



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
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Product Specifications Approval Sheet

Product Name: SAW Tx Filter 1950 MHz LTE Band 1 SMD 1.1x0.9 mm (BW=60 MHz)

TST Parts No.: TA1815B (This part is compliant by AEC-Q200)

Customer Part No.: _____

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

Checked by: _____ Hayley Chou *Hayley Chou*

Approved by: _____ Andy Yu *Andy Yu*

Date: _____ 2018/07/23

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 1950 MHz

MODEL NO.: TA1815B

REV. No.: 1.0

A. MAXIMUM RATING:

1. Maximum Input Power: 10 dBm
2. DC voltage: +/-5 V
3. Operating Temperature: -40 °C to +85 °C
4. Storage Temperature: -40 °C to +100 °C
5. Moisture Sensitivity Level: Level 1 (MSL 1)
6. ESD: 50 V(MM), 100 V(HBM)

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (ESD)

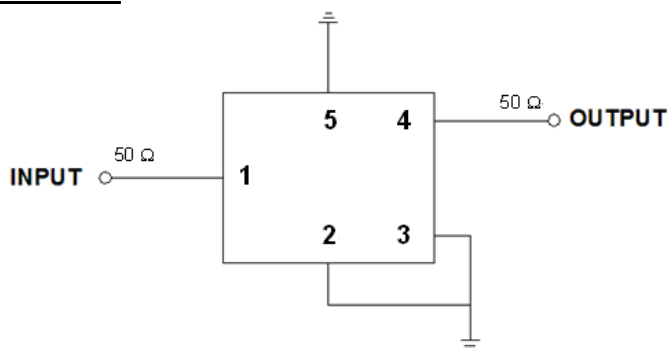
B. ELECTRICAL CHARACTERISTICS:

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

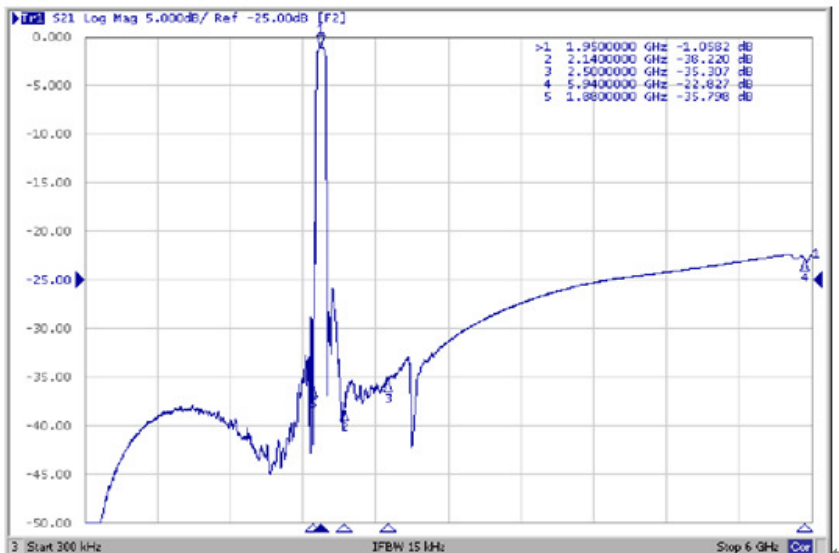
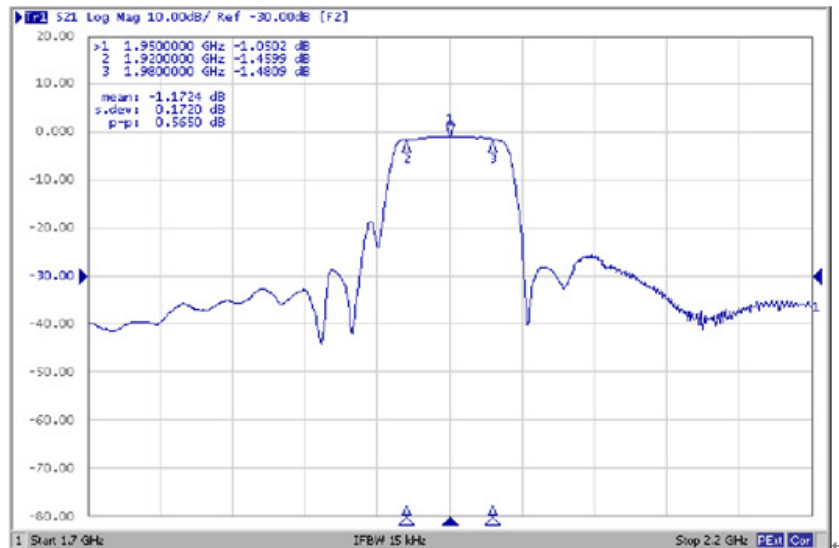
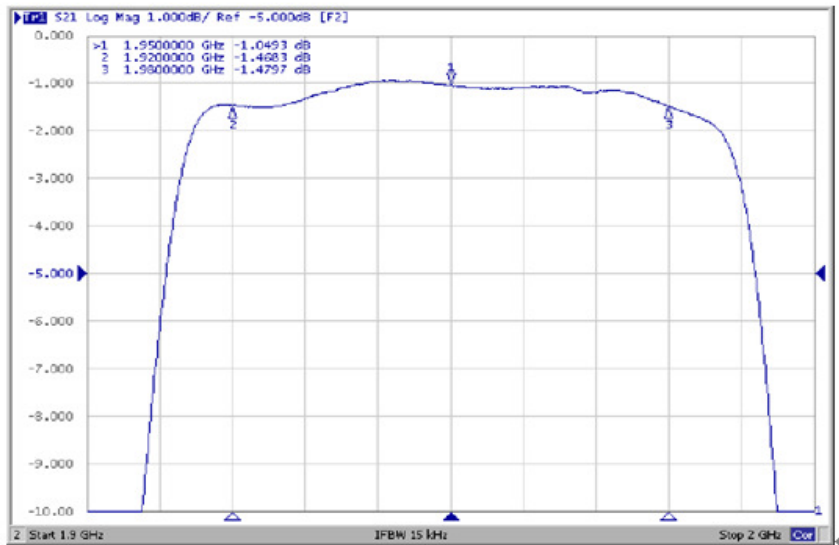
Terminating load impedance: $Z_L = 50 \Omega$ (Single-ended)

Parameters Description	Unit	Min.	Typ.	Max.
Center Frequency Fc	MHz	-	1950	-
Insertion Loss (1920~1980 MHz) IL	dB	-	1.8	2.5
Amplitude Ripple (1920~1980 MHz)	dB _{p-p}	-	0.8	2.0
VSWR (1920~1980 MHz)	-	-	1.8	2.3
Attenuation (Reference level from 0 dB)				
DC ~ 1577 MHz	dB	30	34	-
1577 ~ 1880 MHz	dB	22	29	-
2110 ~ 2170 MHz	dB	35	38	-
2500 ~ 3120 MHz	dB	28	33	-
3840 ~ 3960 MHz	dB	25	29	-
5760 ~ 5940 MHz	dB	15	22	-

C. MEASUREMENT CIRCUIT:

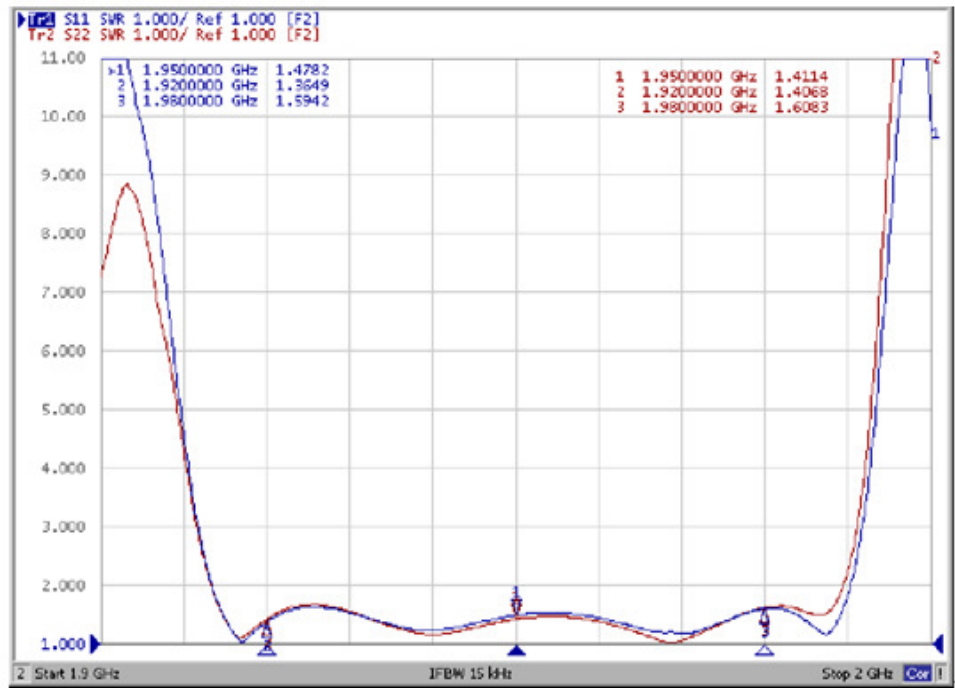


D. FREQUENCY CHARACTERISTIC:

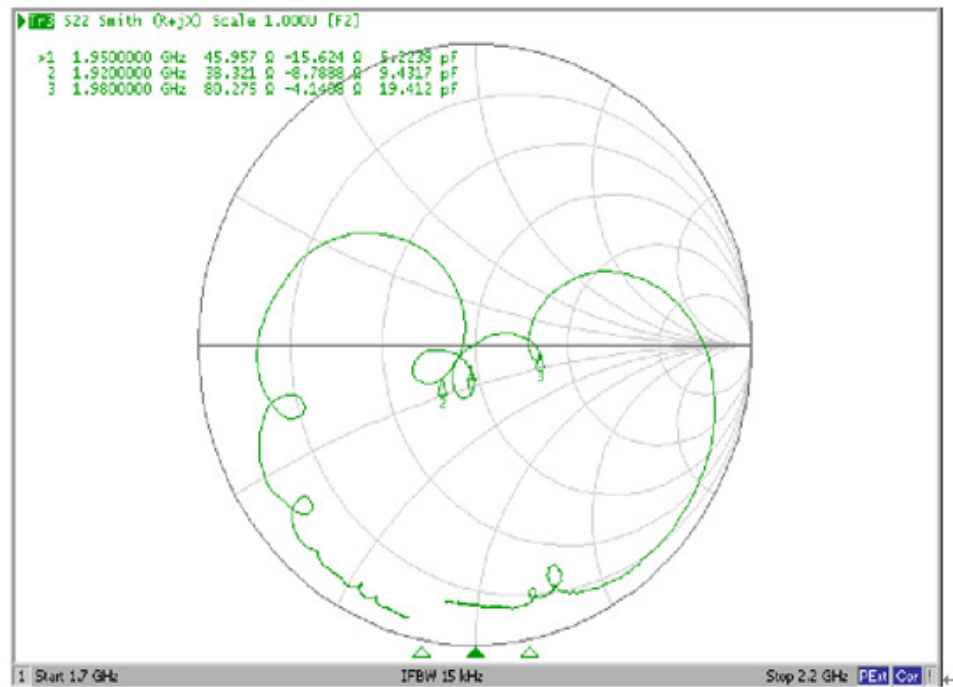
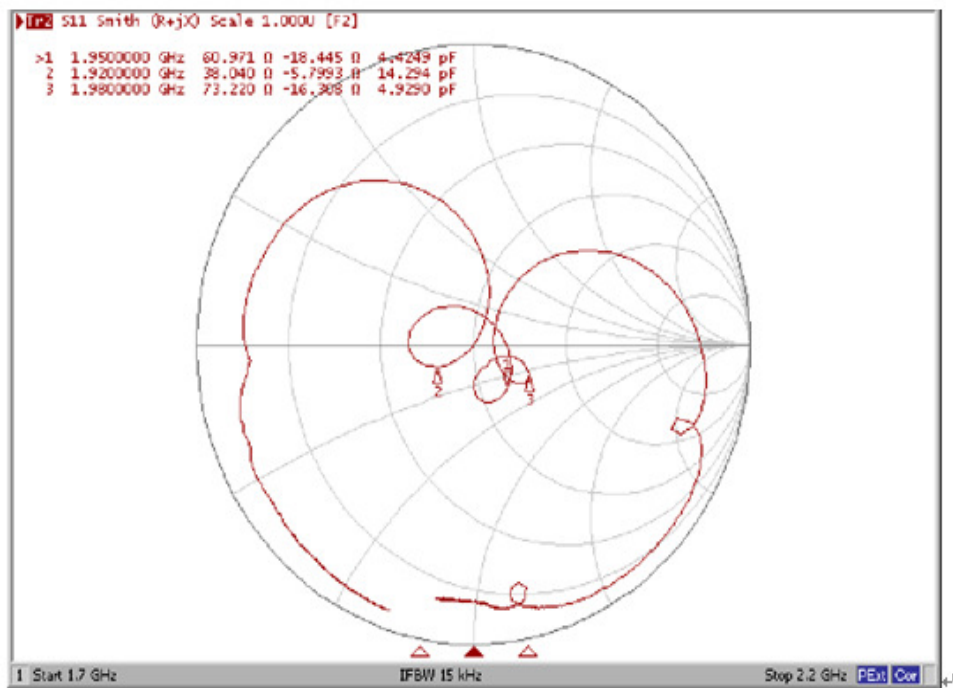


Reflection Functions:

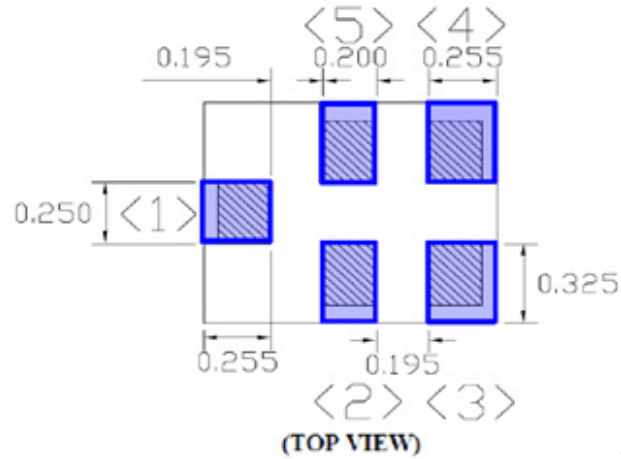
VSWR



Smith Chart

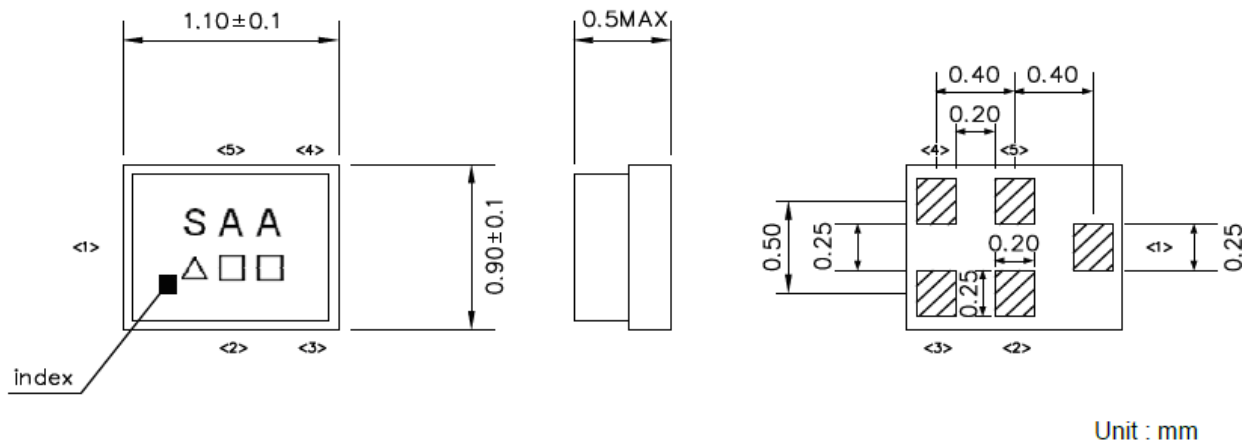


E. PCB Footprint:



F. OUTLINE DRAWING (Mass Production):

Device size: 1.1typ. x 0.9typ. x 0.5max.



Pin Configuration

Pin No.	Symbol	Function
1	IN	Unbalanced pin
2	GND	Ground
3	GND	Ground
4	OUT	Unbalanced pin
5	GND	Ground

△ : Date Code

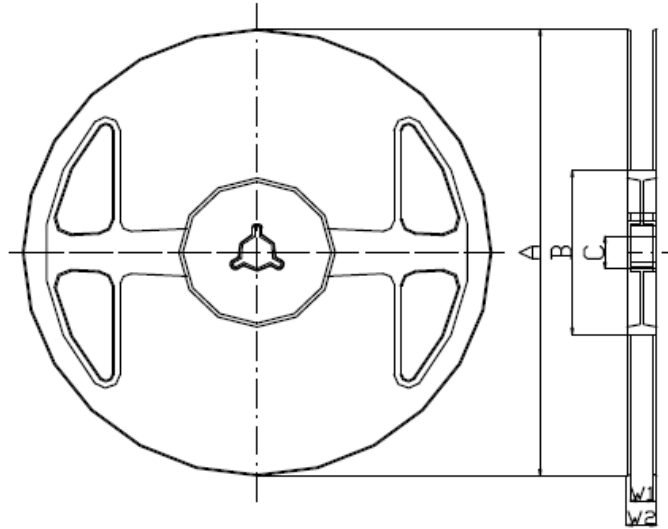
□ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

Date Code:

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017	A	B	C	D	E	F	G	H	J	K	L	M
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z

G. PACKING: (Ref: WI-75M03)

1. REEL DIMENSION



Materials of Reel

Material : Polystyrene + Carbon

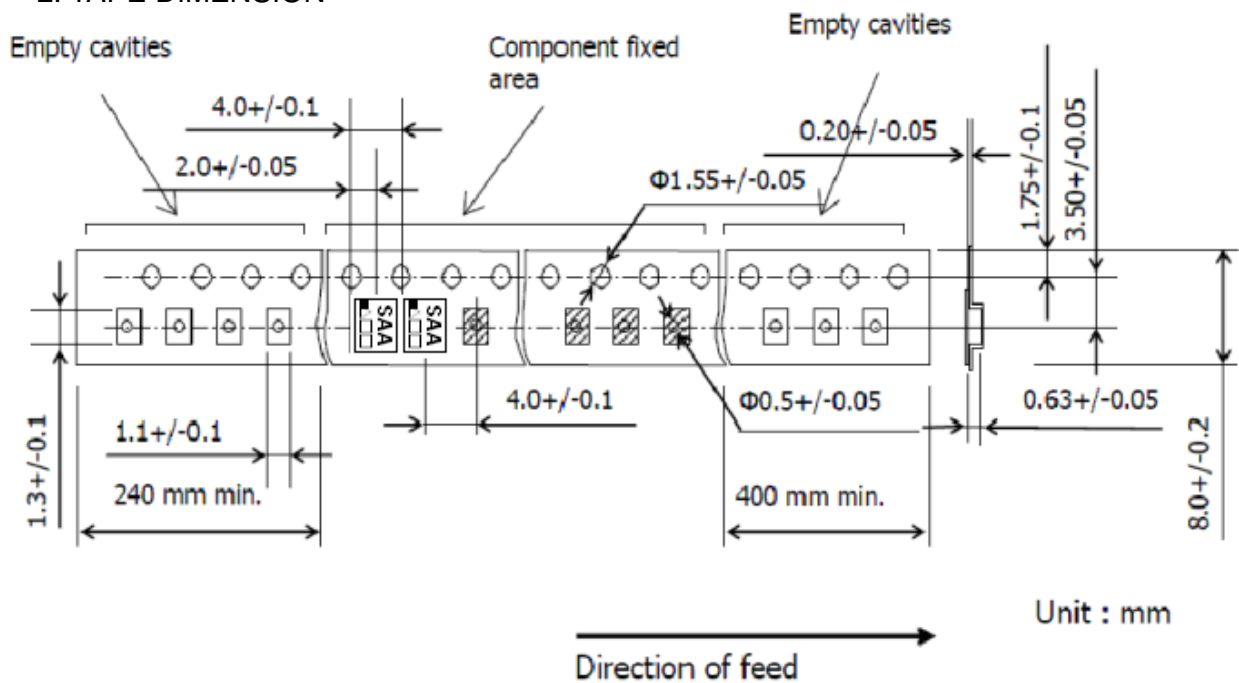
Color : Black

Surface resistance (reference value) : $10^9 \Omega/\text{sq}$ Max.

Unit : mm

Code	Quantity	A	B	C	W1	W2
J	5,000 pcs	$\phi 180.0 +0.0/-1.5$	$\phi 66.0 +/-0.5$	$\phi 13.0 +/-0.2$	$9.0 +1.0/-0.0$	$11.4 +/-1.0$

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 $260^{\circ}\text{C}+0/-5^{\circ}\text{C}$ peak (20~40sec).
4. Time: 2 times.

