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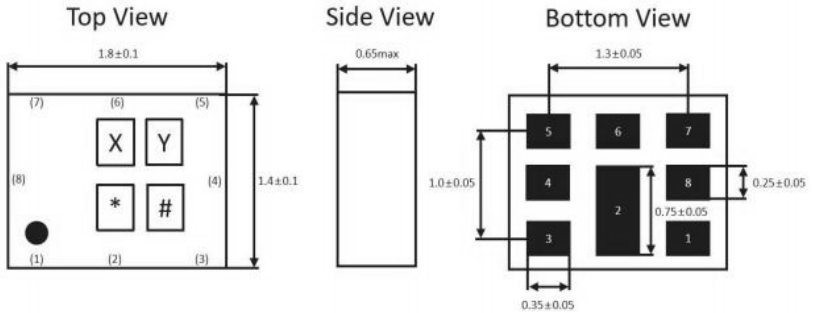
Specification Sheet

Customer Name	XXXX	CUST P/N	NA
Approval No.	PD	Temwell P/N	STSD-718-773-S1814W
Lot No.		Date	2025.04.18
Description	SAW Duplexer	Version	A1

(1)Size Diagram（Unit：MM）



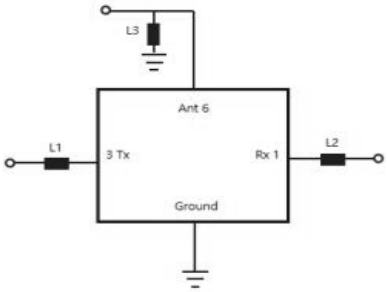
PinNo.	Description
3	Tx
1	Rx
6	Antenna
2,4,5,7,8	Ground
Tolerance	±0.1mm

(2)Electrical Specifications

Item			Specification		
Parameter	MHz	Unit	Min.	Typical	Max.
Center Frequency	-	MHz	-	718 / 773	-
Insertion Loss	703.25-732.75	dB	-	2.5	3.3
	758.25-787.75	dB	-	2.8	3.5
Ripple Deviation	703.25-732.75	dB	-	1.6	1.9
	758-788	dB	-	1.5	1.9
VSWR of Tx Port	703-733	-	-	1.6	2.0
VSWR of Rx Port	758-788	-	-	1.7	2.0
VSWR of Ant Port	703-733	-	-	1.6	2.0
	758-788	-	-	1.7	2.0
Attenuation (703.25-732.75)	10-670	dB	29	34	-
	670-694	dB	26	31	-
	694-695	dB	12	28	-
	695-698	dB	11	26	-
	758-788	dB	52	57	-
	788-803	dB	19	24	-
	859-894	dB	35	41	-
	1225-1250	dB	24	29	-
	1406-1466	dB	24	29	-
	1559-1563	dB	23	28	-
	1565.42-1573.37	dB	23	28	-
	1573.37-1577.47	dB	23	28	-
	1577.47-1585.42	dB	23	28	-
	1597.55-1605-89	dB	25	29	-
	1805-1880	dB	25	29	-
	1930-1995	dB	25	30	-
	2010-2025	dB	26	31	-
	2109-2199	dB	20	25	-
	2400-2484	dB	20	26	-
	2570-2620	dB	20	26	-
	2812-2932	dB	18	24	-
	4900-5950	dB	13	18	-
Attenuation (758.25-787.75)	10-703	dB	45	52	-
	703-733	dB	45	53	-
	824-849	dB	35	40	-

	880-915	dB	48	53	-
	1710-1785	dB	40	46	-
	1850-1910	dB	40	45	-
	1920-1980	dB	40	45	-
	2400-2496	dB	45	54	-
	2496-2690	dB	45	54	-
	4900-5900	dB	40	49	-
Isolation	703-733	dB	52	55	-
	758-788	dB	53	56	-
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 : 12 nH (Ideal inductor)
Rx	L2 : 5.0 nH (Ideal inductor)
Ant	L3 : 9.7 nH (Ideal inductor)

Figure 1 Electrical Characteristics: Tx to Ant.

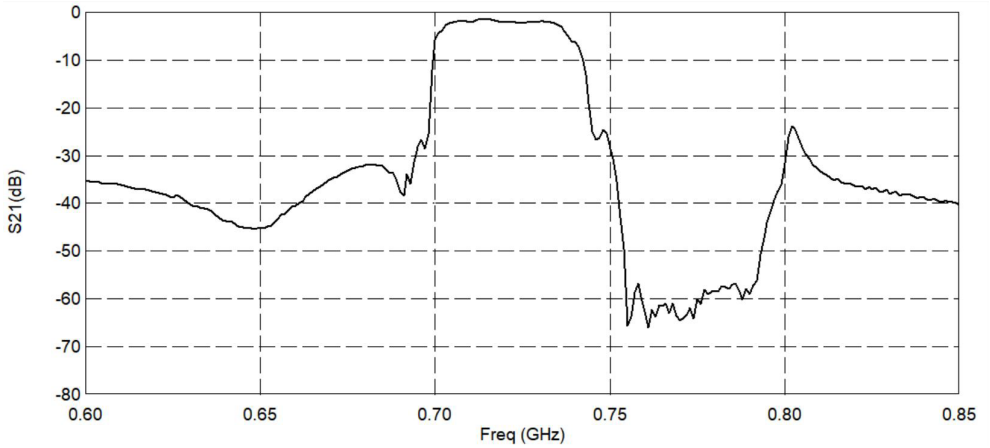


Figure 2 Electrical Characteristics: Tx to Ant.

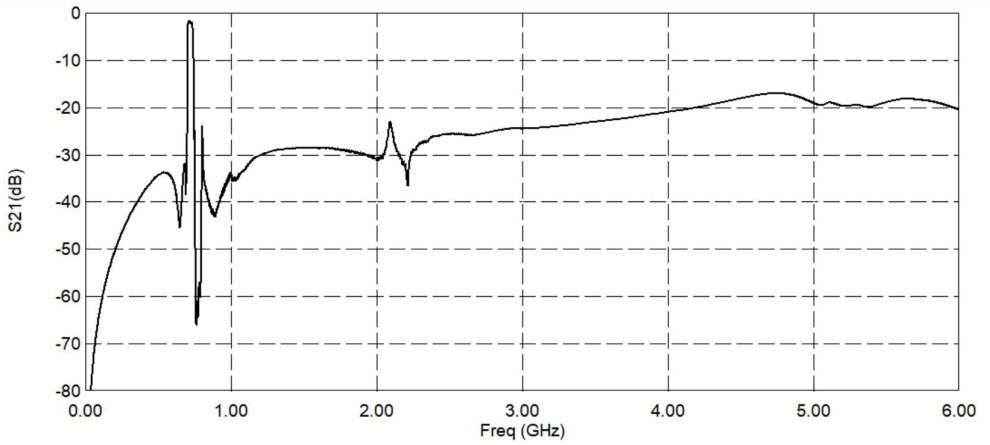


Figure 3 Electrical Characteristics: Ant to Rx.

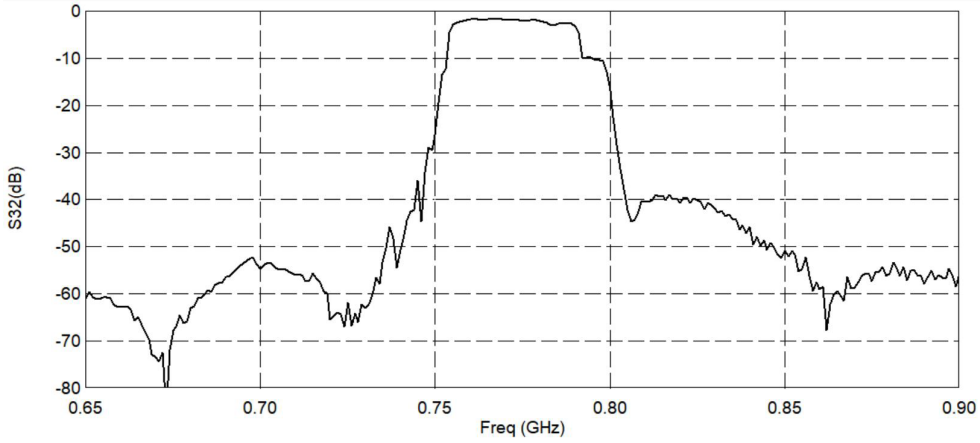


Figure 4 Electrical Characteristics: Ant to Rx.

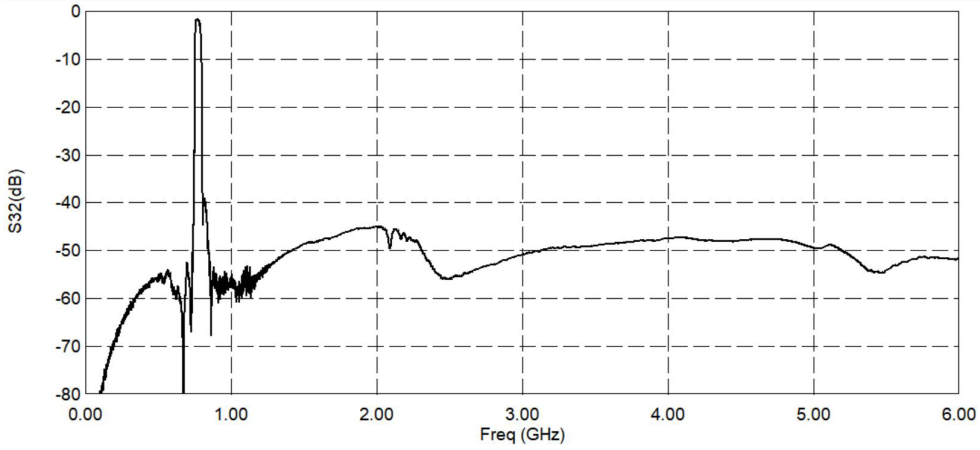


Figure 5 Electrical Characteristics: Tx to Rx.

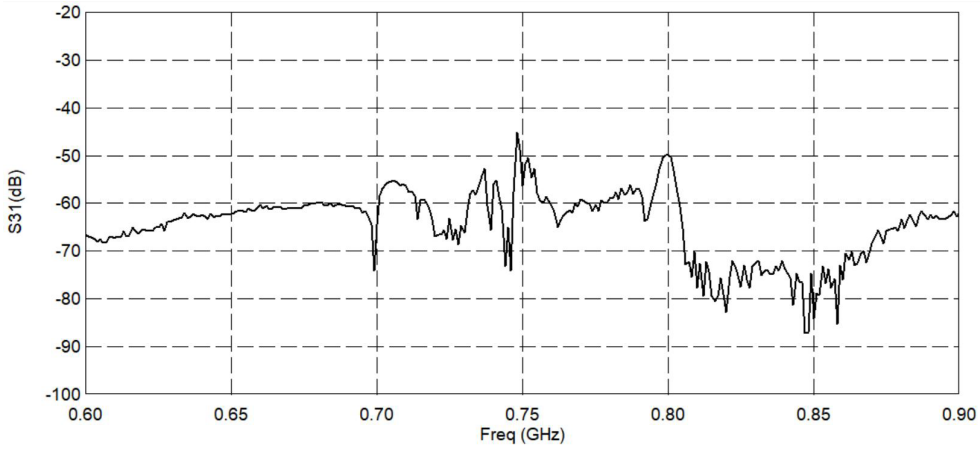


Figure 6 Electrical Characteristics: Tx to Rx.

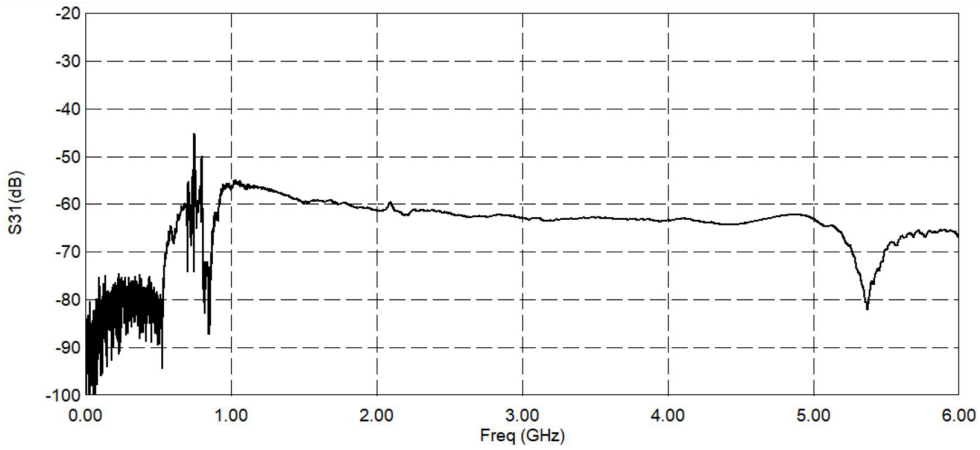
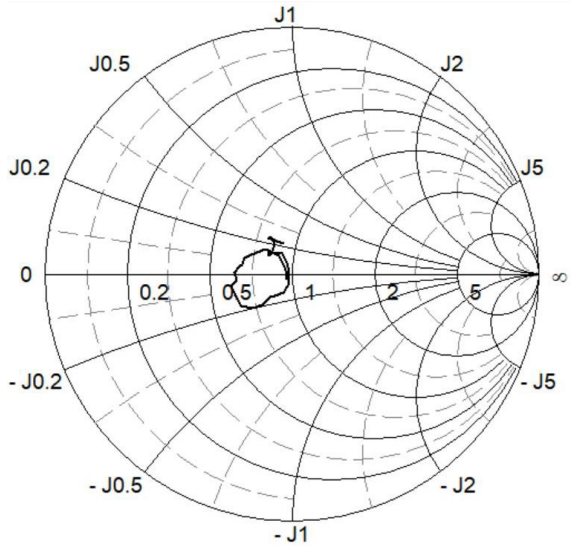
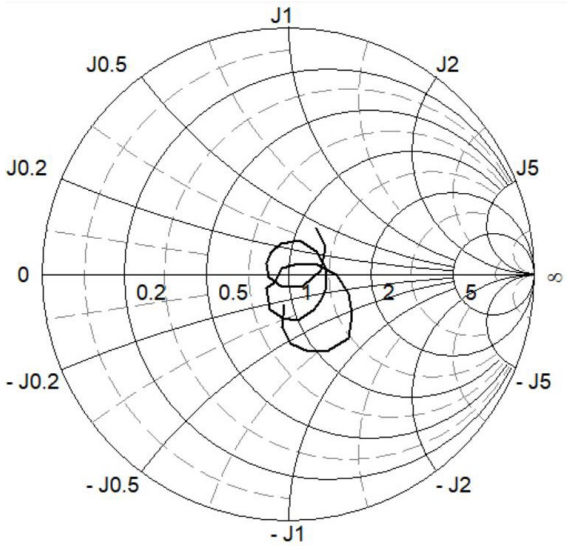


Figure 7 Smith chart

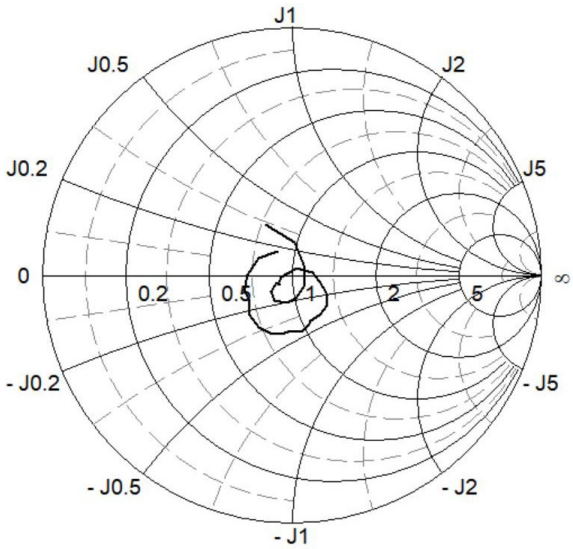
Tx Input Impedance (703MHz to 733MHz)



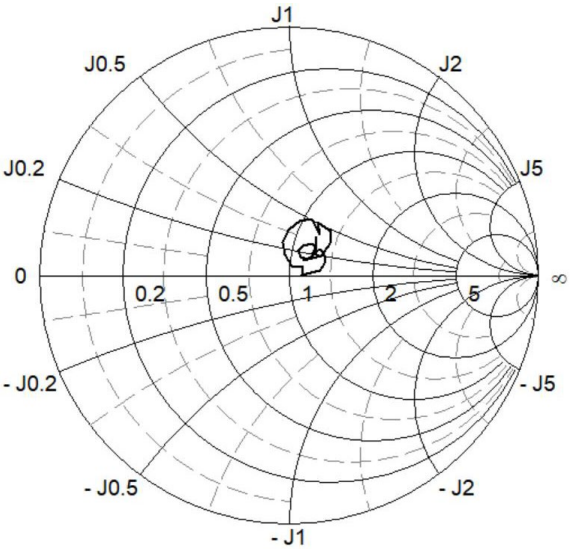
Rx Input Impedance (758MHz to 788MHz)



Ant Input Impedance (Tx Band)

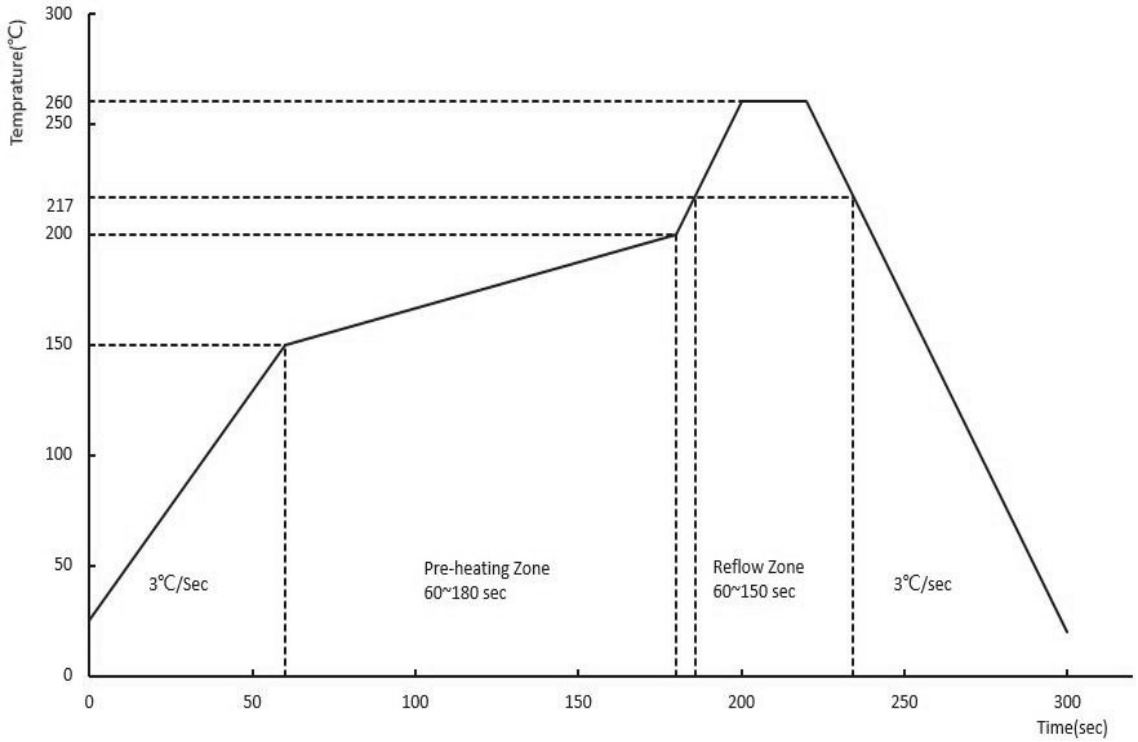


Ant Input Impedance (Rx Band)



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	