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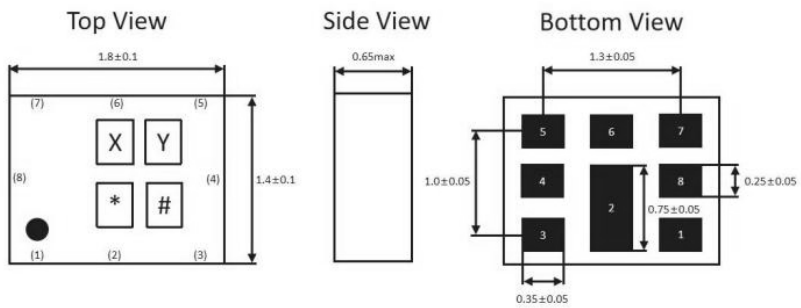
Specification Sheet

Customer Name	XXXX	CUST P/N	NA
Approval No.	PD	Temwell P/N	STSD-1882-1962-S1814W
Lot No.		Date	2025.04.18
Description	SAW Duplexer	Version	A1

(1)Size Diagram（Unit：MM）



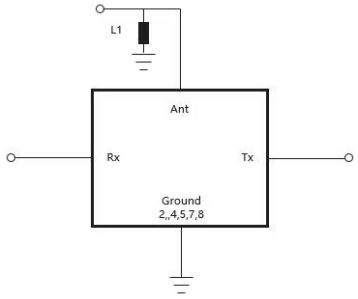
PinNo.	Description
3	Tx
1	Rx
6	Antenna
2,4,5,7,8	Ground
Tolerance	±0.1mm

(2)Electrical Specifications

Item			Specification		
Parameter	MHz	Unit	Min.	Typical	Max.
Center Frequency	-	MHz	-	1882.5 / 1962.5	-
Insertion Loss	1852.5-1912.5	dB	-	2.4	3.2
	1932.5-1992.5	dB	-	2.8	3.4
Ripple Deviation	1852.5-1912.5	dB	-	1.2	2.2
	1932.5-1992.5	dB	-	1.9	2.4
VSWR of Tx Port	1850-1915	-	-	1.7	2.0
VSWR of Rx Port	1932.5-1992.5	-	-	1.7	2.0
VSWR of Ant Port	1850-1915	-	-	1.7	2.0
	1932.5-1992.5	-	-	1.7	2.0
Attenuation (1852.5-1912.5)	10-616	dB	40	46	-
	617-652	dB	40	45	-
	699-716	dB	40	44	-
	728-768	dB	38	43	-
	852-894	dB	36	41	-
	1166-1187	dB	35	39	-
	1225-1250	dB	35	39	-
	1559-1563	dB	42	48	-
	1565.42-1573.37	dB	42	48	-
	1573.37-1577.47	dB	42	48	-
	1577.47-1585.42	dB	42	48	-
	1597.55-1605.89	dB	45	50	-
	1930.25-1989.75	dB	45	50	-
	1930.25-1994.75	dB	45	50	-
	2110-2200	dB	42	47	-
	2350-2360	dB	35	41	-
	2402-2483	dB	32	37	-
	2496-2690	dB	30	35	-
	3300-3800	dB	13	18	-
	3700-3830	dB	15	20	-
	4900-5950	dB	7	12	-
	5550-5745	dB	7	12	-
Attenuation (1932.5-1992.5)	10-662	dB	45	50	-
	663-698	dB	45	49	-
	699-862	dB	40	46	-

	1710.15-1779.85	dB	40	45	-
	1850.25-1909.75	dB	48	53	-
	1850.25-1914.75	dB	25	31	-
	1850.25-1914.75	dB	25	31	-
	2055-2080	dB	40	46	-
	2305-2315	dB	38	43	-
	2402-2483	dB	40	44	-
	2496-2690	dB	38	43	-
	3300-3800	dB	45	52	-
	3860-3990	dB	45	50	-
	4900-5950	dB	45	50	-
	5790-5985	dB	45	52	-
Isolation	1852.5-1912.5	dB	50	52	-
	1932.5-1992.5	dB	50	53	-
Operation Temperature	-20℃~+85℃	℃	-	-	-
Storage Temperature	-40℃~+85℃	℃	-	-	-
RF Power Dissipation	+29	dBm	-	-	-
Remark	Note 1: Test Temperature: 25℃±2℃ Note 2: Terminating source impedance: 50Ω. Terminating load impedance: 50Ω				

(3)Test Circuit



Port	Matching Component
Ant	L2 : 6.7 nH (Ideal inductor)

Figure 1 Electrical Characteristics: Tx to Ant.

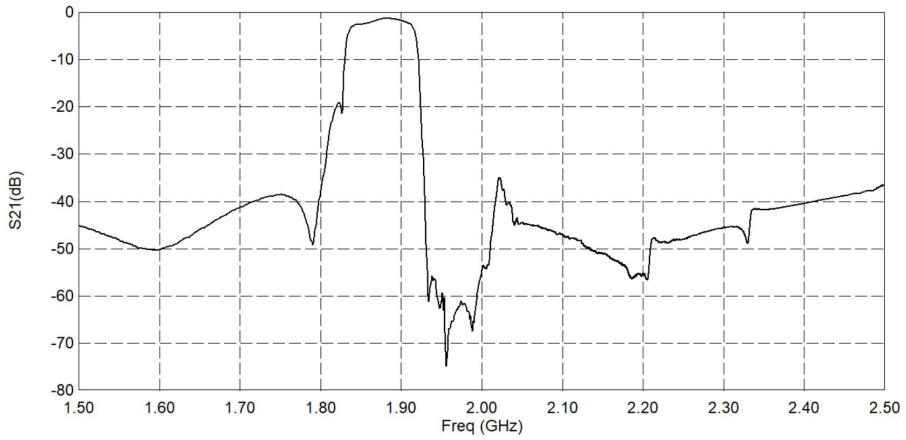


Figure 2 Electrical Characteristics: Tx to Ant.

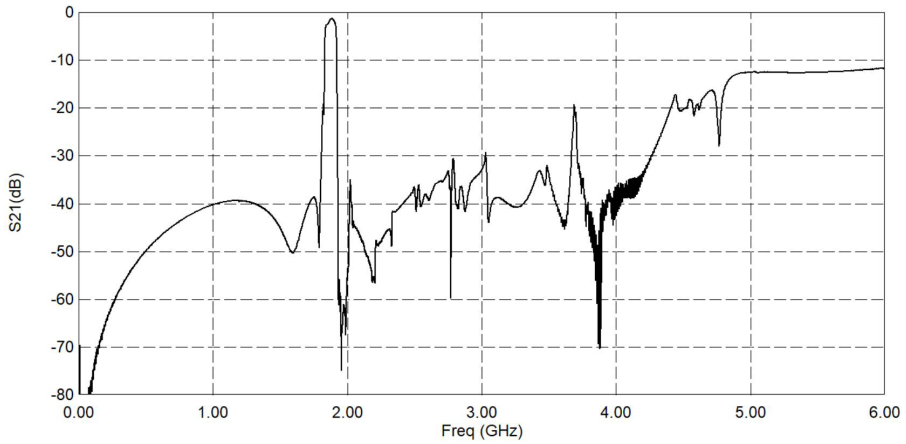


Figure 3 Electrical Characteristics: Ant to Rx.

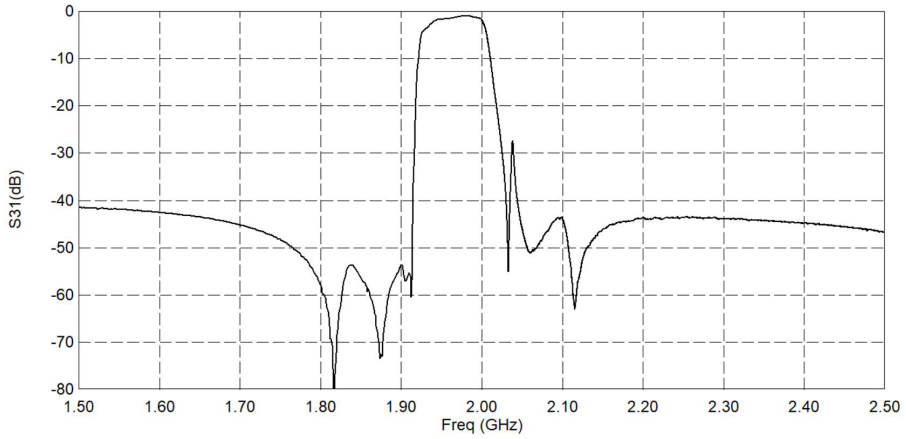


Figure 4 Electrical Characteristics: Ant to Rx.

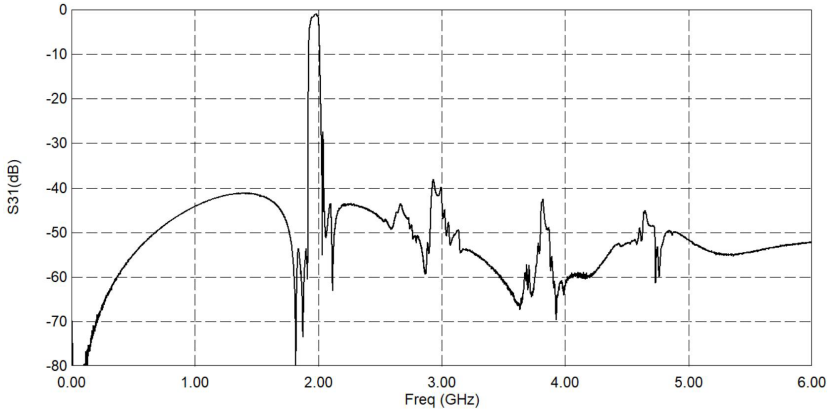


Figure 5 Electrical Characteristics: Tx to Rx.

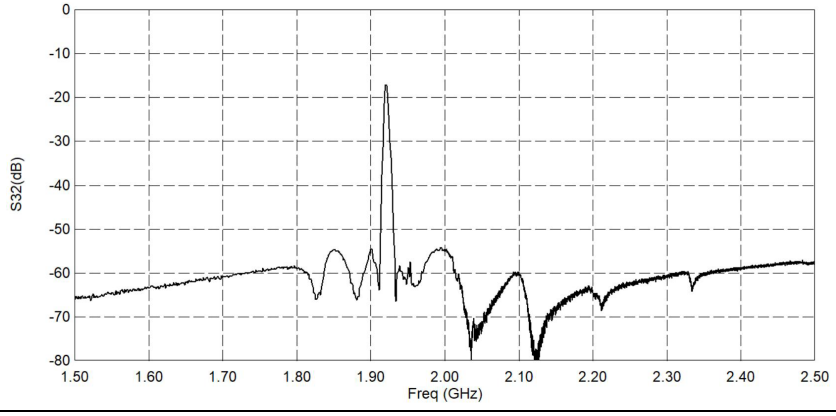


Figure 6 Electrical Characteristics: Tx to Rx.

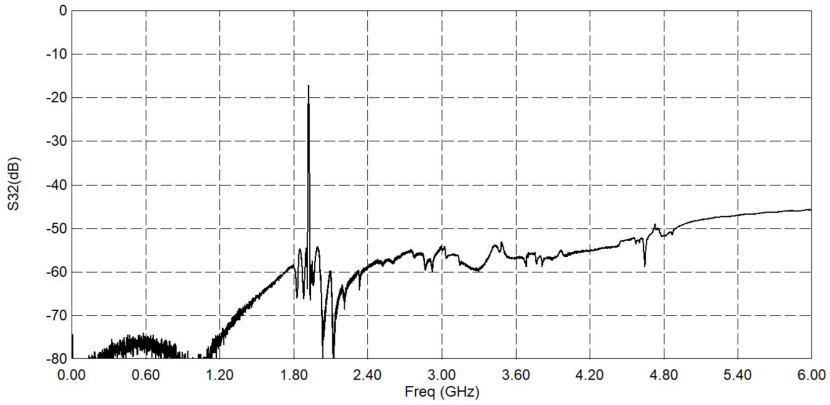
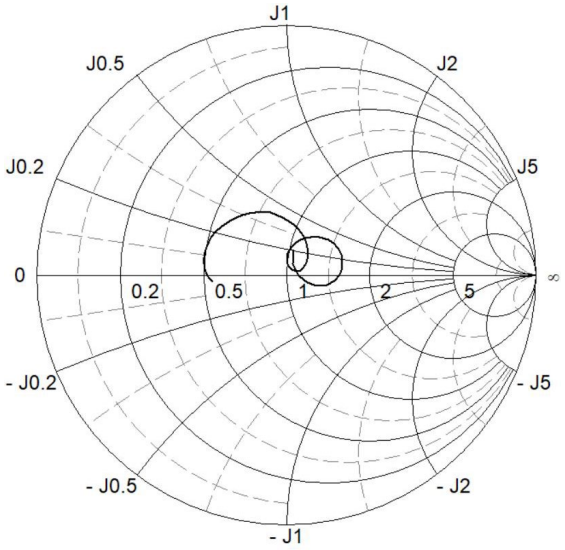
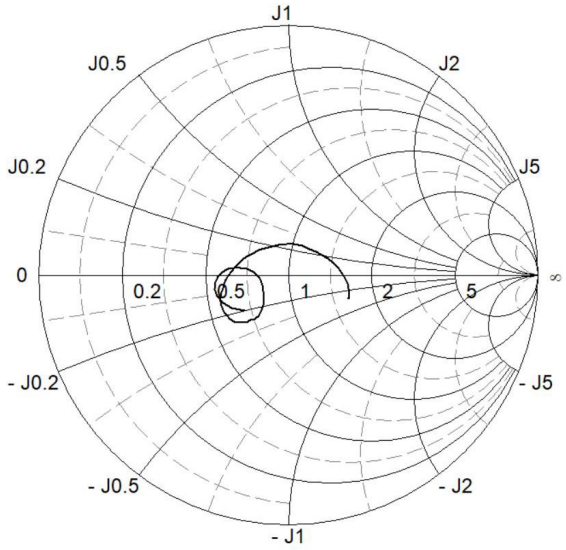


Figure 7 Smith chart

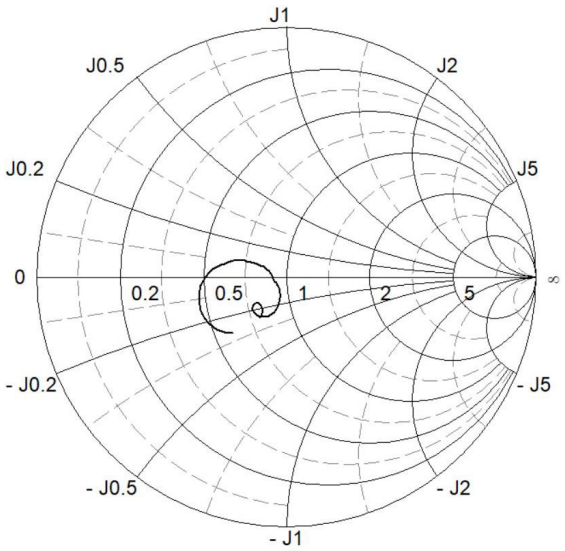
Tx Input Impedance (1850MHz to 1915MHz)



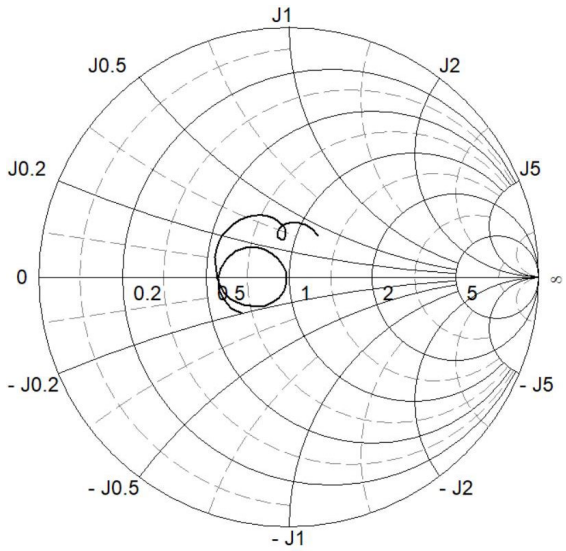
Rx Input Impedance (1930MHz to 1995MHz)



Ant Input Impedance (Tx Band)

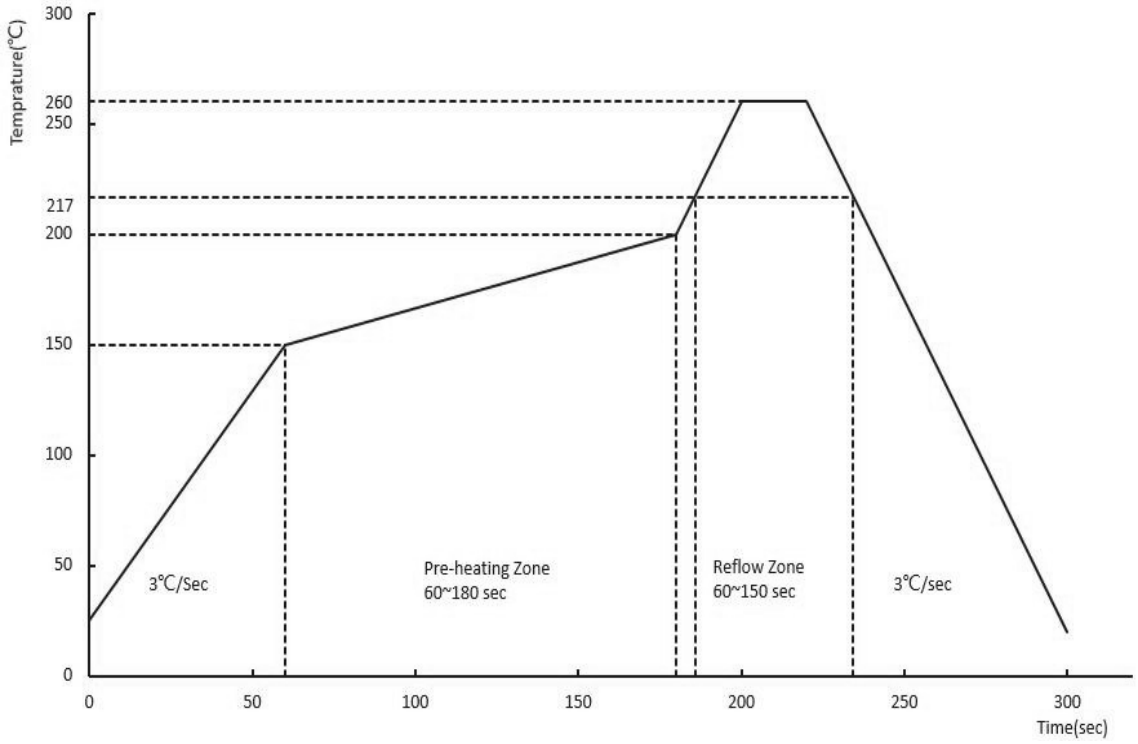


Ant Input Impedance (Rx Band)



Approval	Supervisor	Designer
C. K. Chang	M. Y. Chen	F.L.Lai

Recommended SMT Solder Profile



Reliability

No.	Test item	Test condition	
1	Temperature Storage	Temperature: 85℃±2℃ , Duration: 250h , Recovery time: 2h±0.5h Temperature: -40℃±3℃ , Duration: 250h ,Recovery time: 2h±0.5h	
2	Humidity Test	Conditions: 60℃±2℃ ,90~95%RH	Duration:250h
3	Thermal Shock	Heat cycle conditions: TA=-40℃±3℃, TB=85℃±2℃, 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℃±5℃ Depth: DIP--2/3, SMD--1/5	Duration:3.0s--5.0s
7	Resistance to Soldering Heat	Thickness of PCB:1mm , Solder condition: 260℃±5℃ , Duration:10±1s Temperature of Soldering Iron: 350℃±10℃, Duration: 3~4s, Recovery time : 2 ± 0.5h	