



# 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: Low-Loss 70MHz IF SAW Filter (BW=9 MHz)

TST Parts No.: TB0213A

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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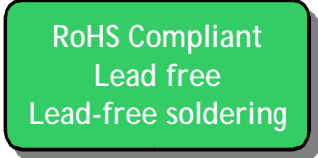
## Low-Loss 70 MHz IF SAW Filter (SMD 13.3x6.5 mm)

Model No.: TB0213A

Rev. No.:3.0

### A. MAXIMUM RATING:

1. Input Power Level: +20 dB<sub>m</sub>
2. Operating Temperature: -10°C to +70°C
3. Storage Temperature: -40°C to +85°C
4. Moisture Sensitivity Level: Level 1(MSL1)



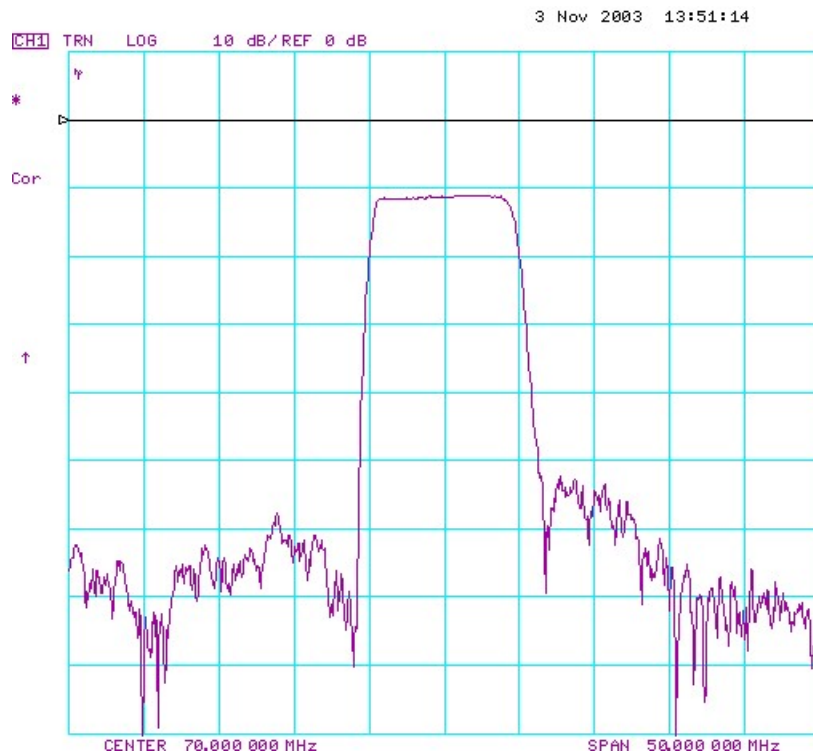
Electrostatic Sensitive Device

### B. ELECTRICAL CHARACTERISTICS:

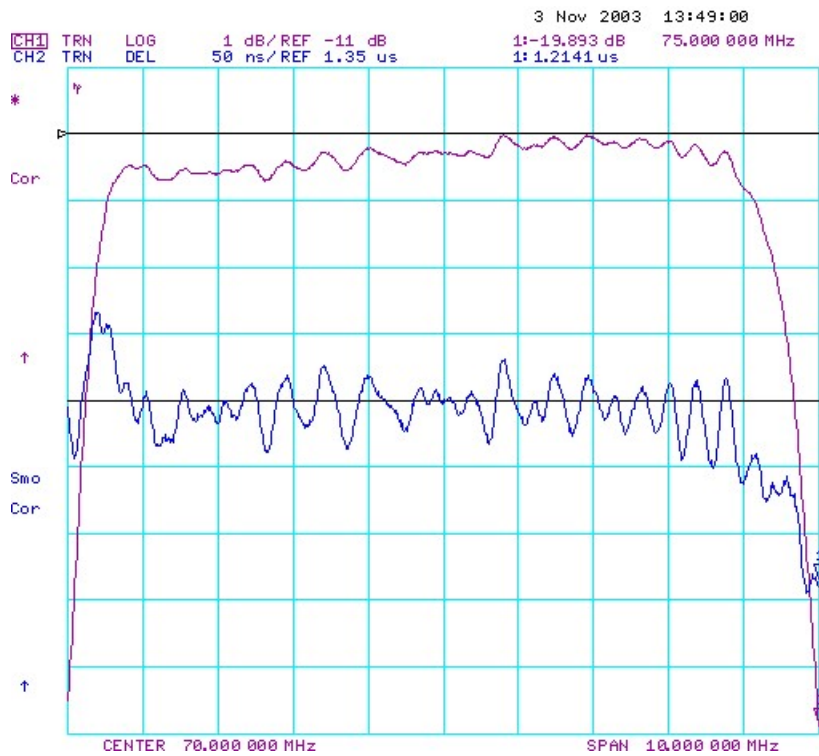
Parameters	Unit	Min.	Typical	Max.
Center frequency, <b>F<sub>c</sub></b>	MHz	69.8	70	70.2
Insertion Loss, <b>IL</b>	dB	-	10.7	11.5
1 dB Bandwidth	MHz	8.4	8.66	-
3 dB Bandwidth	MHz	9.0	9.31	-
35 dB Bandwidth	MHz	-	11.7	13.0
Relative Attenuation:				
10 to 64 MHz	dB	40	46	-
77 to 140 MHz	dB	40	42	-
Amplitude ripple within $F_c \pm 3.7$ MHz	dB	-	0.6	1.0
Group Delay ripple within $F_c \pm 3.7$ MHz	nsec	-	125	160
Substrate Material	-	-	YZ-LN	-
Temperature Coefficient of frequency	ppm/ °C	-	-94	-

### C. FREQUENCY CHARACTERISTICS:

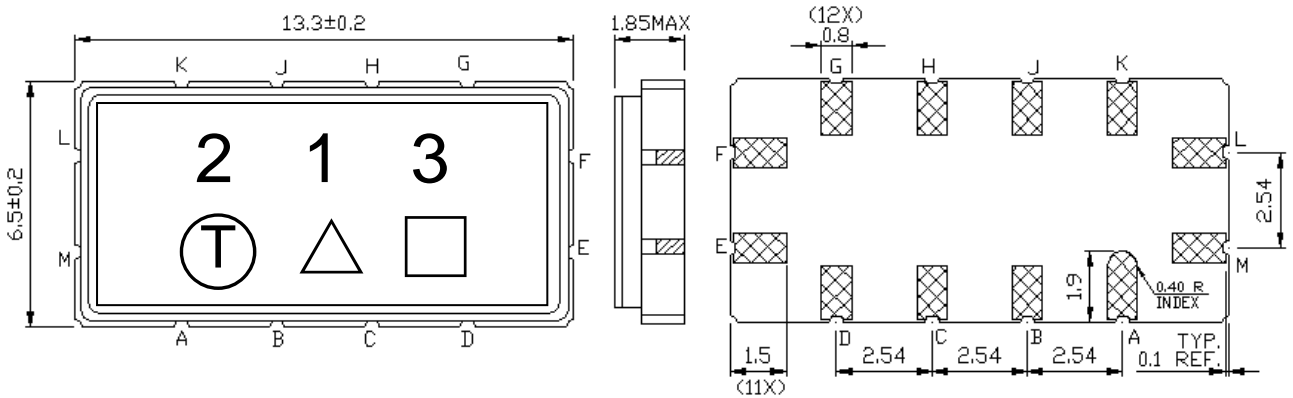
#### (1) Frequency Response



#### (2) Passband response and Group Delay Variation



**D. OUTLINE DRAWING:**



- Pin L: RF Input
- Pin E: RF Output
- Pin M: Input Ground
- Pin F: Output Ground
- Pin A, B, C, D, G, H, J, K: To be Ground
- Unit: mm
- △ : Product / Year Code
- : Week Code

**Product / Year Code- 4year cycle**

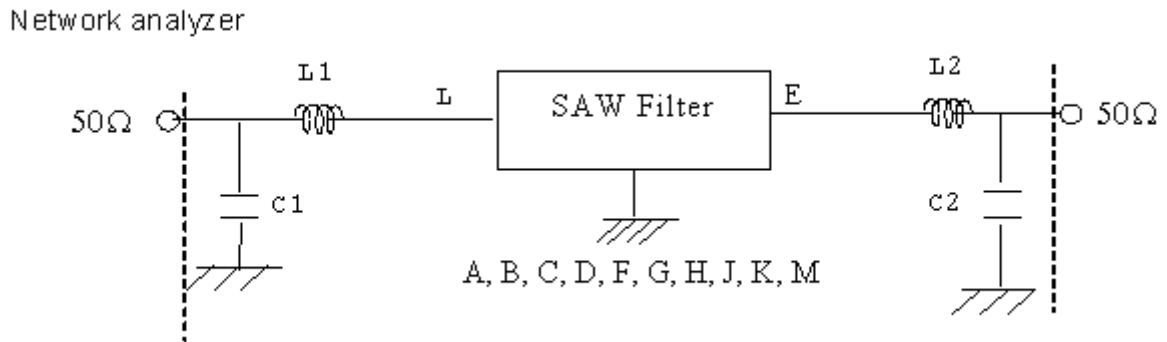
Year	2021 2025	2022 2026	2023 2027	2024 2028
Product Code	B	b	<u>B</u>	<u>b</u>

**Week Code Table**

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

**E. MEASUREMENT CIRCUIT:**

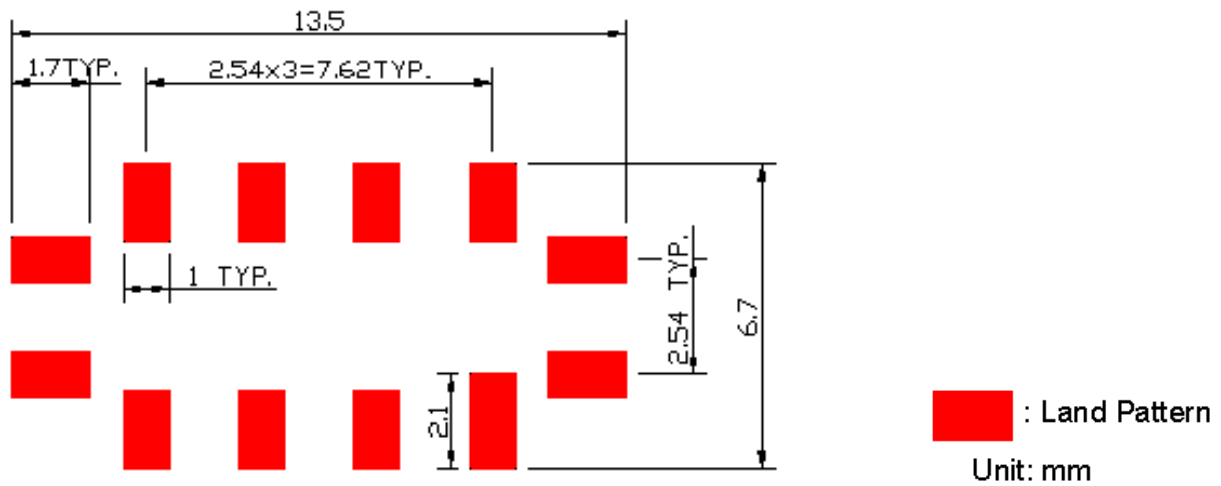
Source and load impedance: 50 Ω



Input: L1=220 nH, Q>40; C1=36 pF

Output: L2=220 nH, Q>40; C2=68 pF

**F. PCB FOOTPRINT:**





## 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.

