**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 Description: SAW IF Filter 70MHz

TST Parts No.: TB0693A

Customer Parts No.: _____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by:_____ Ava Wang _____ Ava Wang

Approved by:_____ Kazuma Lee _____ Kazuma Lee

Date:_____ 2022/04/14 _____

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 70MHz 0.8MHz BW (SMD 13.3×6.5 mm)
MODEL NO.: TB0693A Rev No.2.0

## A. MAXIMUM RATING:

1. Operating temperature range: -40°C to 80°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V
5. Moisture Sensitivity Level: Level 1(MSL1)

RoHS Compliant
Lead free
Lead-free soldering

**E**lectrostatic **S**ensitive **D**evice

## B. ELECTRICAL CHARACTERISTICS :

| ELECTRICAL PARAMETERS | | | VALUE | | |
|---|---|---|---|---|---|
| Parameter | Sign | Units | MIN | TYP | MAX |
| Center Frequency | $F_0$ | MHz | 69.9 | 70 | 70.1 |
| Insertion Loss | IL | dB | - | 9.2 | 11.5 |
| -1 dB Pass Bandwidth | BW1 | MHz | 0.8 | 0.92 | - |
| -3 dB Pass Bandwidth | BW3 | MHz | 1.1 | 1.2 | - |
| -40 dB Pass Bandwidth | BW40 | MHz | - | 2.2 | 2.3 |
| Amplitude Ripple Fc+/- 0.30MHZ | AR | dB | - | 0.7 | 1.0 |
| Group Delay Time Deviation in Pass Band Fc+/- 0.30MHZ | GDV | nsec | - | 350 | 400 |
| Relative Attenuation | | | | | |
| DC ~ 65MHz | dB | UR | 45 | 55 | - |
| 75MHz ~ 200MHz | dB | UR | 45 | 55 | - |
| Source and Load Impedances | RS/RL | Ohm | | 50 | |

## C. FREQUENCY CHARACTERISTICS :

(1) Wide band Response:(span 10MHz)

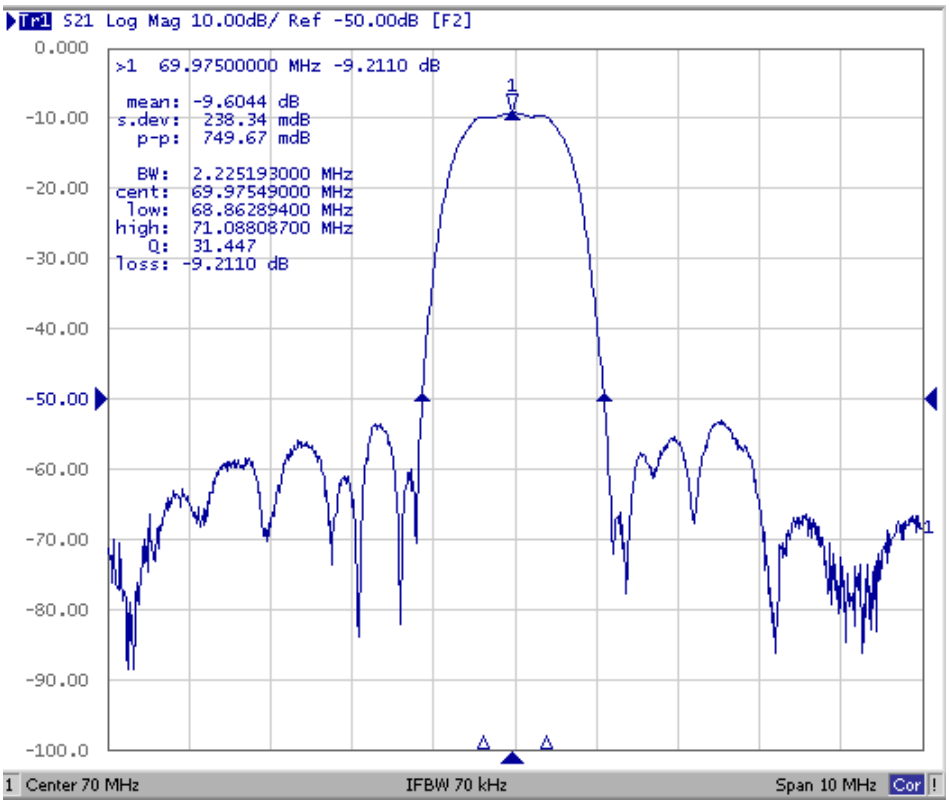



Fig1. Horizontal: 1MHz/Div Vertical: 10dB/Div

(2) Pass band Response:

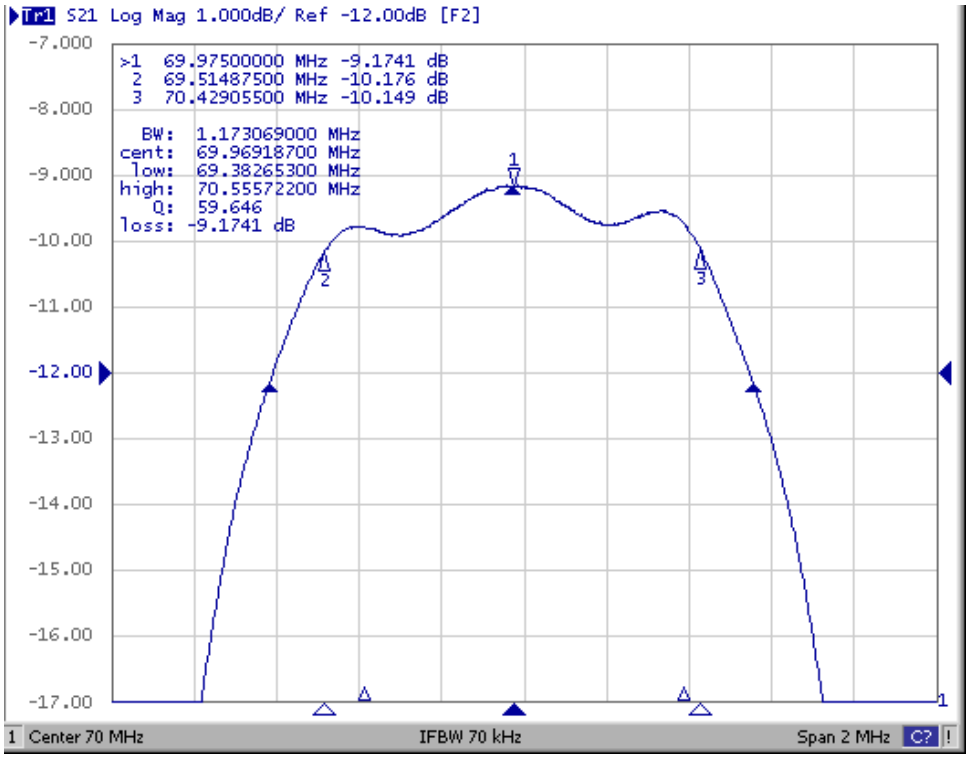



Fig2. Horizontal: 0.2MHz/Div Vertical: 1dB/Div

(3) Group Time Delay response:

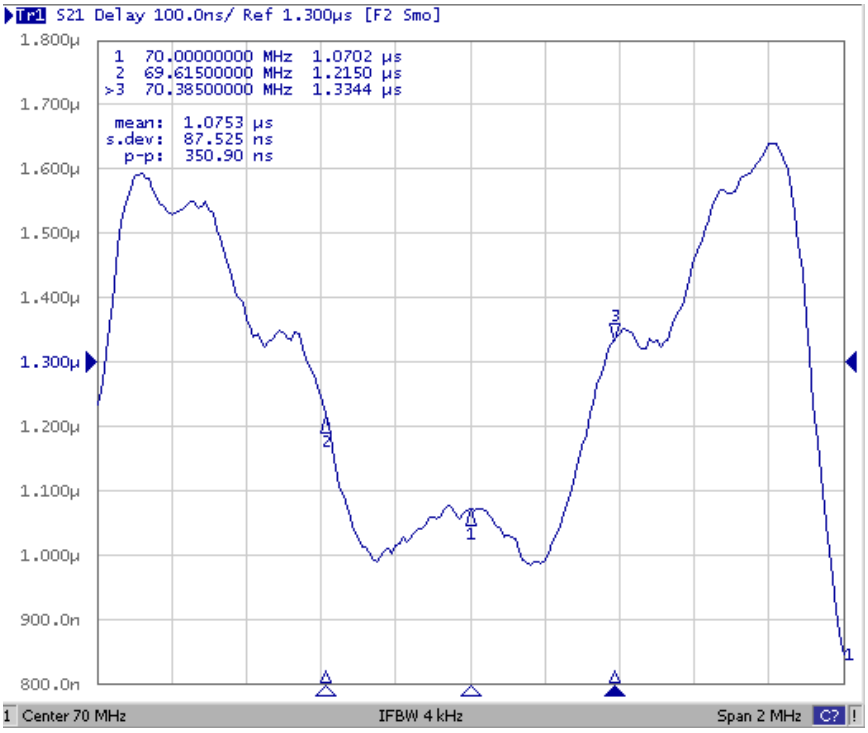
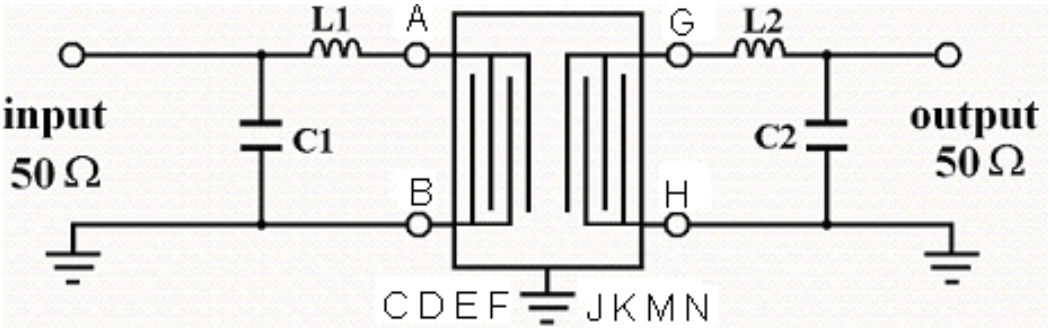



Fig3. Horizontal: 0.2MHz/Div Vertical: 100ns/Div

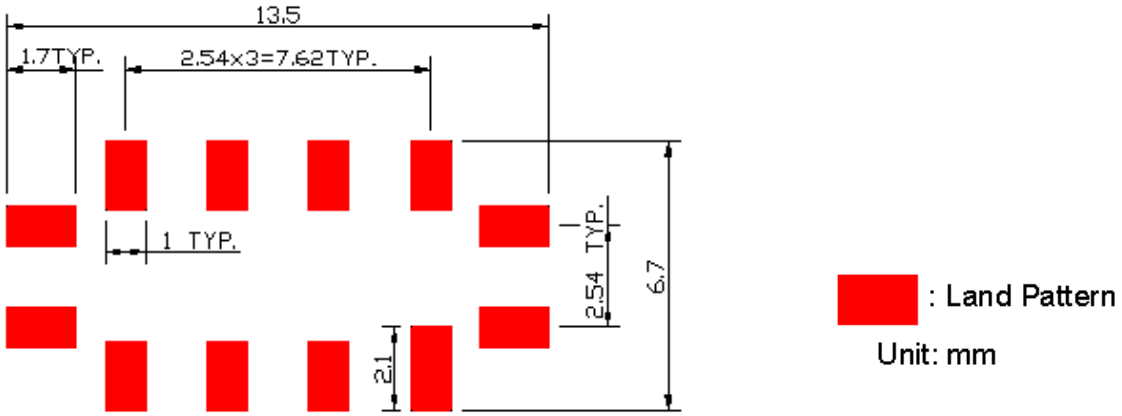
## D. MATCHING CIRCUIT:



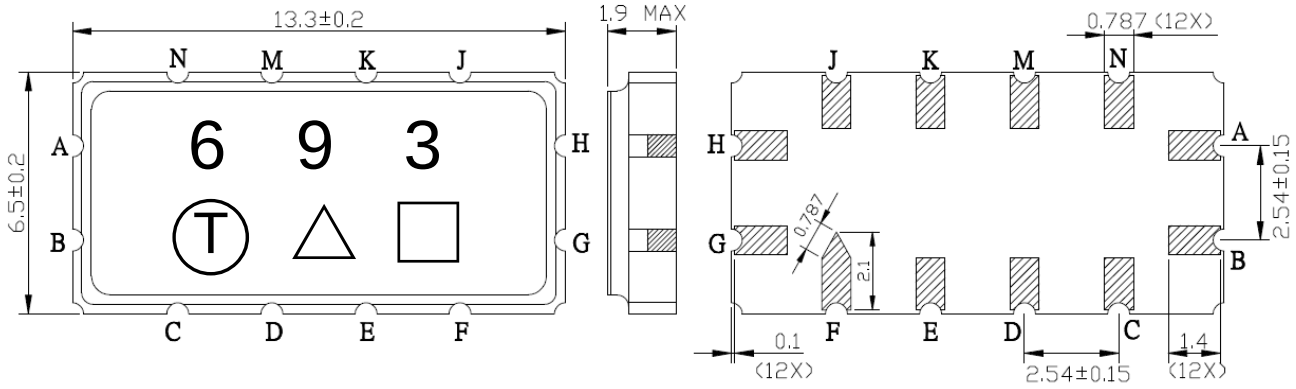

**L1 = 330~480 nH, C1 = 82 pF L2 = 330~480 nH, C2 = 82 pF**

**Zin=50ohm Zout=50ohm**

## E. PCB FOOTPRINT:



## F. OUTLINE DRAWING:




Pin A –RF input

Pin B –RF input ground

Pin G –RF output

Pin H –RF output ground

Pin C, D, E, F, J, K, M, N – Ground

△ : Product / Year Code

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

Unit : mm

Product / Year Code- 4year cycle

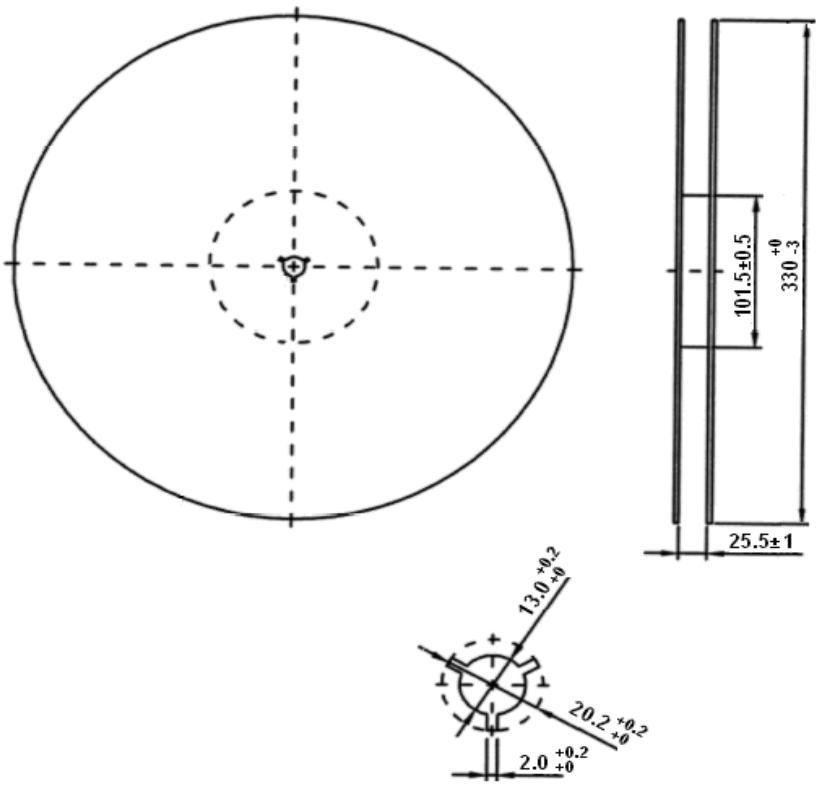
| Year | 2021<br>2025 | 2022<br>2026 | 2023<br>2027 | 2024<br>2028 |
|---|---|---|---|---|
| Product Code | B | b | B | b |

Week Code Table

| WK01 | WK02 | WK03 | WK04 | WK05 | WK06 | WK07 | WK08 | WK09 | WK10 | WK11 | WK12 | WK13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| **WK14** | **WK15** | **WK16** | **WK17** | **WK18** | **WK19** | **WK20** | **WK21** | **WK22** | **WK23** | **WK24** | **WK25** | **WK26** |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| **WK27** | **WK28** | **WK29** | **WK30** | **WK31** | **WK32** | **WK33** | **WK34** | **WK35** | **WK36** | **WK37** | **WK38** | **WK39** |
| a | b | c | d | e | f | g | h | i | j | k | l | m |
| **WK40** | **WK41** | **WK42** | **WK43** | **WK44** | **WK45** | **WK46** | **WK47** | **WK48** | **WK49** | **WK50** | **WK51** | **WK52** |
| n | o | p | q | r | s | t | u | v | w | x | y | z |

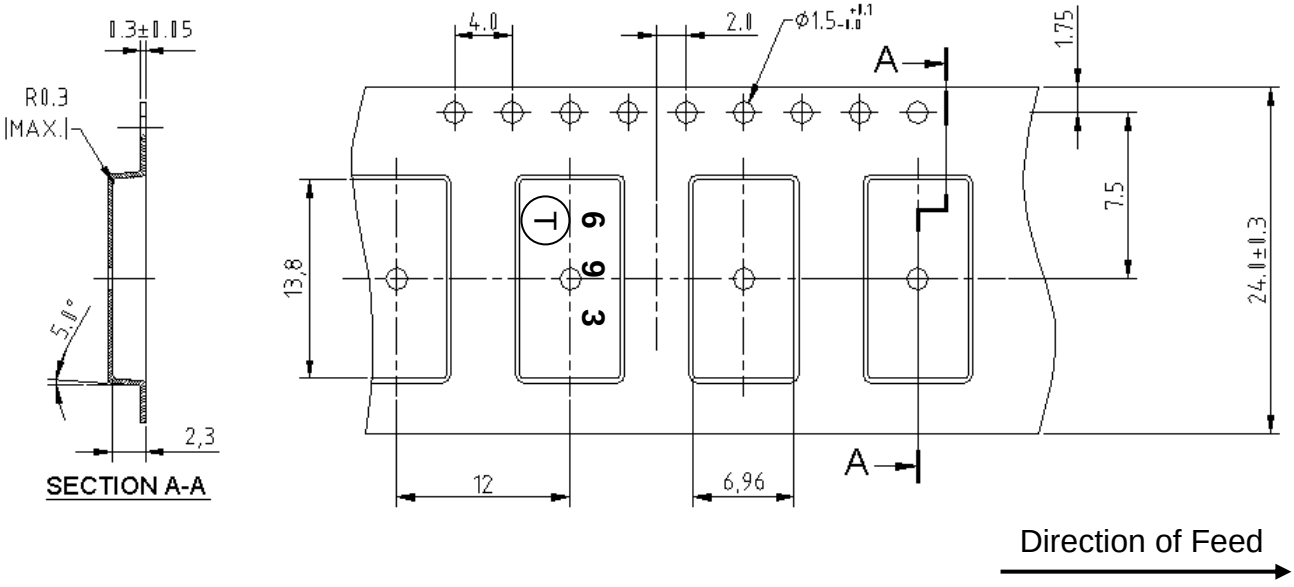
## G. PACKING:

1. REEL DIMENSION **(Please refer to FR-75D10 for packing quantity)**




Unit: mm

2. TAPE DIMENSION



## H. 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.