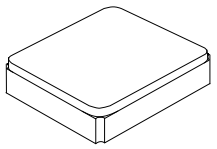
RFMi
BRAND OF AKOUSTIS

Preliminary

RoHS compliant

# SF2209H

## 2017.5 MHz SAW Filter



SM2016-4

**MAXIMUM RATING**:

- Input Power Level: 10 $dB_m$
- DC voltage: 5 V
- Operating Temperature: -30°C to +85°C
- Storage Temperature: -40°C to +85°C
- Moisture Sensitivity Level: Level 1(MSL1)

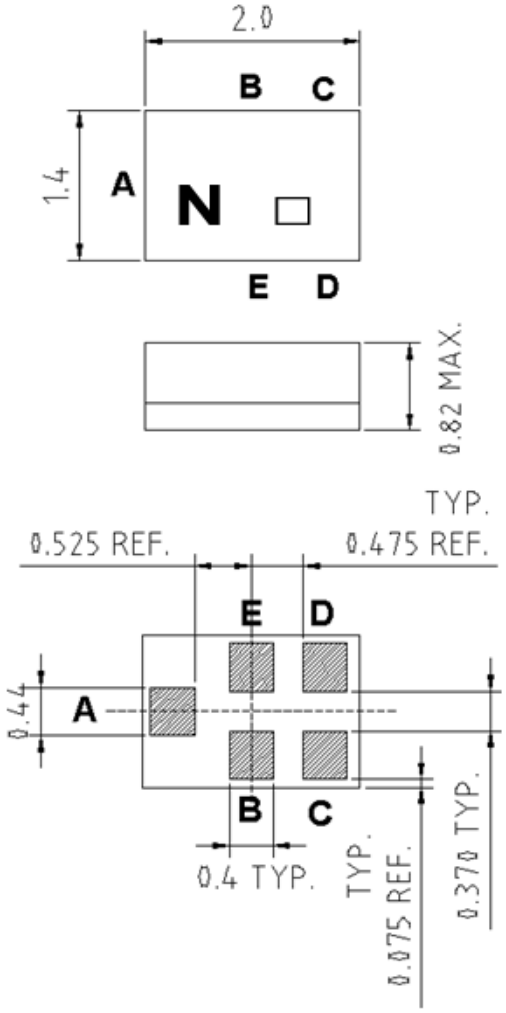
**ELECTRICAL CHARACTERISTICS:**

Terminating source impedance (single-ended): $Z_S$=50Ω

Terminating load impedance (single-ended): $Z_L$=50Ω

| Item | | Unit | Min. | Type. | Max. |
|---|---|---|---|---|---|
| **Center frequency** | **Fc** | MHz | - | 2017.5 | - |
| **Insertion Loss** (2010~2025 MHz) | **IL** | dB | - | 1.6 | 2.5 |
| **Amplitude Ripple** (2010~2025 MHz) | | dB | - | 0.3 | 1.5 |
| **VSWR** (2010~2025 MHz) | | - | - | 1.3 | 2.0 |
| **Attenuation** (Reference level from 0 dB) | | | | | |
| D.C. ~ 1820 MHz | | dB | 21 | 25 | - |
| 1820 ~ 1850 MHz | | dB | 28 | 33 | - |
| 1850 ~ 1950 MHz | | dB | 21 | 28 | - |
| 2085 ~ 2400 MHz | | dB | 21 | 26 | - |
| 2400 ~ 2430 MHz | | dB | 25 | 28 | - |
| 2430 ~ 3000 MHz | | dB | 25 | 28 | - |
| 3000 ~ 4010 MHz | | dB | 28 | 35 | - |
| 4010 ~ 6000 MHz | | dB | 15 | 27 | - |
| **Temperature coefficient of frequency** | **TCf** | ppm /℃ | - | -34 | - |

**OUTLINE DRAWING:**

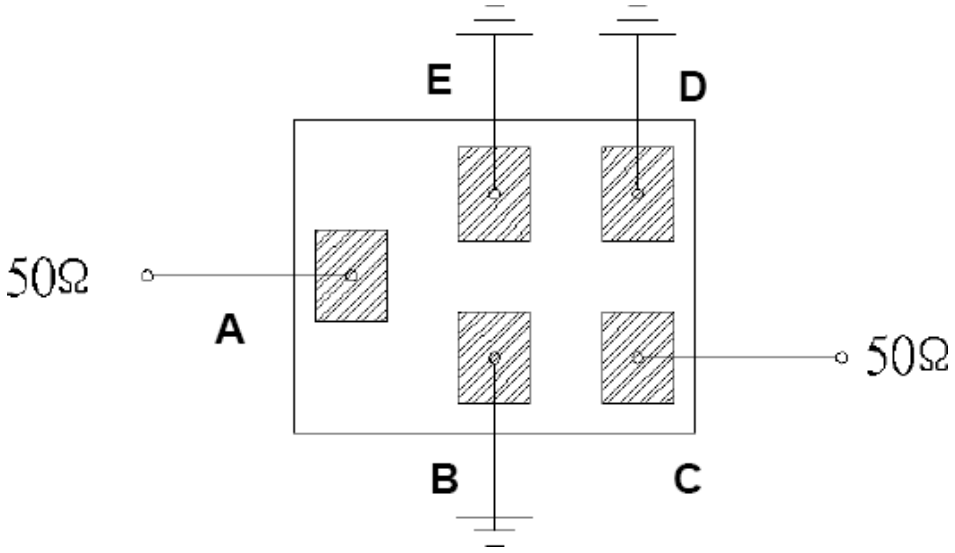



| Pin No. | Symbol | Function |
|---|---|---|
| A | IN | Input |
| B | GND | Ground |
| C | OUT | Output |
| D | GND | Ground |
| E | GND | Ground |
| Unit：mm | | |

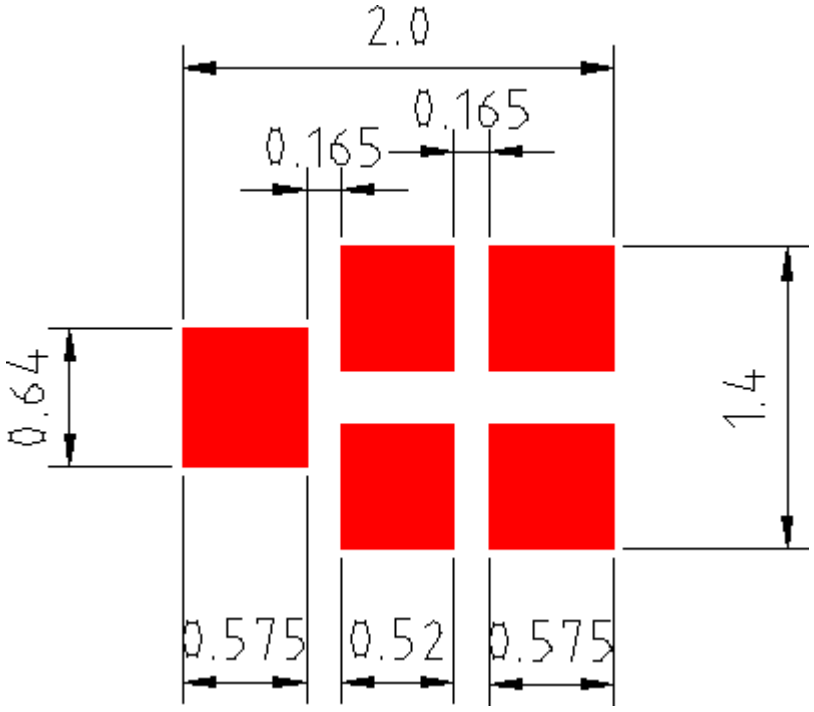
**□ : Year/Month Code (Follow the table)**

| YEAR/Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **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** |

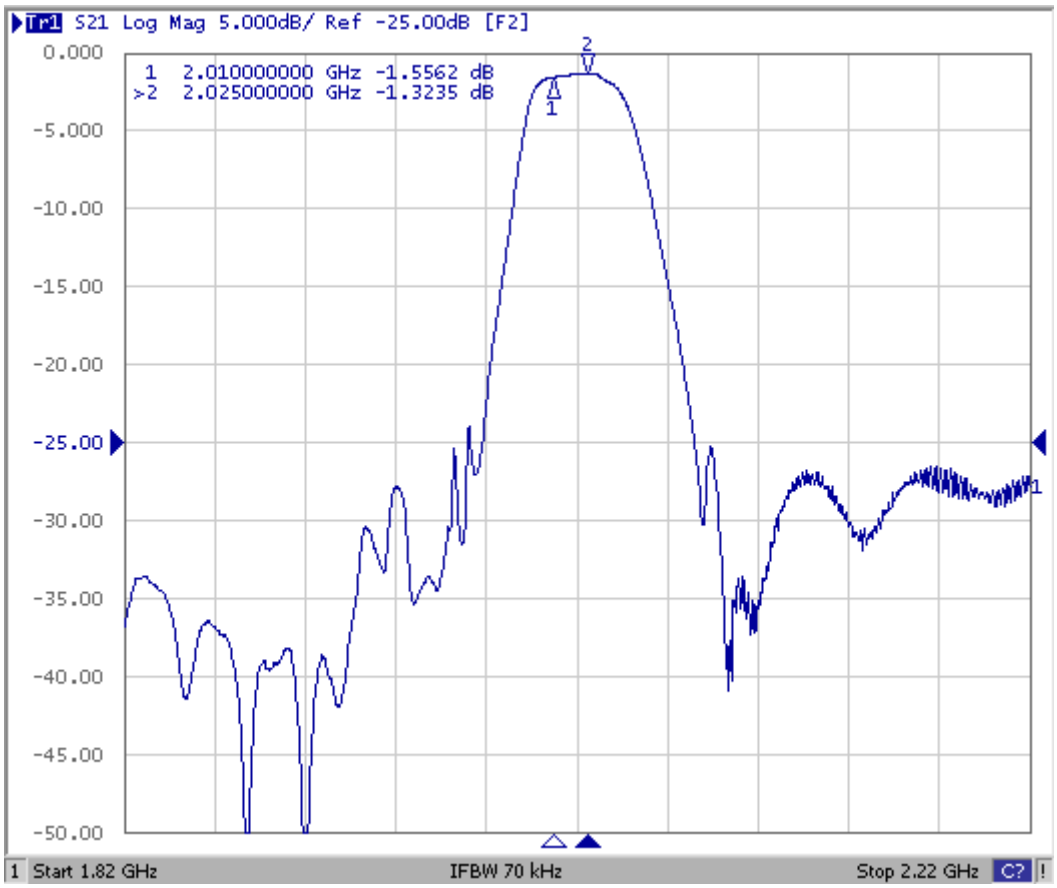
## MEASUREMENT CIRCUIT:

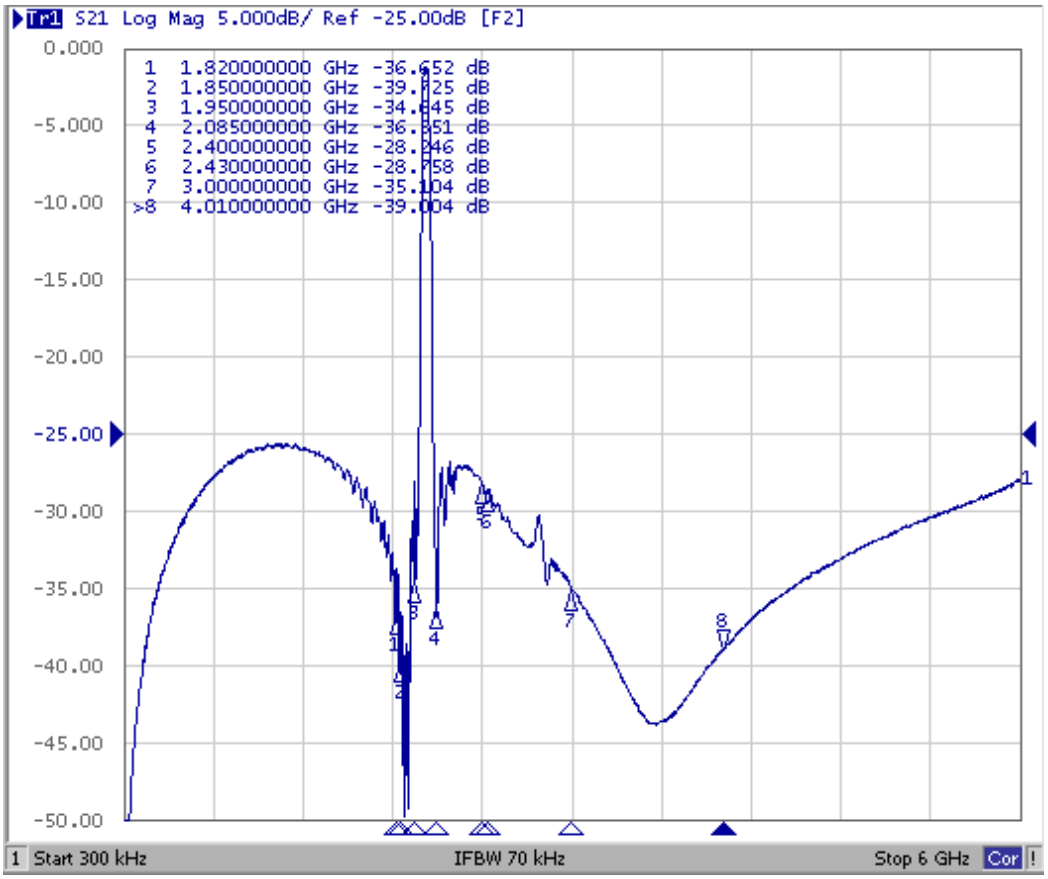



## PCB FOOTPRINT:



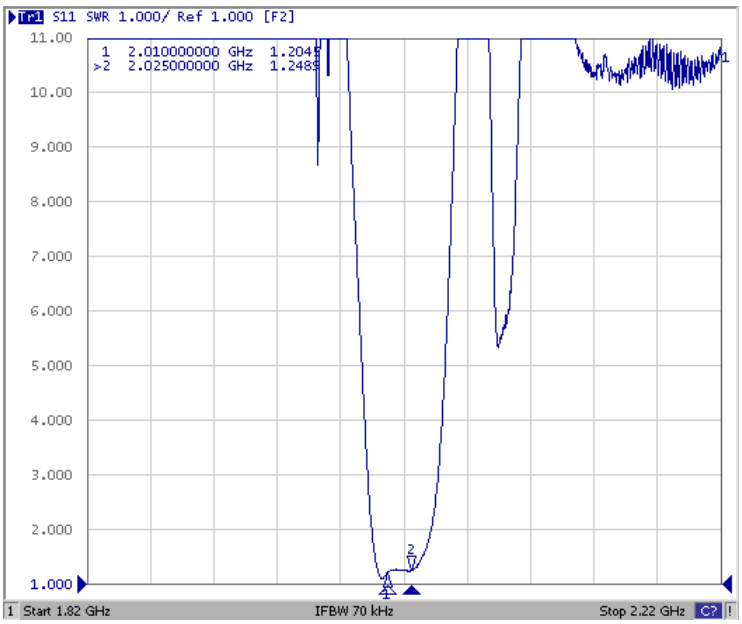
## Frequency Characteristics:

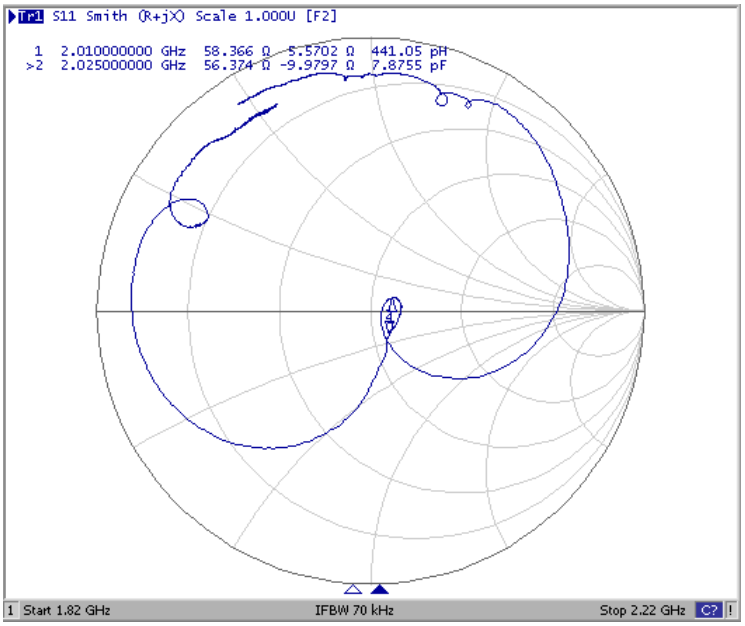


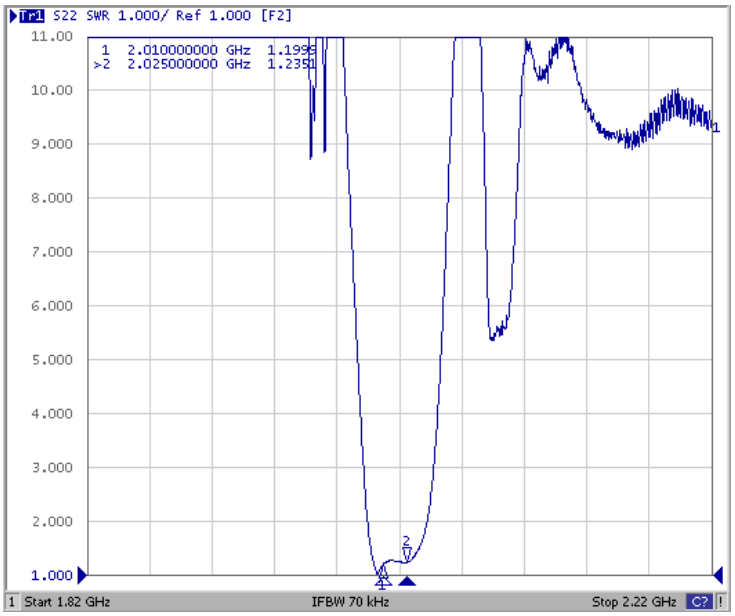
## Reflection Functions:

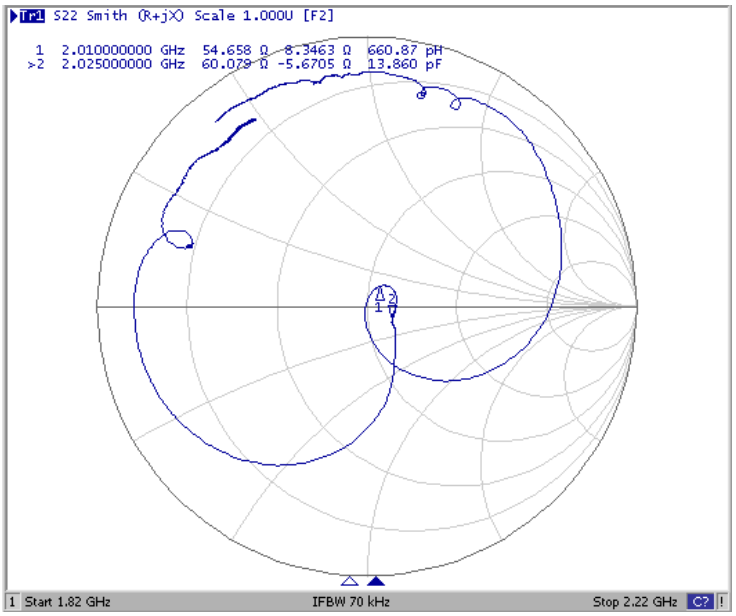
### S11



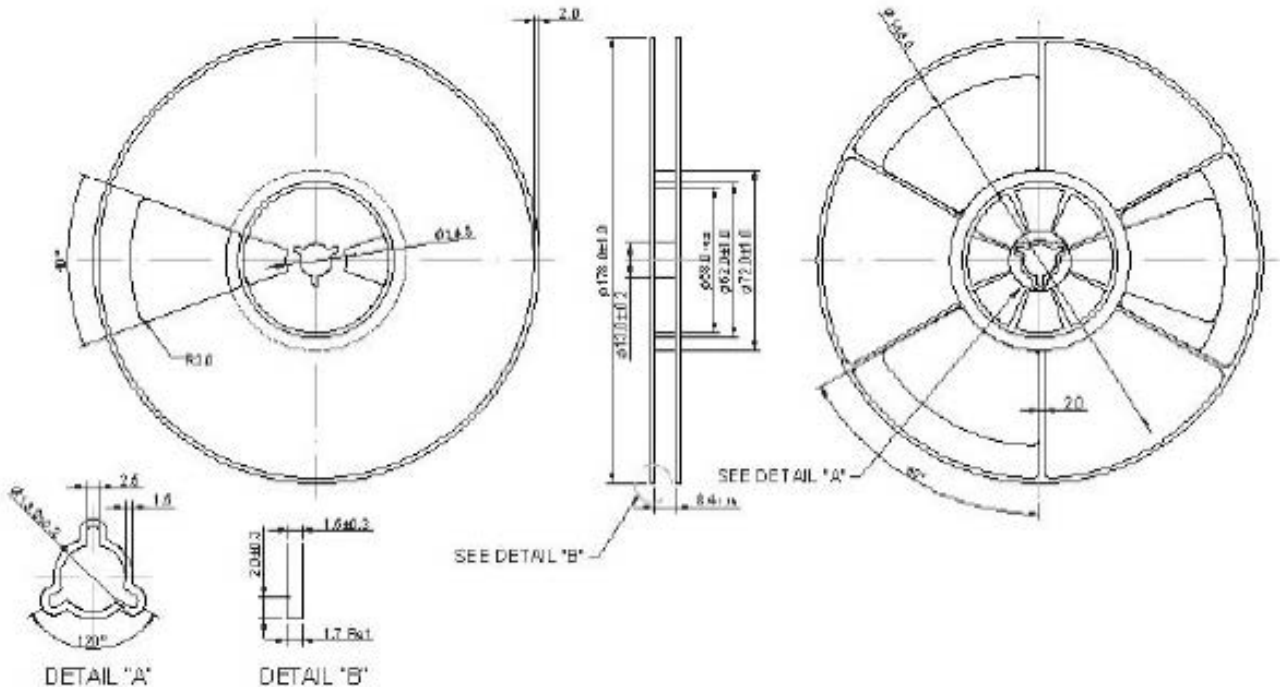




### S22

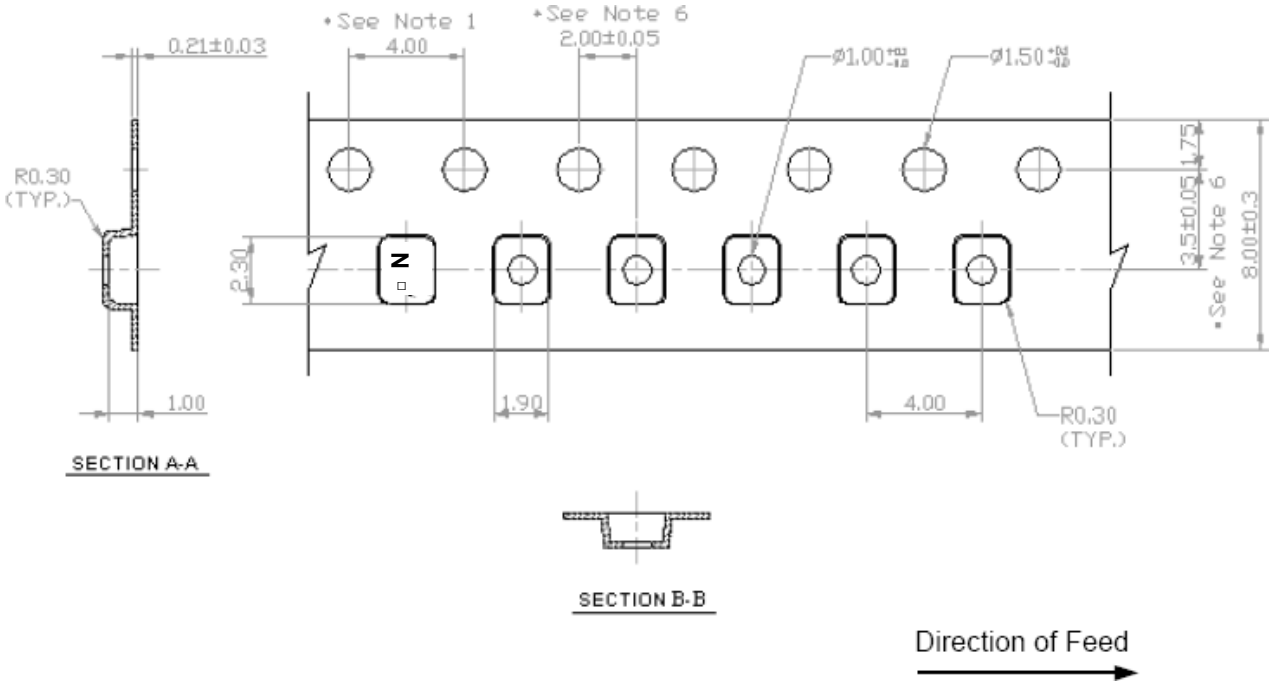


**PACKING:**
Reel Count:
7" = 2000
13" = 10,000

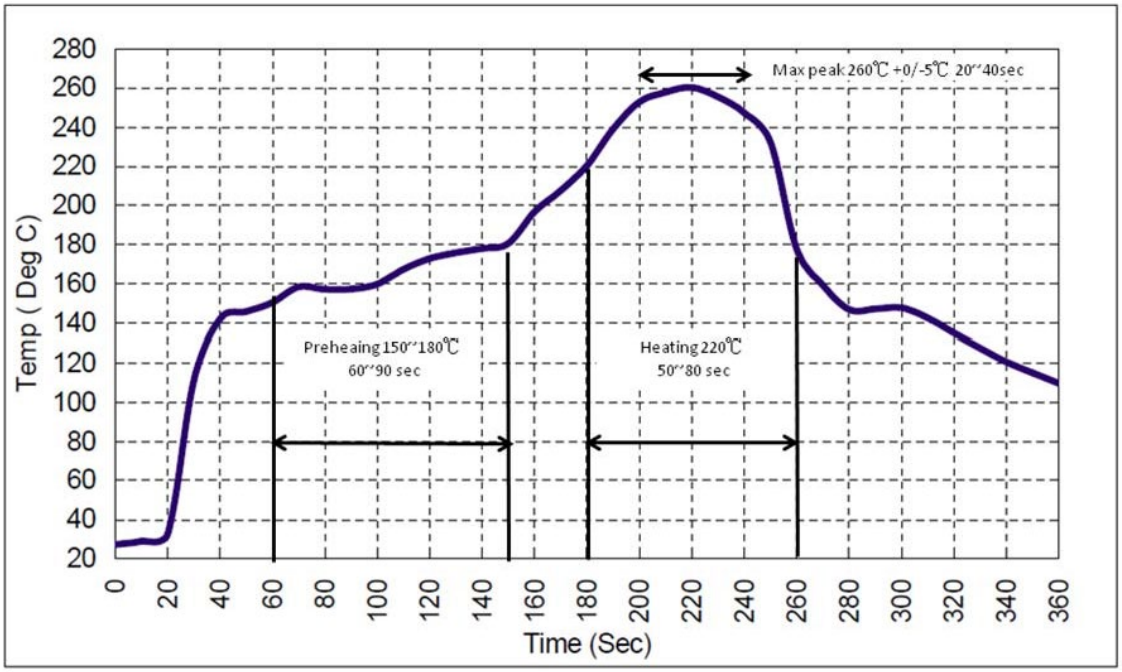



2.TAPE DIMENSION



**RECOMMENDED REFLOW PROFILE:**

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




**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. This component was always RoHS compliant from the first date of manufacture.