



TAI-SAW TECHNOLOGY CO., LTD.

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

Product Description: 1223/ 1582.5 MHz SAW Diplexer SMD 3.0x3.0 mm

TST Part No.: TE0137A

Customer Part No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ David Chang *David*

Approved by: _____ Andy Yu *Andy Yu*

Date: _____ 2019/04/09

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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1223/ 1582.5 MHz SAW Diplexer

MODEL NO.: TE0137A

REV. NO.:1

A. MAXIMUM RATING:

1. Input Power Level: 10 dB_m
2. DC voltage: 6 V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +95°C
5. Moisture Sensitivity Level: Level 1(MSL1)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

(L2_1223 MHz)

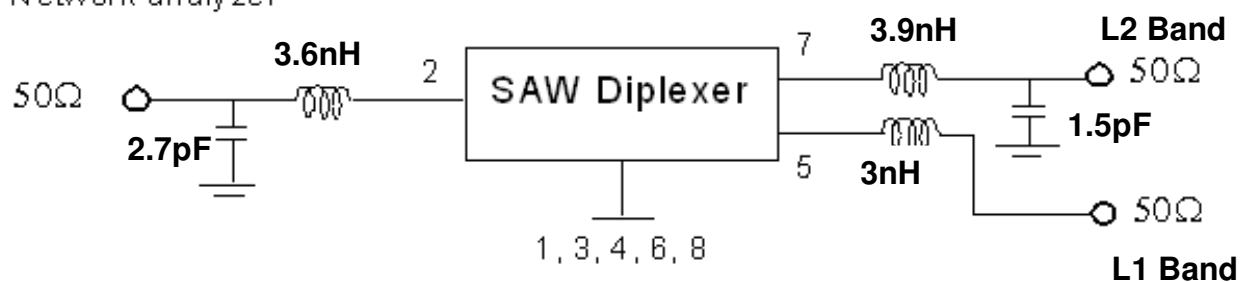
Item	Unit	Min.	Typ.	Max.
Center frequency F_c	MHz	-	1223	-
Insertion Loss (1197~1249 MHz) IL	dB	-	3.5	5.2
Group Delay Variation (1197~1249 MHz)	ns	-	7	25
Group Delay Variation (1197~1217 MHz)	ns	-	6	25
Group Delay Variation (1217~1237 MHz)	ns	-	4	10
Group Delay Variation (1242~1249 MHz)	ns	-	2	10
Attenuation (Reference level from 0 dB)				
880 ~ 920 MHz	dB	45	50	-
1710 ~ 1785 MHz	dB	30	36	-
1850 ~ 1910 MHz	dB	38	44	-
1920 ~ 1980 MHz	dB	34	46	-
2400 ~ 2500 MHz	dB	35	40	-

(L1_1582.5 MHz)

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	1582.5	-
Insertion Loss (1559~1606 MHz) IL	dB	-	4.2	4.8
Group Delay Variation (1559~1606 MHz)	ns	-	7	15
Group Delay Variation (1559~1563 MHz)	ns	-	3	15
Group Delay Variation (1565~1585 MHz)	ns	-	3	10
Group Delay Variation (1598~1606 MHz)	ns	-	2	10
Attenuation (Reference level from 0 dB)				
880 ~ 920 MHz	dB	40	60	-
1710 ~ 1785 MHz	dB	30	35	-
1850 ~ 1910 MHz	dB	34	39	-
1920 ~ 1980 MHz	dB	36	41	-
2400 ~ 2500 MHz	dB	35	44	-

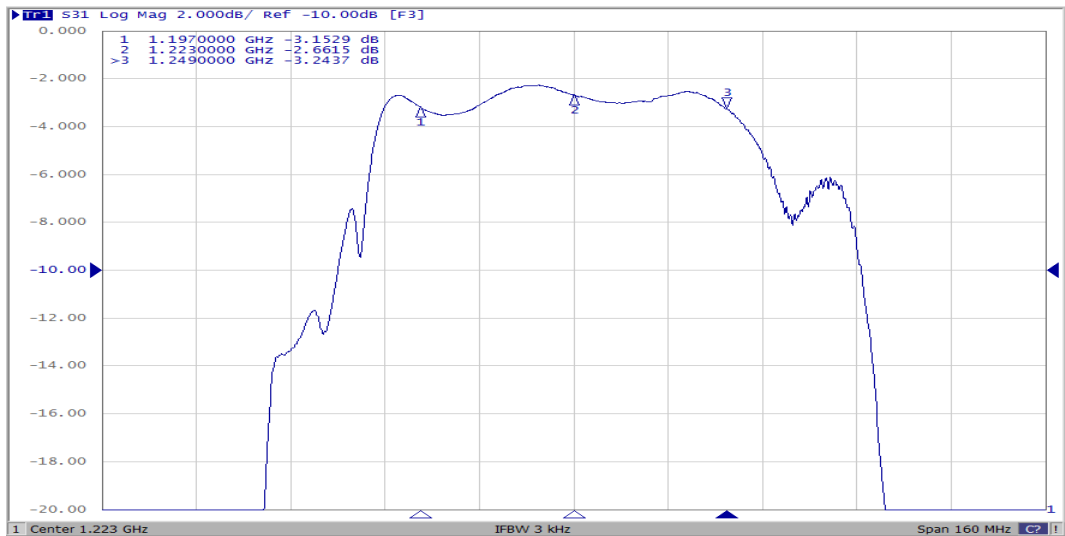
C. MEASUREMENT CIRCUIT:

HP Network analyzer

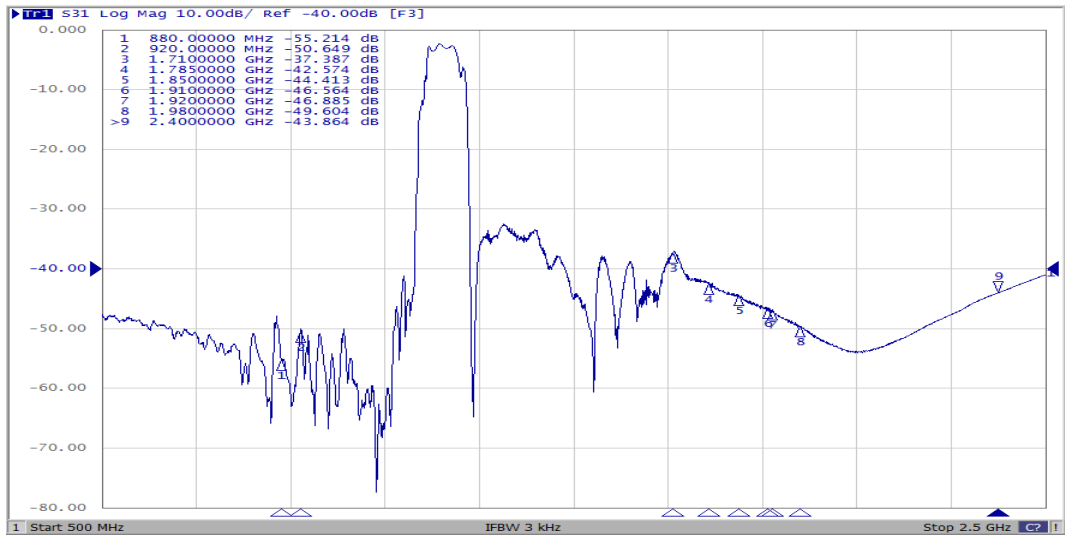


D. Frequency Characteristics:

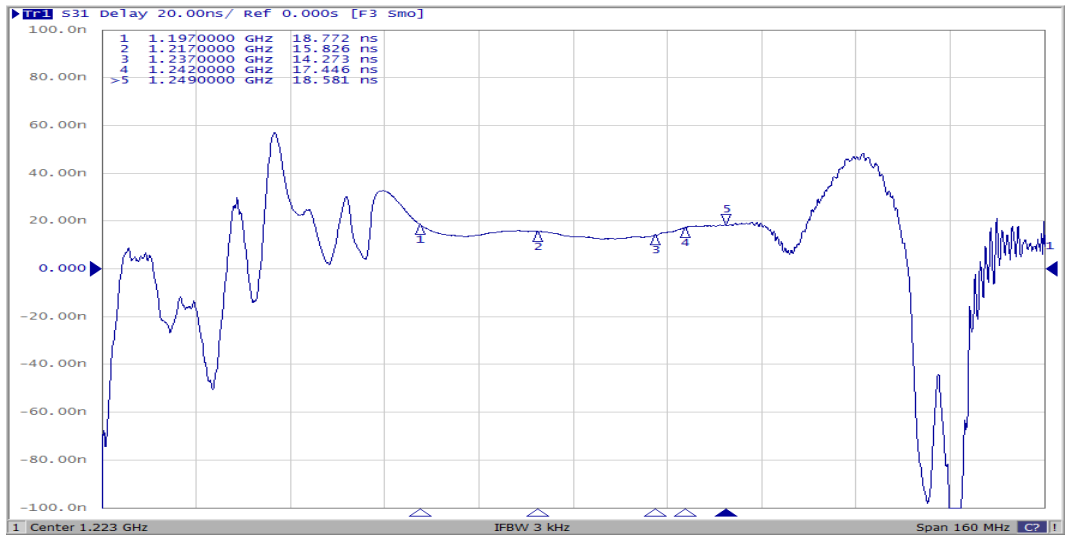
L2 Characteristics



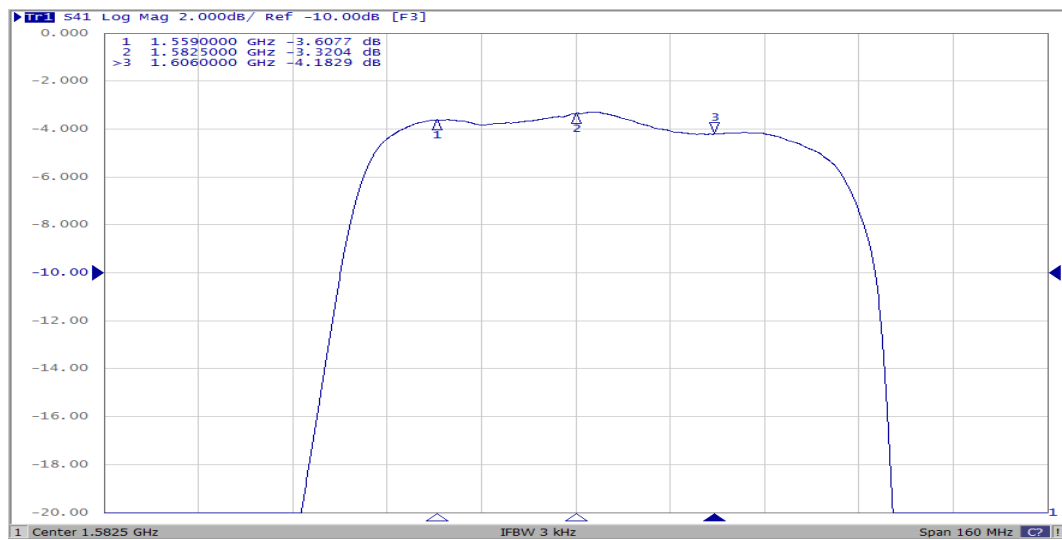
L2 Characteristics (wideband)



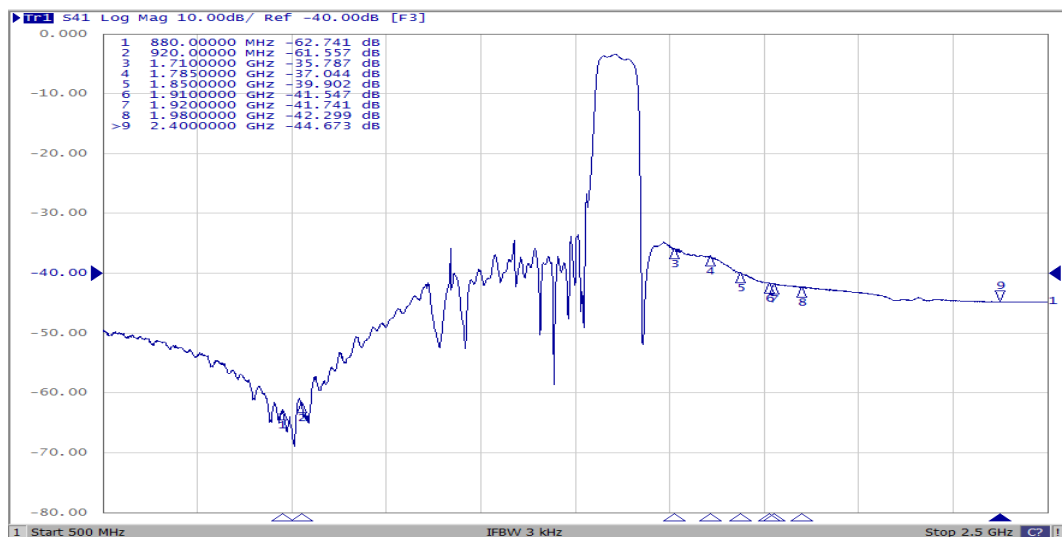
L2 Group Delay



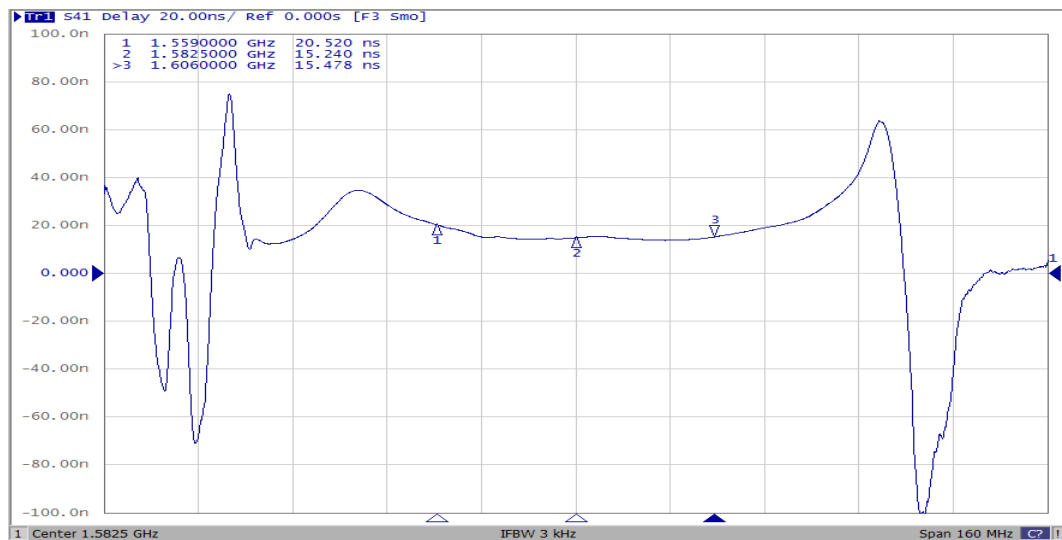
L1 Characteristics



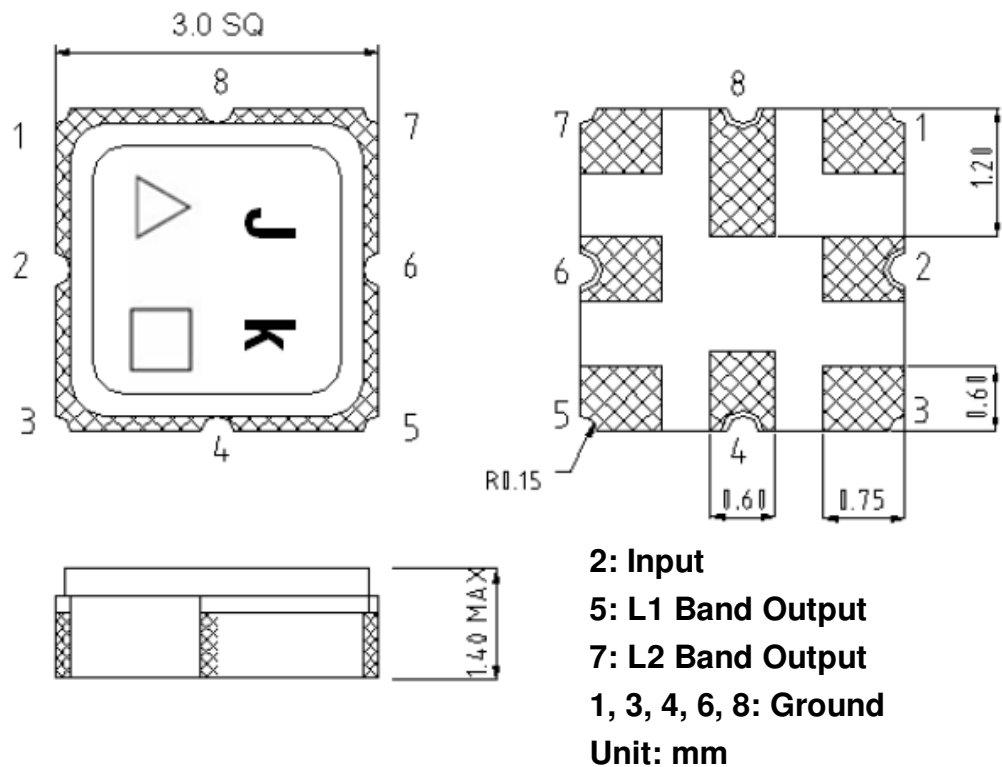
L1 Characteristics (wideband)



L1 Group Delay



E. OUTLINE DRAWING:



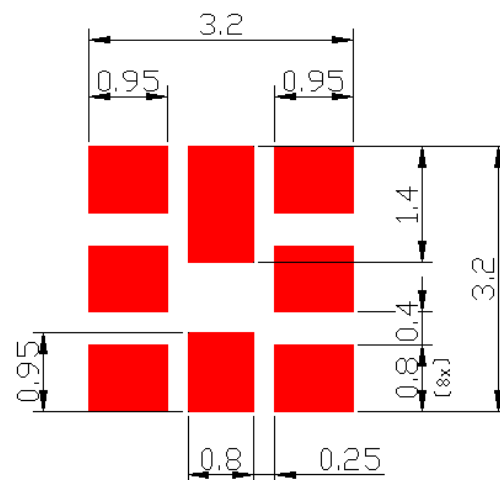
△ : Year Code (2011->1, 2012->2, ..., 2019->9, 2020->0)

□ : Date Code

Date Code Table:

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:



1. REEL DIMENSION

Technical drawing of a circular structural member. The main view is a top-down view showing a large circle with a dashed center line and a dashed circle representing a hole. A leader line points from the text "See DETAIL 'A'" to the center of the hole. To the right, a side view shows the member's profile with dimensions: a total width of 12.0, an inner hole diameter of $\phi 100$ REF., and an outer diameter of $\phi 330$ REF. Below the main view, a cross-section view shows a circular member with a central hole. The outer diameter is labeled $\phi 13.0$, the inner hole diameter is labeled $\phi 20.2$, and the thickness of the member is labeled 2.0.

[illegible]

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.

