

SAW Rx Filter 1960MHz LTE Band 2 SMD 1109 (60MHz BW)

MODEL NO.: TA1950D

REV. NO.:3

A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. DC voltage: 0 V
3. Operating Temperature: -20 °C to +85 °C
4. Storage Temperature: -40 °C to +85 °C
5. Moisture Sensitivity Level: Level 3 (MSL 3)
6. ESD 50V(MM) 100V(HBM)

RoHS Compliant
Lead free
Lead-free soldering

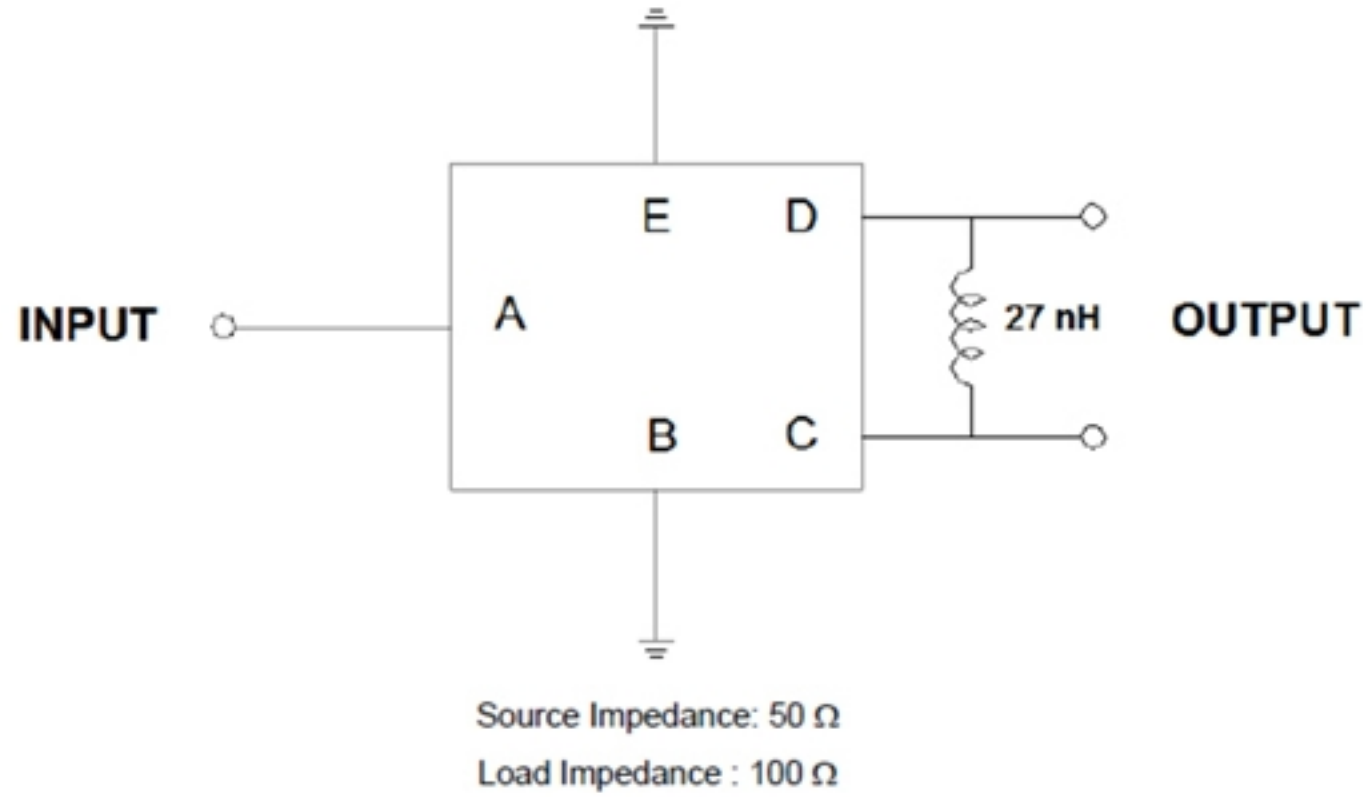
Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS(25 °C):

| Parameters Description | Unit | Min. | Typ. | Max. |
|--|-------|------|-----------|------|
| Center Frequency (Fo) | MHz | - | 1960 | - |
| Insertion Loss within 1930 ~ 1990 MHz | dB | - | 2.8 | 4 |
| 1930.6 ~ 1989.4 MHz | dB | - | 2.8 | 3.7 |
| Amplitude Ripple within 1930 ~ 1990 MHz | dBp-p | - | 1.1 | 2.6 |
| 1930.6 ~ 1989.4 MHz | dBp-p | - | 1.1 | 2.3 |
| Input VSWR within 1930~1990 MHz | - | - | 2 | 2.2 |
| Output VSWR within 1930~1990 MHz | - | - | 2 | 2.3 |
| Amplitude balance within 1930.0 ~ 1990.0 MHz | dB | -1.8 | -0.9/+1 | +1.8 |
| Phase balance within 1930.0 ~ 1990.0 MHz | deg. | -15 | -4.6/+8.5 | +15 |
| Attenuation: | | | | |
| 10 ~ 1850 MHz | dB | 40 | 54 | - |
| 824 ~ 849 MHz | dB | 50 | 62 | - |
| 1850 ~ 1910 MHz | dB | 35 | 46 | - |
| 2020 ~ 2070 MHz | dB | 15 | 22 | - |
| 2070 ~ 6000 MHz | dB | 25 | 32 | - |

※With Matching Network.

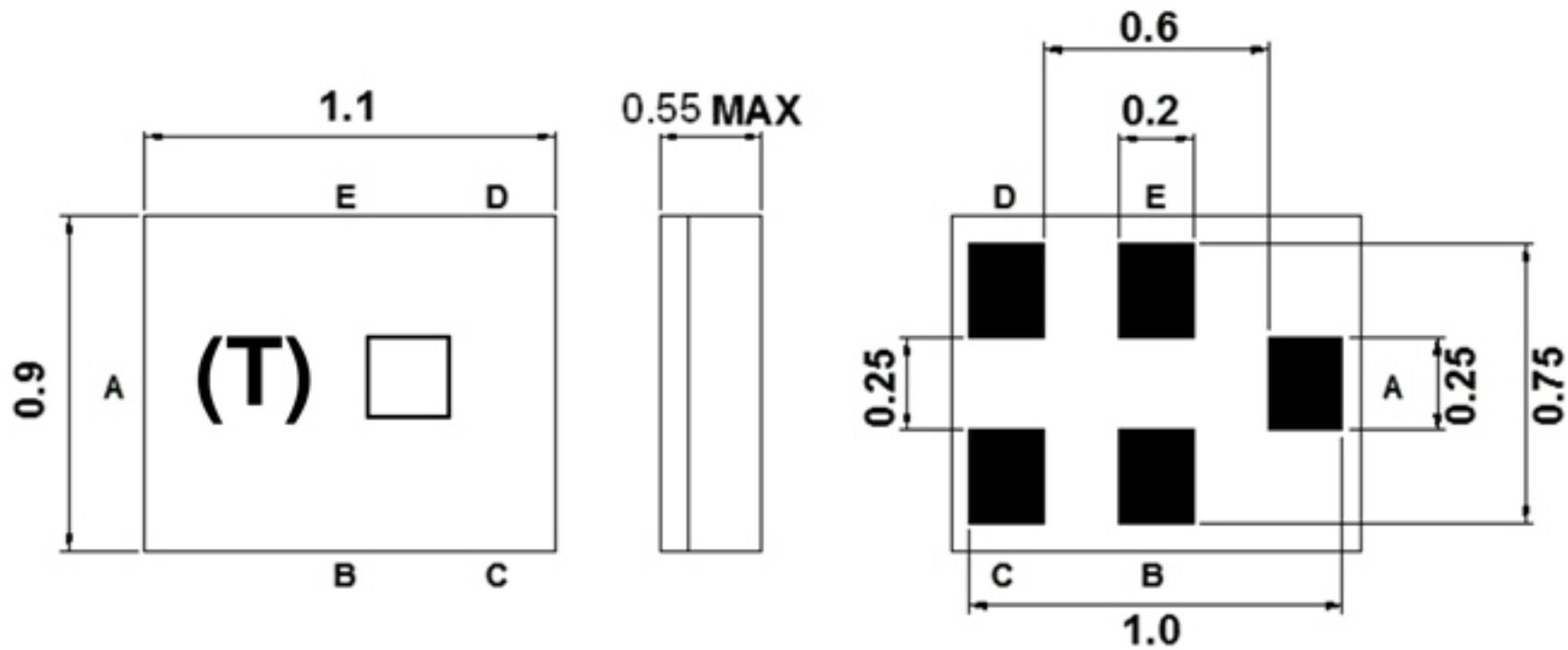
C. MEASUREMENT CIRCUIT:



Pin Description

| | |
|------|----------------|
| B, E | Ground |
| A | Input |
| D, C | Balance Output |

D. OUTLINE DRAWING:



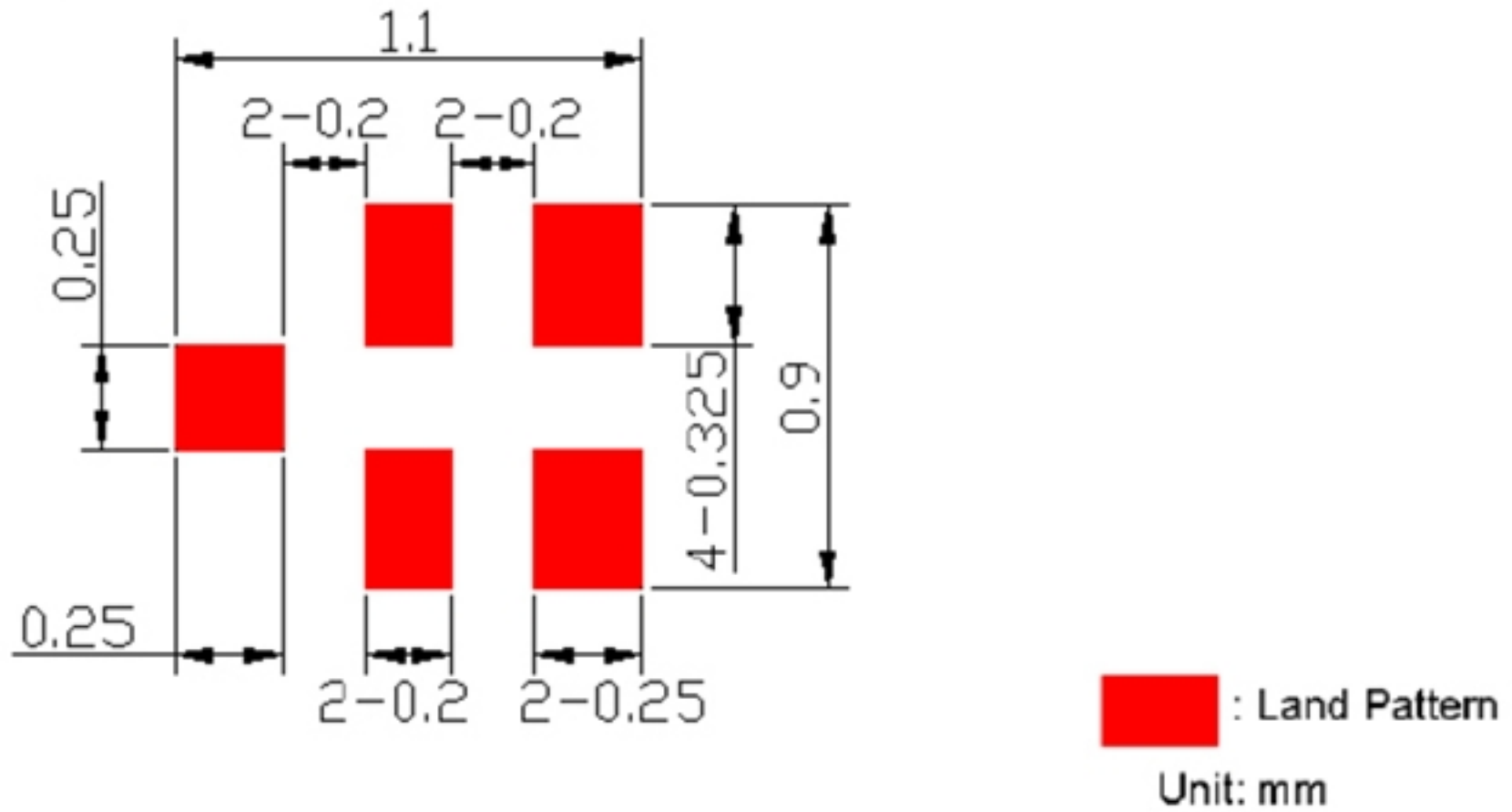
(T): Series Number

□: Date Code(Year+Month)

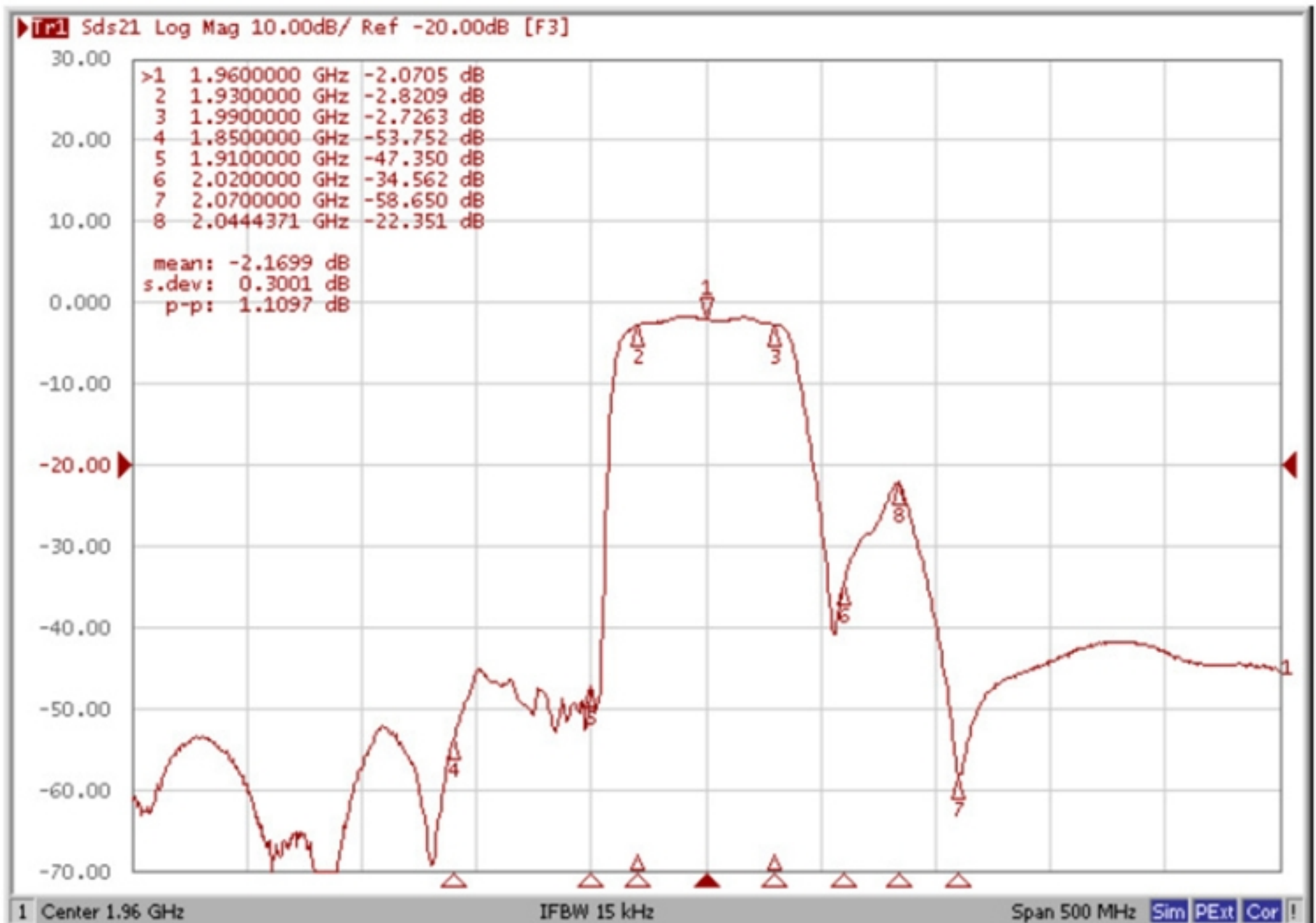
Date Code Table:

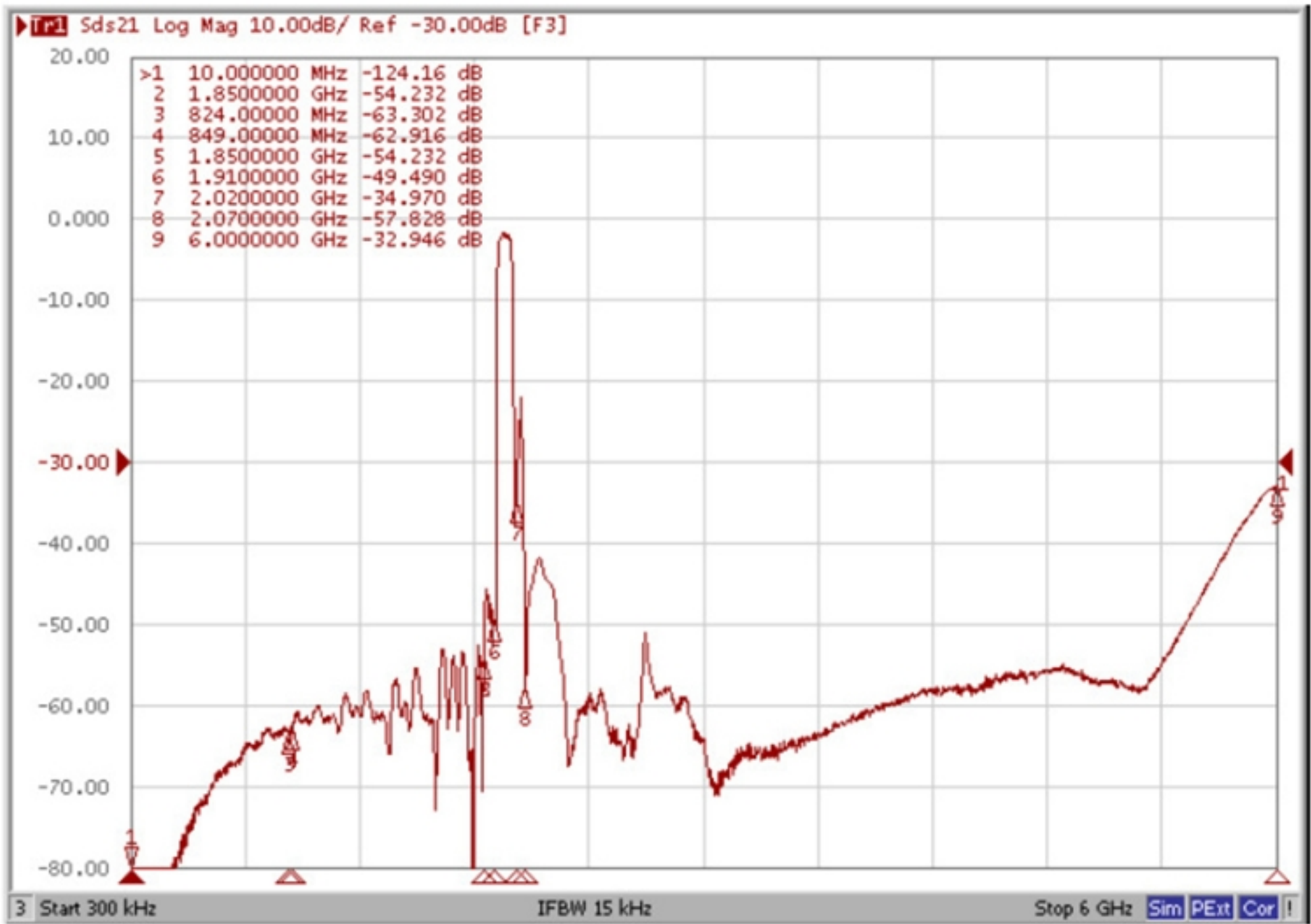
| YEAR/Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2013 | A | B | C | D | E | F | G | H | J | K | L | M |
| 2014 | N | P | Q | R | S | T | 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>j</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. PCB Footprint:

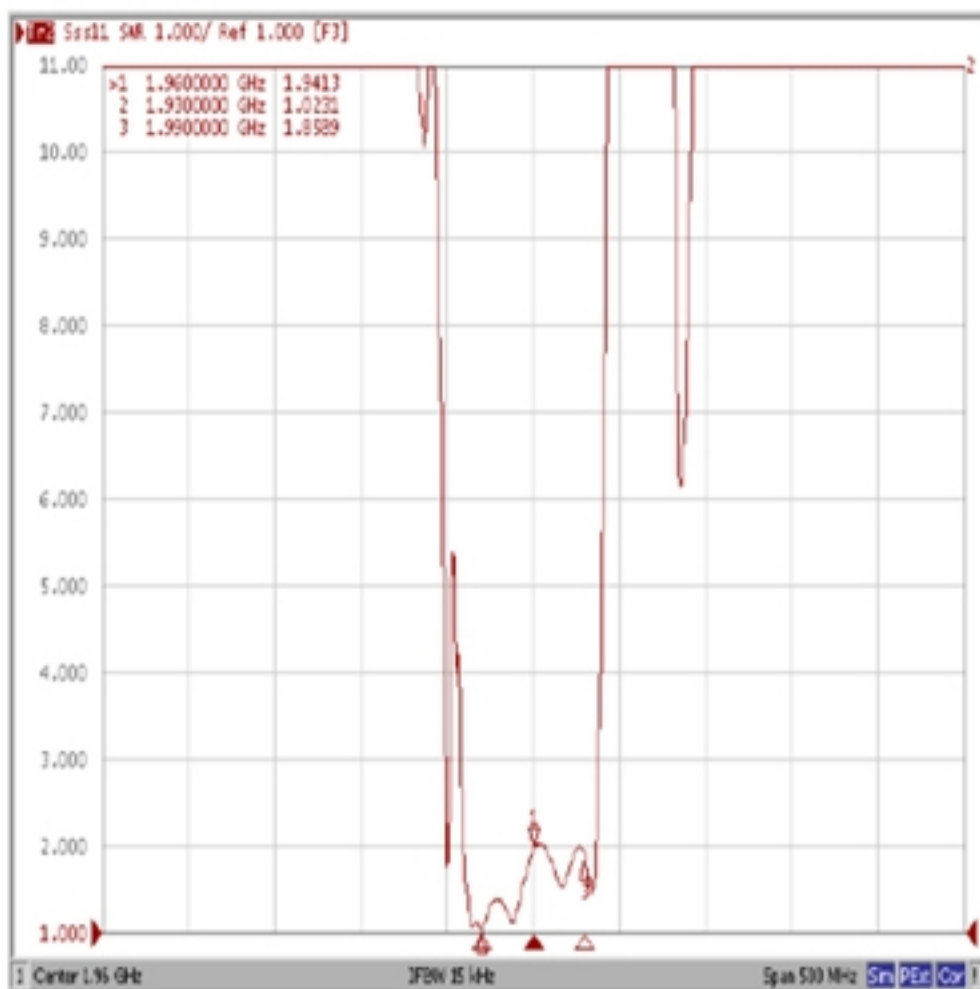


F. Frequency Characteristics:

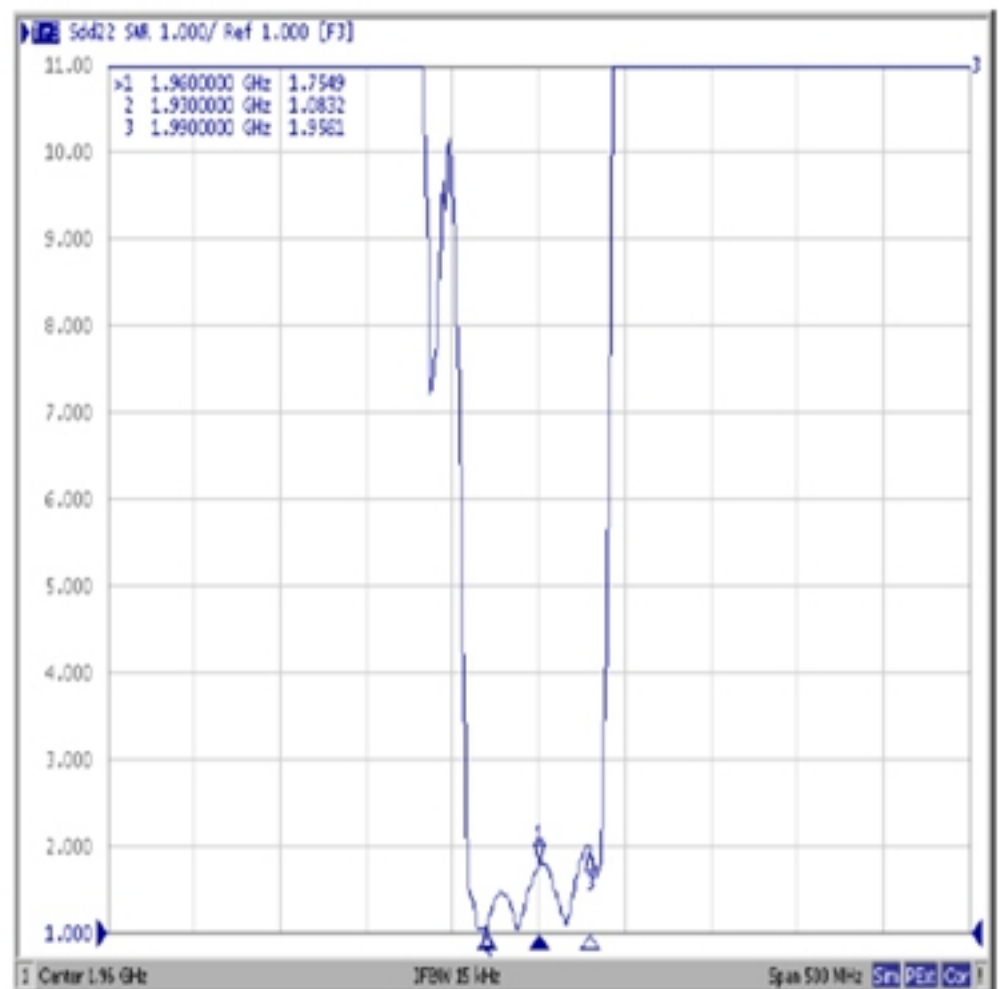




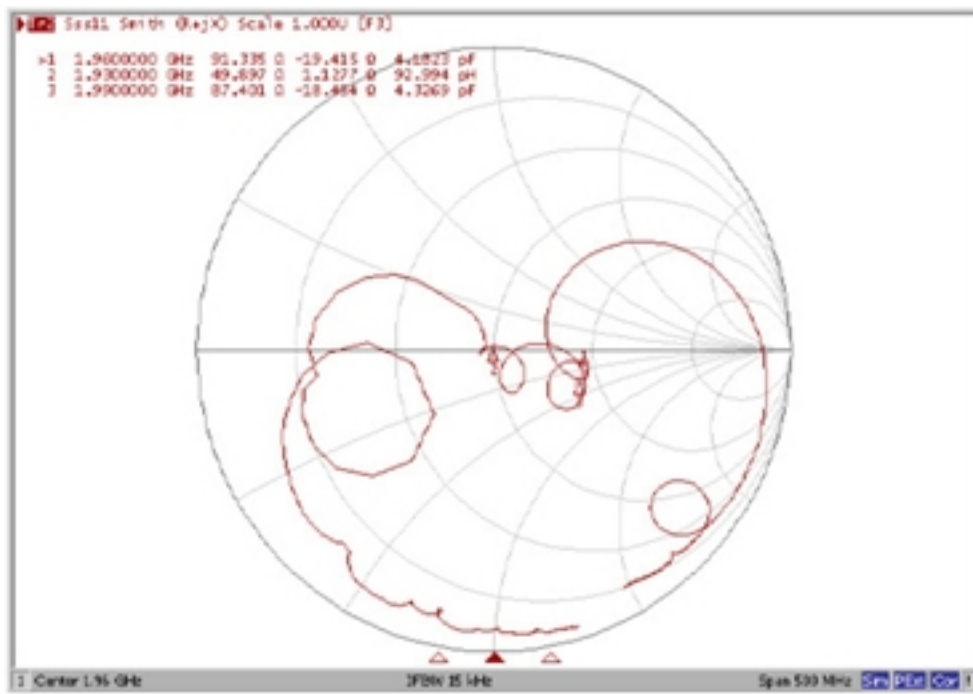
S11 SWR



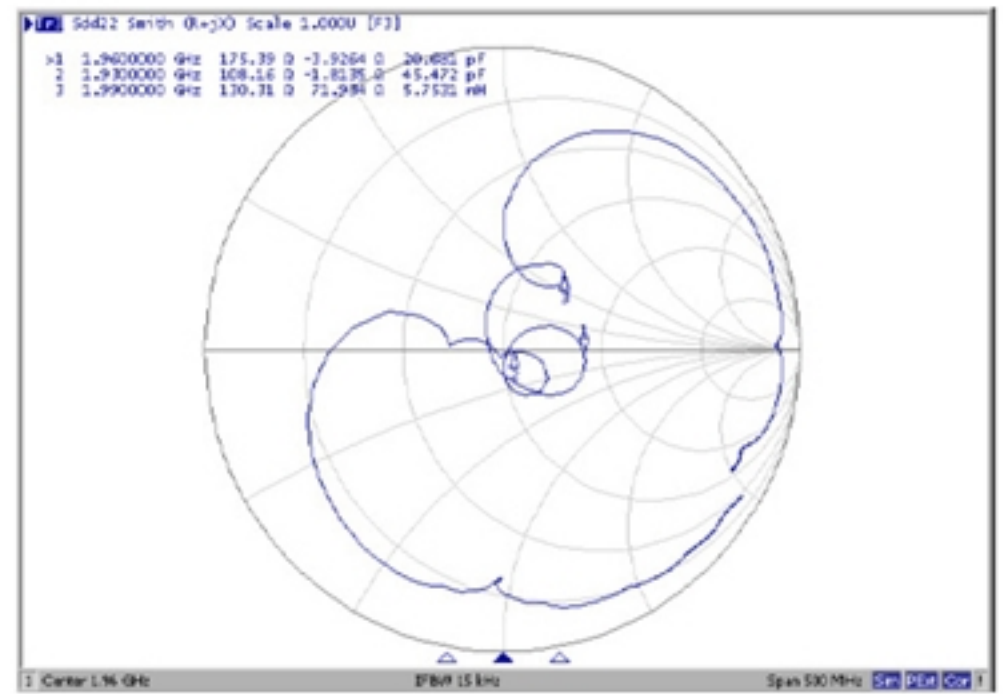
S22 SWR



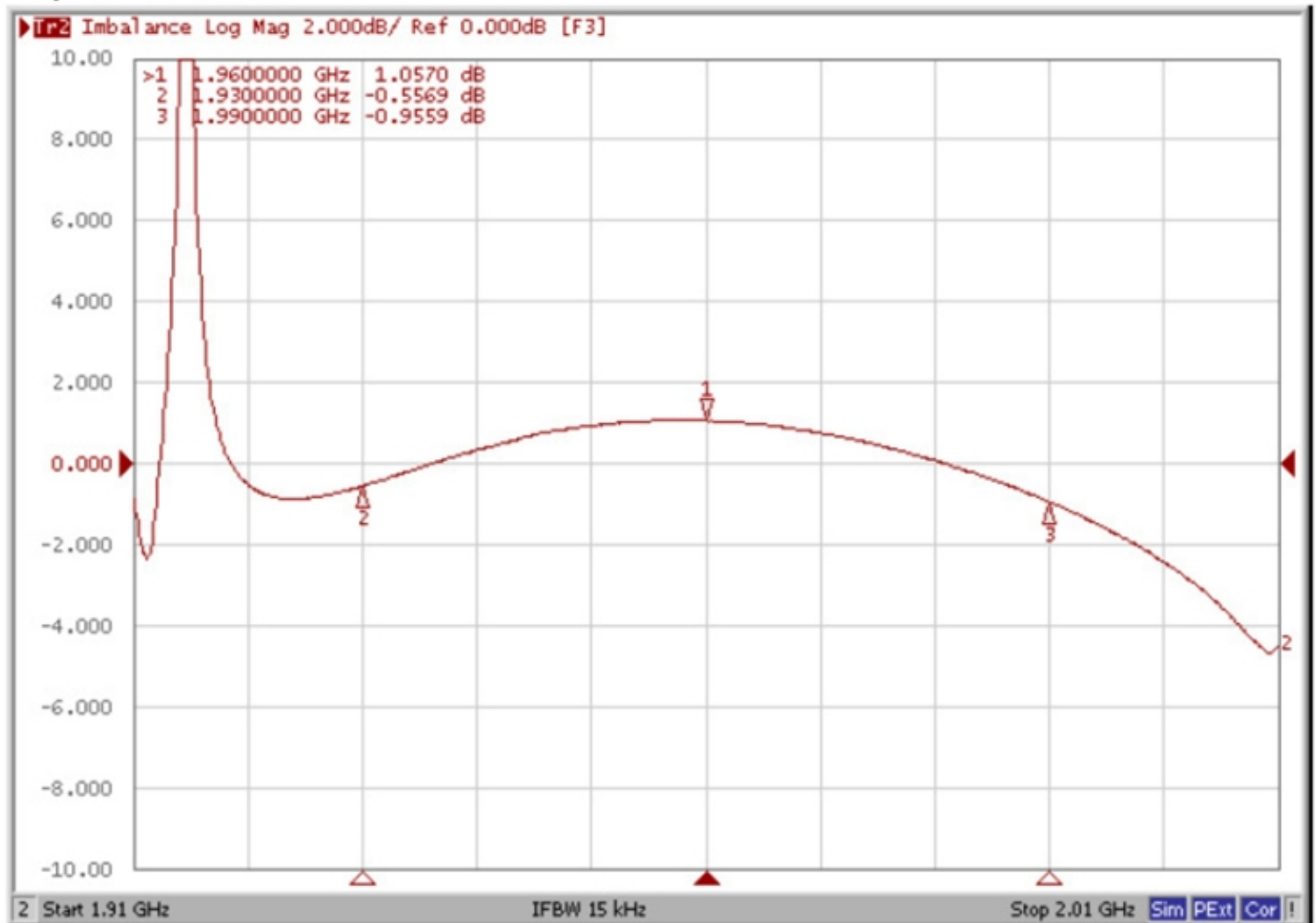
Smith chart S11



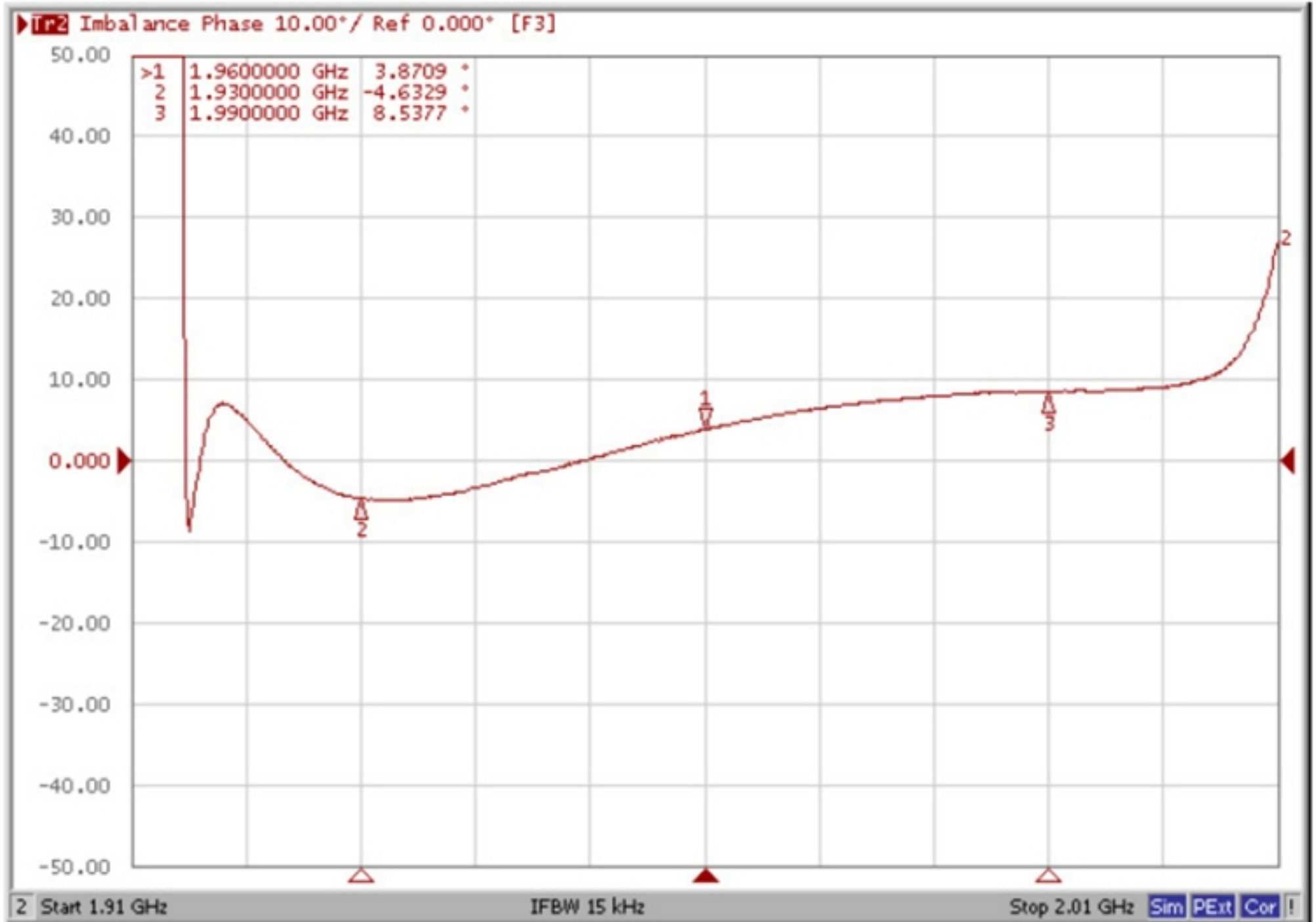
S22



Amplitude balance



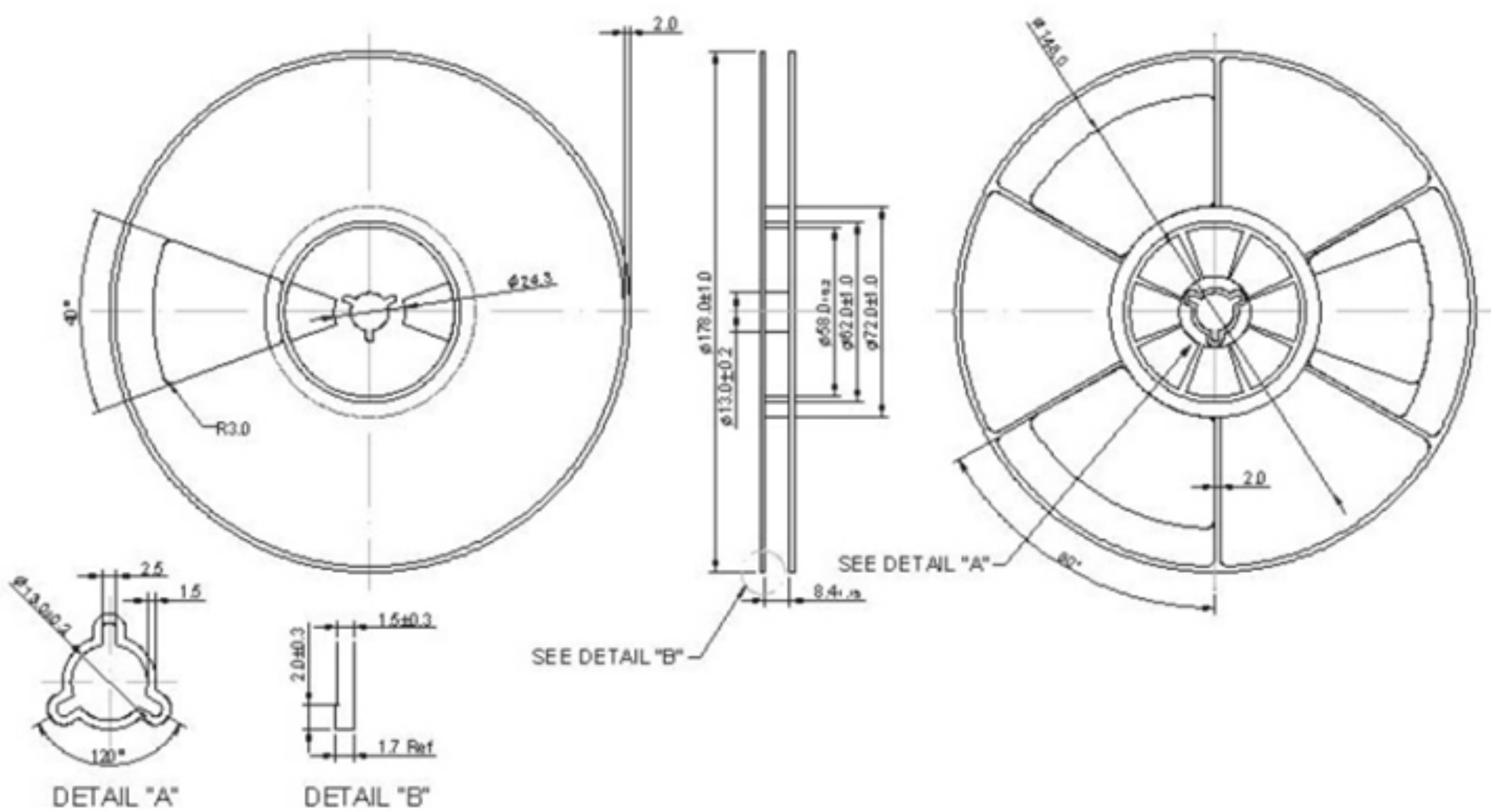
Phase balance



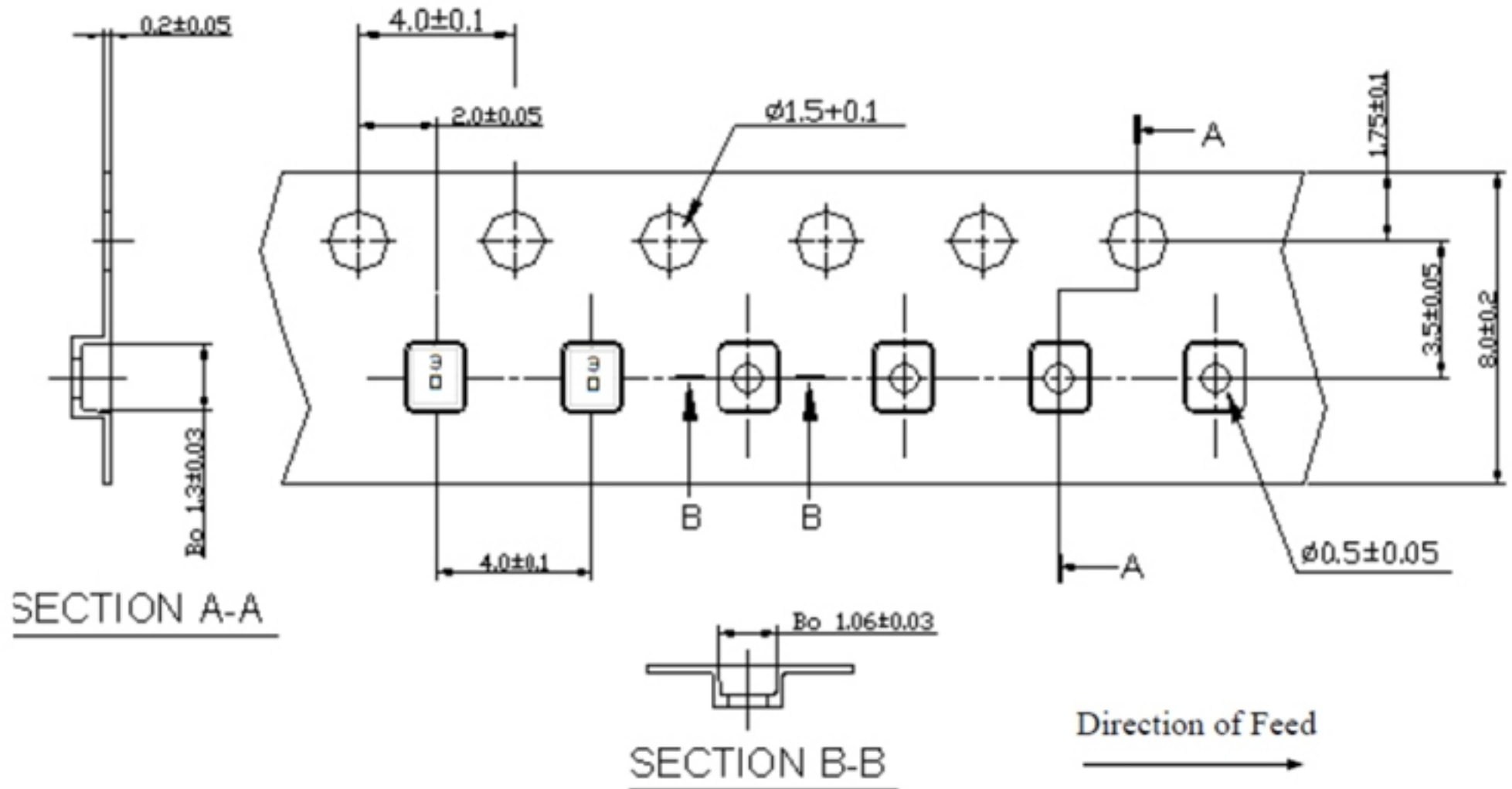
G. PACKING:

1. REEL DIMENSION

7" / 5000pcs



2. TAPE DIMENSION



H. Recommended Reflow Profile:

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

