



# TAI-SAW TECHNOLOGY CO., LTD.

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## Approval Sheet For Product Specification

Issued Date: Oct, 30, 2000

Product Name: SAW Filter 1575.42 MHz SMD 3.8X3.8 mm for GPS

TST Parts No.: TA0176A

Customer Parts No.: \_\_\_\_\_

Company: \_\_\_\_\_

Division: \_\_\_\_\_

Approved by : \_\_\_\_\_

Date: \_\_\_\_\_

Checked by: \_\_\_\_\_ Bob Chau

Approval by: \_\_\_\_\_ Francis Chen

Date: \_\_\_\_\_ 10,30,2000



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## SAW Filter 1575.42 MHz for GPS ~ Low Loss ~

MODEL NO.: TA0176A

REV. NO.:1

### A. MAXIMUM RATING:

1. Input Power Level: 10 dB<sub>m</sub>
2. DC voltage: 5 V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -50°C to +100°C

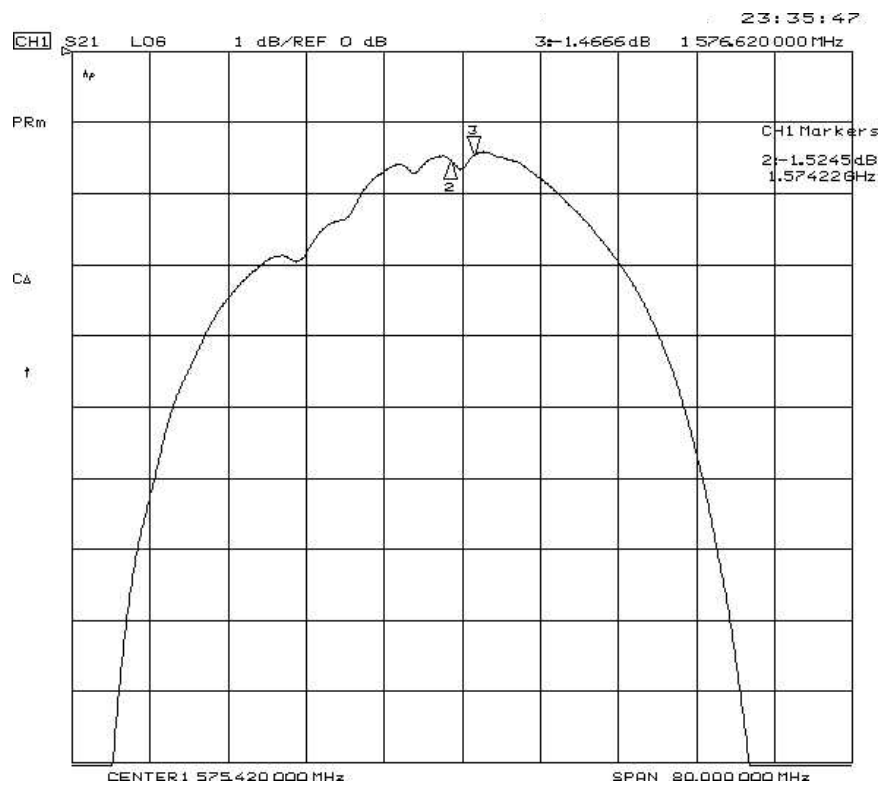
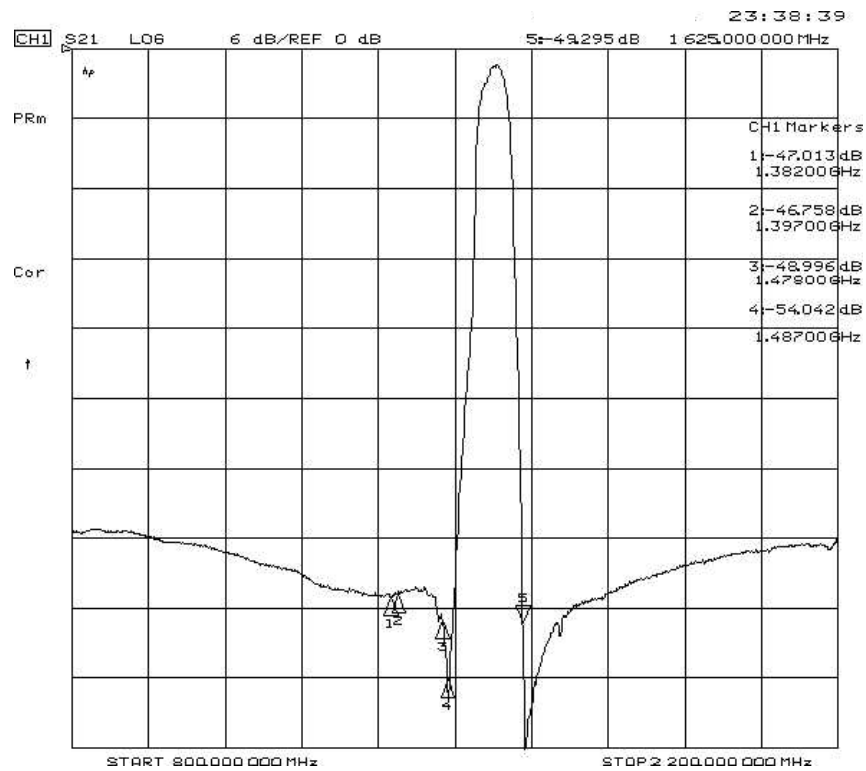
RoHS Compliant  
Lead free  
Lead-free soldering

### B. ELECTRICAL CHARACTERISTICS:

| Item                                           |                                     | Min. | Typ.    | Max. |
|------------------------------------------------|-------------------------------------|------|---------|------|
| <b>Center frequency</b>                        | <b>F<sub>c</sub></b> (dB)           | -    | 1575.42 | -    |
| <b>Insertion loss</b>                          | 1574.22 ~1576.62 MHz <b>IL</b> (dB) | -    | 1.5     | 2.2  |
| <b>Amplitude ripple</b> (p-p)                  | 1574.22 ~ 1576.62 MHz (dB)          | -    | 0.15    | 1.0  |
| <b>Attenuation</b> (Reference level from 0 dB) |                                     |      |         |      |
| DC ~ 1382                                      | MHz (dB)                            | 37   | 40      | -    |
| 1382 ~ 1397                                    | MHz ( IF Image frequency ) (dB)     | 40   | 47      | -    |
| 1397 ~ 1478                                    | MHz (dB)                            | 40   | 45      | -    |
| 1478 ~ 1487                                    | MHz ( Local frequency ) (dB)        | 40   | 47      | -    |
| 1487 ~ 1500                                    | MHz (dB)                            | 30   | 52      | -    |
| 1625 ~ 1640                                    | MHz (dB)                            | 30   | 49      | -    |
| 1640 ~ 2000                                    | MHz (dB)                            | 38   | 42      | -    |
| 2000 ~ 2800                                    | MHz (dB)                            | 33   | 41      | -    |
| 2800 ~ 3000                                    | MHz (dB)                            | 30   | 34      | -    |
| <b>VSWR</b> within 1574.22 ~1576.62 MHz        |                                     | -    | 1.1     | 2.0  |
| <b>Source impedance</b>                        | <b>Z<sub>s</sub></b> (Ω)            | -    | 50      | -    |
| <b>Load impedance</b>                          | <b>Z<sub>L</sub></b> (Ω)            | -    | 50      | -    |

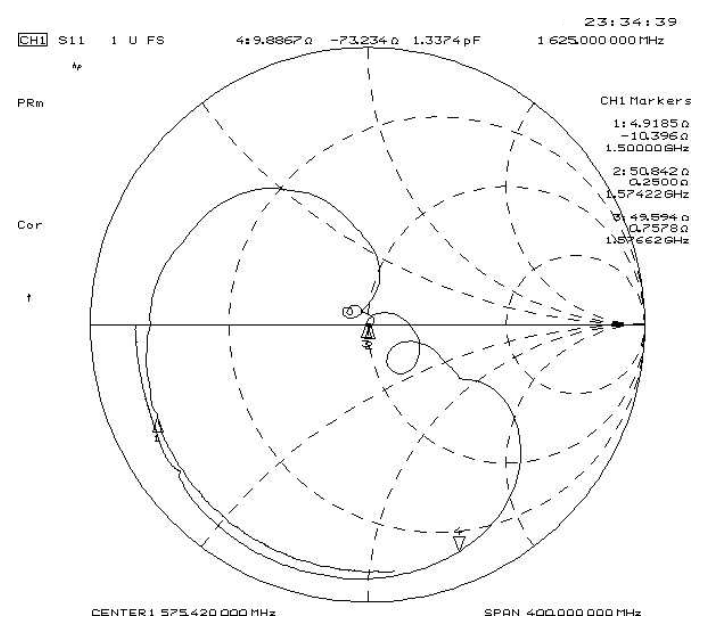
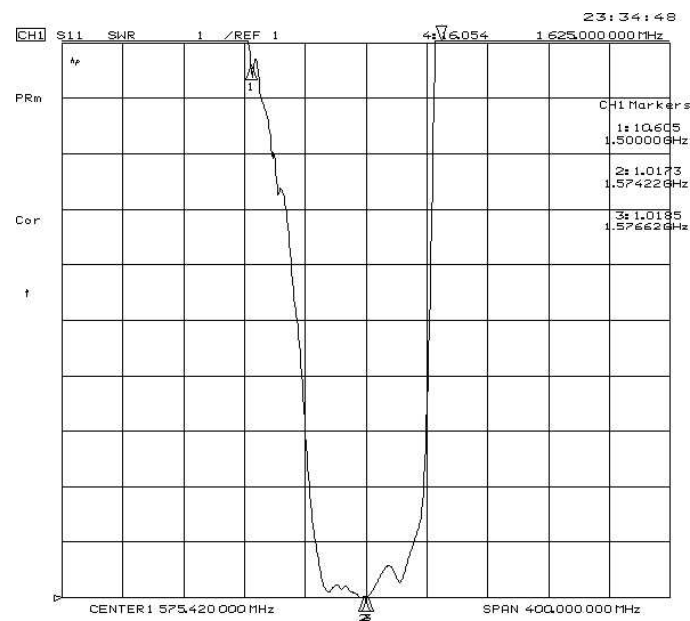
Note1. No matching network required for operation at 50 Ω

## C. Frequency Characteristics :

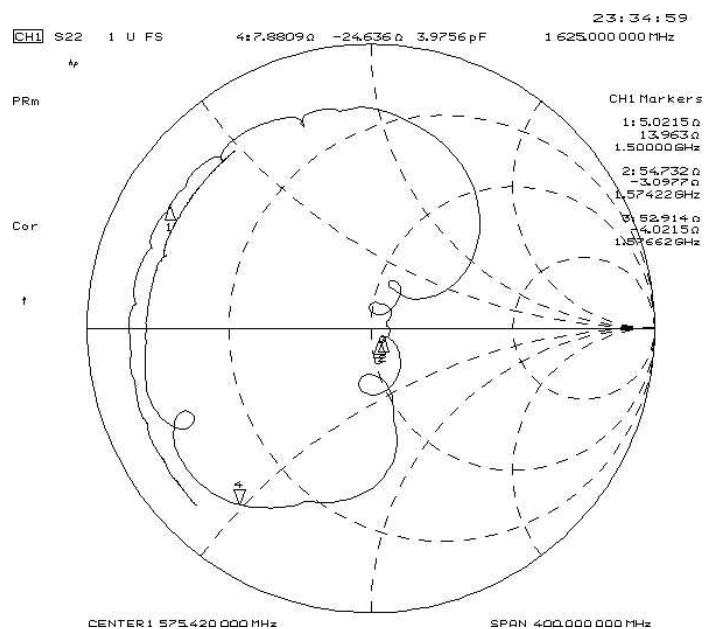
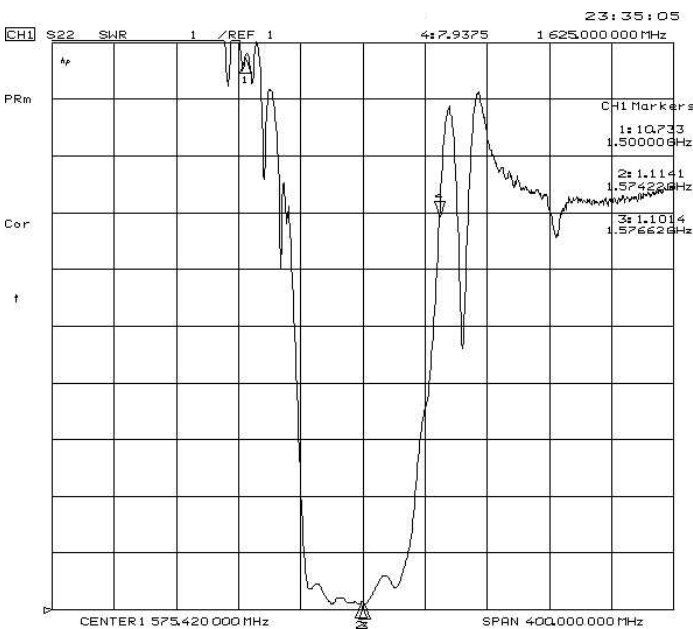


D. Reflections Functions :

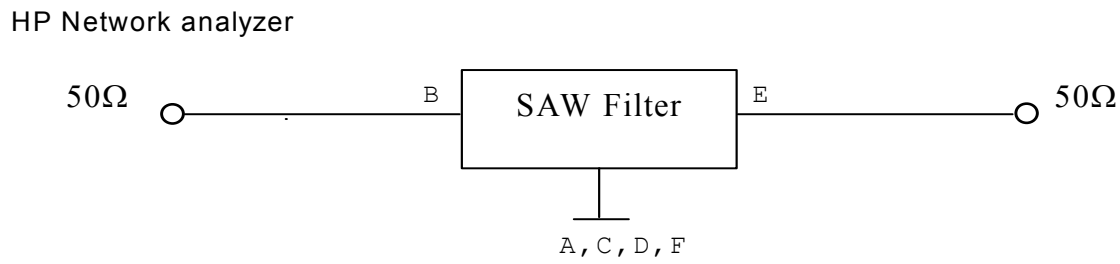
S11 VSWR



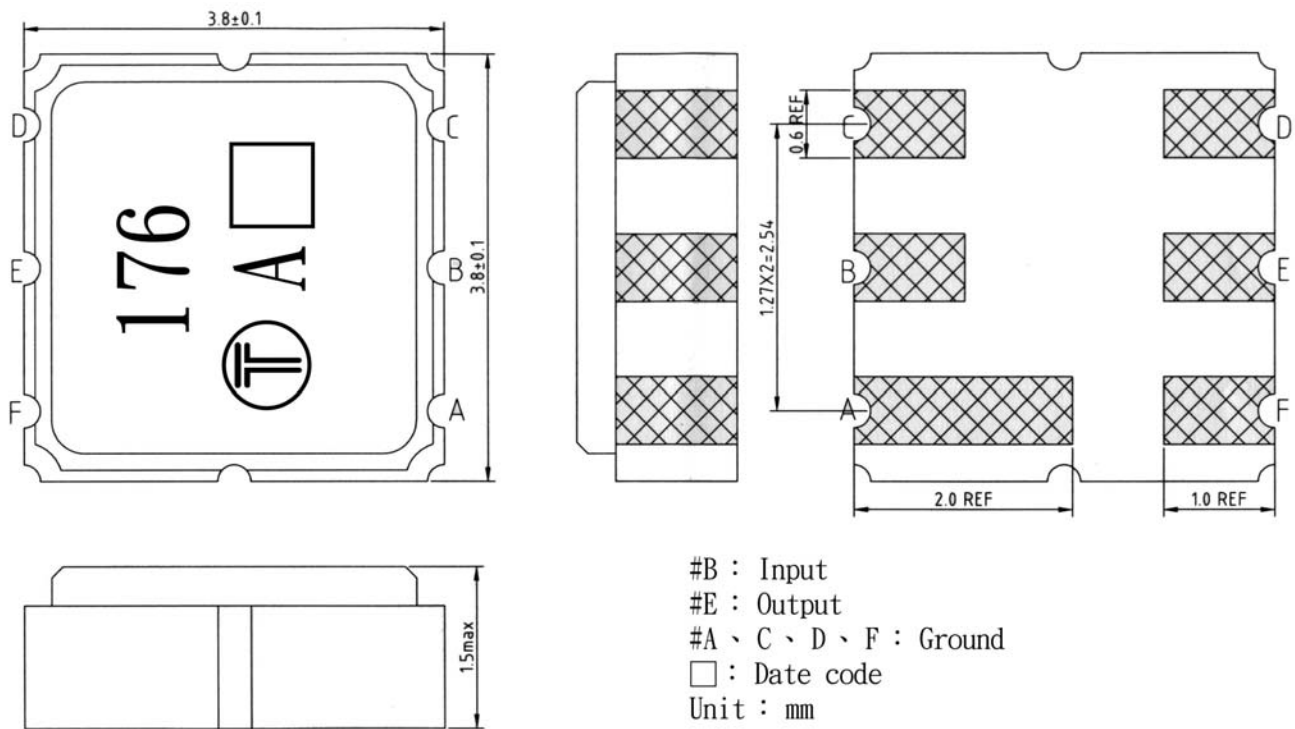
S22 VSWR



### E. MEASUREMENT CIRCUIT:



### F.OUTLINE DRAWING:



## 1. REEL DIMENSION

Technical drawing of a circular plate. The main view shows a large circle with a central hole. A dashed circle indicates the hole's boundary. A leader line points from the text "See DETAIL 'A'" to the central hole. To the right, a side view shows the plate's thickness and the hole's depth. Dimensions include a total thickness of 12.0, a hole depth of 100 REF., and a hole diameter of 330 REF. Below the main view, a detailed view of the hole (Detail A) shows a circular hole with a diameter of 13.0 and a depth of 20.2. The hole is surrounded by a flange with a diameter of 2.0.

Section A-A