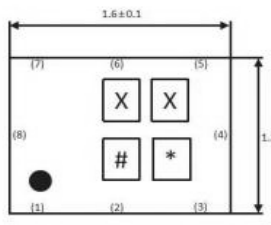
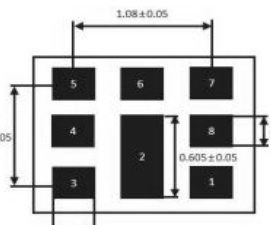


Specification Sheet

Customer Name	XXXX	CUST P/N	NA
Approval No.	PD	Temwell P/N	STSD-1747-1842-S1612W
Lot No.		Date	2025.04.16
Description	SAW Duplexer	Version	A1

(1)Size Diagram (Unit : MM)

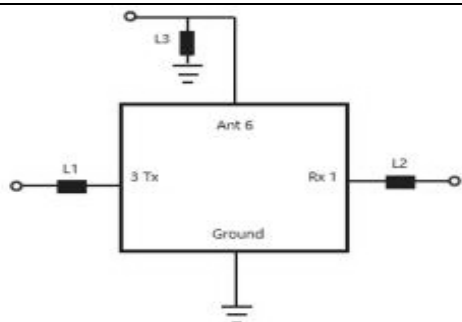
Top View  Side View  Bottom View 	<table> <tr> <th>PinNo.</th><th>Description</th></tr> <tr> <td>1</td><td>Rx</td></tr> <tr> <td>3</td><td>Tx</td></tr> <tr> <td>6</td><td>Antenna</td></tr> <tr> <td>2,4,5,7,8</td><td>Ground</td></tr> <tr> <td>Tolerance</td><td>±0.1mm</td></tr> </table>	PinNo.	Description	1	Rx	3	Tx	6	Antenna	2,4,5,7,8	Ground	Tolerance	±0.1mm
PinNo.	Description												
1	Rx												
3	Tx												
6	Antenna												
2,4,5,7,8	Ground												
Tolerance	±0.1mm												

(2)Electrical Specifications

Item			Specification		
Parameter	MHz	Unit	Min.	Typical	Max.
Center Frequency	-	MHz	-	1747.5 & 1842.5	-
Insertion Loss	1710.15-1784.85	dB	-	2.3	2.9
	1805.15-1879.85	dB	-	2.6	3.3
Ripple Deviation	1710.15-1784.85	dB	-	0.5	1.6
	1807.5-1877.5	dB	-	0.7	1.7
VSWR of Tx Port	1710.15-1784.85	-	-	1.5	2.0
VSWR of Rx Port	1805.15-1879.85	-	-	1.7	2.0
VSWR of Ant Port	1710.15-1784.85	-	-	1.5	2.0
	1805.15-1879.85	-	-	1.7	2.0
Attenuation (1710.15-1784.85)	10-960	dB	32	37	-
	1164-1189	dB	30	34	-
	1559-1606	dB	25	37	-
	1606-1680	dB	15	32	-
	1805.15-1879.85	dB	45	54	-
	1920-1980	dB	35	40	-
	2110-2170	dB	27	34	-
	2400-2500	dB	23	28	-
	2620-2690	dB	23	26	-
	3420-3570	dB	18	22	-
	4900-5850	dB	9	14	-
Attenuation (1805.15-1879.85)	5130-5355	dB	9	14	-
	1-1710	dB	36	44	-
	718-748	dB	40	50	-
	814-849	dB	40	50	-
	832-862	dB	40	50	-
	880-915	dB	40	48	-
	1447-1463	dB	38	40	-
	1615-1690	dB	40	50	-
	1710.15-1784.85	dB	45	55	-
	1785-1790	dB	17	44	-
	1920-2400	dB	34	43	-
	2400-2500	dB	38	40	-
	2500-2570	dB	38	40	-
	2570-3515	dB	35	42	-

	3515-3760	dB	35	40	-
	4900-5950	dB	30	36	-
	5205-5660	dB	30	36	-
Isolation	1710.15-1784.85	dB	50	56	-
	1805-15-1879.85	dB	50	57	-
Operation Temperature	-20°C~+85°C	°C	-	-	-
Storage Temperature	-40°C~+85°C	°C	-	-	-
RF Power Dissipation	+30	dBm	-	-	-
Remark	Note 1: Test Temperature: 25°C±2°C Note 2: Terminating source impedance: 50Ω. Terminating load impedance: 50Ω				

(3)Test Circuit



Port	Matching Component
Tx	L1 :3.5 nH (Ideal inductor)
Rx	L2 :4.5 nH (Ideal inductor)
Ant	L3 :4.5 nH (Ideal inductor)

Figure 1 Electrical Characteristics: Tx to Ant.

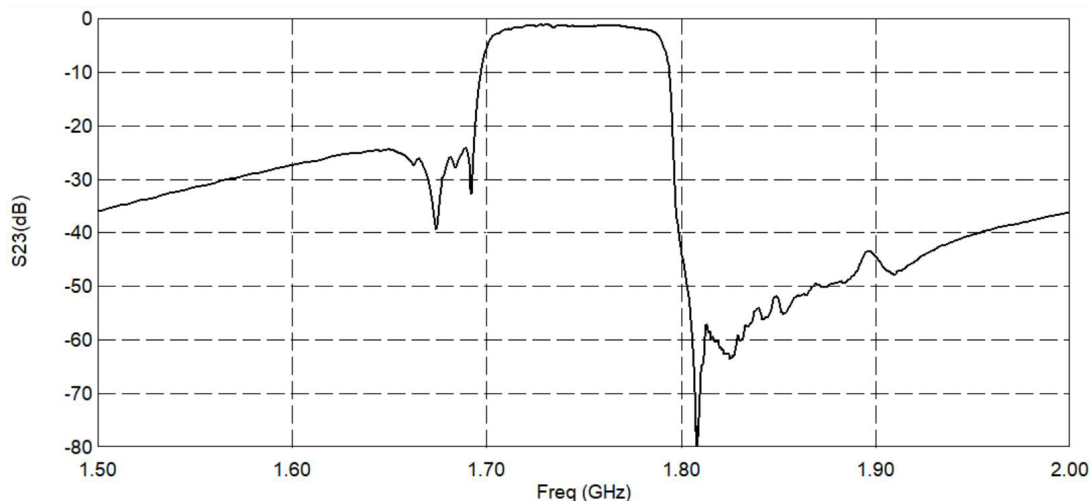


Figure 2 Electrical Characteristics: Tx to Ant.

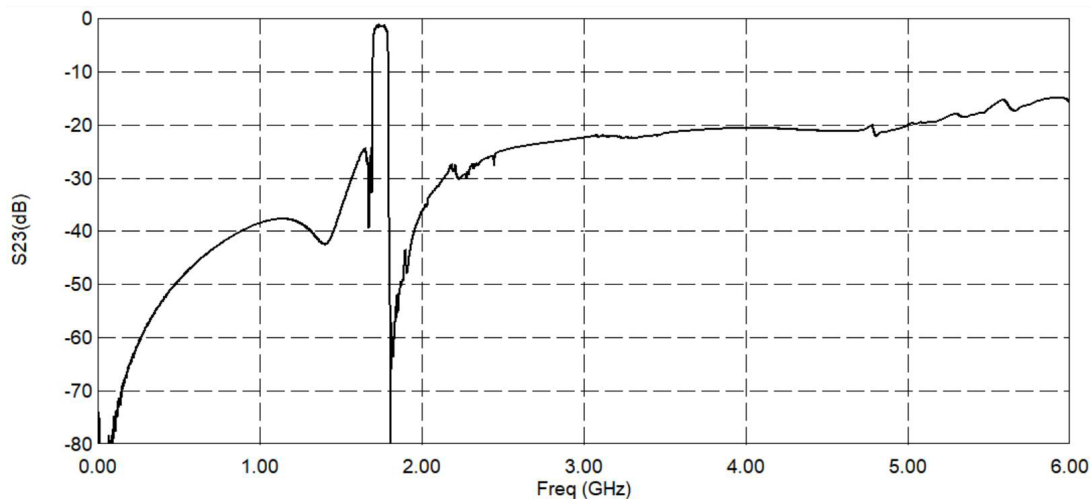


Figure 3 Electrical Characteristics: Ant to Rx.

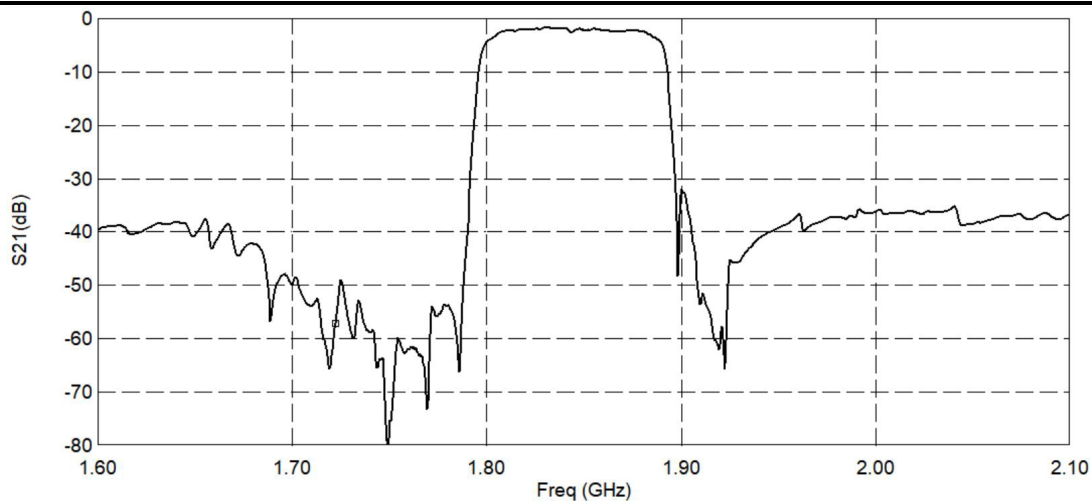


Figure 4 Electrical Characteristics: Ant to Rx.

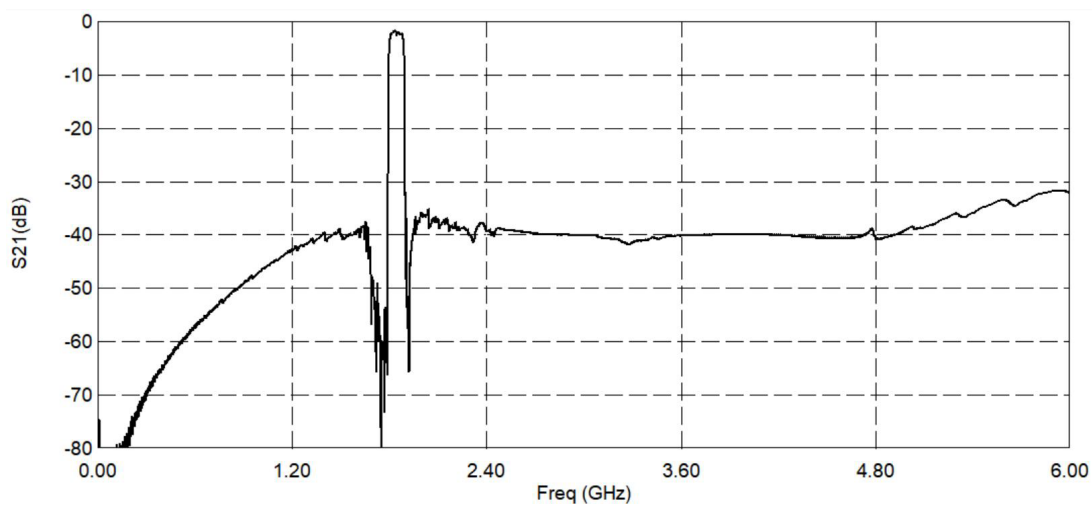


Figure 5 Electrical Characteristics: Tx to Rx.

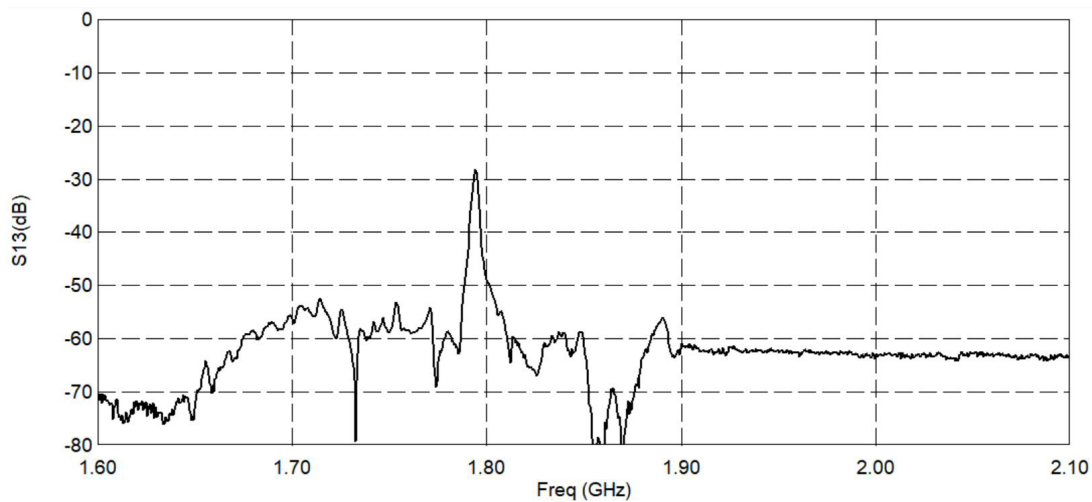


Figure 6 Electrical Characteristics: Tx to Rx.

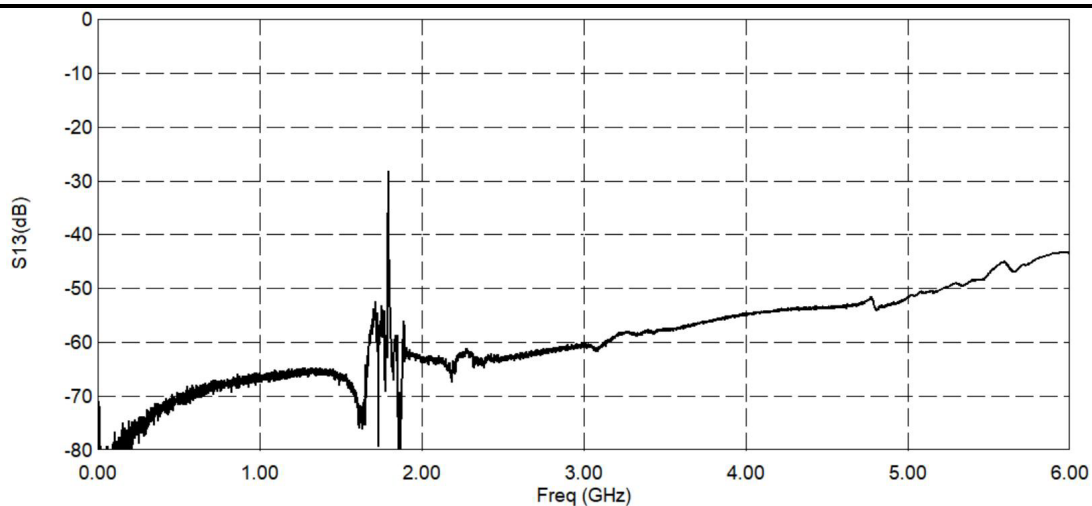
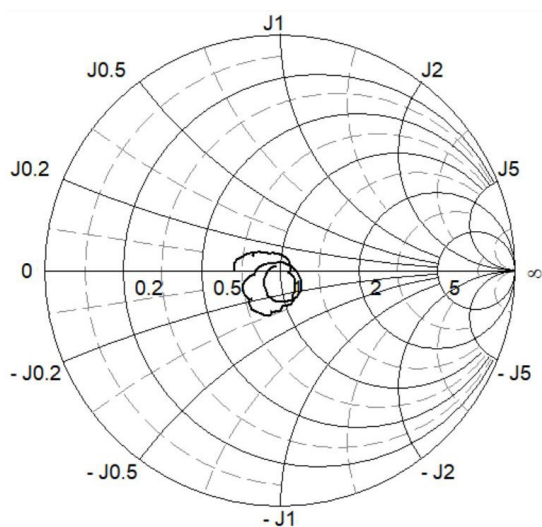
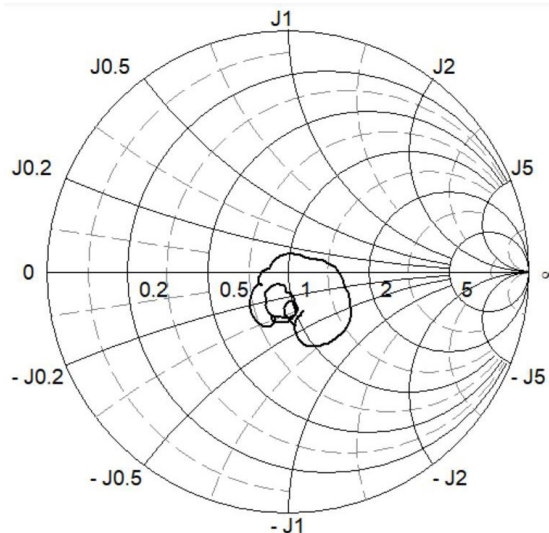


Figure 7 Smith chart

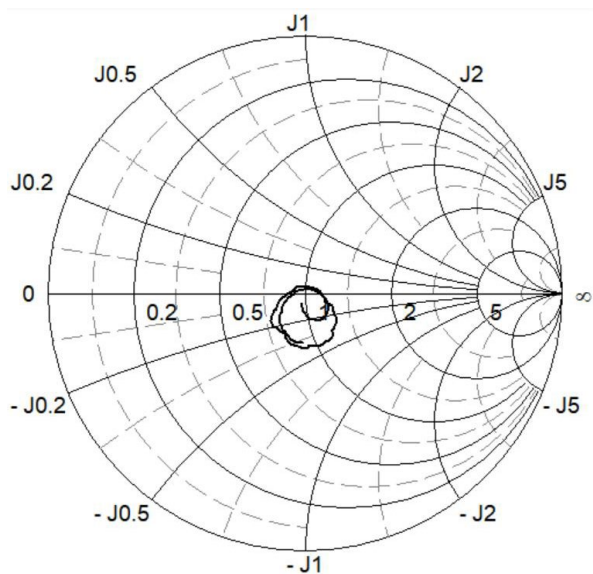
Tx Input Impedance (1710.15MHz to 1784.85MHz)



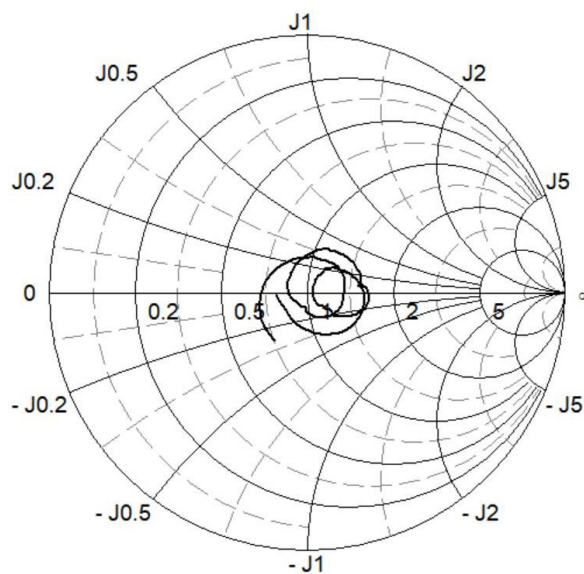
Rx Input Impedance (1805.15MHz to 1879.85MHz)



Ant Input Impedance (Tx Band)



Ant Input Impedance (Rx Band)



Approval

C. K. Chang

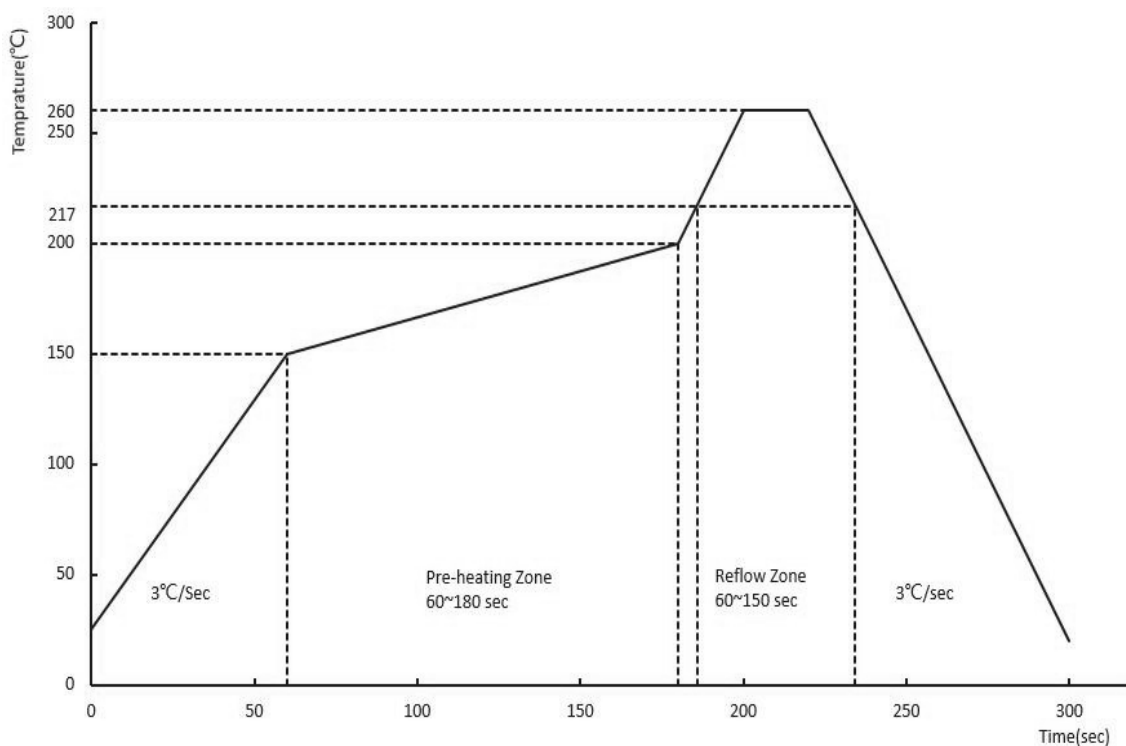
Supervisor

M. Y. Chen

Designer

F.L.Lai

Recommended SMT Solder Profile



Reliability

No.	Test item	Test condition	
1	Temperature Storage	Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h Temperature: -40°C±3°C , Duration: 250h ,Recovery time: 2h±0.5h	
2	Humidity Test	Conditions: 60°C±2°C ,90~95%RH	Duration:250h
3	Thermal Shock	Heat cycle conditions: TA=-40°C±3°C, TB=85°C±2°C, t1=t2=30min, Switch time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.	
4	Vibration Fatigue	Frequency of vibration:10~55Hz Directions: X,Y and Z	Amplitude:1.5mm Duration: 2h
5	Drop Test	Cycle time:10times	Height:1.0m
6	Solder Ability Test	Temperature:245°C±5°C Depth: DIP--2/3, SMD--1/5	Duration:3.0s--5.0s
7	Resistance to Soldering Heat	Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration:10±1s Temperature of Soldering Iron: 350°C±10°C, Duration: 3~4s, Recovery time : 2 ± 0.5h	