



# 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](mailto:tstsales@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

## Approval Sheet For Product Specification

Issued Date: Dec, 31, 2003

Product Name: SAW Filter 1842.5 MHz for Mobile Communication

TST Parts No.: TA0318A

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

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

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

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

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

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

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

Date: \_\_\_\_\_ 12,31,2003



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## SAW Filter 1842.5 MHz for Mobile Communication

MODEL NO.: TA0318A

REV. NO.:1

### A. MAXIMUM RATING:

1. Operating Temperature: -20°C ~ +75°C

2. Storage Temperature: -40°C ~ +85°C

RoHS Compliant  
Lead free  
Lead-free soldering

### B. ELECTRICAL CHARACTERISTICS :

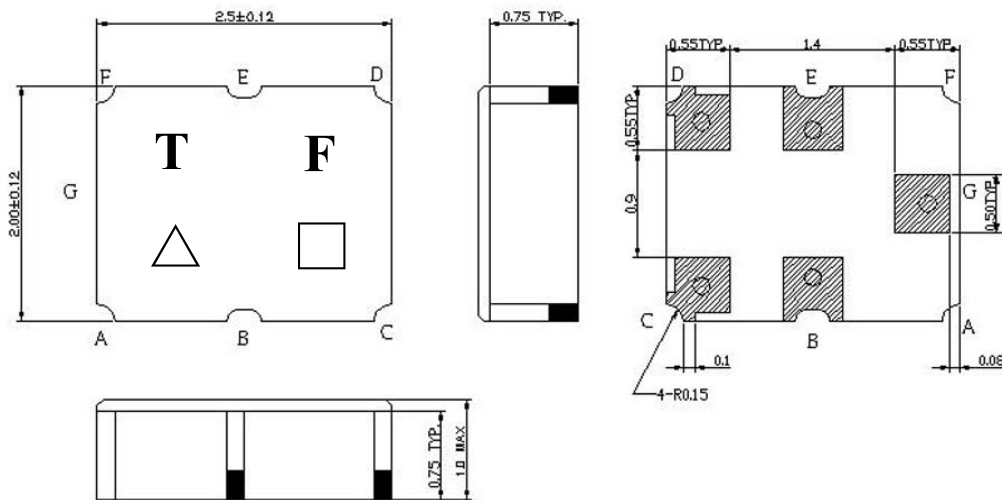
Singled to Balanced operation

Terminating source impedance :  $Z_s = 50 \ \Omega$

Terminating load impedance :  $Z_L = 150 \ \Omega // 22 \text{ nH}$

| Item                                                                                       | Value |        |      | Note |
|--------------------------------------------------------------------------------------------|-------|--------|------|------|
|                                                                                            | Min.  | Typ.   | Max. |      |
| Center frequency $F_c$ MHz                                                                 | -     | 1842.5 | -    | -    |
| Insertion loss( 1805~1880 MHz) I.L. (dB)                                                   | -     | 3.0    | 4.0  | -    |
| Ripple ( 1805~1880 MHz) (dB)                                                               | -     | 0.8    | 2.1  | -    |
| Input VSWR ( 1805~1880 MHz)                                                                | -     | 1.9    | 2.7  | -    |
| Output VSWR ( 1805~1880 MHz)                                                               | -     | 2.2    | 2.7  | -    |
| <b>Attenuation:</b> ( Reference level from 0 dB)                                           |       |        |      |      |
| 0 ~ 1200 MHz (dB)                                                                          | 40    | 49     | -    | -    |
| 1200 ~ 1705 MHz (dB)                                                                       | 30    | 34     | -    | -    |
| 1705 ~ 1785 MHz (dB)                                                                       | 9     | 14     | -    | -    |
| 1920 ~ 1980 MHz (dB)                                                                       | 10    | 22     | -    | -    |
| 1980 ~ 2200 MHz (dB)                                                                       | 20    | 23.5   | -    | -    |
| 2200 ~ 3000 MHz (dB)                                                                       | 30    | 36     | -    | -    |
| 3000 ~ 5000 MHz (dB)                                                                       | 40    | 50     | -    | -    |
| 5000 ~ 6000 MHz (dB)                                                                       | 35    | 43     | -    | -    |
| <b>Symmetry in band</b> (referenced to the matched operating condition)                    |       |        |      |      |
| Output amplitude balance ( $ S_{31}/S_{21} $ ) ( 1805~1880 MHz) (dB)                       | -2    | 0      | 2    | -    |
| Output phase balance ( $\Phi(S_{31}) - \Phi(S_{21}) + 180^\circ$ ) ( 1805~1880 MHz) degree | -12   | 0      | 12   | -    |

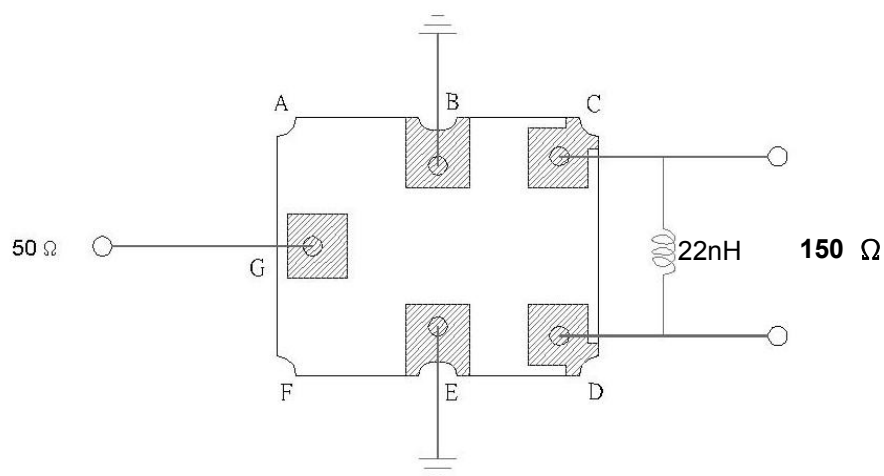
### C. OUTLINE DRAWING:



### Pin configuration

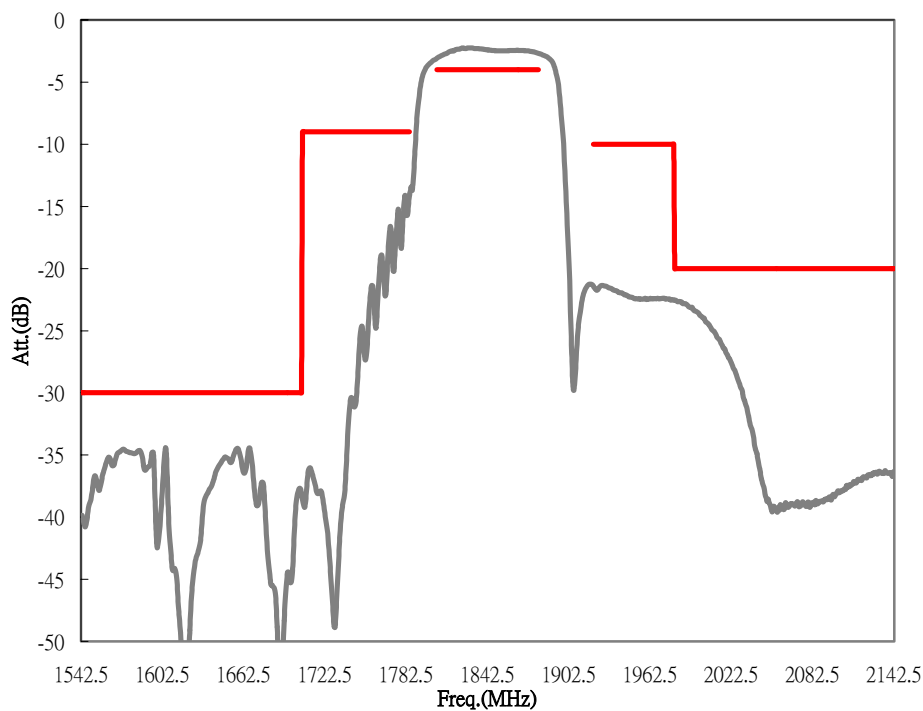
- G : Unbalance input
- C,D : Balance output
- B,E : Ground
- △ : Year code
- : Date code
- Unit : mm

### D. MEASUREMENT CIRCUIT:

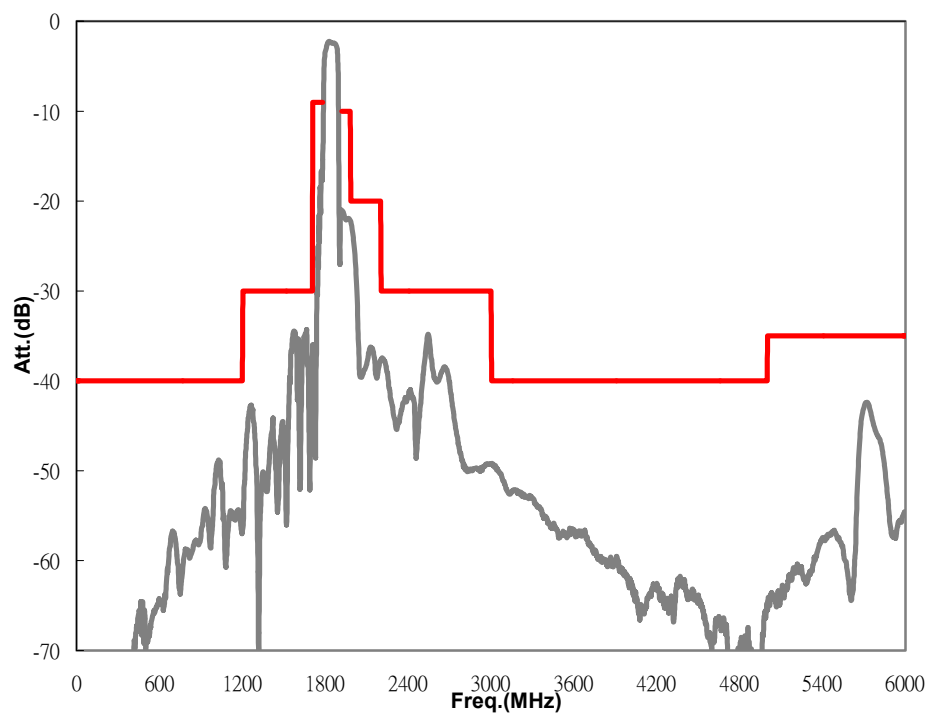


## E. FREQUENCY CHARACTERISTICS:

### 1. Transfer function (25 °C)

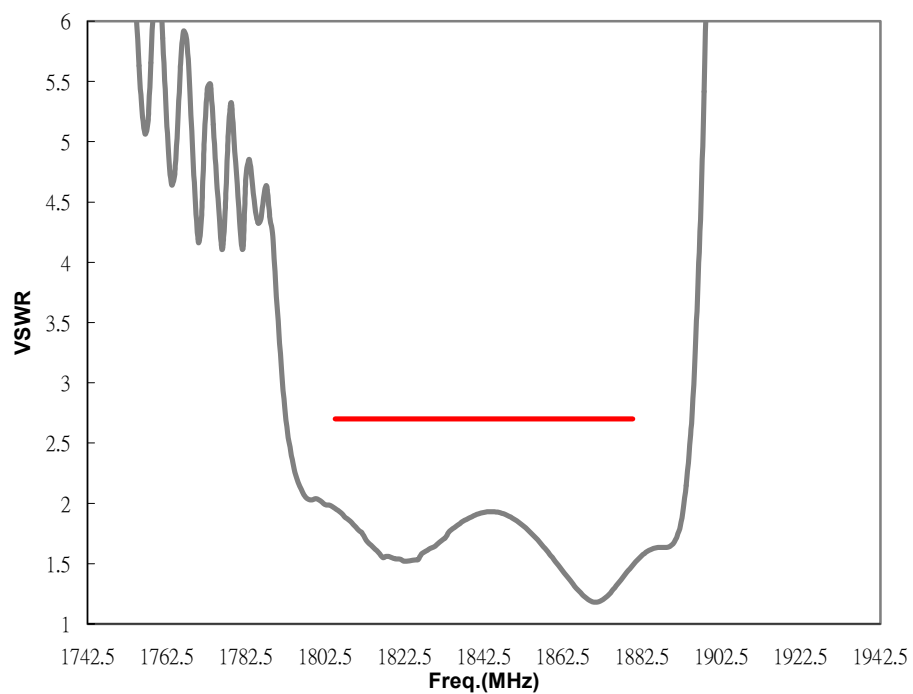


(wideband)

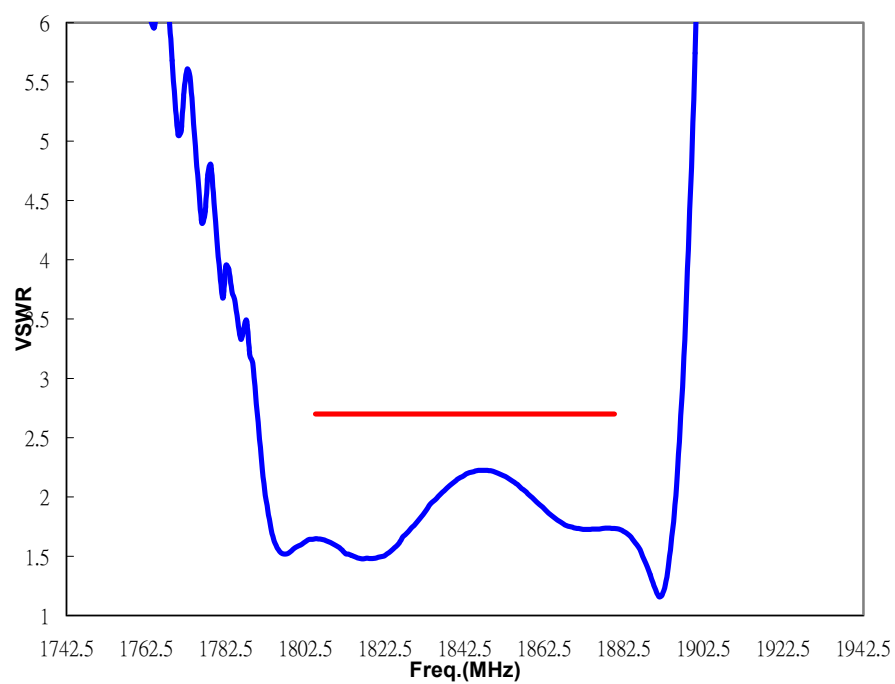


## 2. VSWR (25 °C)

### Unbalance Input

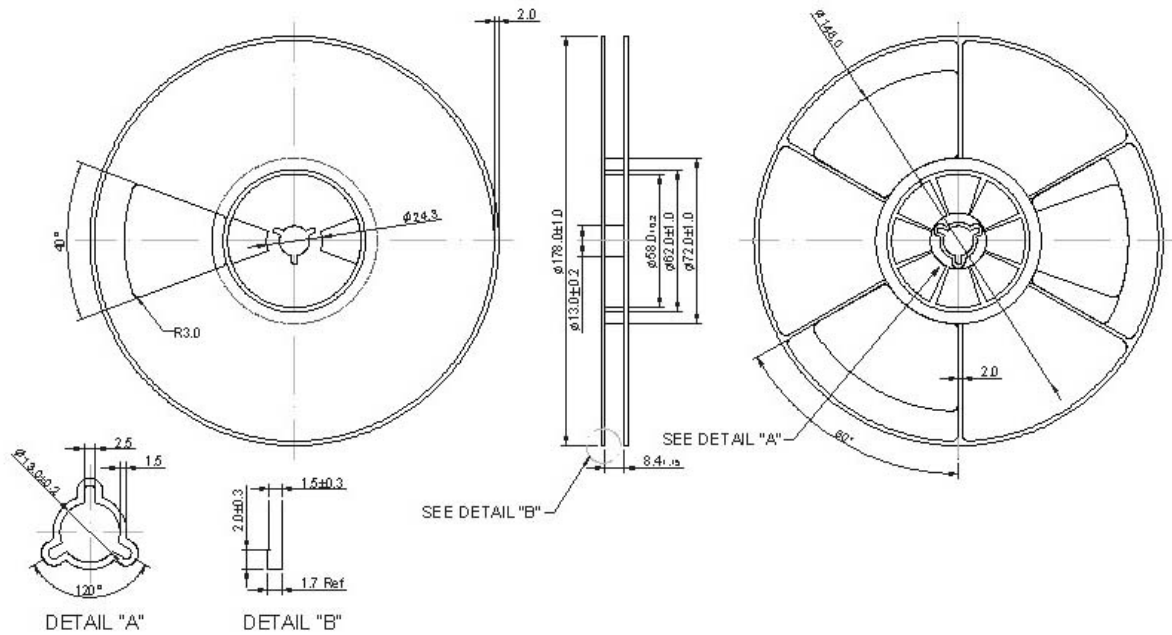


### Balance Output

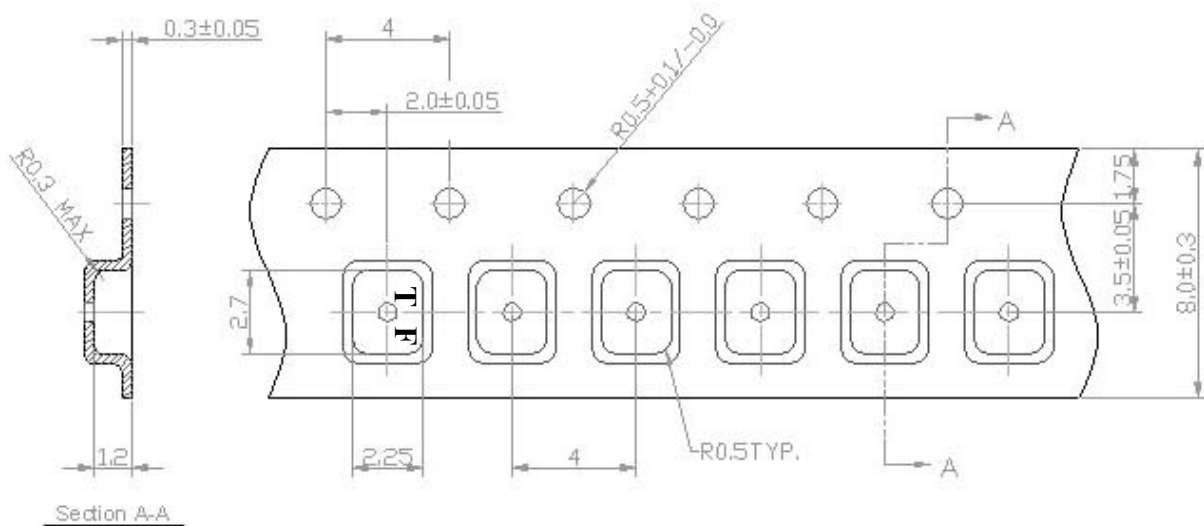


## F. PACKING:

### 1. REEL DIMENSION



### 2. TAPE DIMENSION



### G. Reflow Profile:

1. Preheating shall be fixed at 140 ~ 160 °C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150 °C shall be 30 seconds min.
3. Heating shall be fixed at 200 °C for 50 ~ 60 seconds and at 230±10 °C peak.

