



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Name: SAW Tx Filter 836.5 MHz LTE Band 5 SMD 1.1x0.9 mm (BW=25 MHz)

TST Parts No.: TA1692C (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: _____ 2018/08/13

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 836.5 MHz

MODEL NO.: TA1692C

REV. No.: 1.0

A. MAXIMUM RATING:

1. Maximum Input Power: 13 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: 100 V(MM), 200 V(HBM)

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (ESD)

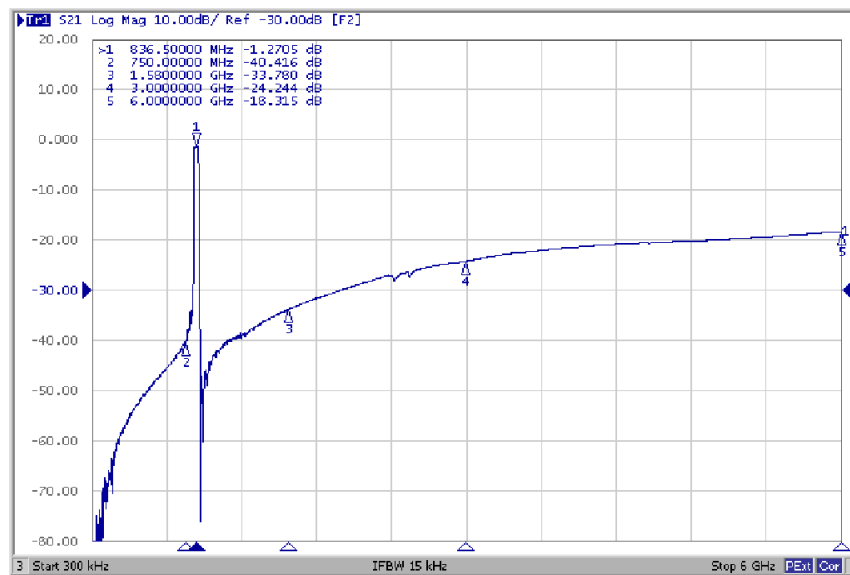
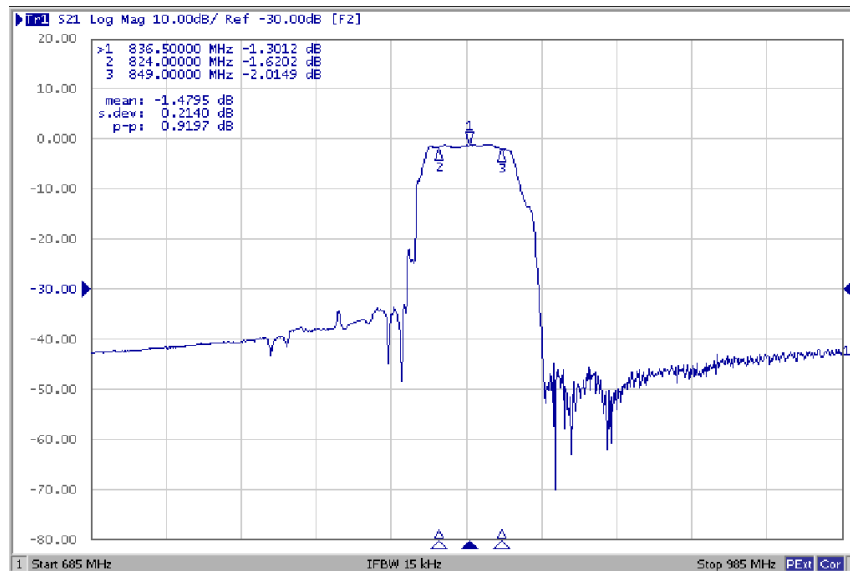
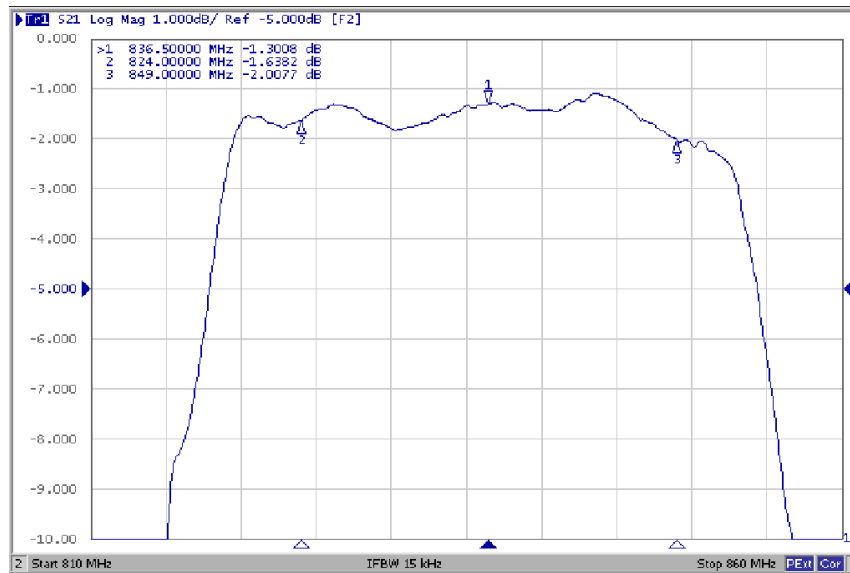
B. ELECTRICAL CHARACTERISTICS:

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 F_c	MHz	-	836.5	-
Insertion Loss (824~849 MHz) IL	dB	-	1.9	2.3
Amplitude Ripple (824~849 MHz)	dB _{p-p}	-	0.8	1.3
VSWR (824~849 MHz)	-	-	2.0	2.3
Attenuation (Reference level from 0 dB)				
DC ~ 750 MHz	dB	35	41	-
750 ~ 800 MHz	dB	28	35	-
869 ~ 894 MHz	dB	38	45	-
894 ~ 1050 MHz	dB	38	43	-
1050 ~ 1210 MHz	dB	35	41	-
1210 ~ 1580 MHz	dB	30	36	-
1580 ~ 2000 MHz	dB	28	32	-
2000 ~ 3000 MHz	dB	23	27	-
3000 ~ 6000 MHz	dB	12	18	-

C. FREQUENCY CHARACTERISTIC:

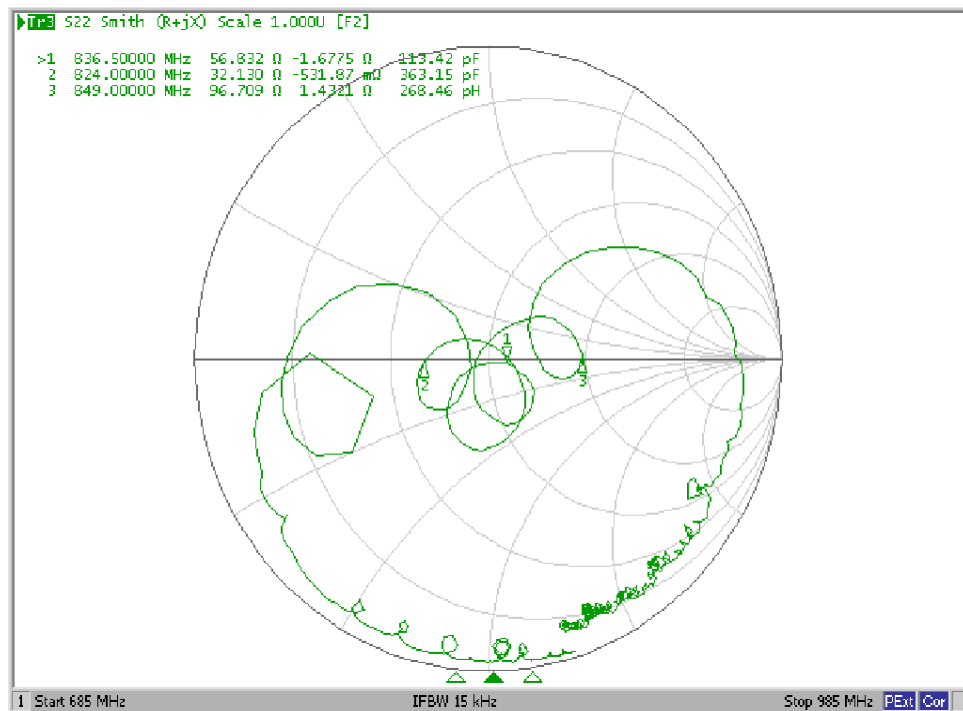
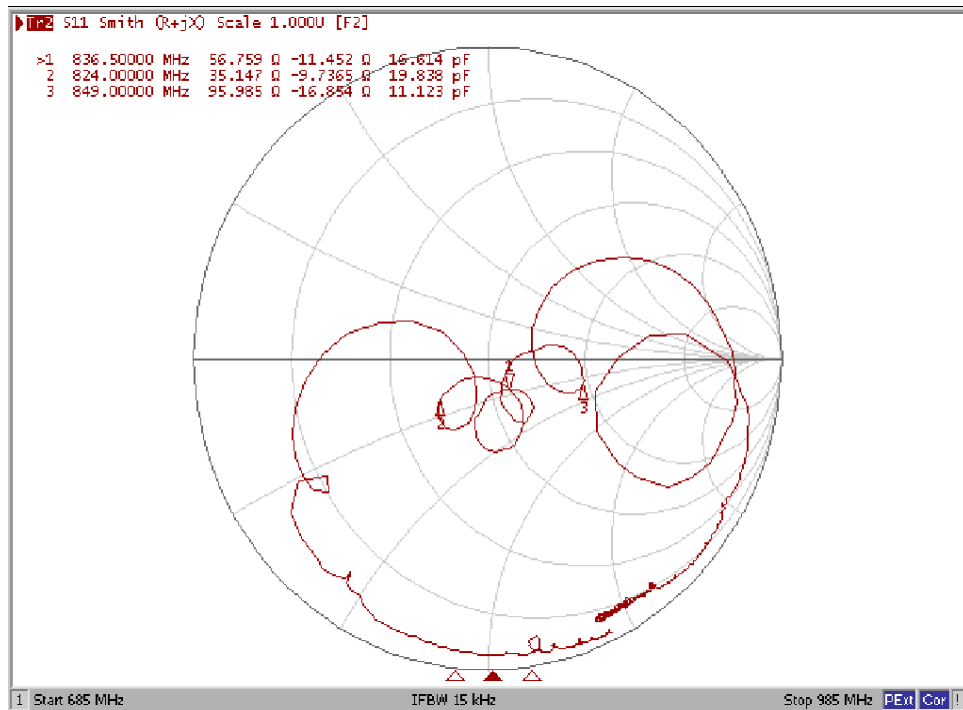


Reflection Functions:

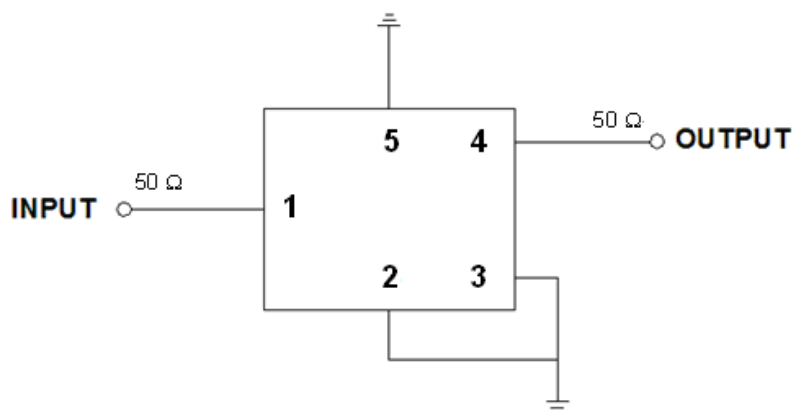
VSWR



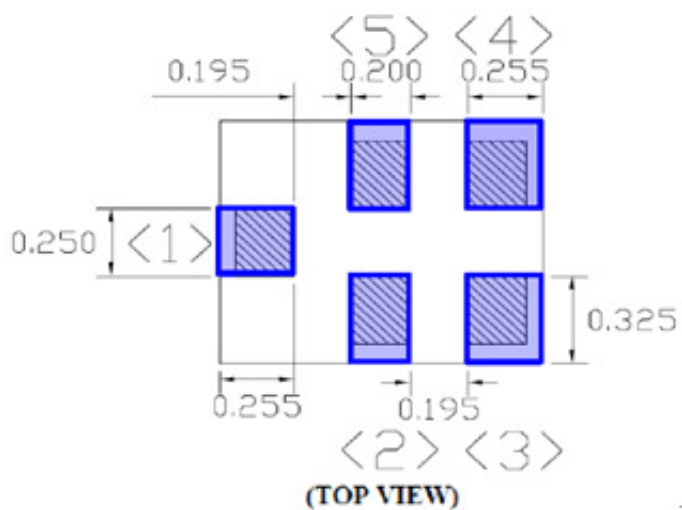
Smith Chart



D. MEASUREMENT CIRCUIT:

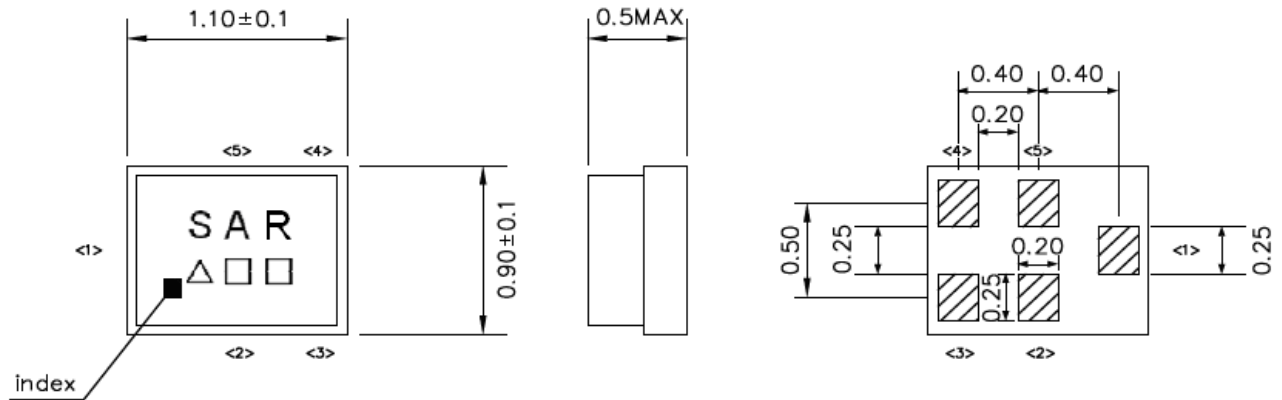


E. PCB Footprint:



F OUTLINE DRAWING (Mass Production):

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



Unit : mm

Pin Configuration

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

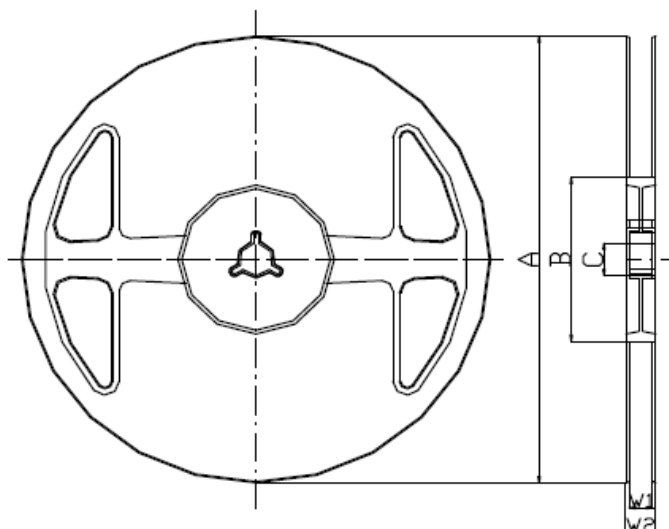
△ : Date Code

□ : 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

1. REEL DIMENSION



Material : Polystyrene + Carbon

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

Unit : mm

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

Empty cavities

Component fixed area

Empty cavities

4.0+/-0.1

2.0+/-0.05

0.20+/-0.05

1.75+/-0.1

3.50+/-0.05

1.3+/-0.1

1.1+/-0.1

240 mm min.

4.0+/-0.1

400 mm min.

0.63+/-0.05

8.0+/-0.2

Unit : mm

Direction of feed

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.

