

SAW DPX 836.5/881.5 MHz LTE Band 5 SMD 1814 (25 MHz BW)

MODEL NO.:TF0123B

REV.No.:2.0

A. MAXIMUM RATING:

1. Operating temperature range: -40 °C to +85 °C
2. Storage temperature range: -55 °C to +125 °C
3. Input power : 29dBm (Ta=+50deg C,50000h,CW)
4. Maximum DC Voltage: +/-3 V
5. Moisture Sensitivity Level: Level 3
- 6.ESD 50V(MM) 100V(HBM)



Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx Port): 50 Ω(Single-ended)

Terminating impedance (Rx Port): 50 Ω (Single-ended)

Terminating impedance (Ant Port): 50//6.8nH Ω (Single-ended)

Tx to ANT ($f_{T0}=836.5$ MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	824~849MHz	dB(*1)	-	1.4	1.9	
Amplitude ripple	824~849MHz	dB	-	0.3	1.2	
VSWR	ANT	-	-	1.6	2.0	
	Tx	-	-	1.9	2.2	
Attenuation:						
DC~750 MHz		dB	25	40	-	
779~804 MHz		dB	30	45	-	
860~870 MHz		dB	3	7	-	
869~894 MHz		dB	52	58	-	
1574~1577 MHz		dB	40	51	-	
1648~1698 MHz		dB	40	53	-	
2472~2547 MHz		dB	30	54	-	

ANT to Rx (f_{T0}=881.5 MHz)

Parameters Description		Unit	Min	Typ	Max	Remarks
Insertion Loss	869~894 MHz	dB(*1)	-	1.7	2.3	
Amplitude ripple	869~894 MHz	dB	-	0.4	1.3	
VSWR	ANT	-		1.7	2.0	
	Rx			1.7	2.0	
Attenuation:						
779~804 MHz		dB	50	57	-	
824~849 MHz		dB	50	60	-	

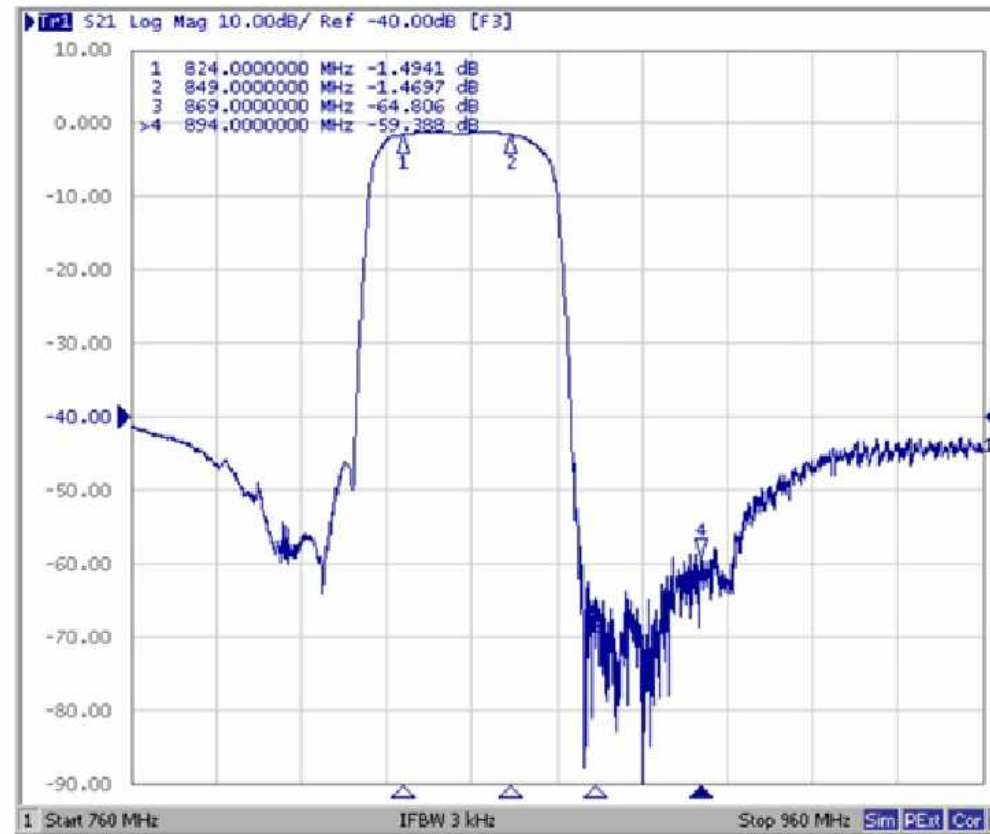
Tx to Rx

Isolation	824~849 MHz	dB	55	58	-	
	869~894 MHz	dB	54	59	-	

(*1) Specification of insertion loss excludes loss that comes from the test board.

C. FREQUENCY CHARACTERISTICS:

Tx to Ant

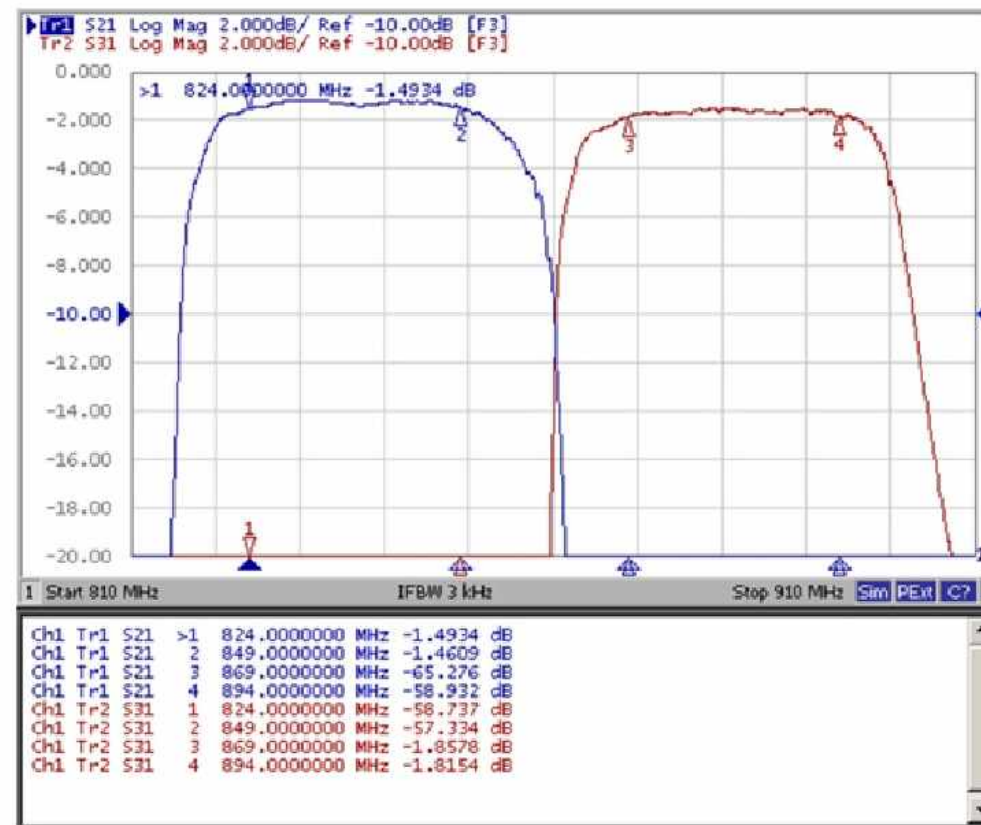


Ant to Rx

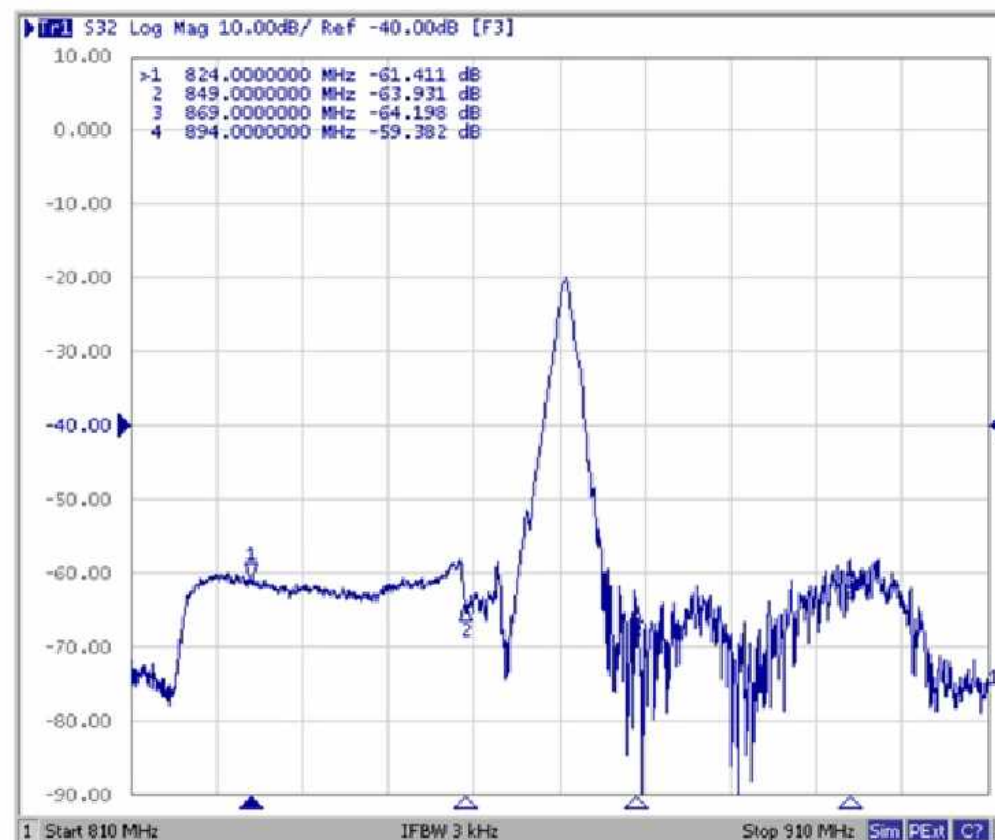


These data **exclude** loss that comes from the test board.

Tx to Ant ,Ant to Rx

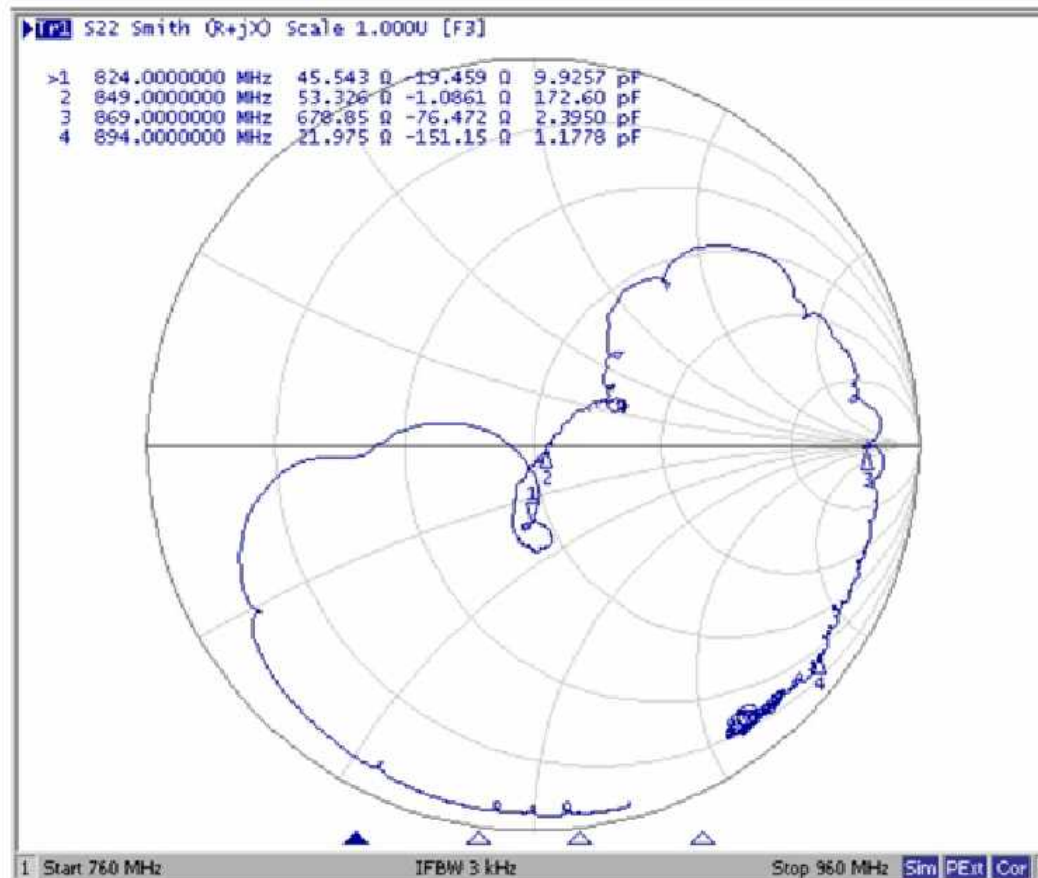
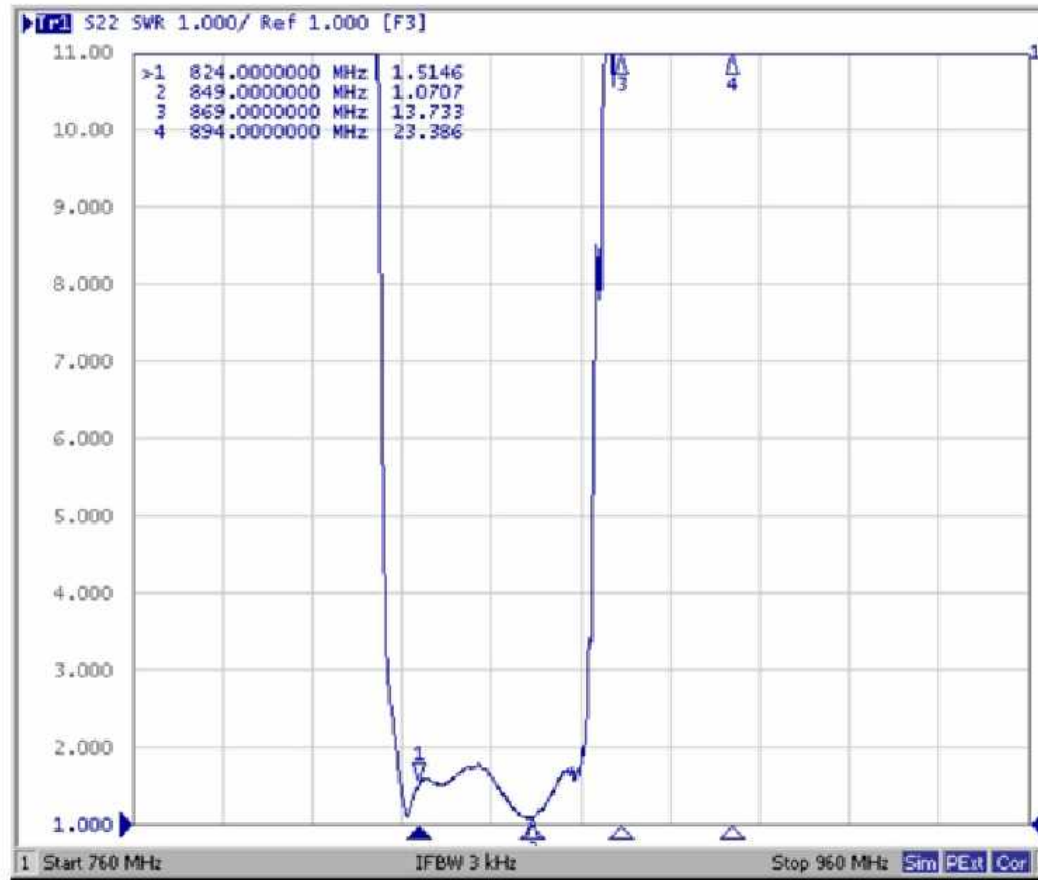


Tx to Rx Isolation

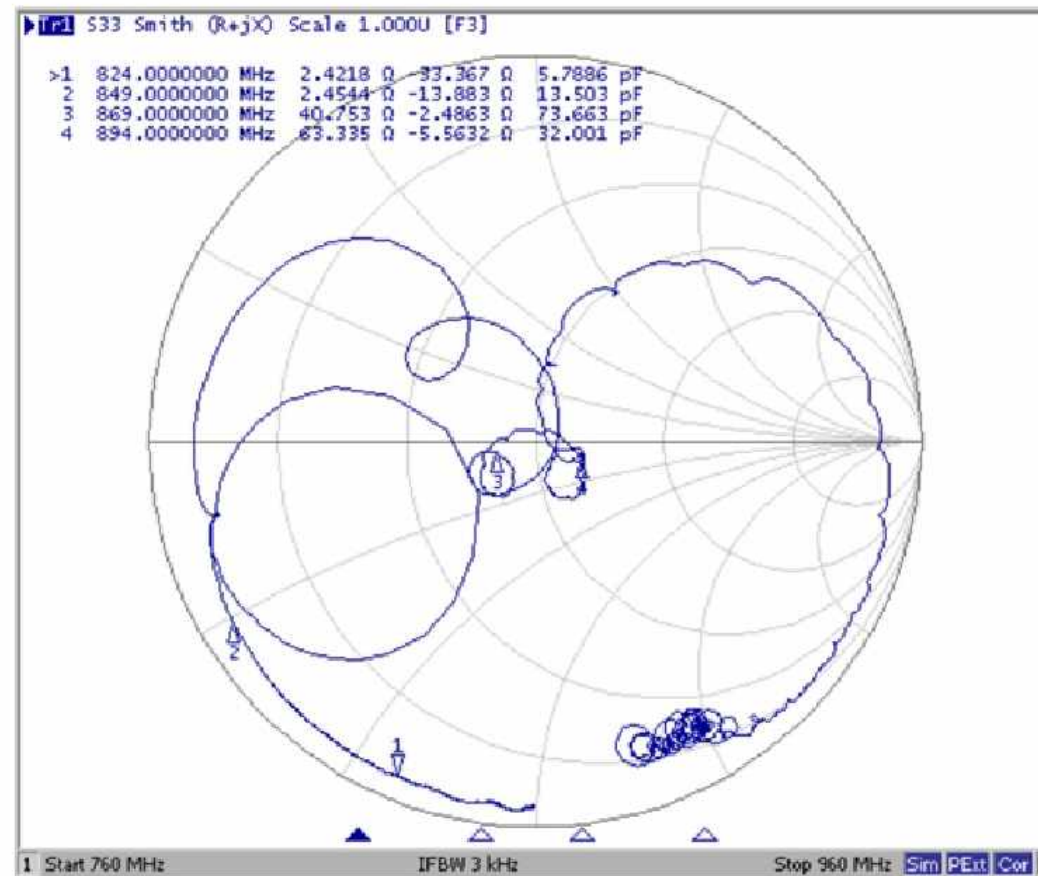
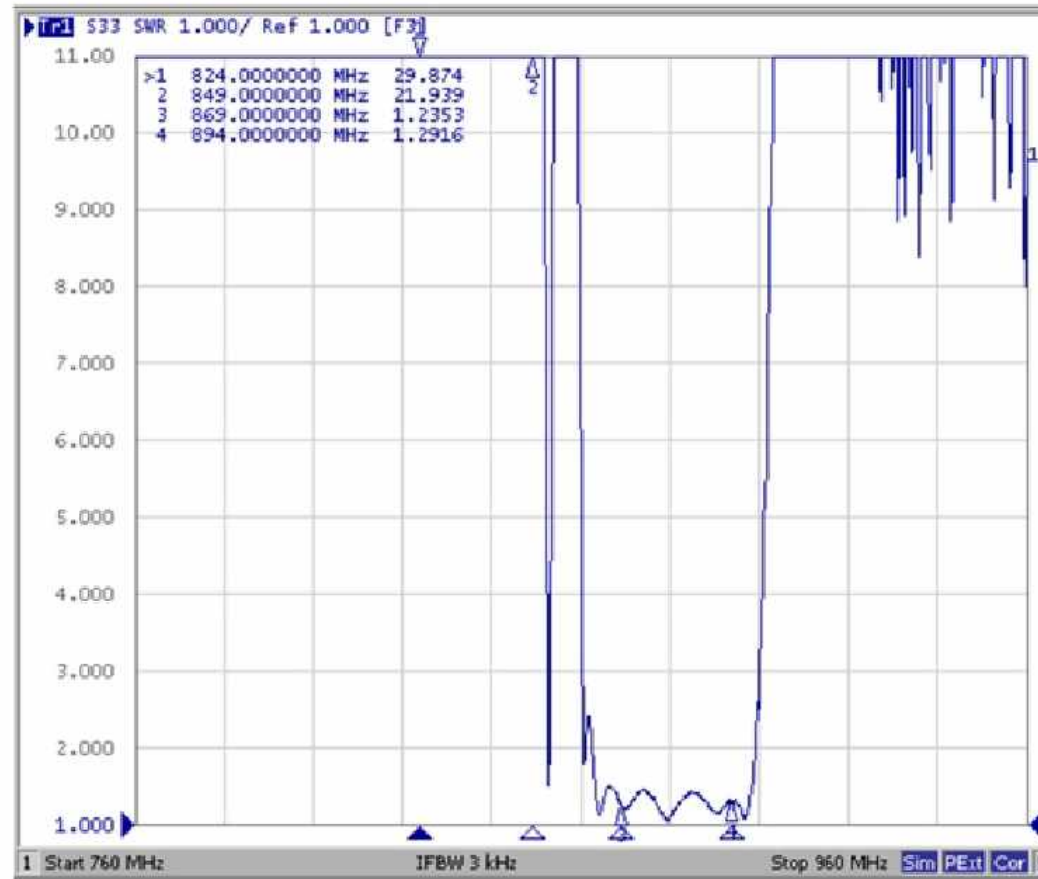


These data **exclude** loss that comes from the test board

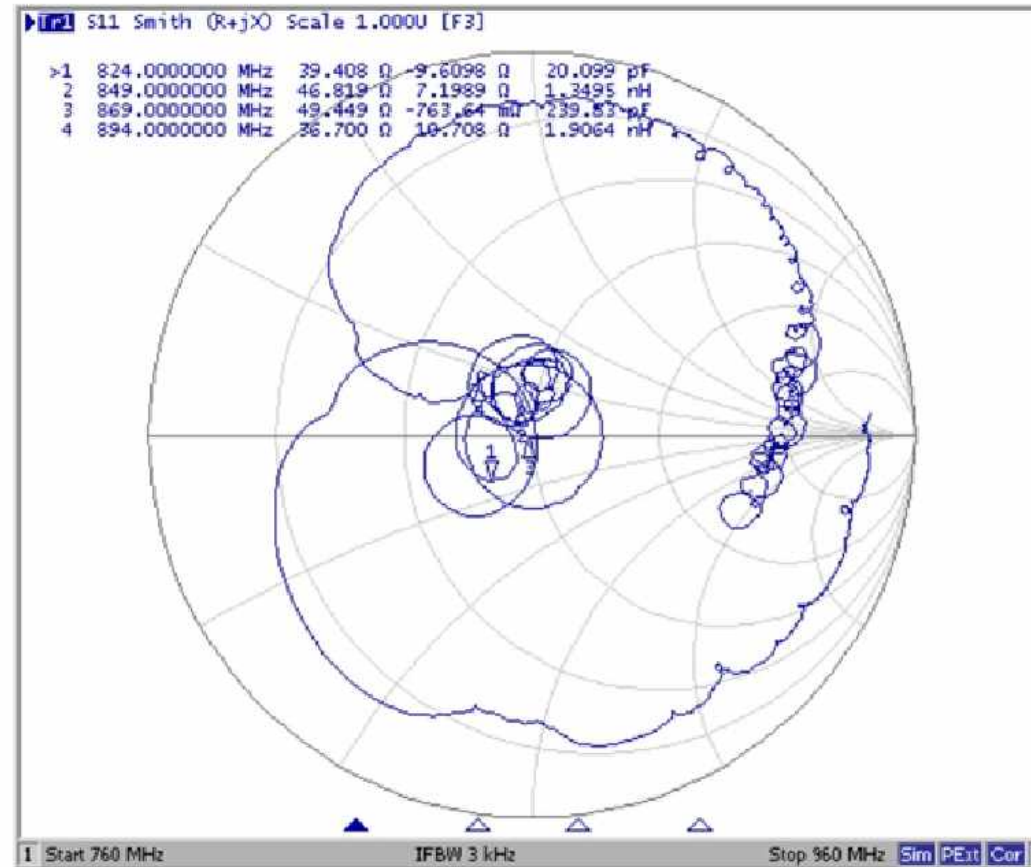
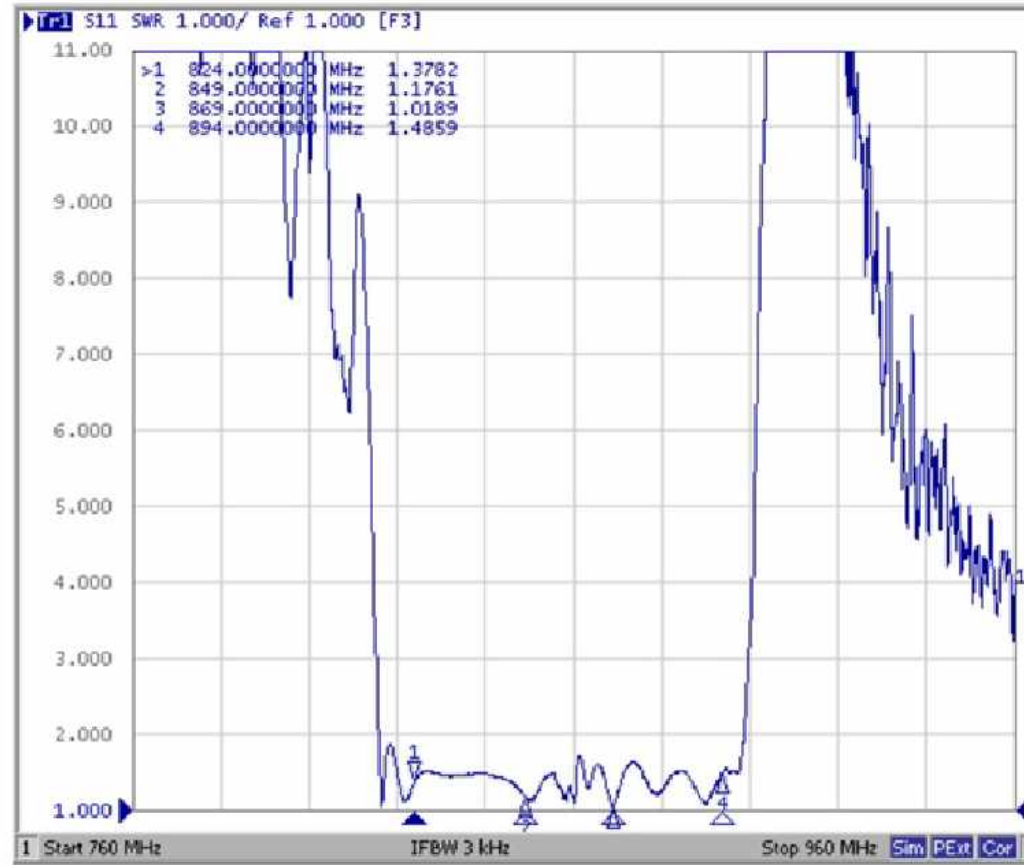
Tx Port



Rx Port



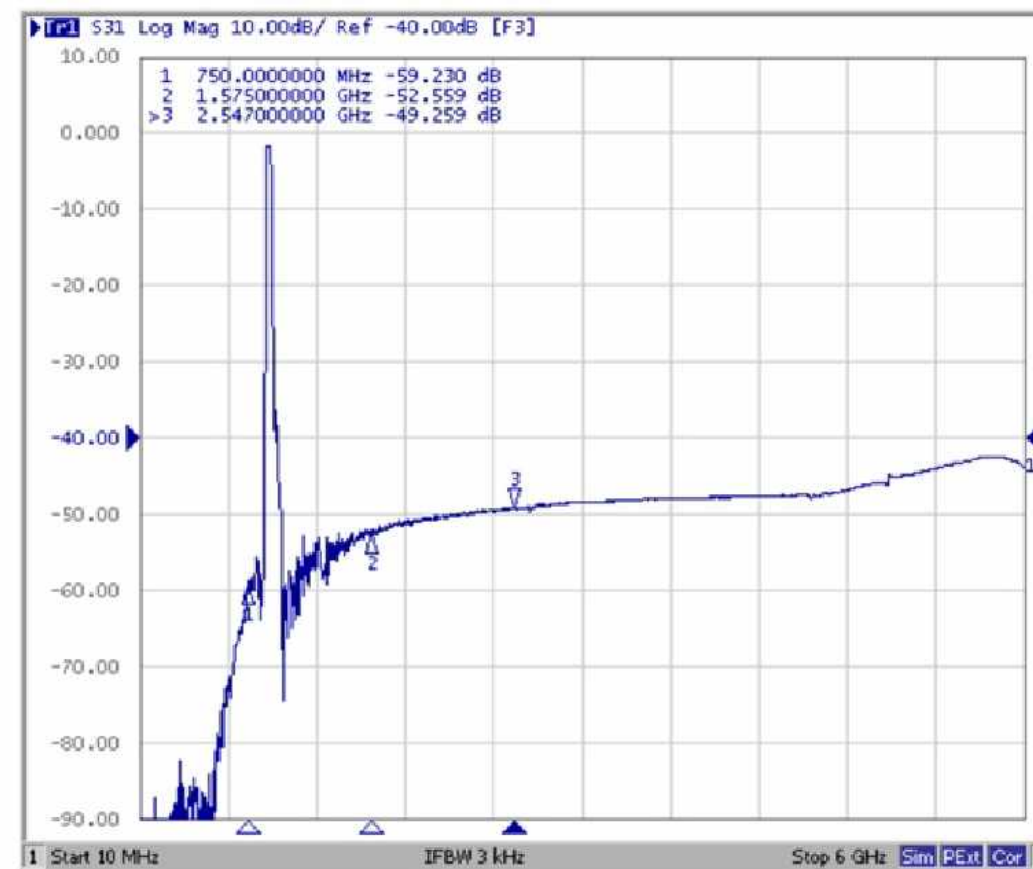
Ant Port



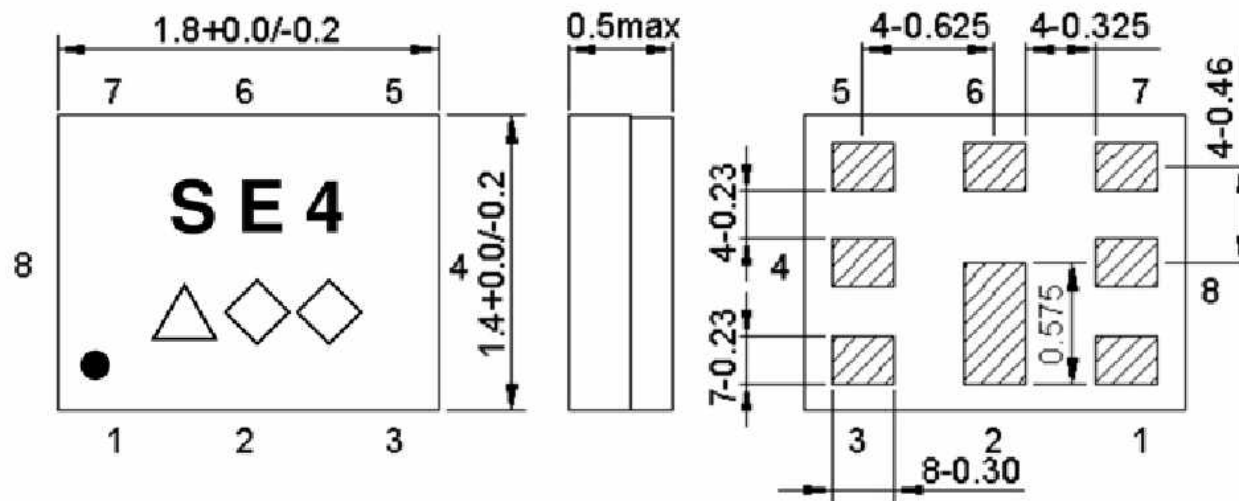
Tx to Ant (Wide span)



Ant to Rx (Wide span)



D .OUTLINE DRAWIN:



Not Specified Tolerance : +/-0.05 mm
 Coplanarity : 0.1 mm max.
 1 to 8 : Pin No.
 Unit : mm

Marking name : **SE4**

△: Date code(2016 May → s ,....., 2019 Dec→m.)

◇◇: Lot Code.

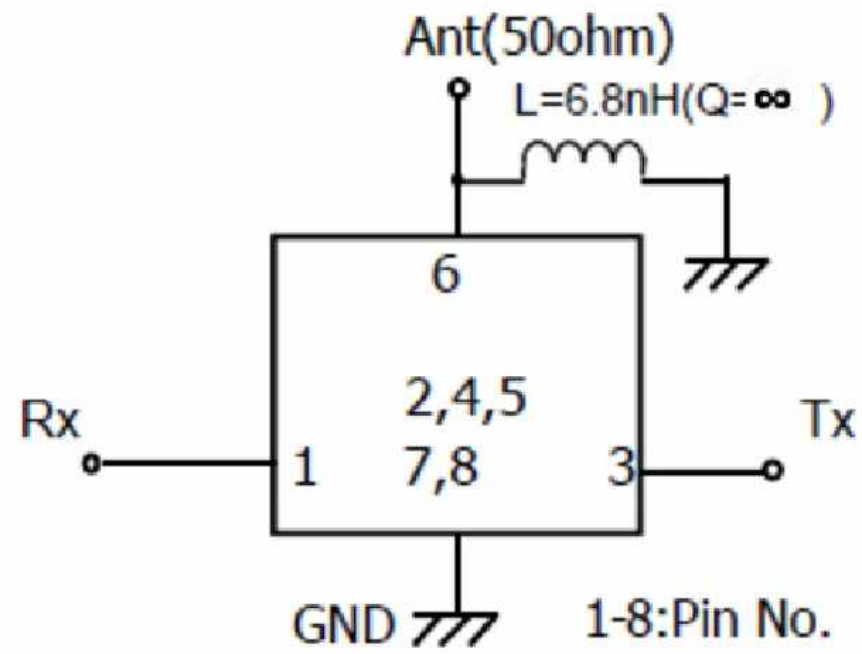
Product Date Code. Follow below table.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	n	p	q	r	s	t	u	v	w	x	y	z
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
2021	A	B	C	D	E	F	G	H	J	K	L	M

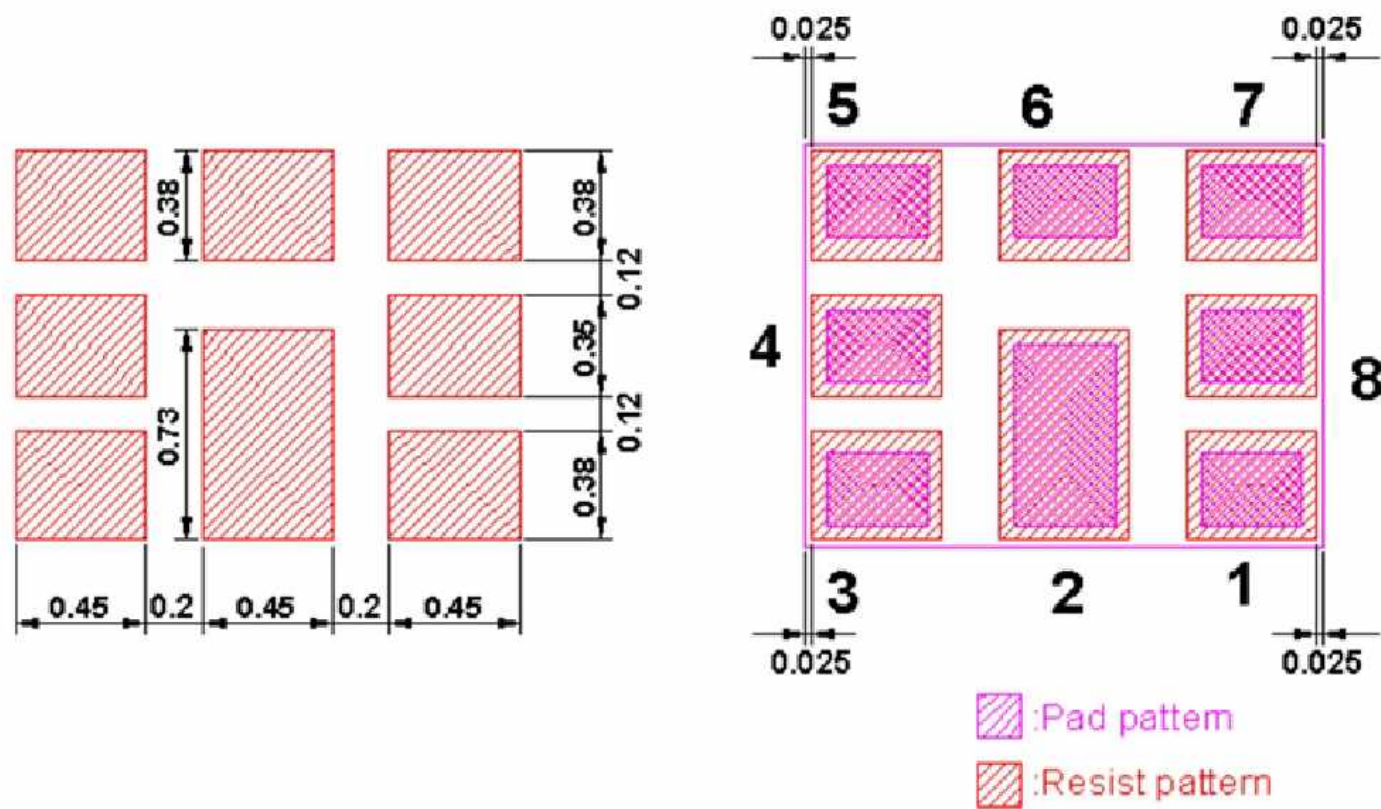
Pin Configuration:

Pin No.	Pin Name	Description
1	Rx	Receive Pin
2	GND	Ground Pin
3	Tx	Transmitter Pin
4	GND	Ground Pin
5	GND	Ground Pin
6	ANT	Antenna Pin
7	GND	Ground Pin
8	GND	Ground Pin

E. Evaluation Circuit



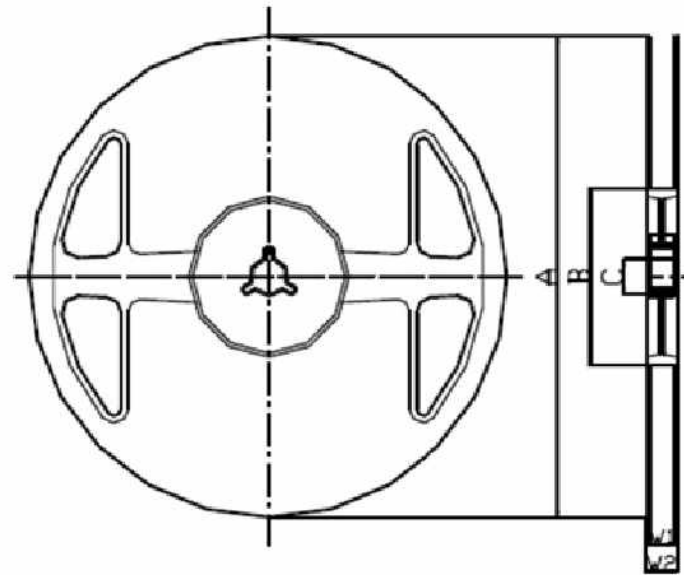
F. FOOTPRINT:



G. PACKING:

1. REEL DIMENSION

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



Materials of Reel

Material : Polystyrene + Carbon

Characteristics : Conforms to EIAJ-ET-7200A

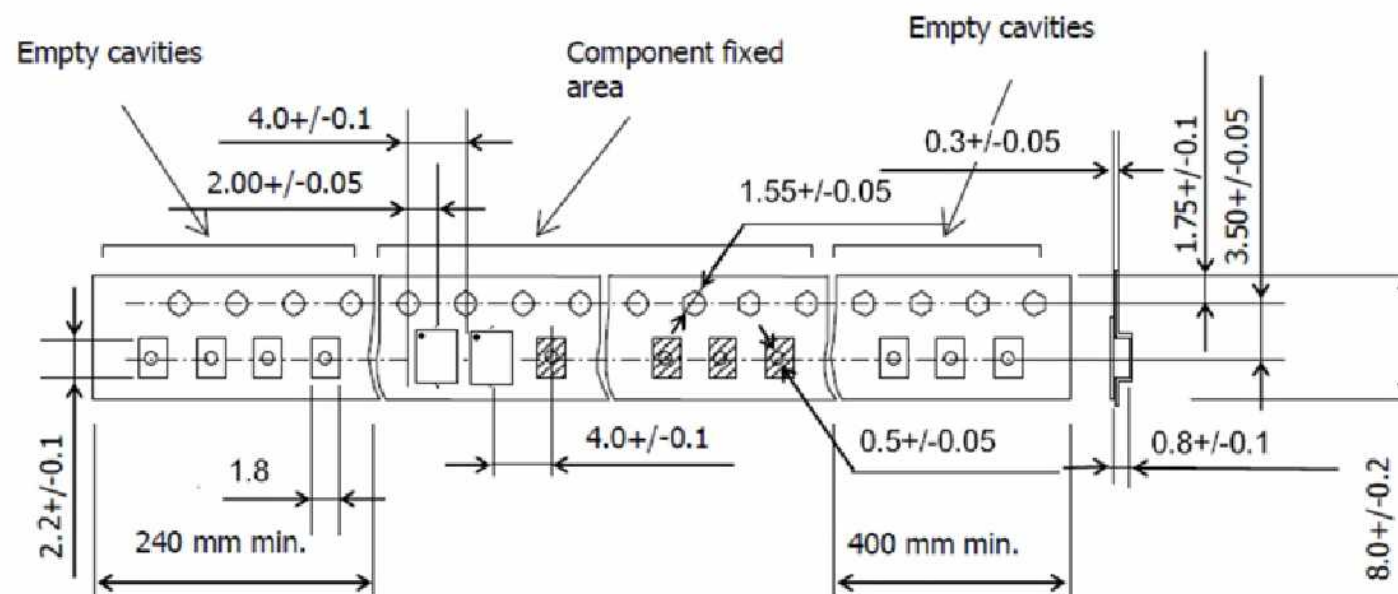
Color : Black

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

Unit : mm

Code	Quantity	A	B	C	W1	W2
Z	3,000 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



Unit : mm

Direction of feed

TAI-SAW TECHNOLOGY CO., LTD.

TST DCC
Release document

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 245~260°C peak (min. 10sec).
4. Time : 3 times.

