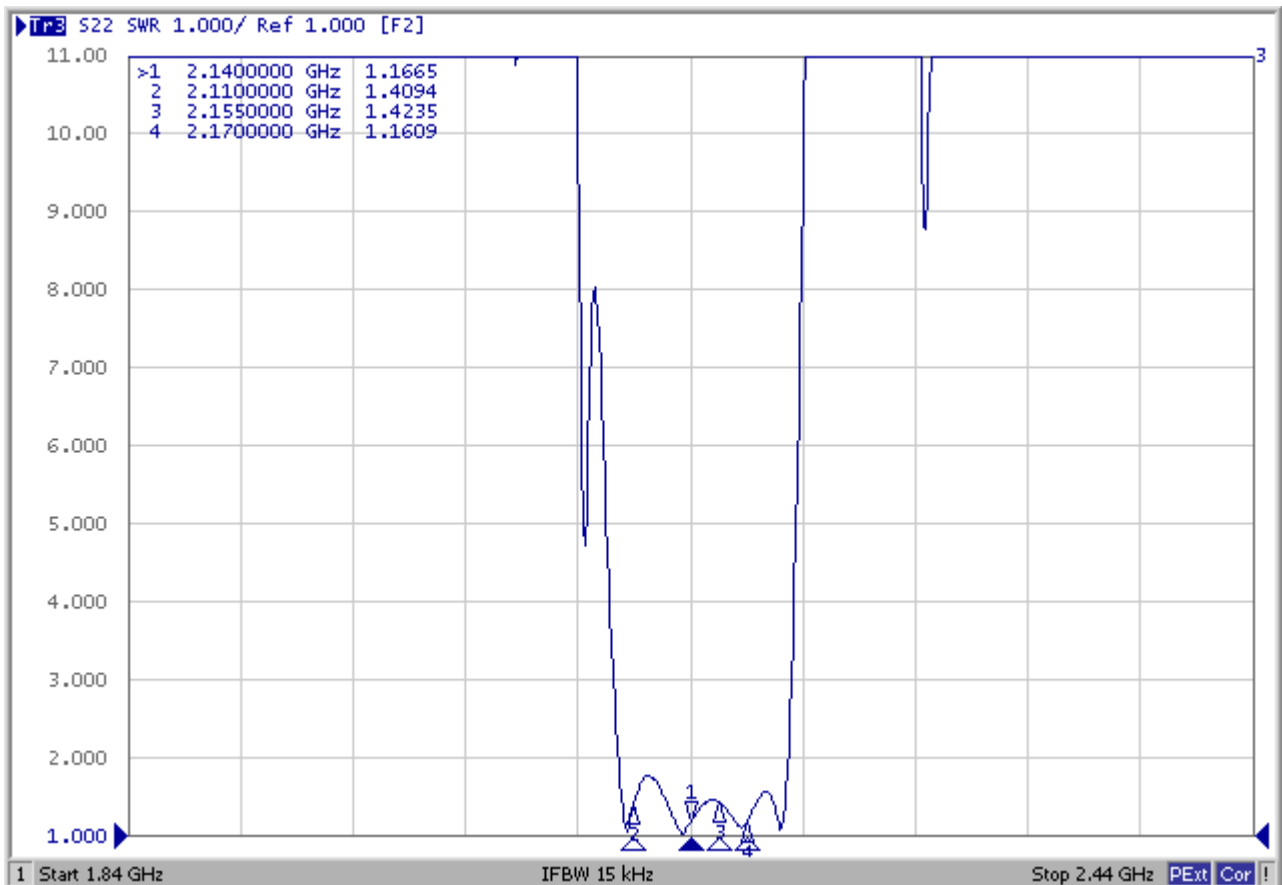
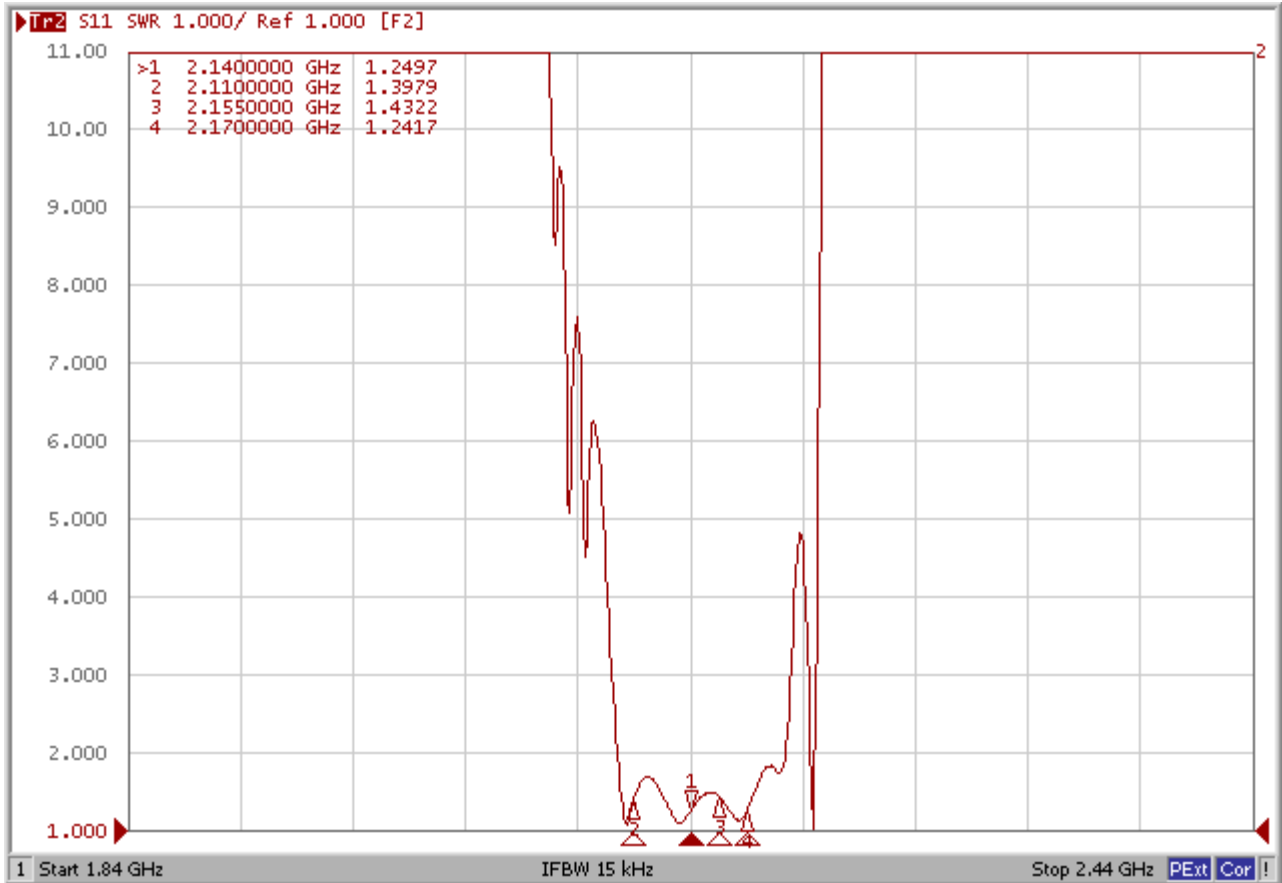
Notes : (1) No Matching Network ..

### C. FREQUENCY CHARACTERISTICS:

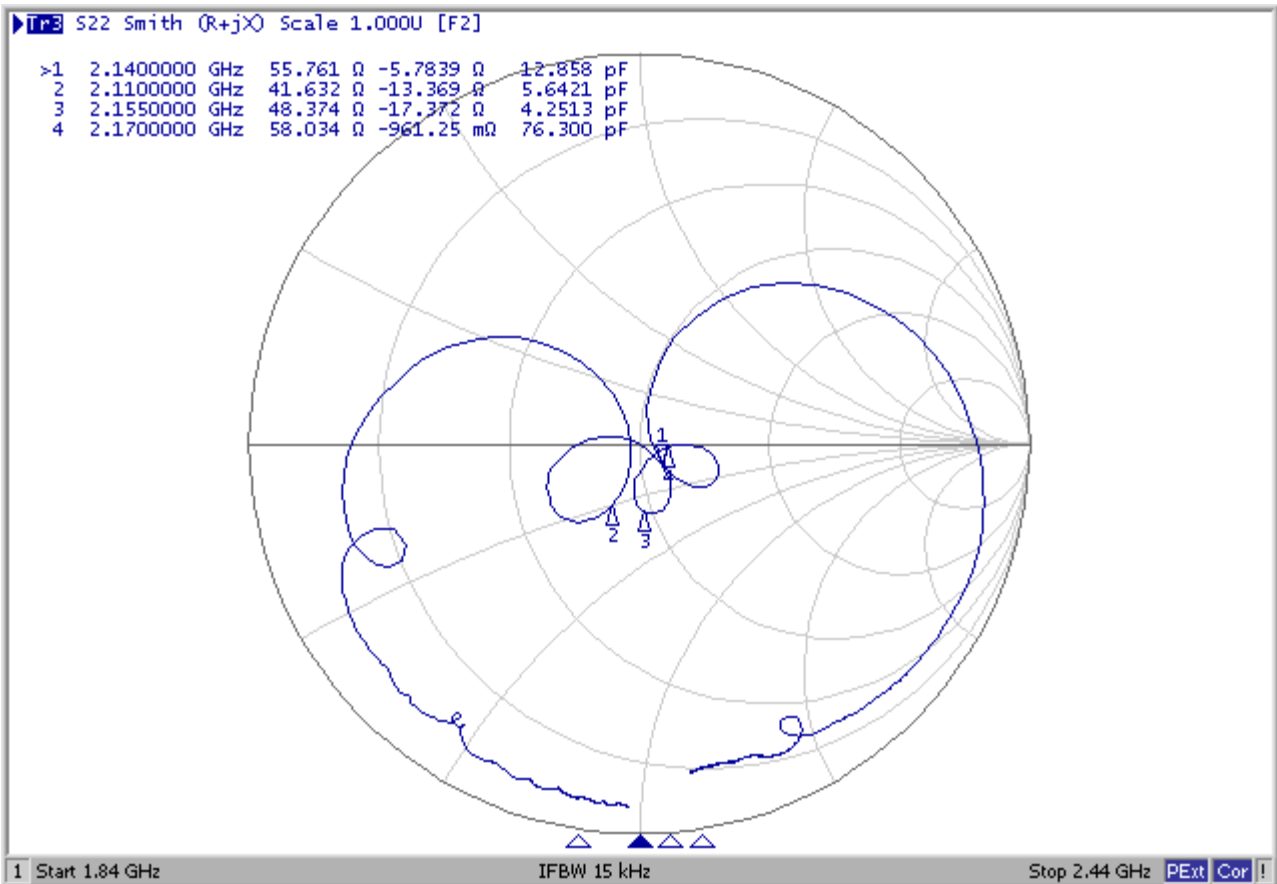
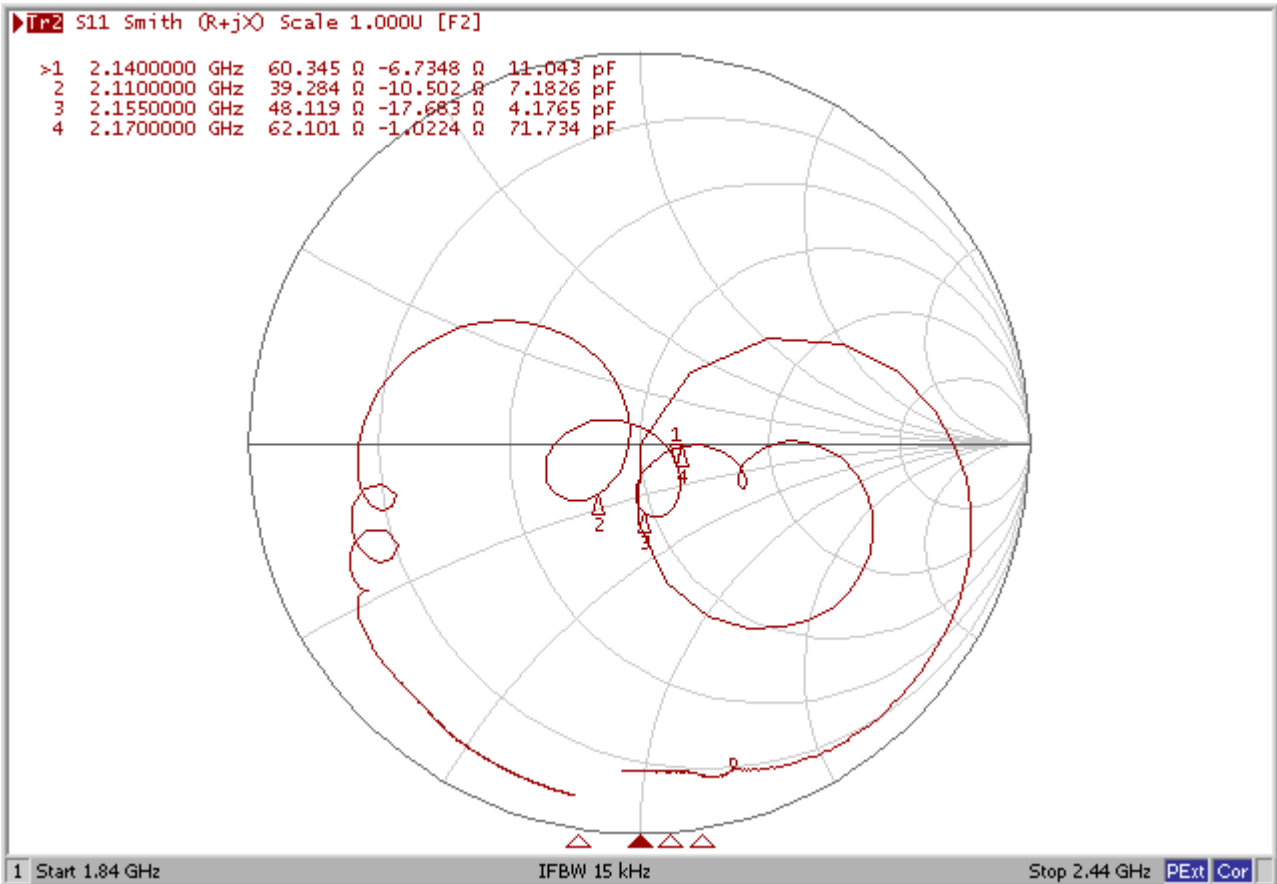
#### Frequency Response



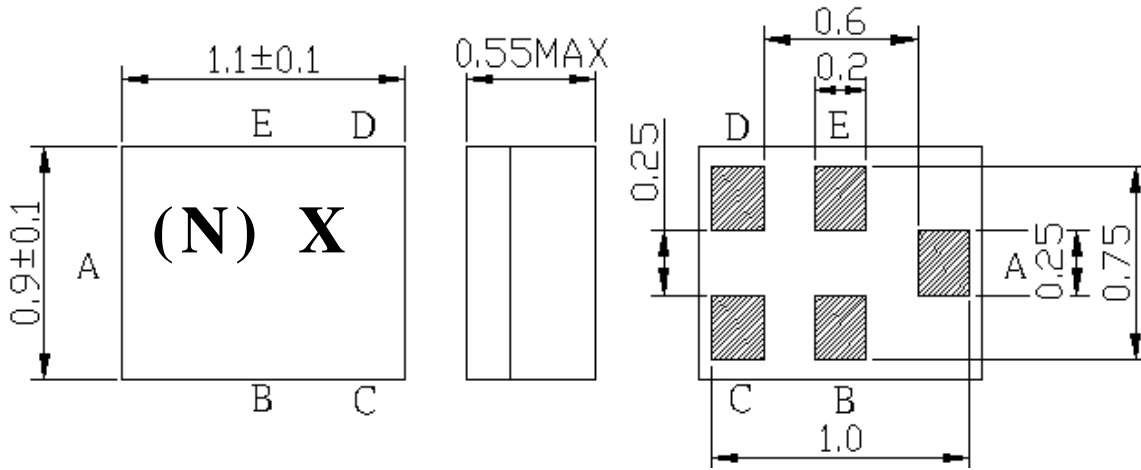
# VSWR



## Smith Chart



**D.OUTLINE DRAWING:**



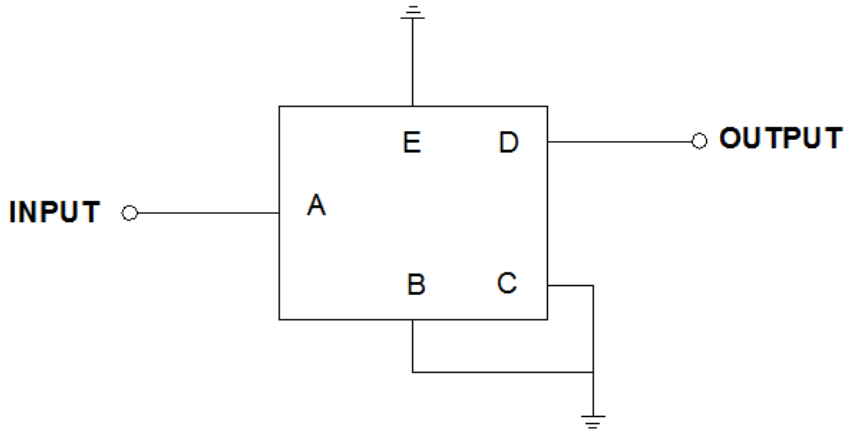
| Marking Descriptions |                       |
|----------------------|-----------------------|
| (N)                  | Series Number         |
| X                    | Date Code(Year+Month) |

| Pin Description |        |
|-----------------|--------|
| B, C, E         | Ground |
| A               | Input  |
| D               | Output |

Date Code ( year+month)

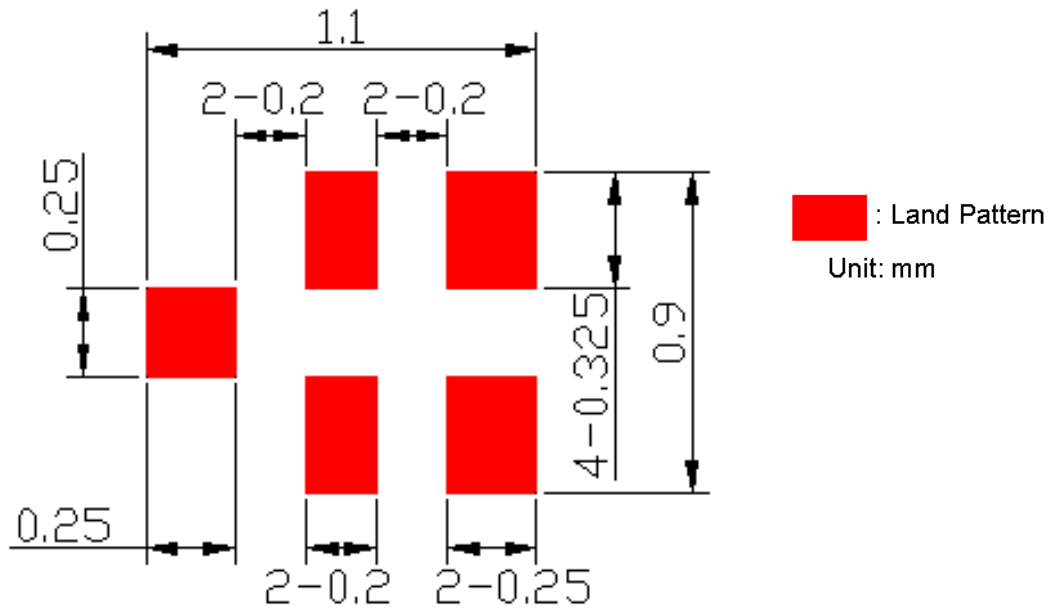
| Year | Jan.     | Feb.     | Mar.     | Apr.     | May.     | Jun.     | Jul.     | Aug.     | Sep.     | Oct.     | Nov.     | Dec.     |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2013 | A        | B        | C        | D        | E        | F        | G        | H        | J        | K        | L        | M        |
| 2014 | N        | P        | Q        | R        | S        | T        | U        | V        | W        | X        | Y        | Z        |
| 2015 | a        | b        | c        | d        | e        | f        | g        | h        | j        | k        | l        | m        |
| 2016 | n        | p        | q        | r        | s        | t        | u        | v        | w        | x        | y        | z        |
| 2017 | <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> |
| 2018 | <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> |
| 2019 | <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> |
| 2020 | <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:



Source & Load Impedance: 50  $\Omega$

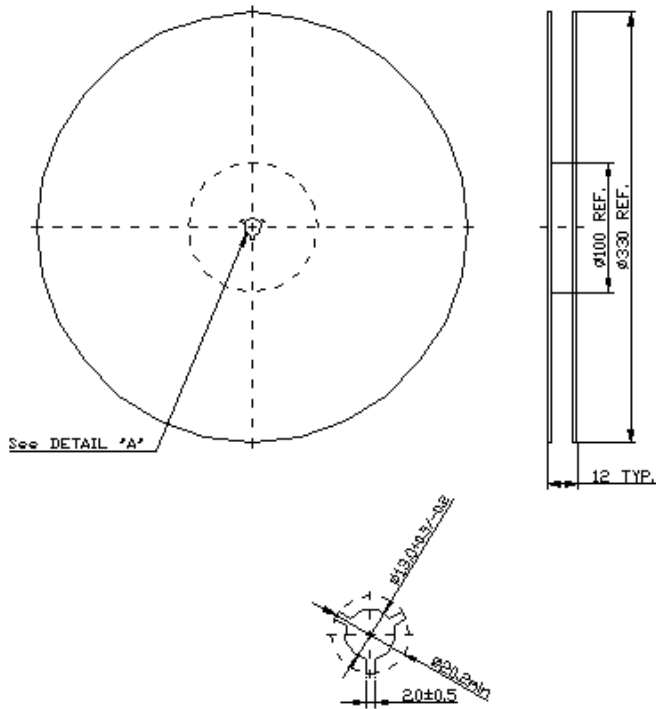
### F. PCB Footprint :



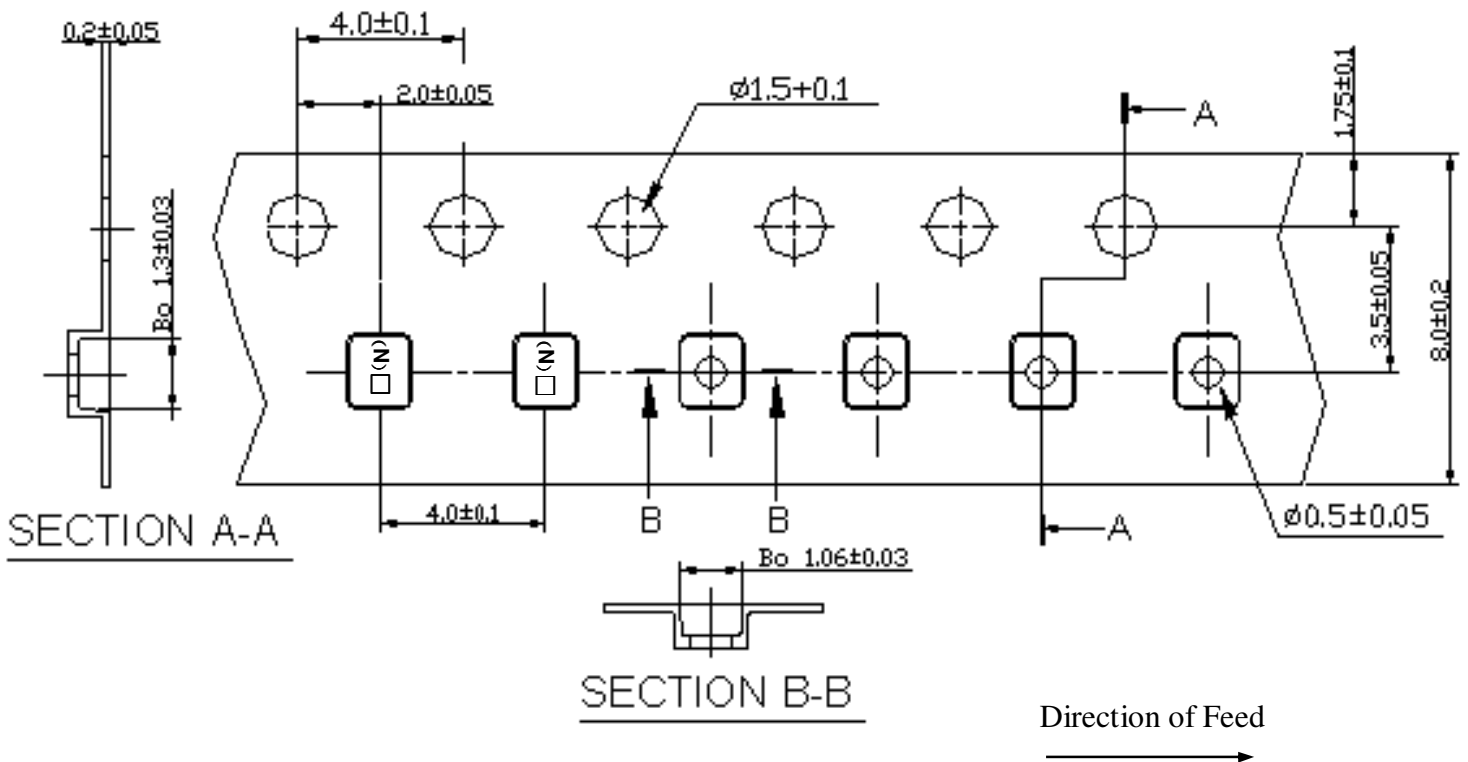
**G. PACKING:**

**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.

