**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 Web: www.taisaw.com

# Product Specifications Approval Sheet

Product Name: SAW Filter 193.7MHz (BW 18MHz) SMD 9.1×7.1mm

TST Parts No.:TB0609A

Customer Parts No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____V.J Fanchian_____

Approval by:_____Andy Yu_____

Date:_____2021/6/29_____

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.

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 Web: www.taisaw.com

# SAW Filter 193.7 MHz SMD 9.1mmX7.1mm

MODEL NO.: TB0609A Rev. No. V2.0

RoHS Compliant
Lead free
Lead-free soldering

## A. MAXIMUM RATING:

1. Operating Temperature: -40°C to +85°C
2. Storage Temperature: -40°C to +85°C
3. Maximum Input Power : 15dBm
4. Moisture Sensitive Level (MSL): Level 1

## B. ELECTRICAL CHARACTERISTICS:

1. Ambient Temperature: 25 °

| Item | Unit | Min. | Type. | Max. |
|---|---|---|---|---|
| Center frequency, **Fc** | MHz | - | 193.7 | - |
| Insertion Loss, **IL** | dB | - | 17.4 | 18.0 |
| 1 dB bandwidth | MHz | 17.5 | 18.0 | - |
| 3 dB bandwidth | MHz | - | 19.0 | 20 |
| 20 dB bandwidth | MHz | - | 21.3 | 30 |
| 40 dB bandwidth | MHz | - | 22.2 | 32 |
| Pass band Ripple (p-p)<br>Within **Fc**+-8.5MHz | dB | - | 0.7 | 1.2 |
| Group Delay Variation (p-p)<br>Within **Fc**+-8.5MHz | ns | - | 50 | 80 |
| Absolute Group Delay at Fc | usec | - | 1.02 | - |
| Absolute Group Delay (mean)<br>Within Fc+-8.5MHz | usec | - | 1.015 | - |
| Relative Attenuation | | | | |
| 10 MHz to 170 MHz | dB | 40 | 47 | - |
| 230 MHz to 550 MHz | | 35 | 40 | - |
| 550 MHz to 600 MHz | | 25 | 30 | - |
| 600MHz to 900MHz | | 20 | 23 | - |

C. FREQUENCY CHARACTERISTICS :

1.S21 Response

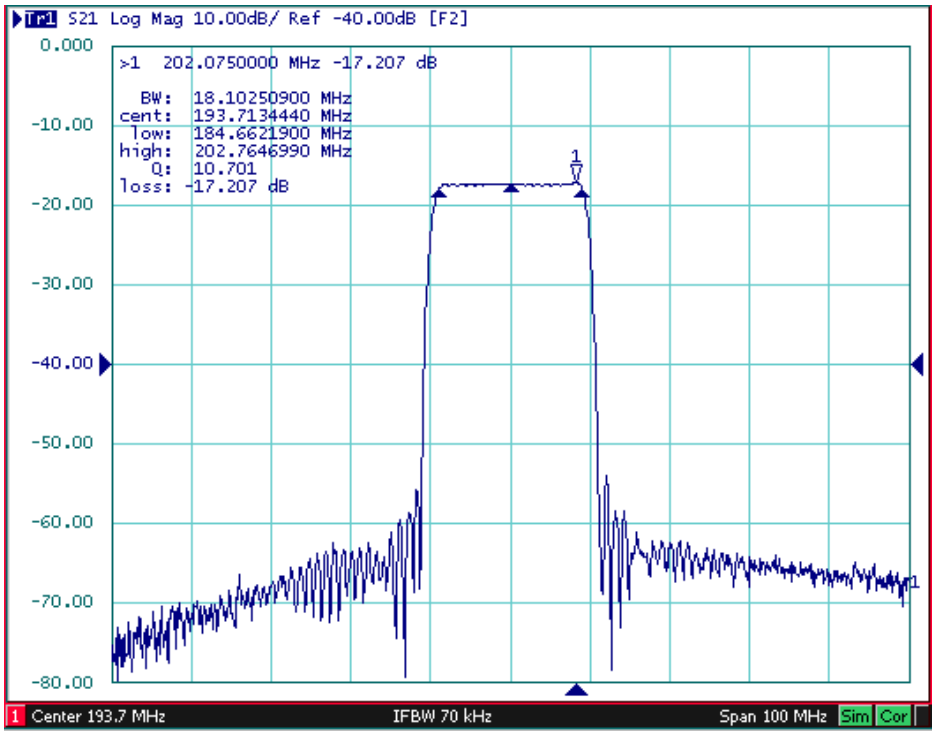



Fig1. Horizontal: 10MHz/Div Vertical: 10dB/Div

2. Passband Ripple

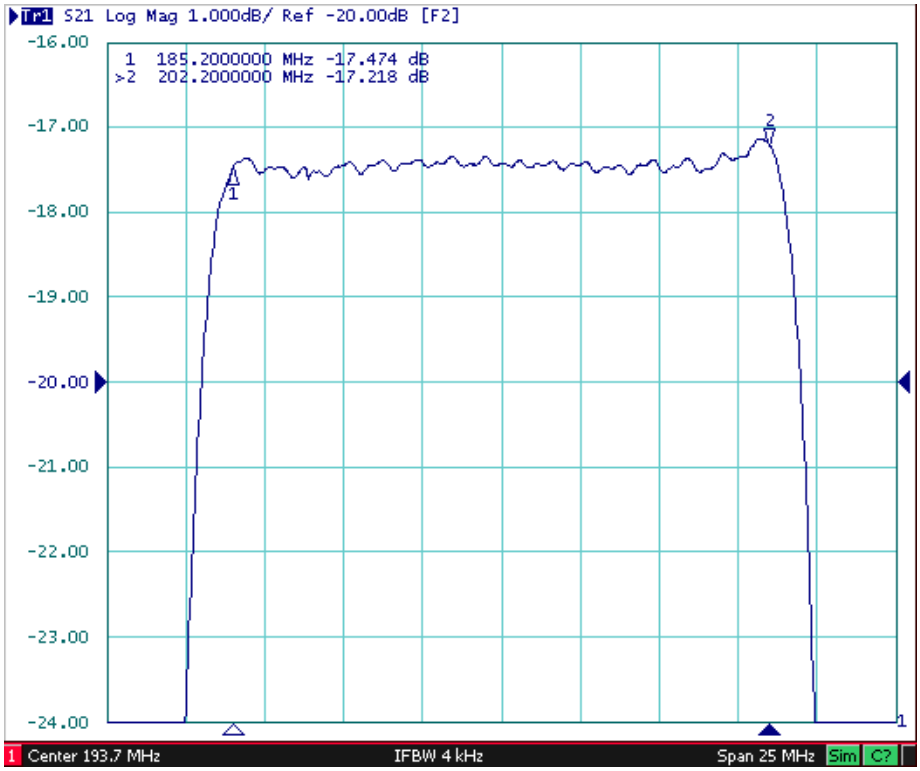



Fig2. Horizontal: 2.5MHz/Div Vertical: 1dB/Div

3. Group Delay Ripple:

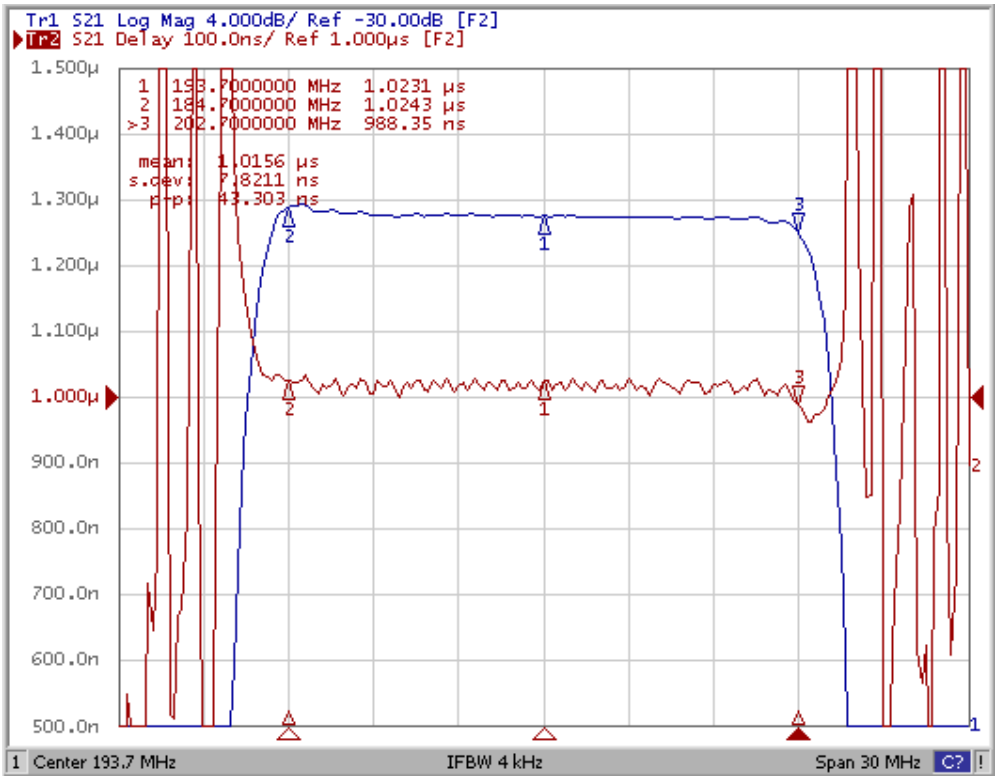



Fig3. Horizontal: 3.0MHz/Div Vertical: 100nS/Div

4. Wide Band Response:

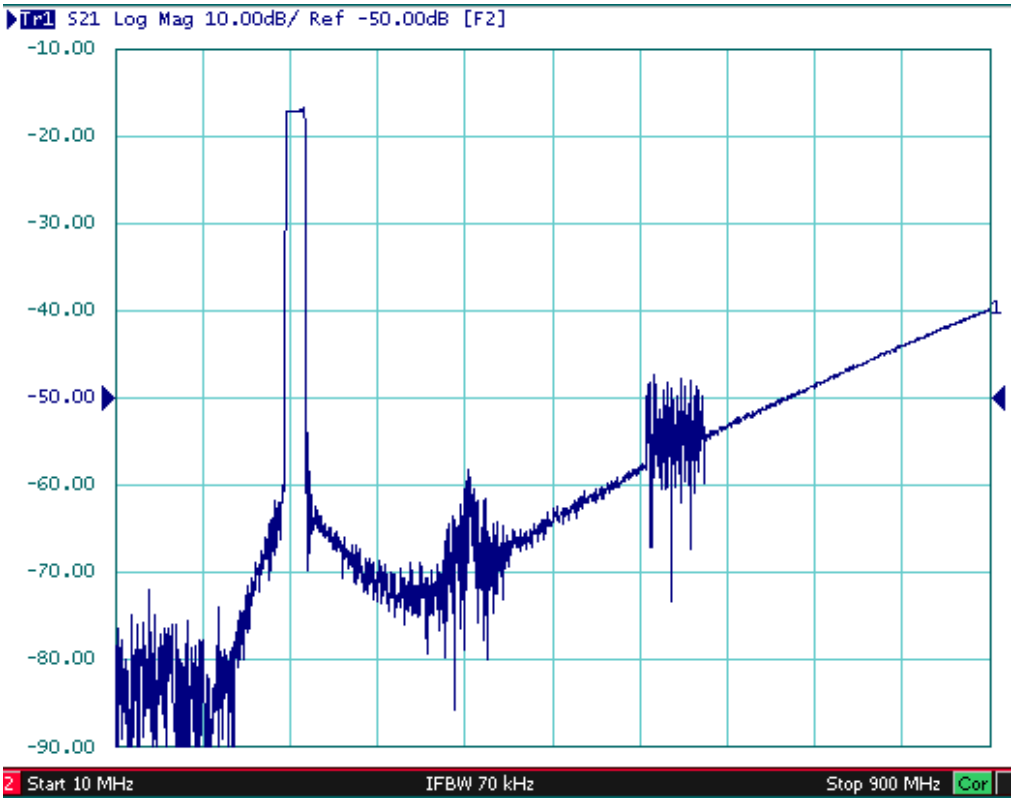
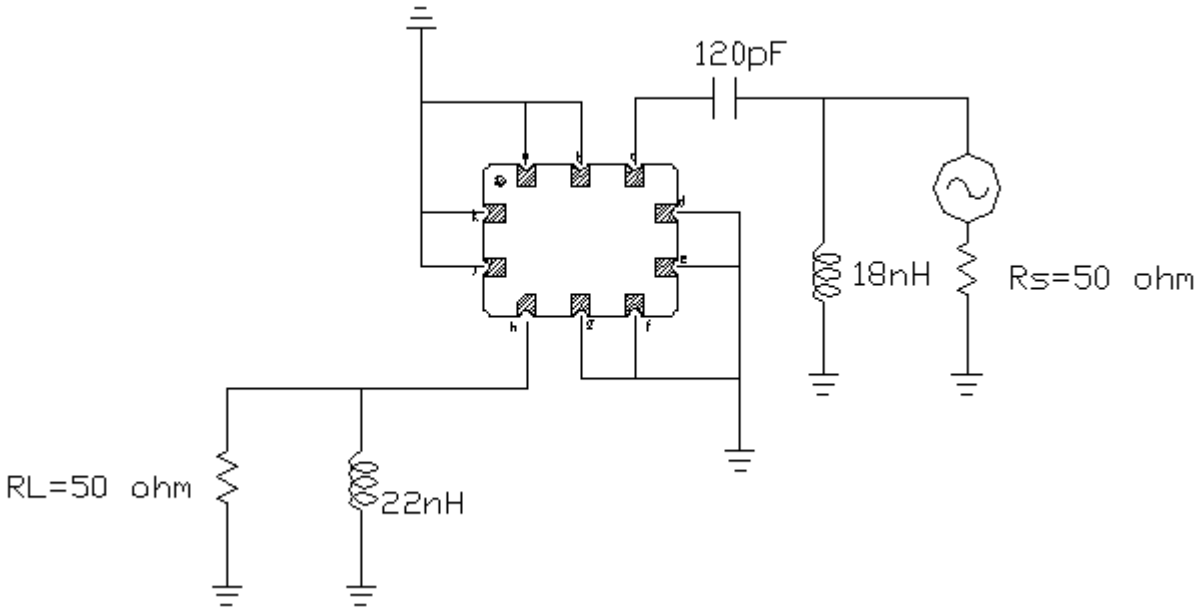



Fig3. Horizontal: 10~900MHz Vertical: 10dB/Div

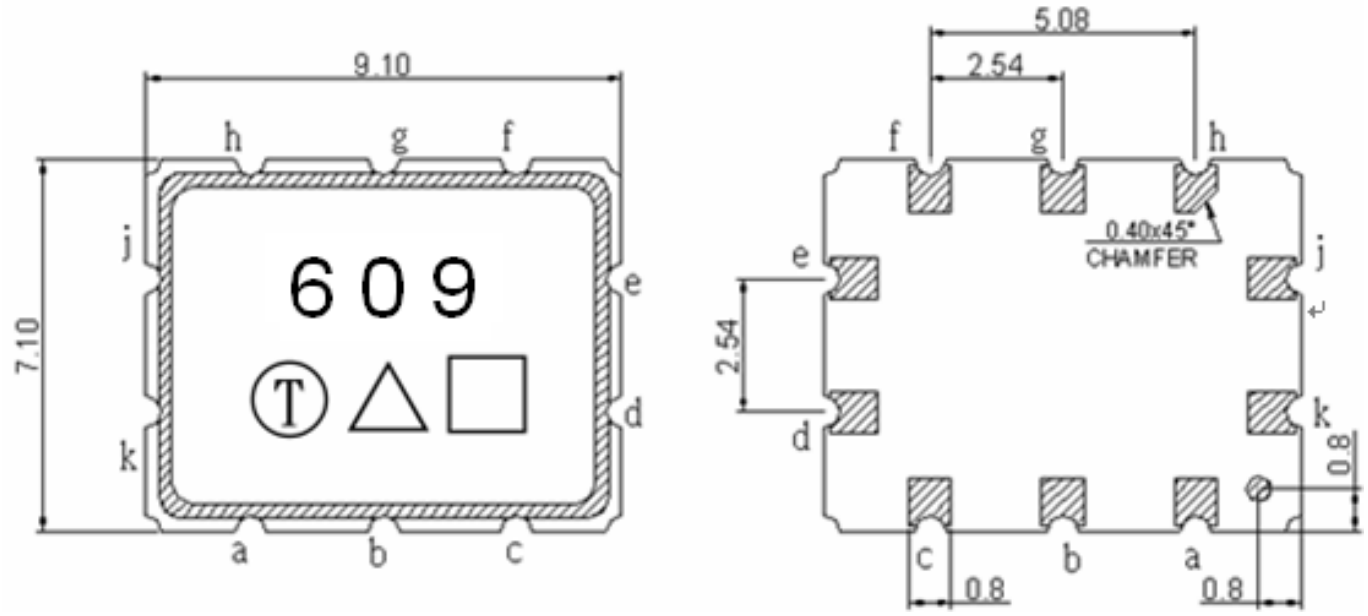
D. MEASUREMENT CIRCUIT

1. Single ended input 50 ohm to Single ended Output 50 ohm




Note: The matching structure will change according to different test fixture.

E.OUTLINE DRAWING:




Pin c : RF Input

Pin h : RF Output

Pin a,b,d,e,f,g,j,k : Ground

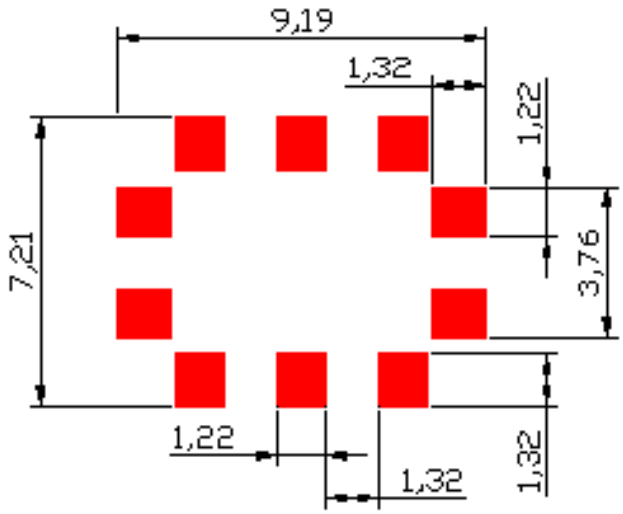
Unit: mm

□ : Week Code (Follow the table from planner each year)

△ : Product / Year Code

| Year | 2021<br>2025 | 2022<br>2026 | 2023<br>2027 | 2024<br>2028 |
|---|---|---|---|---|
| Product Code | B | b | B | b |

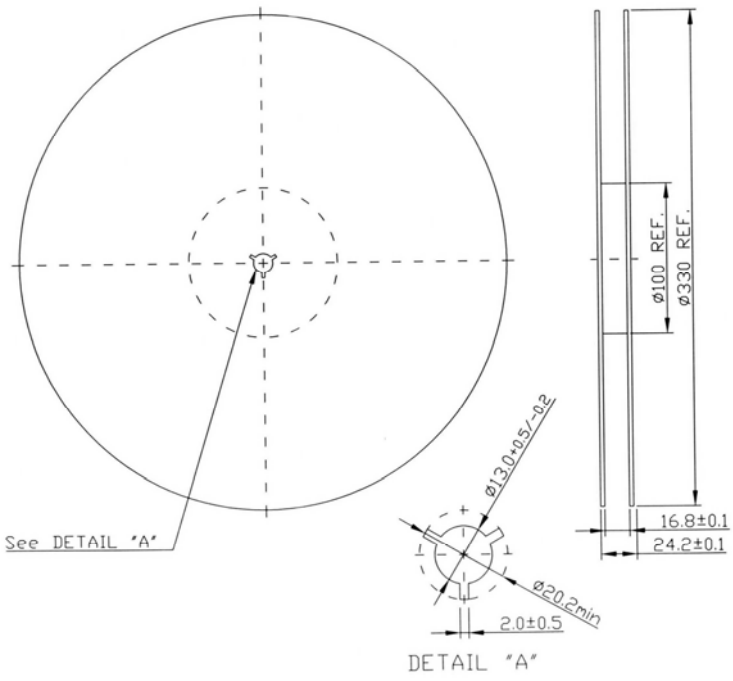
F. PCB Footprint




Unit: mm

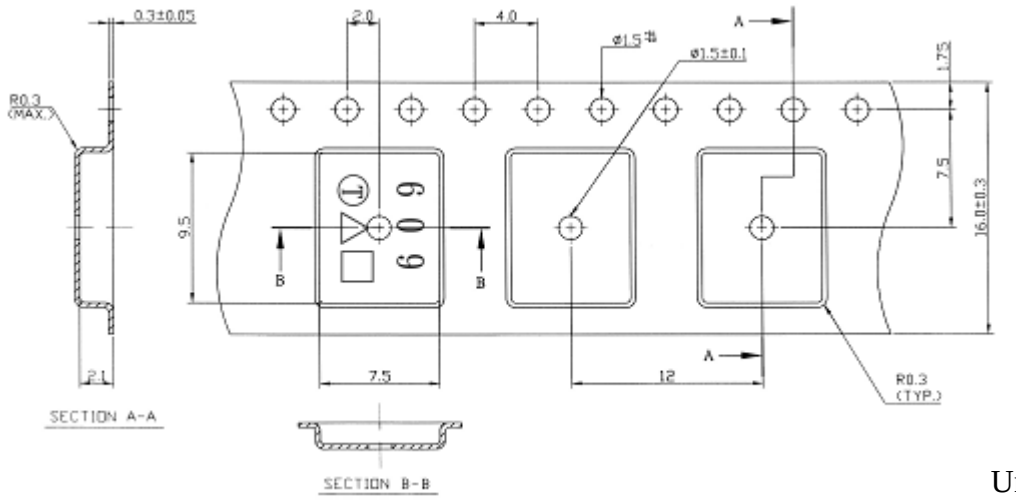
G. PACKING:

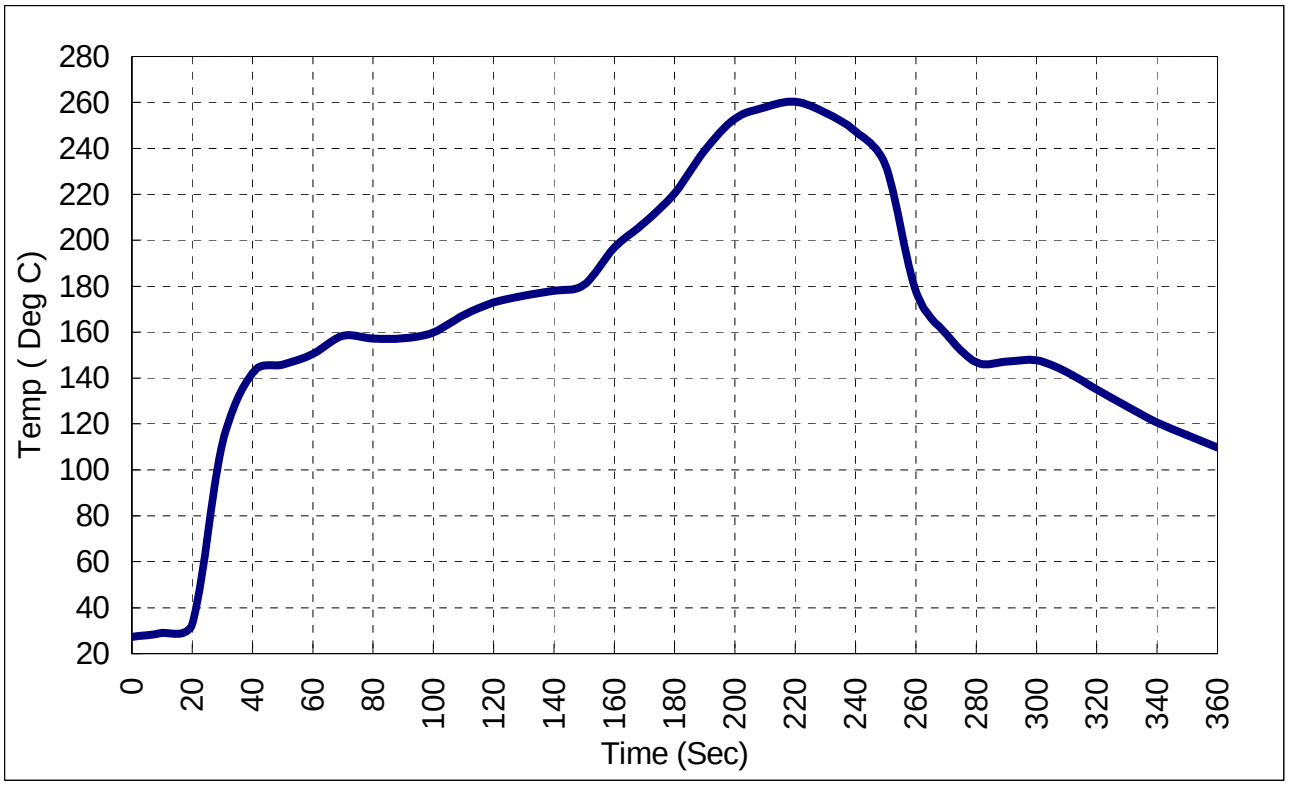
1. REEL DIMENSION




Unit: mm

2. TAPE DIMENSION




Unit: mm

H. RECOMMENDED REFLOW PROFILE :