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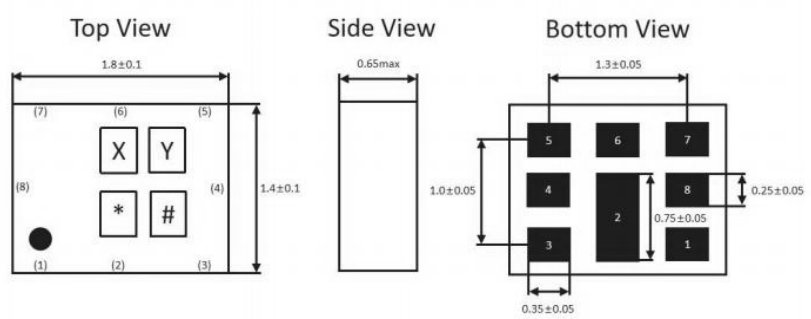
Specification Sheet

Customer Name	XXXX	CUST P/N	NA
Approval No.	PD	Temwell P/N	STSD-1732-2132-S1814W
Lot No.		Date	2025.04.17
Description	SAW Duplexer	Version	A1

(1)Size Diagram（Unit：MM）



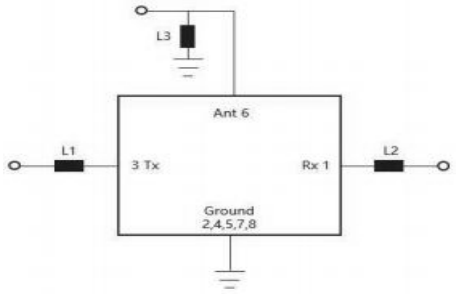
PinNo.	Description
3	Tx
1	Rx
6	Antenna
2,4,5,7,8	Ground
Tolerance	±0.1mm

(2)Electrical Specifications

Item			Specification		
Parameter	MHz	Unit	Min.	Typical	Max.
Center Frequency	-	MHz	-	1732.2 / 2132.5	-
Insertion Loss	1710-1755	dB	-	2.0	2.4
	2110-2155	dB	-	2.0	2.5
Ripple Deviation	1710-1755	dB	-	0.4	1.2
	2110-2155	dB	-	0.5	1.2
VSWR of Tx Port	1710-1755	-	-	1.5	2.0
VSWR of Rx Port	2110-2155	-	-	1.5	2.0
VSWR of Ant Port	1710-1755	-	-	1.6	2.0
	2110-2155	-	-	1.4	2.0
Attenuation (1710-1755)	10-728	dB	40	50	-
	699-716	dB	40	50	-
	704-716	dB	40	50	-
	716-746	dB	40	50	-
	777-787	dB	40	50	-
	824-849	dB	37	47	-
	851-894	dB	37	46	-
	1226-1250	dB	35	41	-
	1559-1563	dB	35	43	-
	1565.42-1573.37	dB	35	42	-
	1573.37-1577.46	dB	35	41	-
	1577.46-1585.42	dB	35	40	-
	1597.55-1605.89	dB	30	37	-
	1805-1880	dB	40	47	-
	1930-1990	dB	35	43	-
	2110-2155	dB	30	39	-
	2350-2360	dB	25	33	-
	2400-2494	dB	25	34	-
	2500-2570	dB	25	32	-
	3410-3520	dB	20	30	-
	4905-5267	dB	15	25	-
	4900-5950	dB	15	24	-
Attenuation (2110-2155)	10-699	dB	43	54	-
	400-400	dB	50	60	-
	699-714	dB	42	53	-

	777-787	dB	42	52	-
	824-849	dB	42	51	-
	1310-1355	dB	40	48	-
	1710-1755	dB	40	48	-
	1755-2025	dB	25	35	-
	1910-1955	dB	45	56	-
	2305-2315	dB	38	46	-
	2400-2500	dB	38	47	-
	2500-3820	dB	22	30	-
	3820-3910	dB	20	28	-
	4220-4310	dB	12	20	-
	4900-5950	dB	6	10	-
Isolation	1710-1755	dB	50	52	-
	2110-2155	dB	45	47	-
	1574-1577	dB	55	57	-
	3410-3520	dB	55	59	-
	5120-5275	dB	20	24	-
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
Tx	L1 : 3.1 nH (Ideal inductor)
Rx	L2 : 1.1 nH (Ideal inductor)
Ant	L3 : 3.5 nH (Ideal inductor)

Figure 1 Electrical Characteristics: Tx to Ant.

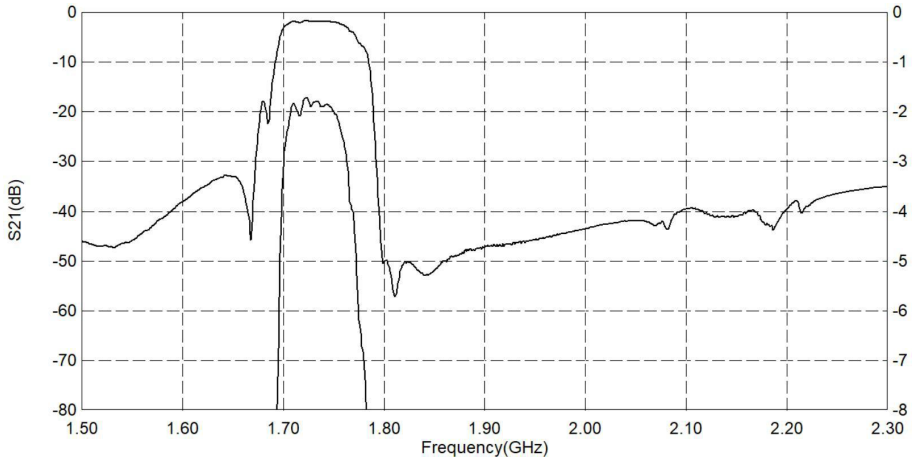


Figure 2 Electrical Characteristics: Tx to Ant.

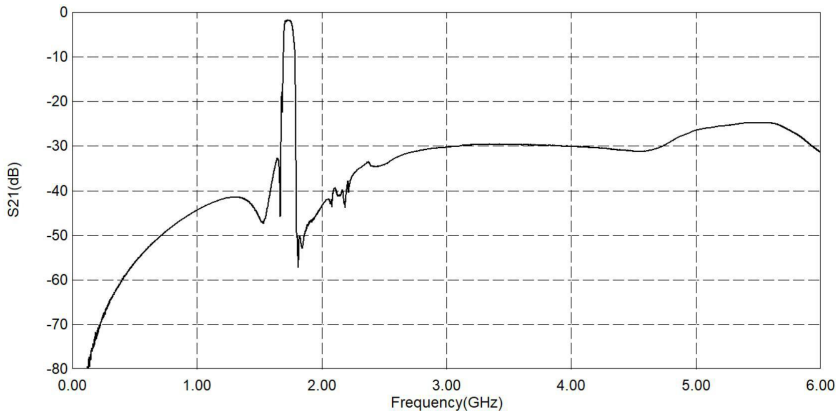


Figure 3 Electrical Characteristics: Ant to Rx.

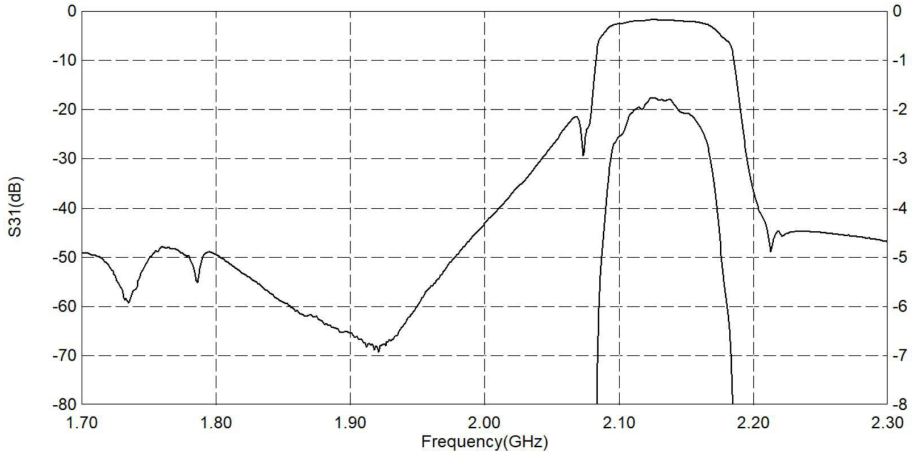


Figure 4 Electrical Characteristics: Ant to Rx.

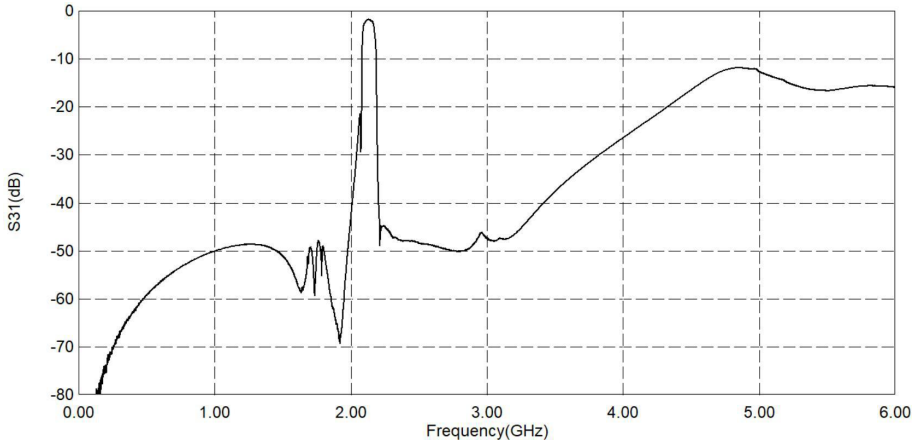


Figure 5 Electrical Characteristics: Tx to Rx.

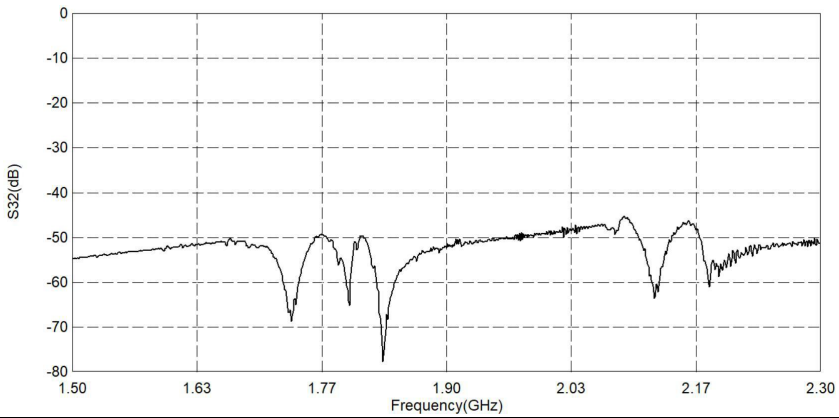


Figure 6 Electrical Characteristics: Tx to Rx.

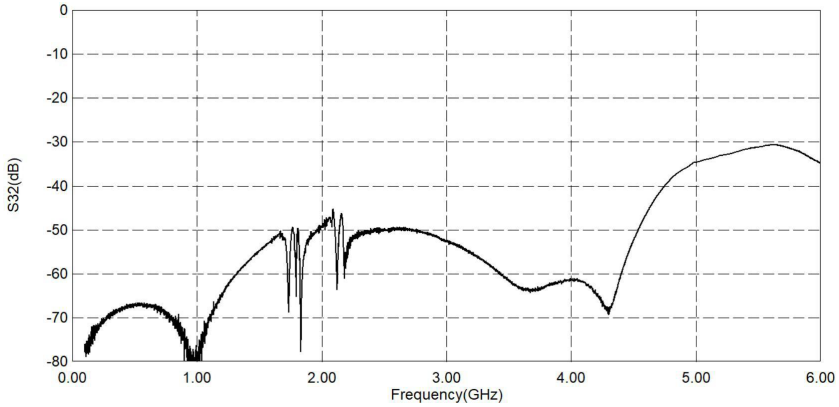
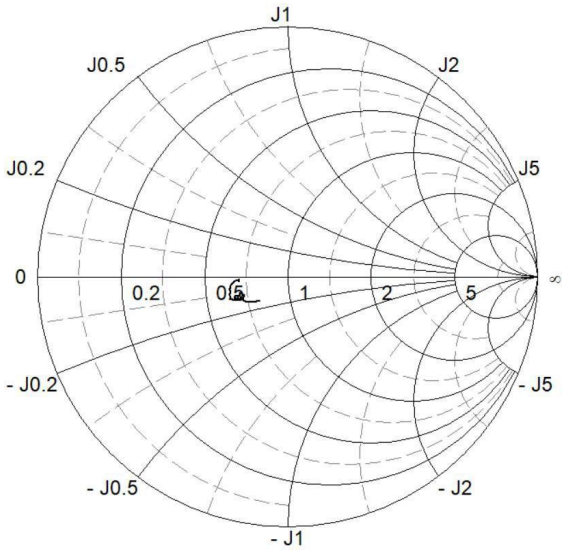
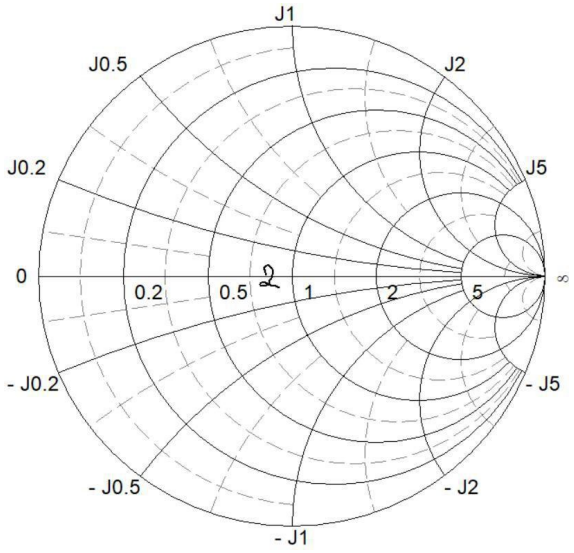


Figure 7 Smith chart

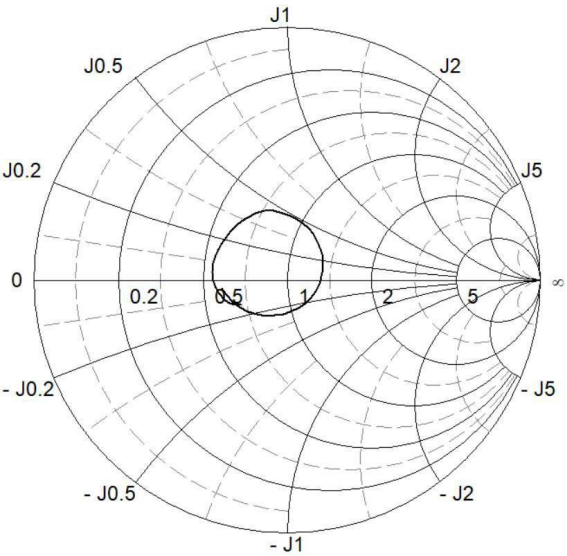
Tx Input Impedance (1710MHz to 1755MHz)



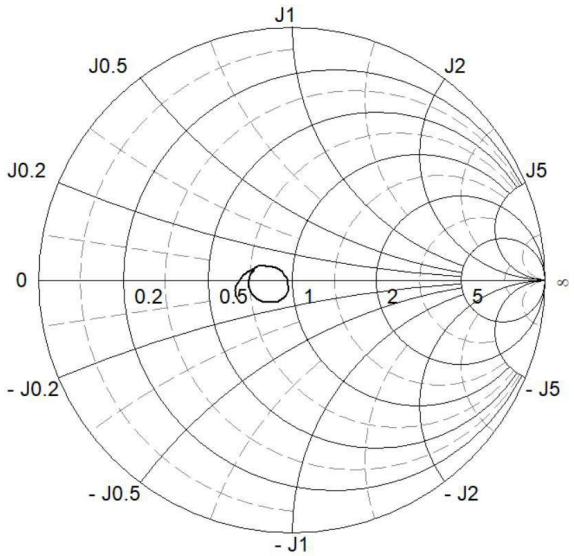
Rx Input Impedance (2110MHz to 2155MHz)



Ant Input Impedance (Tx Band)

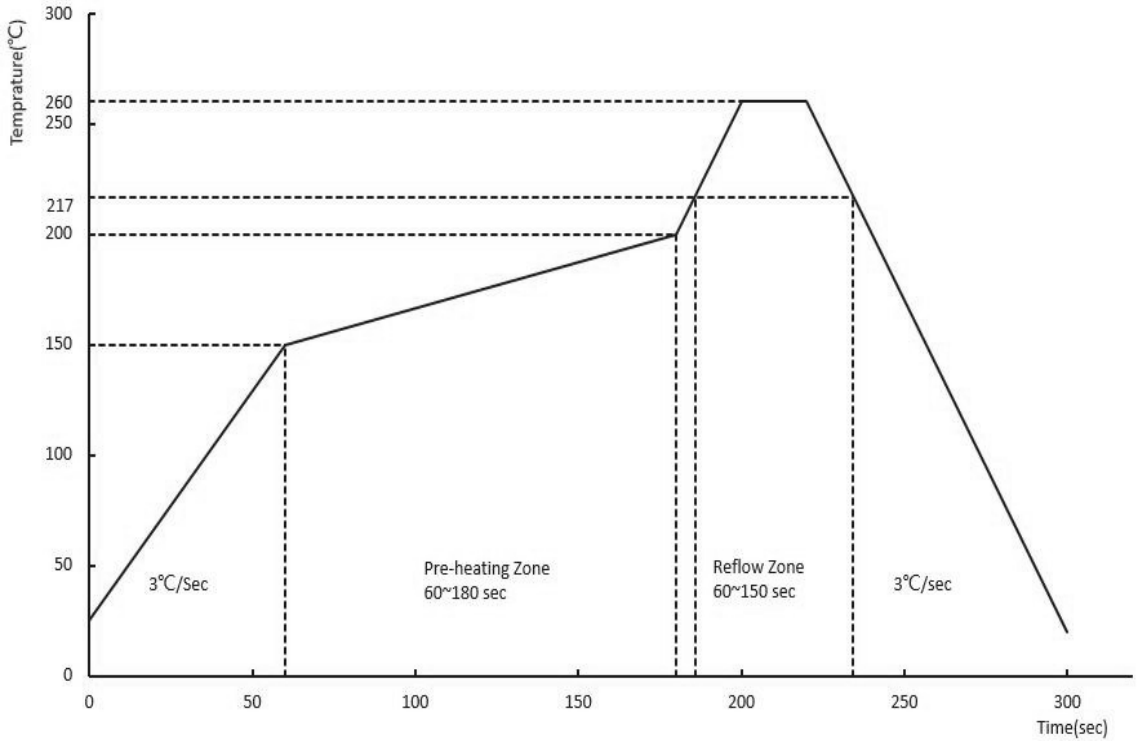


Ant Input Impedance (Rx Band)



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	