



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,  
Taoyuan, 324, Taiwan, R.O.C.

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## Product Specifications Approval Sheet

Product Description: SAW Filter 403.5 MHz SMD 3.8x3.8 mm

TST Part No.: TA1135B

Customer Part No.: \_\_\_\_\_

|                             |
|-----------------------------|
| Customer signature required |
| Company: _____              |
| Division: _____             |
| Approved by : _____         |
| Date: _____                 |

Checked by: \_\_\_\_\_ Marco Huang *Marco Huang*

Approved by: \_\_\_\_\_ Bob Chau *Bob Chau*

Date: \_\_\_\_\_ 10/15/2015

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 403.5 MHz

MODEL NO.: TA1135B

REV. NO.:1

### A. MAXIMUM RATING:

1. Input Power Level: **20 dB<sub>m</sub>**
2. DC voltage: 3 V
3. Operating Temperature: -10°C to 60°C
4. Storage Temperature: -40°C to +85°C

RoHS Compliant  
Lead free  
Lead-free soldering

**Electrostatic Sensitive Device**

### B. ELECTRICAL CHARACTERISTICS:

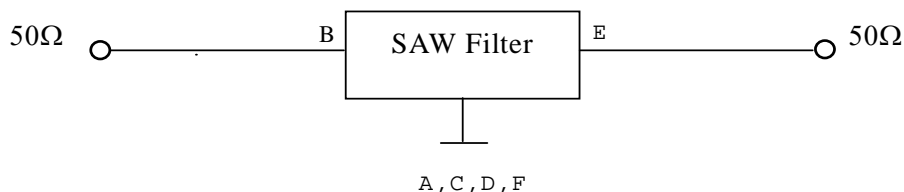
| Item  |                                    | Min. | Typical | Max. |
|---|------------------------------------|------|---------|------|
| Center frequency  | F <sub>c</sub> MH                  | -    | 403.5   | -    |
| Minimum Insertion loss                                  | 402 ~ 405 MHz IL <sub>min</sub> dB | -    | 1.5     | 2.5  |
| Passband Ripple   | 402 ~ 405 MHz                      | -    | 0.3     | 1.25 |
| 3dB Bandwidth   | BW <sub>-3dB</sub> MHz             | 3    | 7.6     | -    |
| Attenuation (Reference level from IL <sub>min</sub> dB) |                                    |      |         |      |
| 358.5   | MHz dB                             | 40   | 64      | -    |
| 358.5~384.0   | MHz dB                             | 35   | 59      | -    |
| 415.0~423.0   | MHz dB                             | 25   | 36      | -    |
| 423.0~503.0   | MHz dB                             | 40   | 59      | -    |
| Temperature coefficient of frequency                    | ppm/k                              |      | -37     |      |
| Source impedance  | Z <sub>s</sub> Ω                   | -    | 50      | -    |
| Load impedance  | Z <sub>L</sub> Ω                   | -    | 50      | -    |

Note1: IL<sub>min</sub> is the minimum of the pass band attenuation. The center frequency F<sub>c</sub> is the mean value of the upper and lower frequencies at the 3dB filter attenuation level relative to the IL<sub>min</sub>.

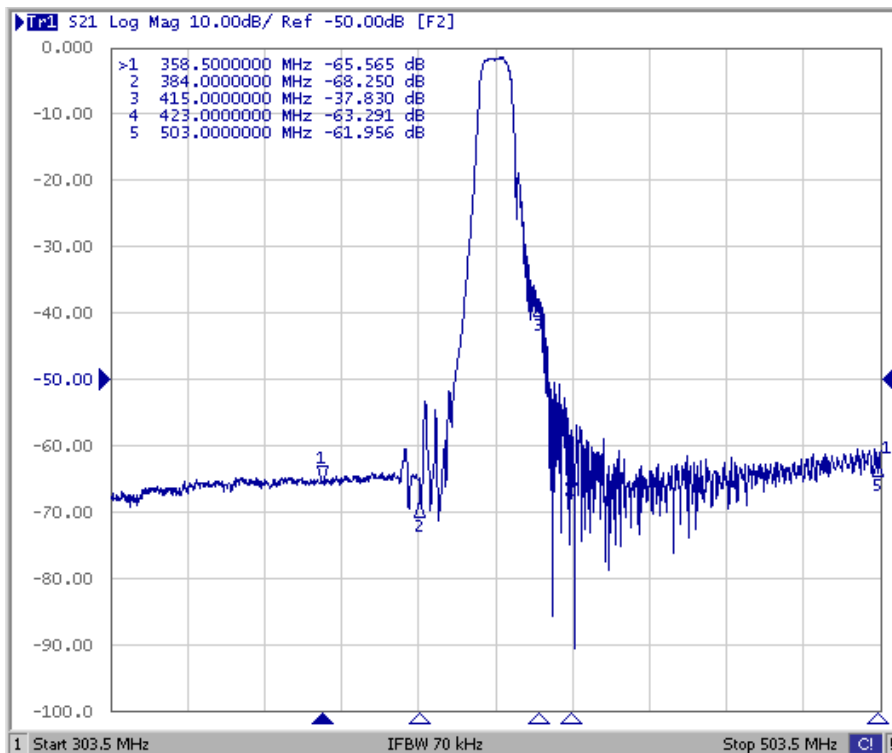
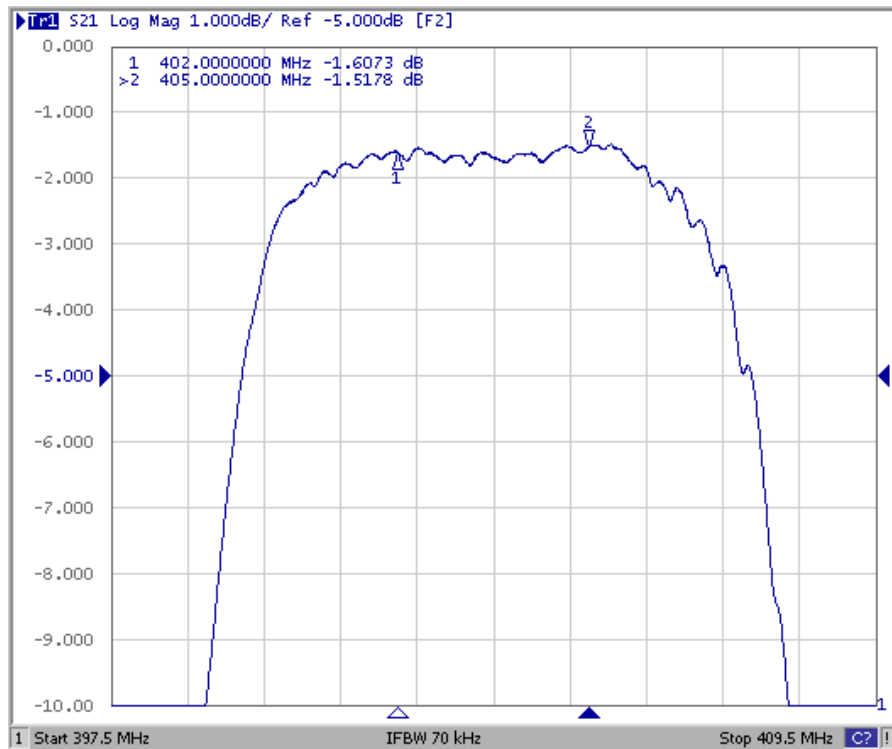
Note2: The room temperature, Tr, is 25° C. FTC is temperature coefficient of frequency. The nominal frequency at temperature, Tc, may be calculated from  $f = F_c [1 - FTC(T_r - T_c)]$ .

### C. MEASUREMENT CIRCUIT:

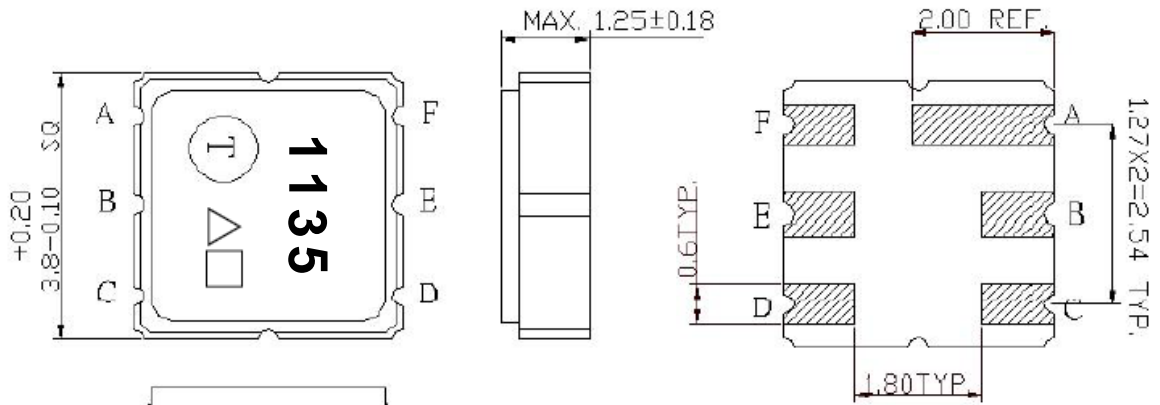
HP Network analyzer



## D. FREQUENCY CHARACTERISTICS:



**E. OUTLINE DRAWING:**

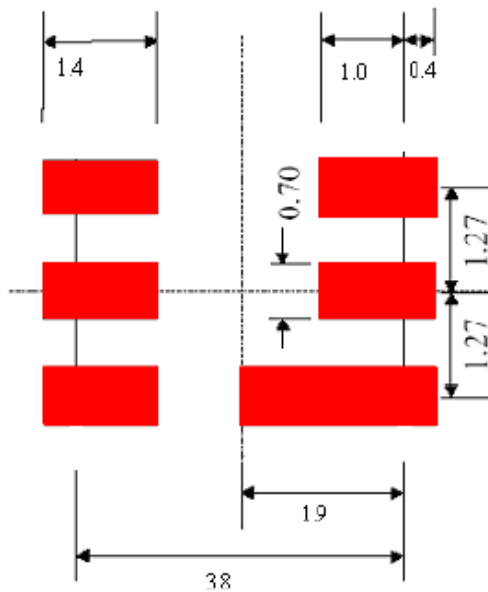


B : Input  
 E: Output  
 A,C,D,F Ground  
 △:Year Code  
 □: Date Code(Follow the table provided by planner each year.)  
 Unit: mm

△ Product Year Code

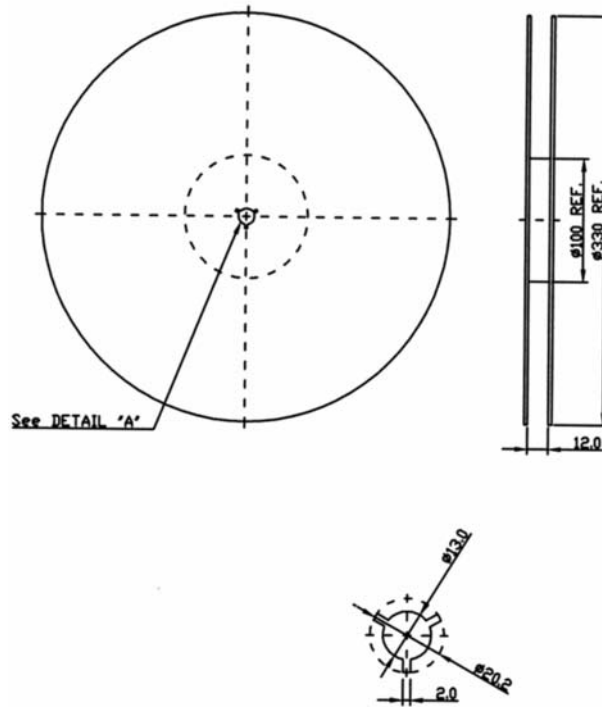
|              |                      |                      |
|--------------|----------------------|----------------------|
| Year         | 2005<br>2007<br>2009 | 2006<br>2008<br>2010 |
| Product Code | A                    | a                    |

**F. PCB FOOTPRINT:**

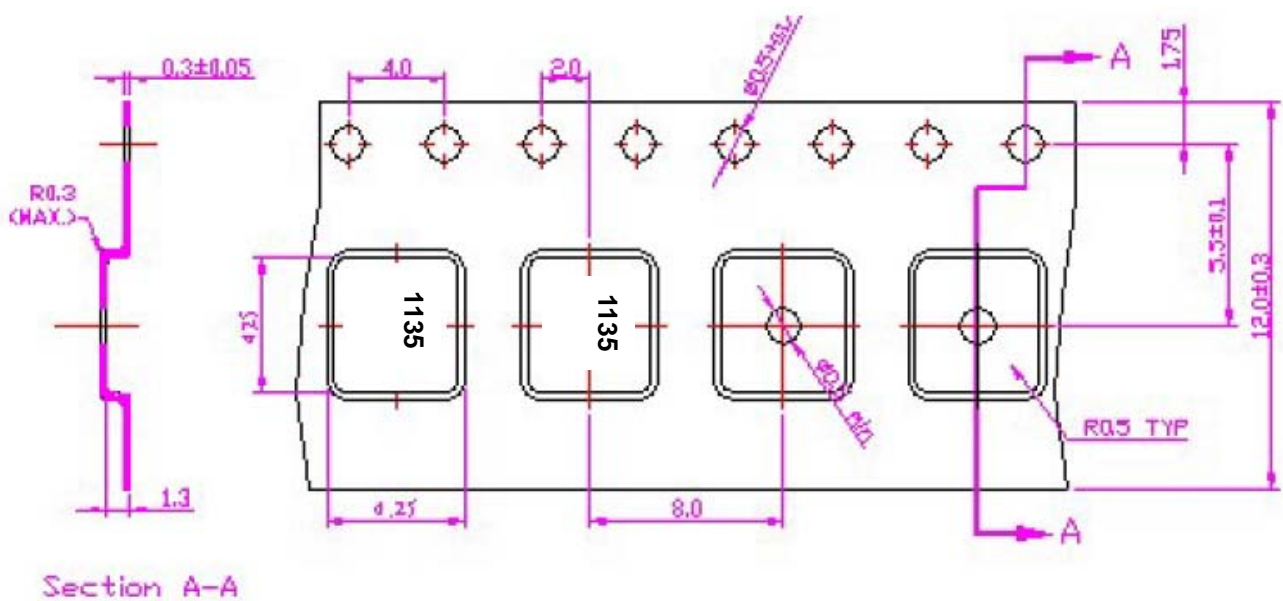


**G. PACKING:**

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



2. TAPE DIMENSION



Direction of Feed



## H. RECOMMENDED REFLOW PROFILE :

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

