



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Description: 120 MHz 13.84MHzBW SMD 13.3mm x 6.5 mm SAW IF Filter

TST Parts No.: TB1235A

Customer Parts No.: _____

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

Checked by: _____ Kazuma Lee 

Approval by: _____ Bob Chau 

Date: _____ 09/20/2016

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 120MHz 13.84MHz BW (SMD 13.3×6.5 mm)

MODEL NO.: TB1235A

REV. NO.1

A. MAXIMUM RATING:

1. Operating temperature range: -10°C to 80°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device

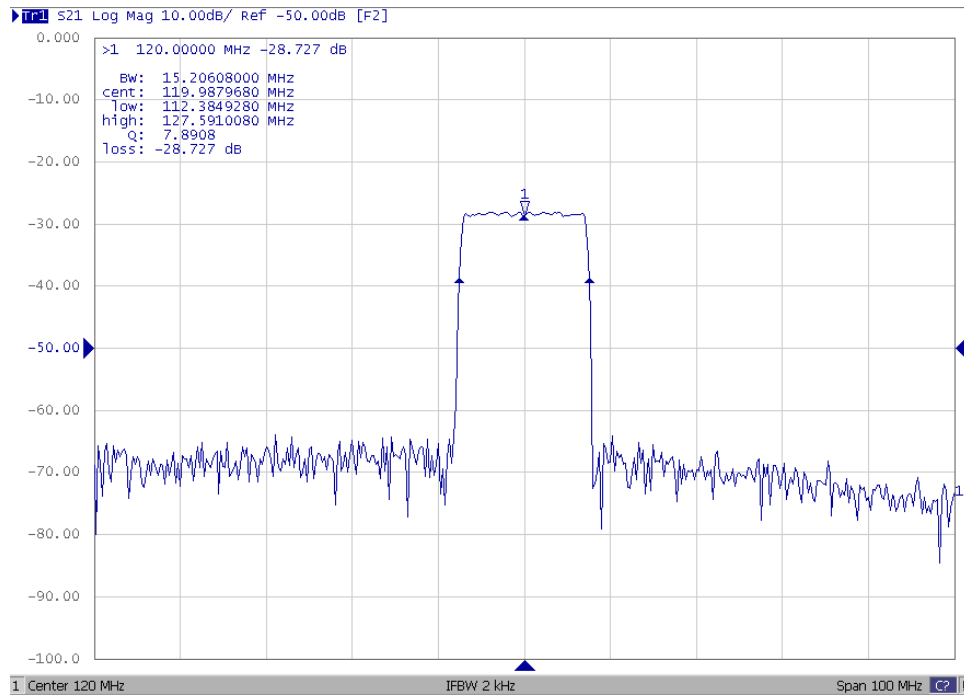
B. CHARACTERISTICS:

Ambient Temperature: 25°C

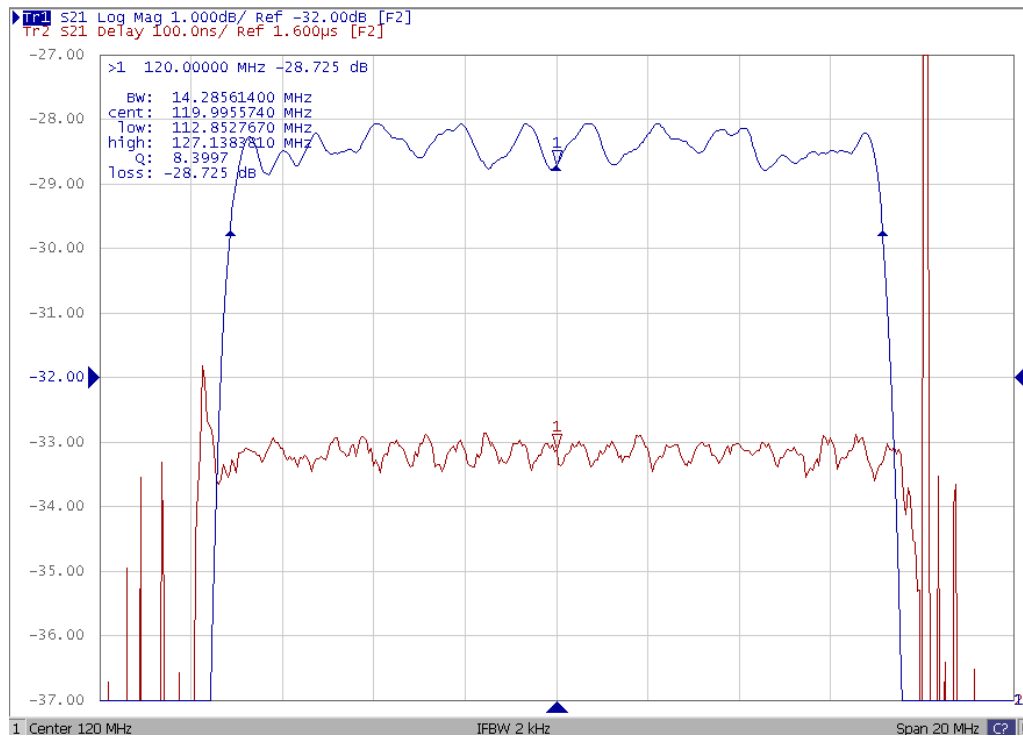
Item	Unit	Min.	Type.	Max.
Center frequency, F_c	MHz	-	120	-
Insertion Loss, IL	dB	-	28.7	30.0
-1dB bandwidth	MHz	14.15	14.25	-
-3dB bandwidth	MHz	-	14.6	-
-10dB bandwidth	MHz	-	15.2	15.3
-40dB bandwidth	MHz	-	16.1	-
Passband Ripple F_c± 6.92MHz	dB	-	0.7	1.2
Group Delay variation F_c± 6.92MHz	ns	-	60	-
Absolute Group Delay	us	-	1.5	-
Attenuation:(Reference level from Min IL)				
Ultimate Attenuation	dB	38	42	-
Temperature Coefficient	ppm/°C	-	-23	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

C. FREQUENCY CHARACTERISTICS:

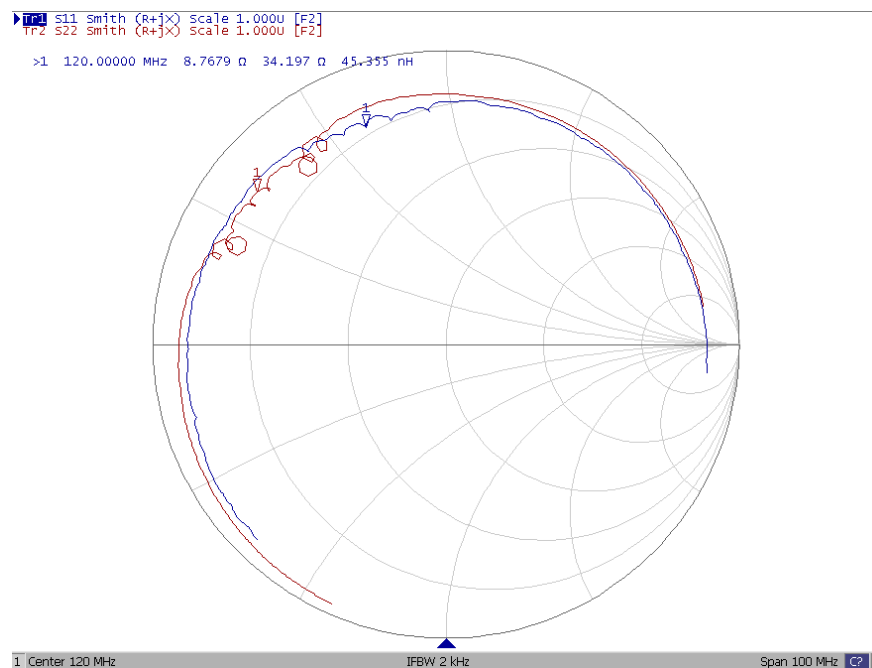
(1) Wide Band Response:



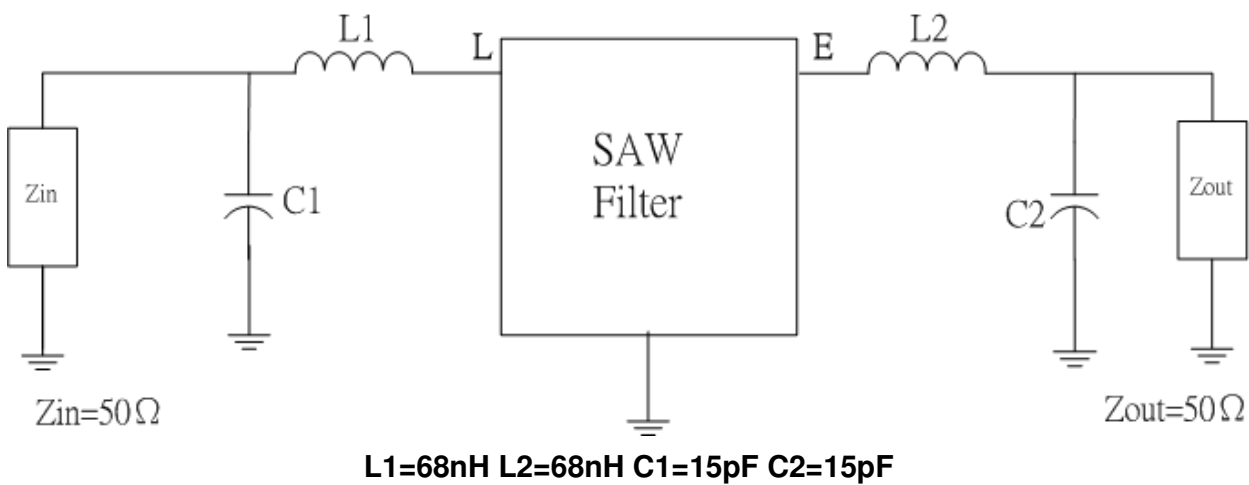
(2) Pass Band Response and Group Delay Response:



(3) Smith Chart:



D. MATCHING CIRCUIT:



Technical drawing of the 1235 indicator, showing front, side, and detail views with dimensions and labels.

Front View Dimensions:

- Overall Width: 13.3 ± 0.2
- Overall Height: 6.5 ± 0.2
- Internal Width Segments: K, J, H, G
- Internal Height Segments: L, M
- Mounting Flange Thickness: 1.85 MAX
- Internal Features: Circle with 'T', Triangle, Square
- Bottom Labels: A, B, C, D
- Right Side Labels: F, E

Detail View Dimensions:

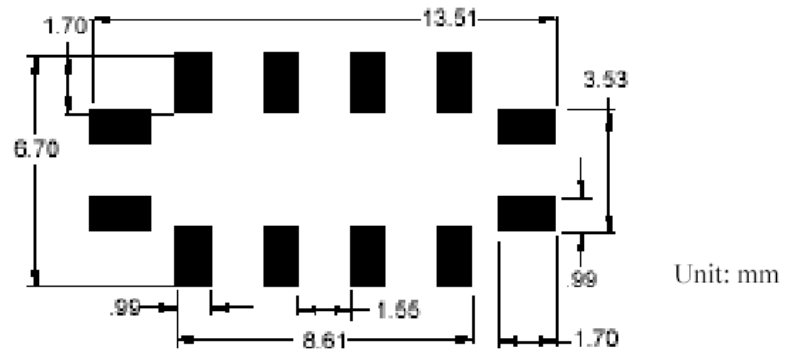
- Top Hole Pattern: (12X) 0.8
- Top Hole Labels: G, H, J, K
- Left Side Labels: F, E
- Right Side Labels: L, M
- Bottom Hole Pattern: (11X) 1.5
- Bottom Hole Labels: D, C, B, A
- Bottom Hole Spacing: 2.54
- Bottom Hole Depth: 1.9
- Bottom Hole Radius: 0.40 R INDEX
- Bottom Hole Tolerance: 0.1 TYP. REF.

△ : Product / Year Code

Year	2013 2017	2014 2018	2015 2019	2016 2020
Product Code	B	b	<u>B</u>	<u>b</u>

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

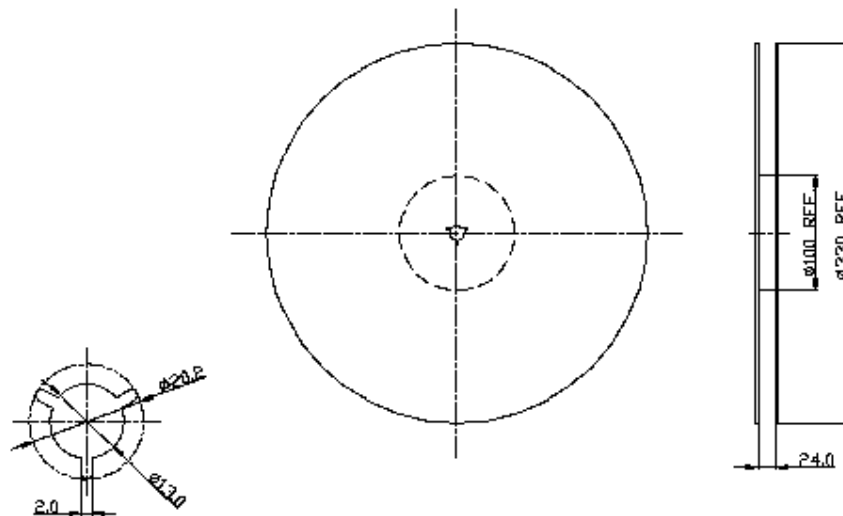
F. PCB FOOTPRINT:



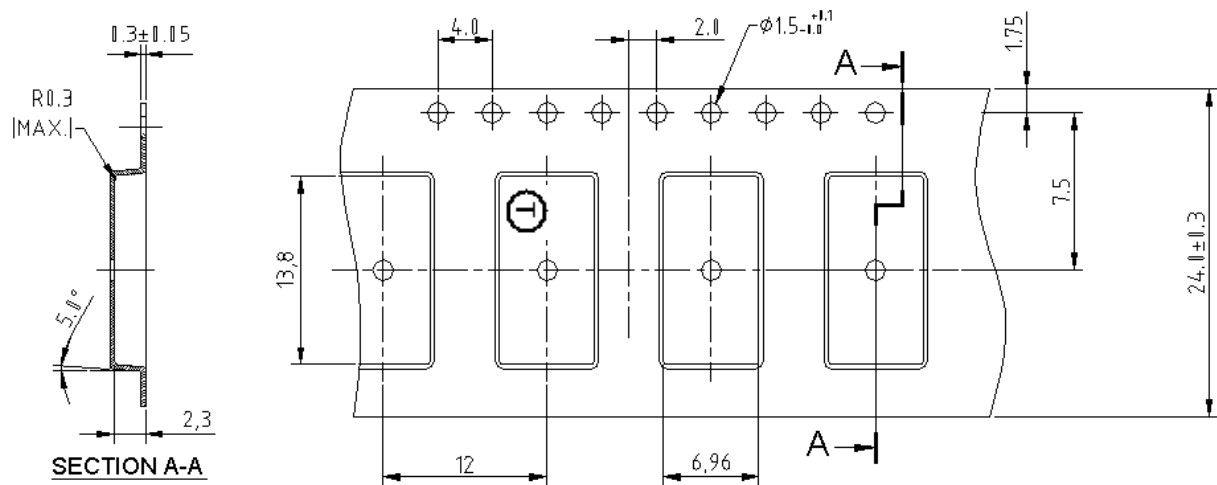
G. PACKING:

1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at $150 \sim 180^{\circ}\text{C}$ 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 $260^{\circ}\text{C} \pm 0/-5^{\circ}\text{C}$ peak (20~40sec).
4. Time: 2 times.

