



# TAI-SAW TECHNOLOGY CO., LTD.

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

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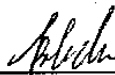
## Product Specifications Approval Sheet


Product Description: SAW Filter 999 MHz SMD 3.0X3.0 mm

TST Part No.: TA1411A

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

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

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

Approved by: \_\_\_\_\_ Francis Chen 

Date: \_\_\_\_\_ 10, 17, 2011

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 999 MHz

MODEL NO.:TA1411A

REV. NO.:1

### A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. DC Voltage : 3V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

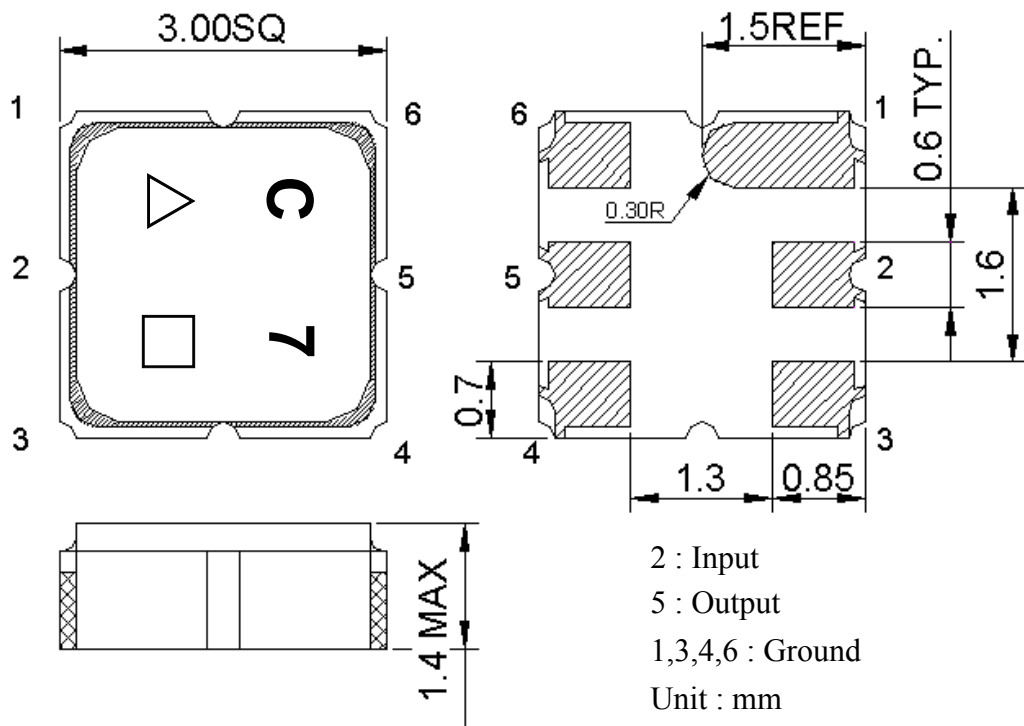
### B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance (single ended) :  $Z_s = 50 \Omega$

Terminating load impedance (single ended) :  $Z_L = 50 \Omega$

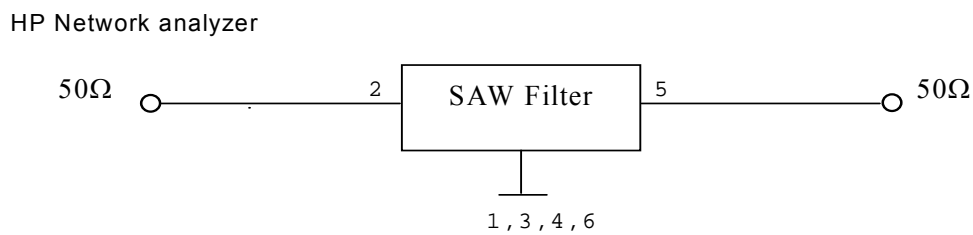
Item	Unit	Min.	Typ.	Max.	Note
<b>Center Frequency</b> <span style="float:right"><b>Fc</b></span>	MHz	-	999	-	-
<b>Insertion Loss</b> (988 ~ 1010 MHz)	dB	-	2.4	3.5	-
<b>Amplitude Variation</b> (988 ~ 1010 MHz)	dB	-	1.35	2.4	-
<b>Amplitude Variation over 3 MHz</b>	dB	-	0.7	1.2	-
<b>VSWR</b> (988 ~ 1010 MHz)		-	1.9	2.4	-
<b>Group Delay Variation over 3 MHz</b>	ns	-	15	23	-
<b>Attenuation</b> (reference level from 0 dB)					
DC~970 MHz	dB	30	36	-	-
970~974 MHz	dB	15	30	-	-
1024~1028 MHz	dB	15	45	-	-
1028~2000 MHz	dB	30	38	-	-
<b>Temperature Coefficient of Frequency</b>	ppm/°C	-	-36	-	-

**C.OUTLINE DRAWING:**

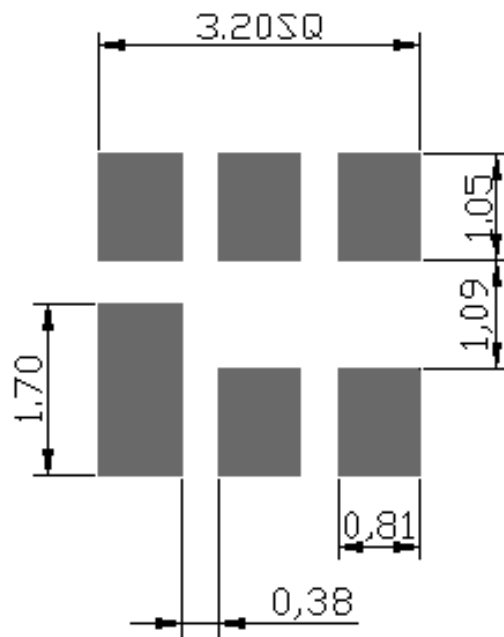


△ : Year Code (2009->9, 2010->0,..., 2018->8)  
 □ : Date Code (W01->A,W02->B,...W27->a,...,W52->z)

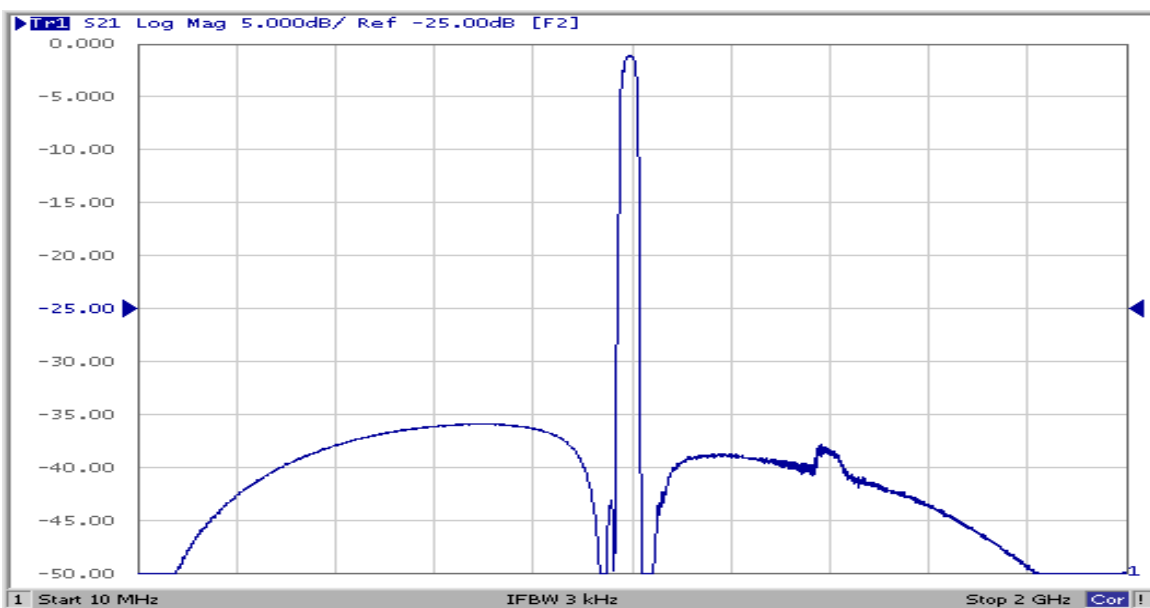
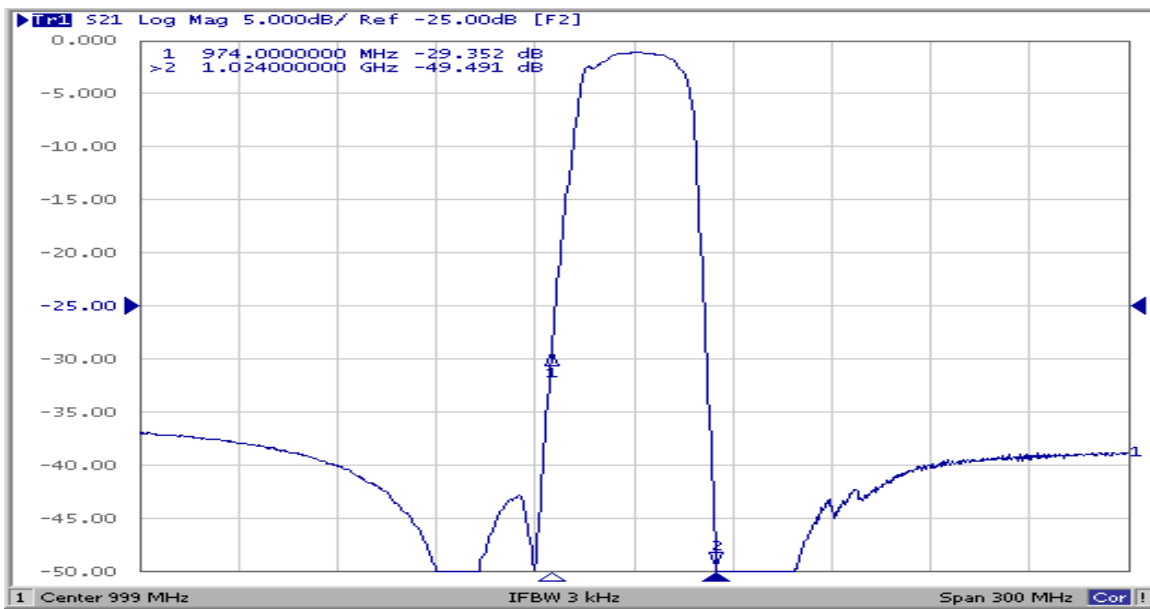
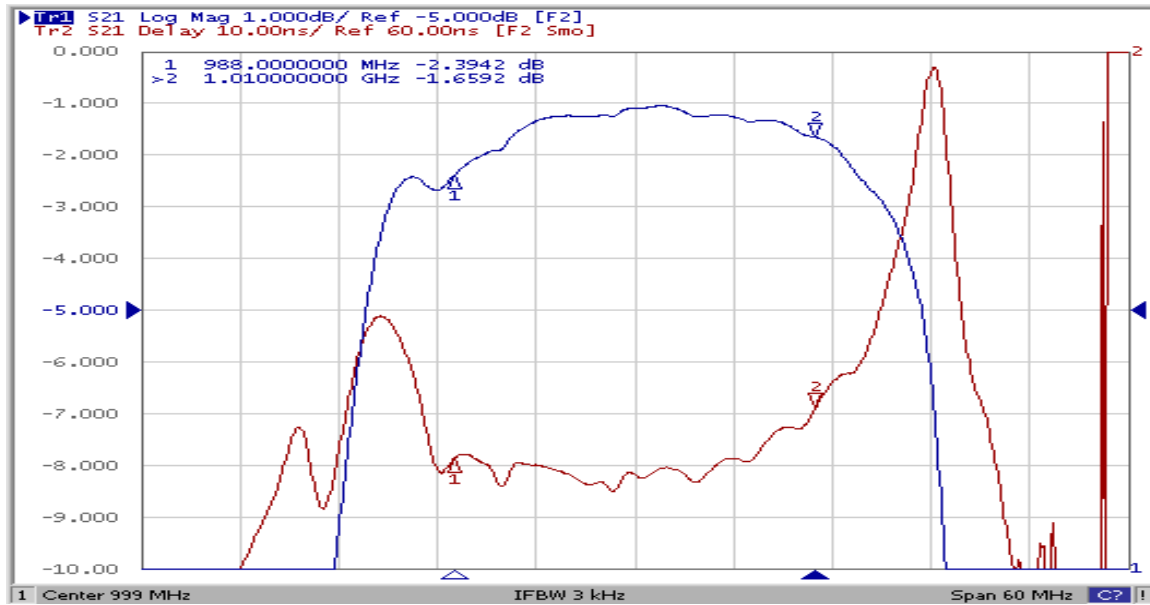
**D. MEASUREMENT CIRCUIT:**



**E. PCB Footprint:**

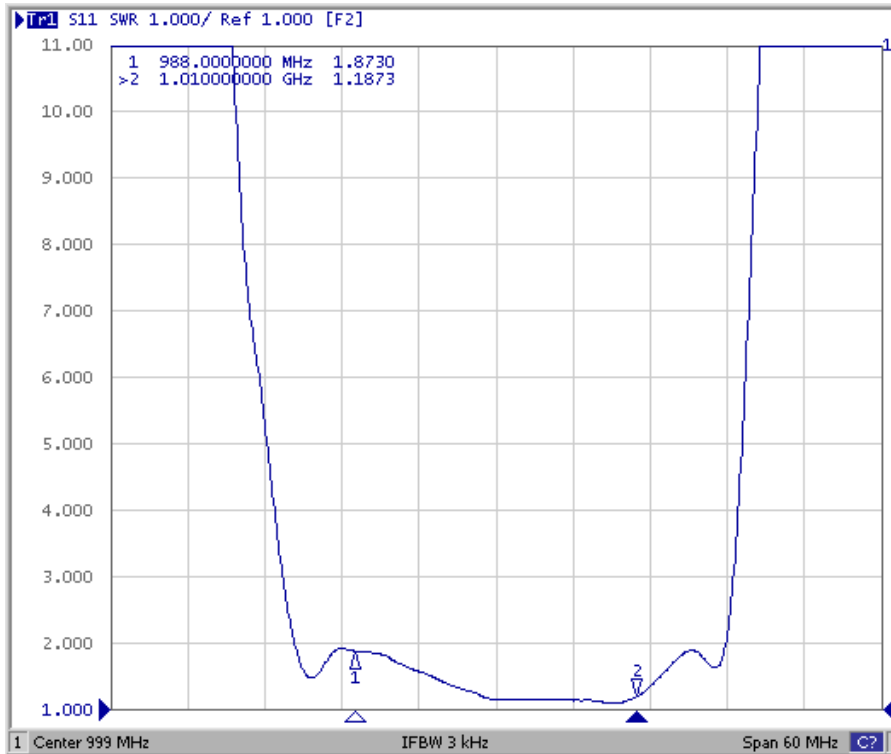


## F. Frequency Characteristics :

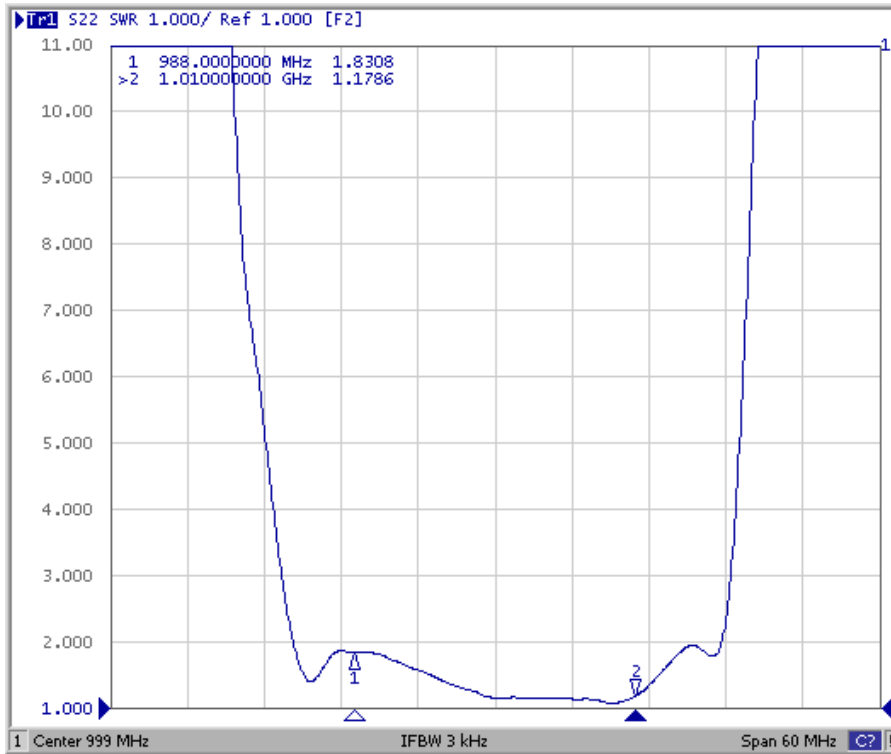


# Reflection Functions :

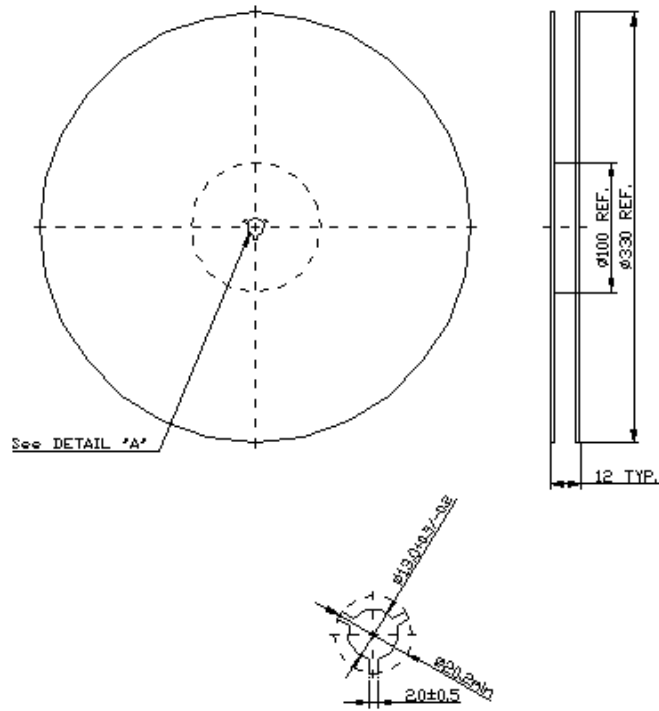
## S11



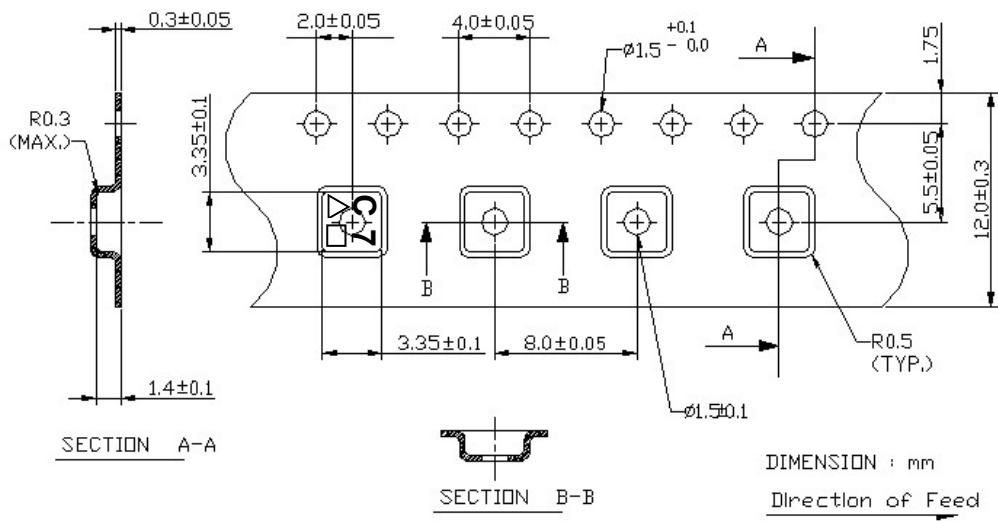
## S22



**G. PACKING:**  
**1. REEL DIMENSION**



**2. TAPE DIMENSION**



## 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 245~260°C peak (min. 10sec).
4. Time : 2 times.

