



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
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Product Specifications Approval Sheet

Product Description: SAW Filter 2441.75MHz (BW 83.5MHz) SMD 1.1X0.9mm

TST Parts No.:TA2104A

Customer Parts No.: _____

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

Checked by: _____ Michael Yang *Michael*

Approval by: _____ Andy Yu *Andy Yu*

Date: _____ 2021/07/02

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.



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SAW Filter 2441.75MHz (BW 83.5MHz) SMD 1.1x0.9x0.5mm

MODEL NO.:TA2104A

REV. NO.:3.0

A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. DC Voltage : 3V
3. Operating Temperature: -30°C to +85°C
4. Storage Temperature: -40°C to +105°C
5. Moisture Sensitivity Level: Level 3(MSL3)
6. ESD 50V(MM) 100V(HBM)

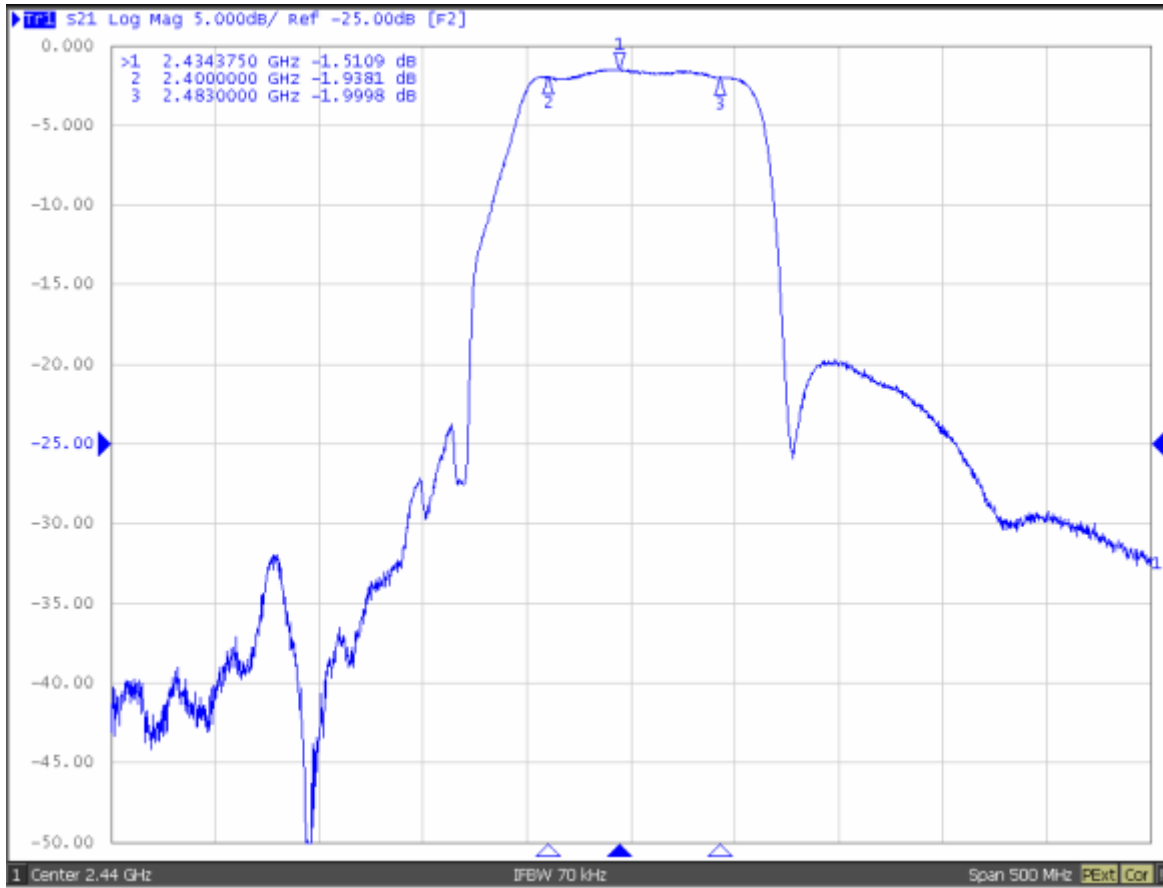


Electrostatic Sensitive Device

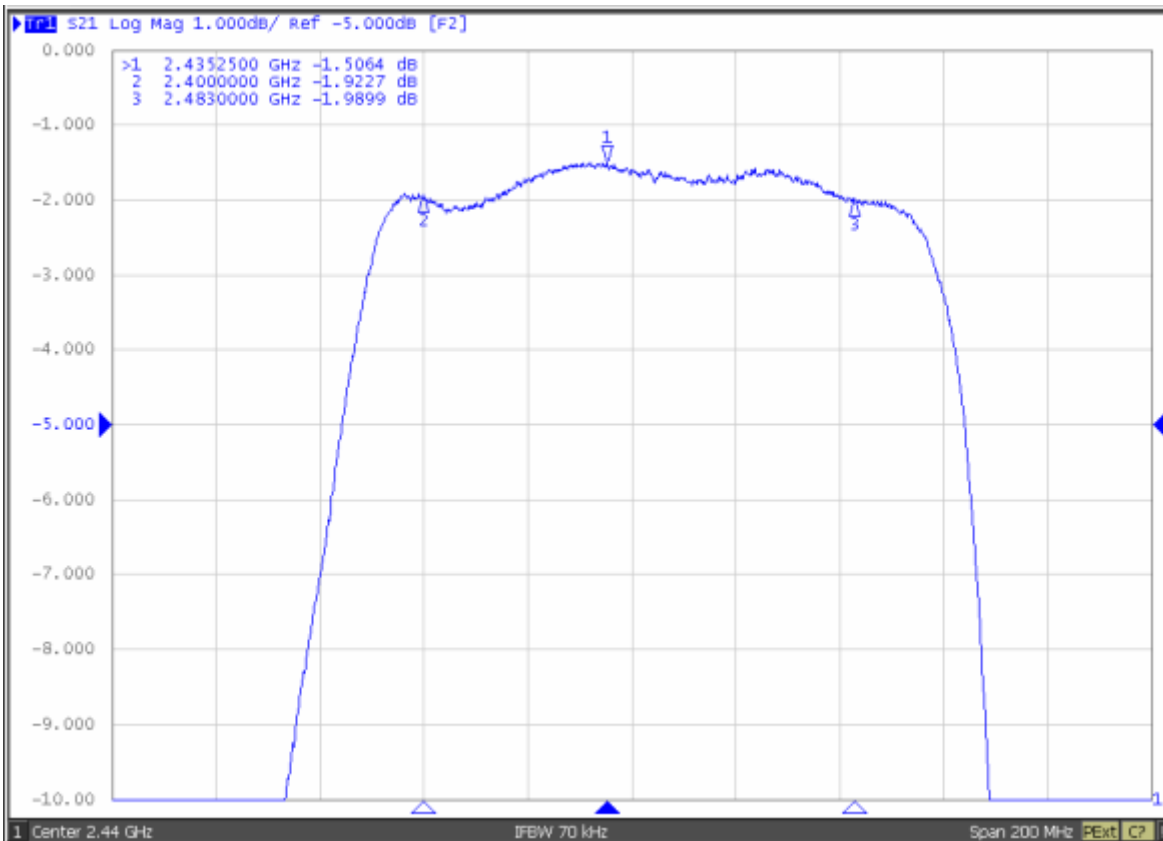
B. ELECTRICAL CHARACTERISTICS:

| Item | Unit | Min | Type. | Max |
|--|--------|-------------|---------|-----|
| Center Frequency Fc | MHz | - | 2441.75 | - |
| Insertion Loss IL 2400 – 2483.5 MHz | dB | | 2.2 | 2.6 |
| Amplitude ripple 2400 – 2483.5 MHz | | | 0.7 | 1.5 |
| VSWR 2400 – 2483.5 MHz | | | 2.0 | 2.4 |
| Attenuation | | | | |
| 0.1 – 960 MHz | dB | 30 | 35 | |
| 1570 – 1990 MHz | dB | 32 | 35 | |
| 2110 – 2170 MHz | dB | 40 | 45 | |
| 2170 – 2300 MHz | dB | 30 | 35 | |
| 2300 – 2320 MHz | dB | 25 | 33 | |
| 2320 – 2345 MHz | dB | 18 | 25 | |
| 2345 – 2365 MHz | dB | 10 | 15 | |
| 2550 – 2800 MHz | dB | 15 | 20 | |
| 2800 – 4000 MHz | dB | 30 | 33 | |
| 4000 – 5000 MHz | dB | 30 | 33 | |
| Temperature coefficient | ppm/°C | -36 | | |
| Package size | mm | SMD 1.1x0.9 | | |

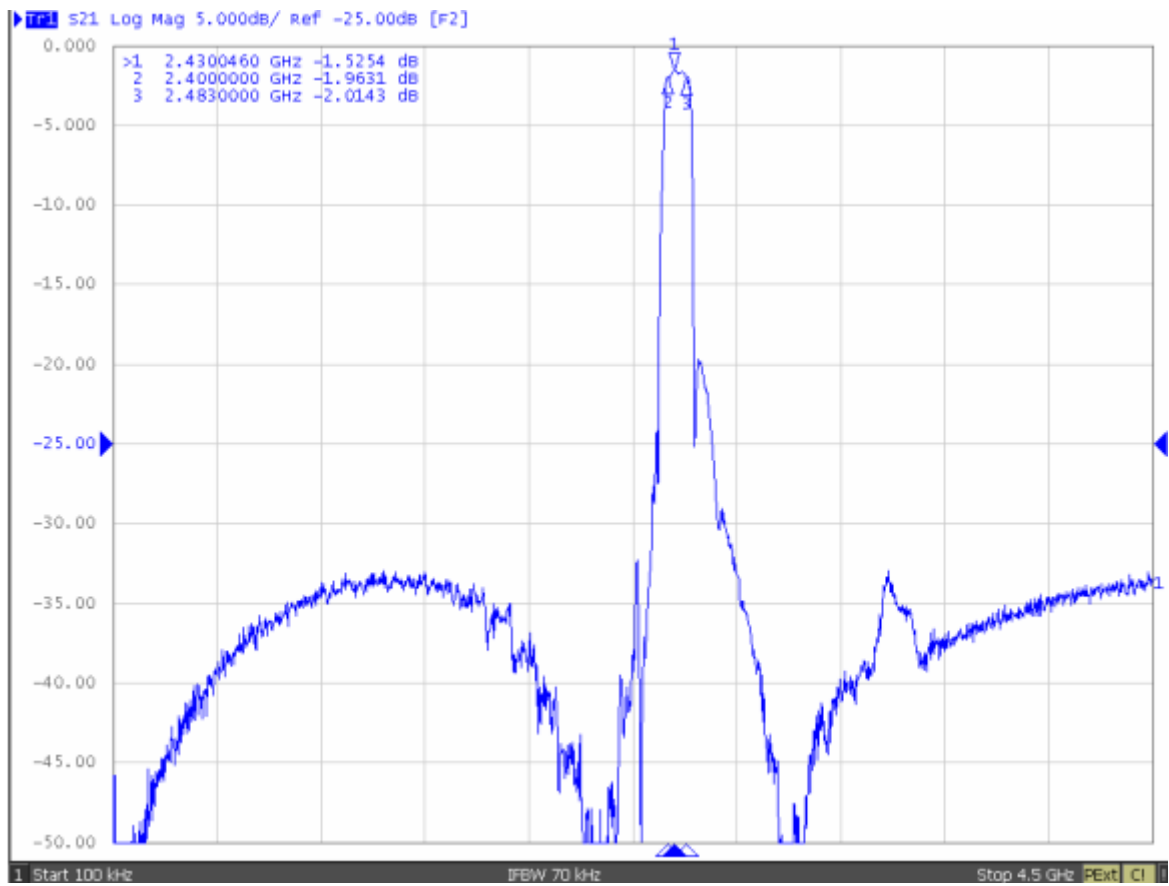
C.FREQUENCY CHARACTERISTICS:
S21 response: (span 500MHz)



S21 response: (span 200MHz)

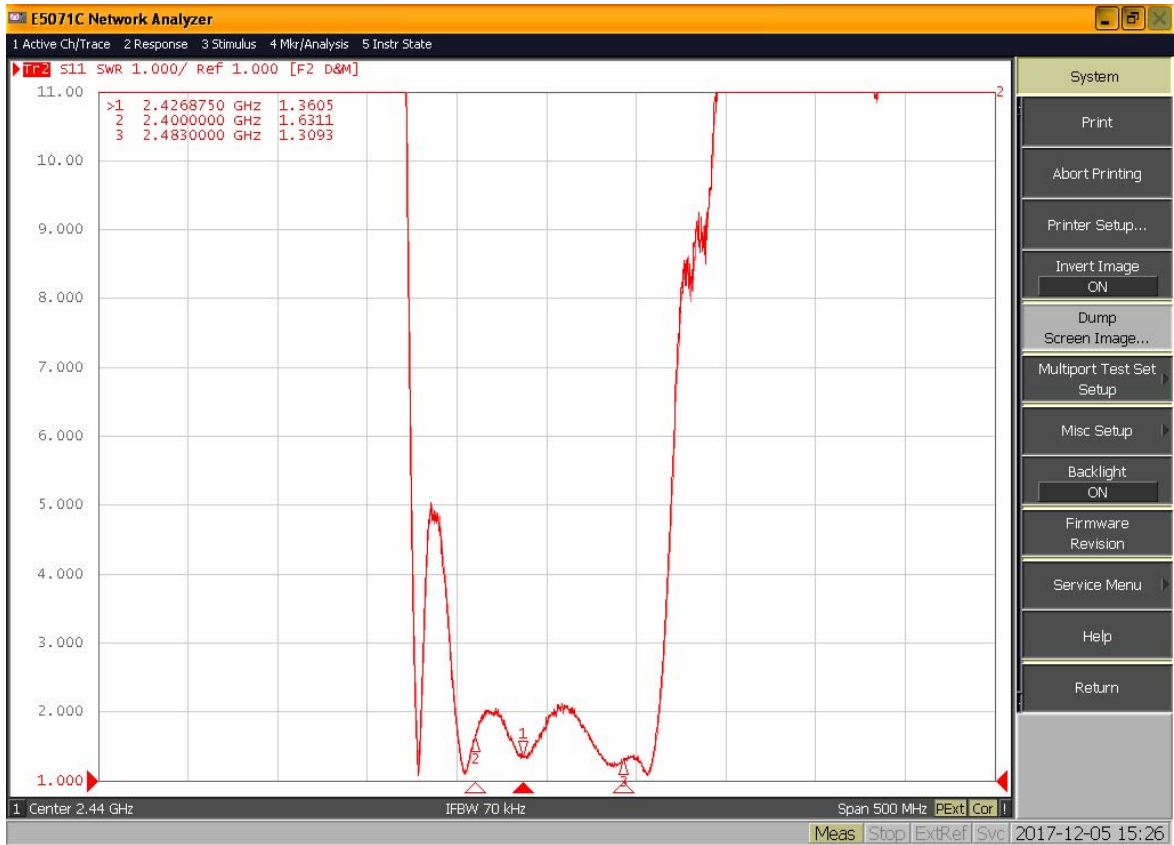


S21 response: (span 4.5GHz)

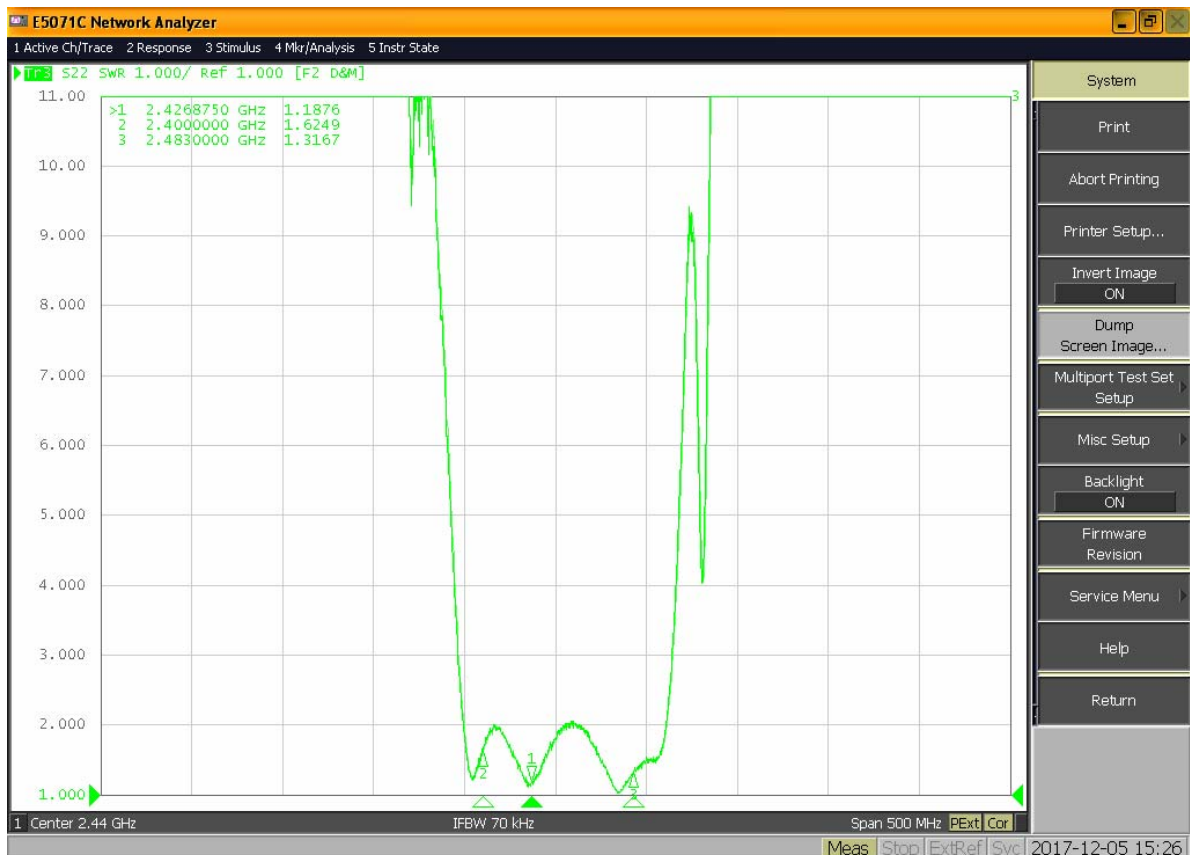


Reflection Functions :

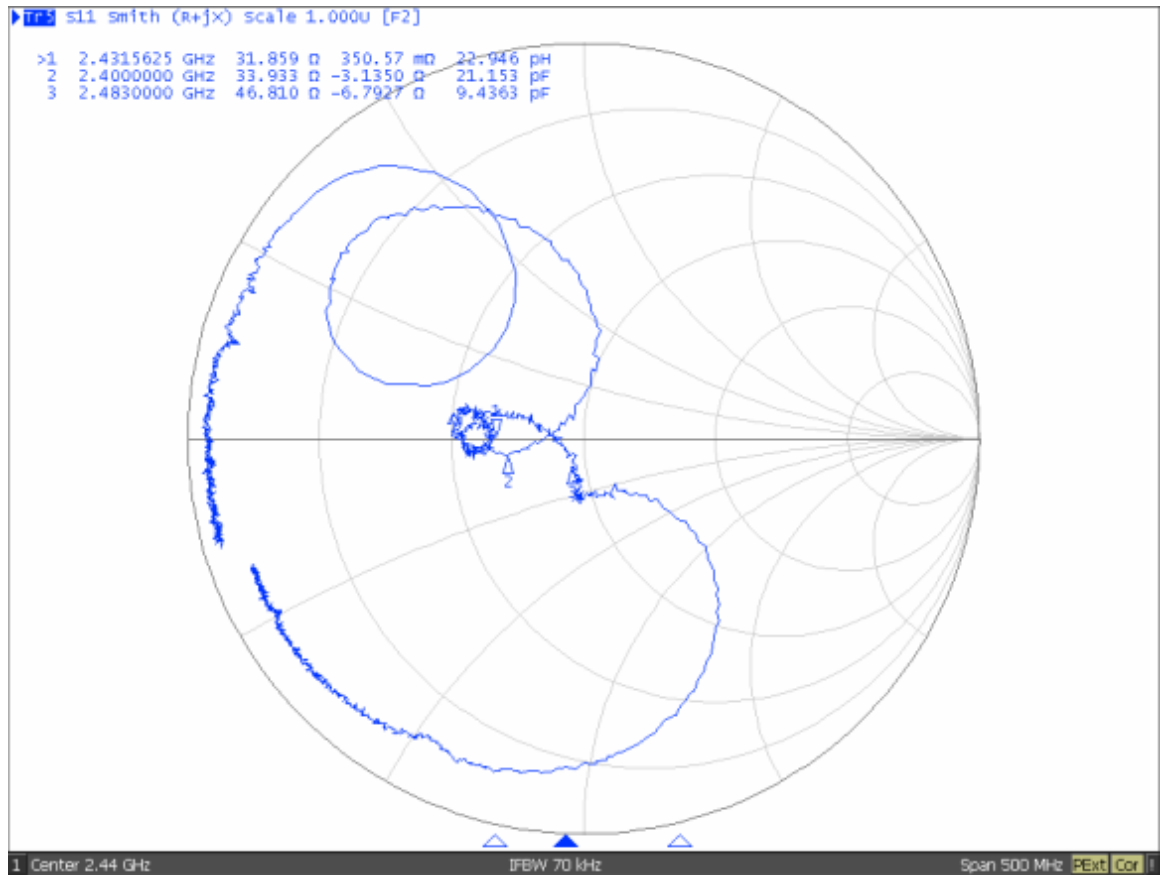
VSWR S11



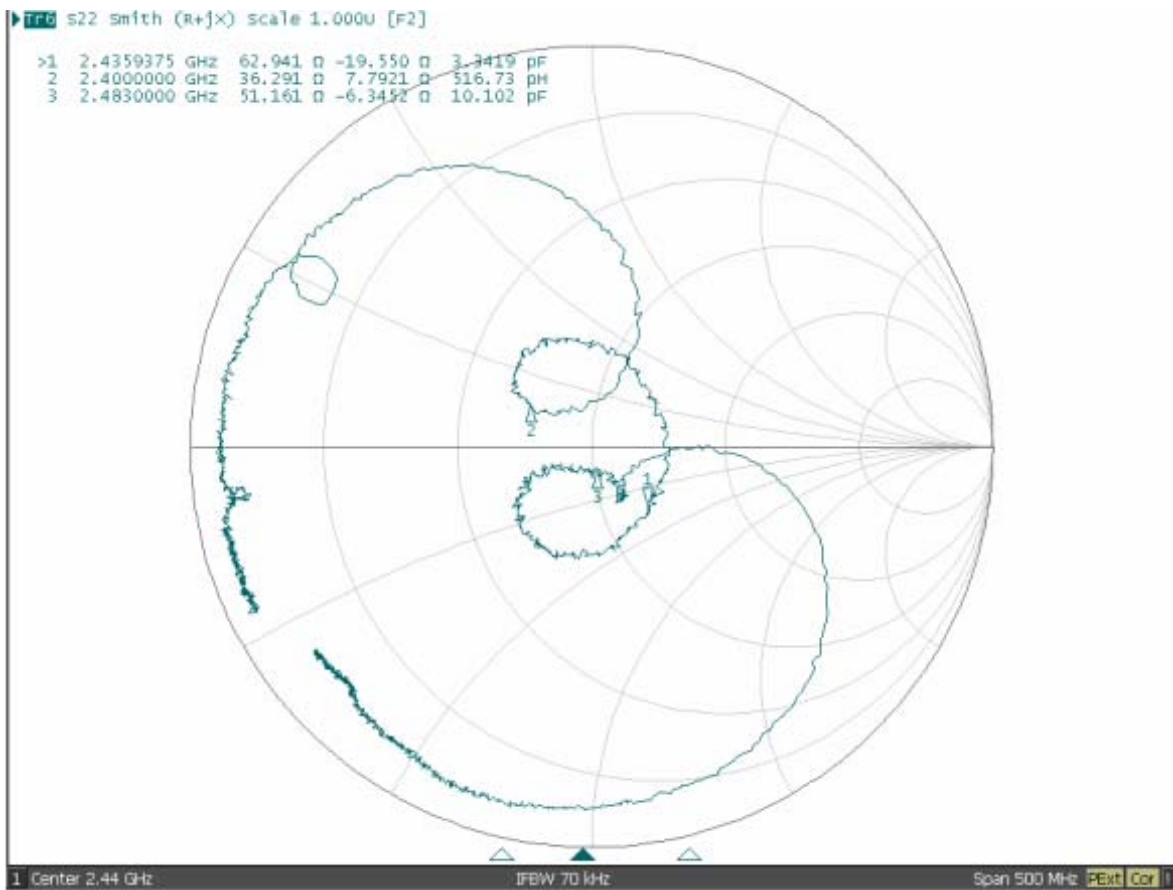
VSWR S22



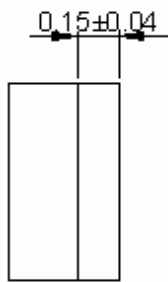
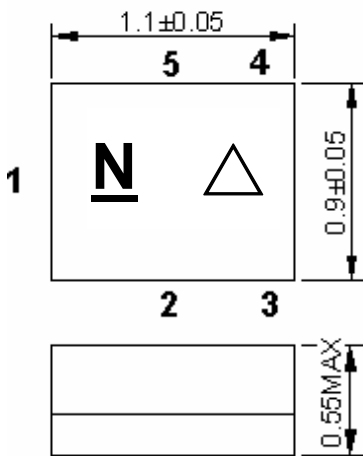
Smith Chart S11



Smith Chart S22



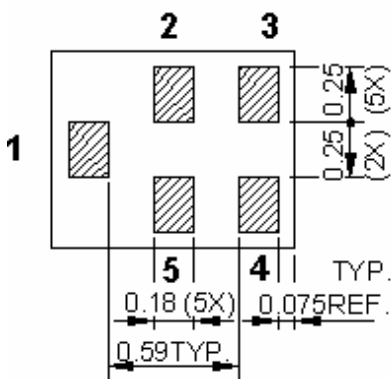
D. OUTLINE DRAWING:



All tolerances are +/-0.05 mm unless otherwise specified
Coplanarity : 0.1 mm max.

1 to 5 : Pin No.

Unit : mm



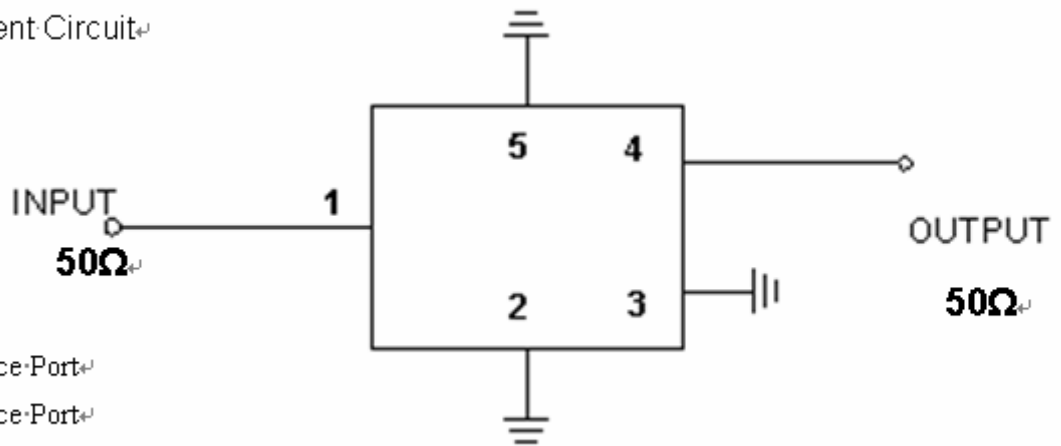
| Pin No. | Symbol | Function |
|---------|--------|----------|
| 1 | IN | Input |
| 2 | GND | Ground |
| 3 | GND | Ground |
| 4 | OUT | Output |
| 5 | GND | Ground |

Δ : Year/Month Code (Follow the table)

| YEAR/Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2013 / 2021 | A | B | C | D | E | F | G | H | J | K | L | M |
| 2014 / 2022 | N | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2015 / 2023 | a | b | c | d | e | f | g | h | j | k | l | m |
| 2016 / 2024 | n | p | q | r | s | t | u | v | w | x | y | z |
| 2017 / 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> |
| 2018 / 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> |
| 2019 / 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> |
| 2020 / 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:

Measurement Circuit

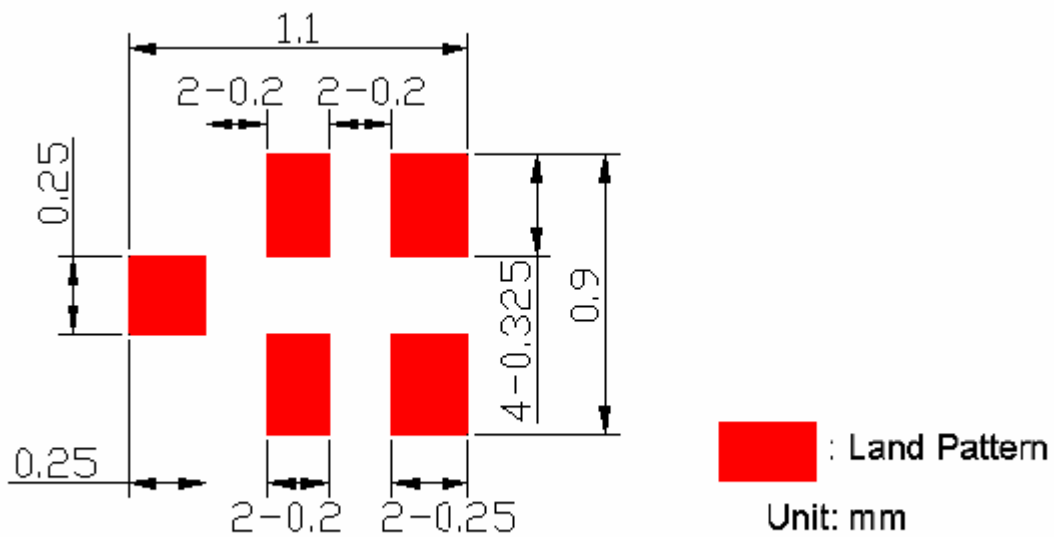


(1): Unbalance Port

(4): Unbalance Port

Others: Ground

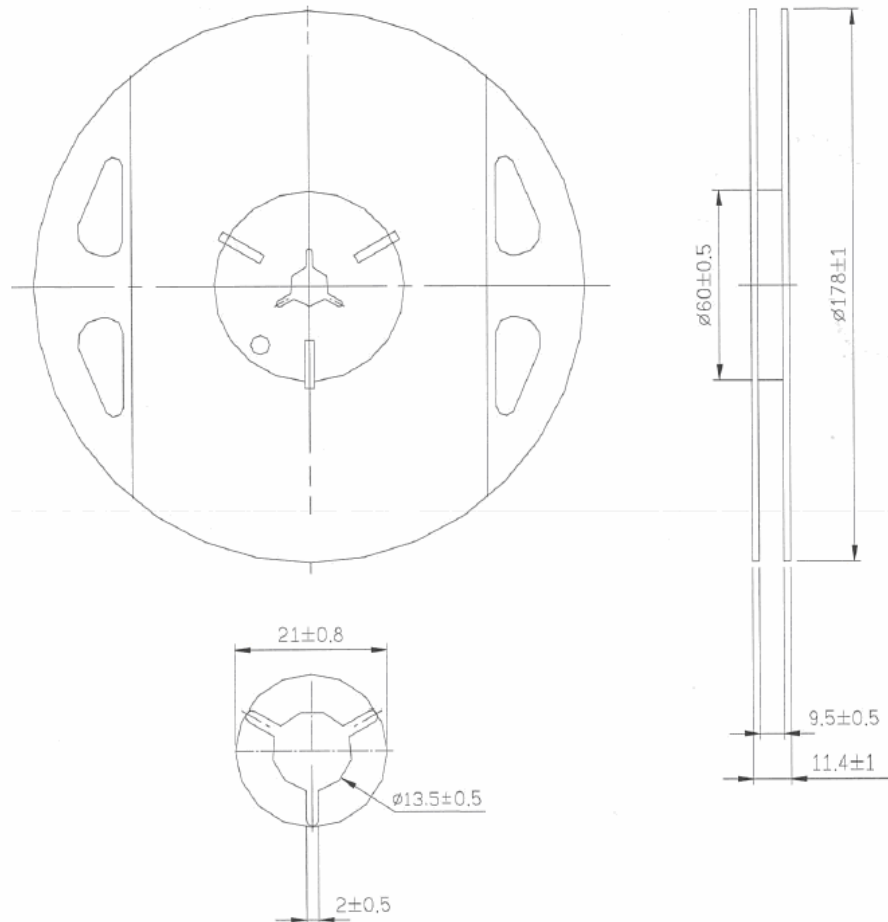
F. PCB Footprint :



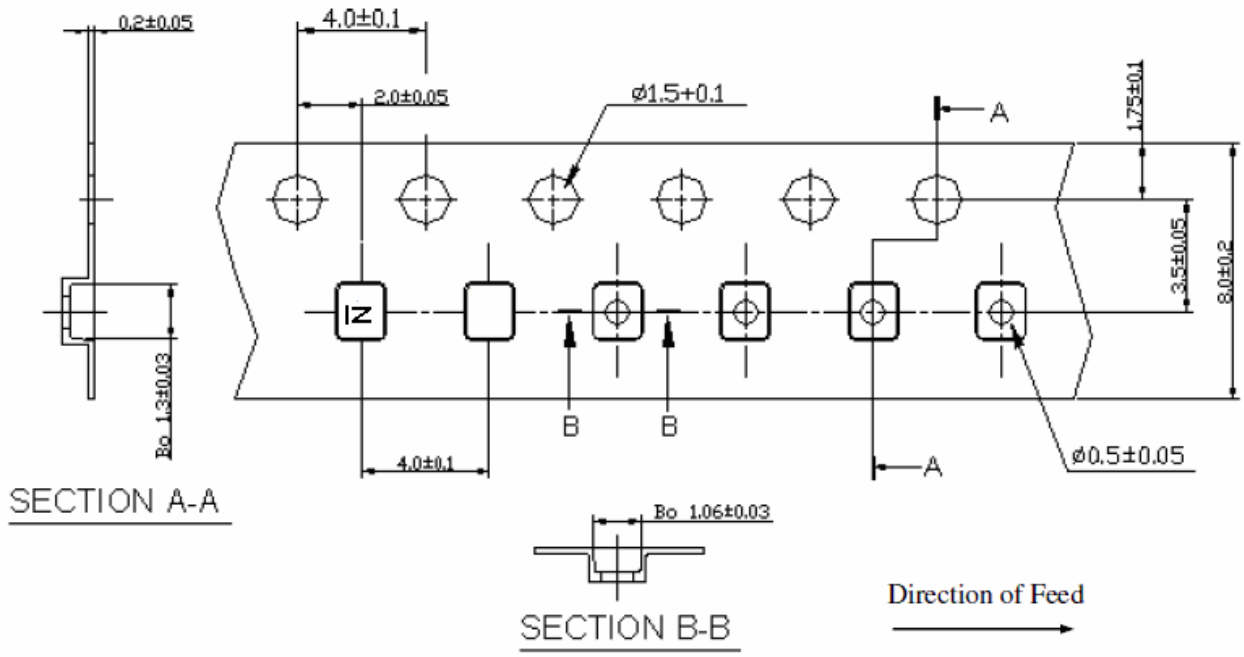
G. PACKING:

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.

