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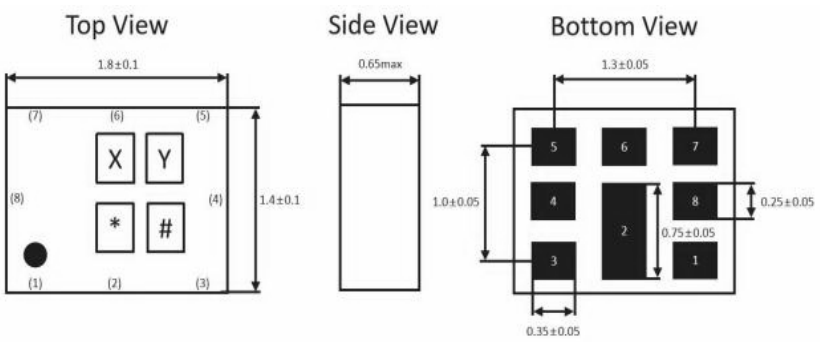
Specification Sheet

Customer Name	XXXX	CUST P/N	NA
Approval No.	PD	Temwell P/N	STSD-733-788-S1814W
Lot No.		Date	2025.04.18
Description	SAW Duplexer	Version	A1

(1)Size Diagram（Unit：MM）



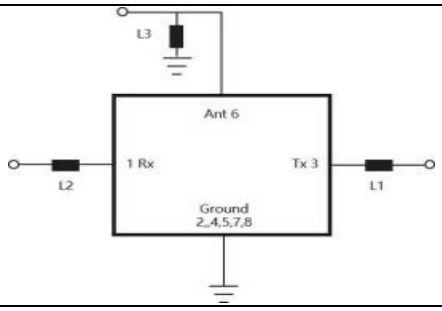
PinNo.	Description
3	Tx
1	Rx
6	Antenna
2,4,5,7,8	Ground
Tolerance	±0.1mm

(2)Electrical Specifications

Item			Specification		
Parameter	MHz	Unit	Min.	Typical	Max.
Center Frequency	-	MHz	-	733 / 788	-
Insertion Loss	718.25-747.75	dB	-	2.6	3.0
	773.25-802.75	dB	-	2.7	3.3
Ripple Deviation	718-748	dB	-	1.3	1.6
	773-803	dB	-	1.2	1.8
VSWR of Tx Port	718-748	-	-	1.7	2.0
VSWR of Rx Port	773-803	-	-	1.8	2.1
VSWR of Ant Port	718-748	-	-	1.7	2.0
	773-803	-	-	1.8	2.1
Attenuation (718-748)	10-698	dB	29	34	-
	698-710	dB	34	39	-
	758-773	dB	12	18	-
	773-803	dB	45	52	-
	859-894	dB	30	36	-
	1225-1250	dB	38	44	-
	1436-1510	dB	35	39	-
	1559-1563	dB	35	39	-
	1565.42-1573.37	dB	35	39	-
	1573.37-1577.47	dB	35	39	-
	1577.47-1585.42	dB	35	39	-
	1597.55-1605.89	dB	35	39	-
	1805-1880	dB	35	39	-
	1930-1995	dB	35	40	-
	2010-2025	dB	35	40	-
	2154-2244	dB	34	39	-
	2400-2484	dB	25	31	-
	2570-2620	dB	21	26	-
	2872-2992	dB	20	24	-
	4900-5950	dB	14	19	-
Attenuation (773-803)	10-703	dB	45	49	-
	703-718	dB	46	52	-
	718-748	dB	49	54	-
	880-915	dB	40	44	-

	2400-2496	dB	50	60	-
	2496-2690	dB	50	60	-
	4900-5900	dB	50	60	-
Isolation	718-748	dB	52	56	-
	773-803	dB	52	57	-
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 : 10.9 nH (Ideal inductor)
Rx	L2 : 4.0 nH (Ideal inductor)
Ant	L3 : 10.8 nH (Ideal inductor)

Figure 1 Electrical Characteristics: Tx to Ant.

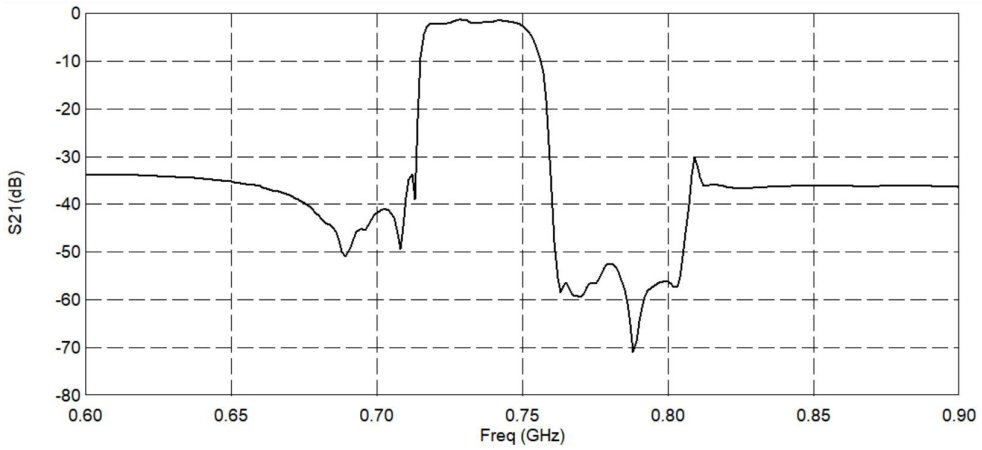


Figure 2 Electrical Characteristics: Tx to Ant.

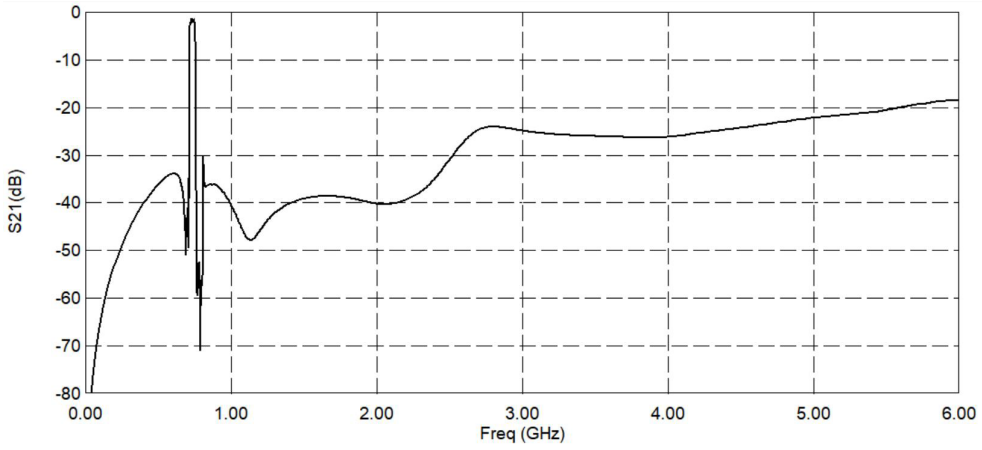


Figure 3 Electrical Characteristics: Ant to Rx.

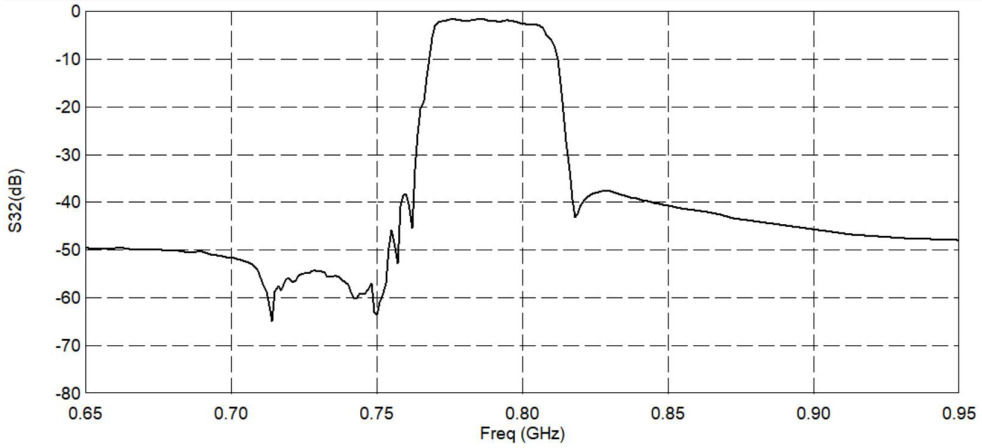


Figure 4 Electrical Characteristics: Ant to Rx.

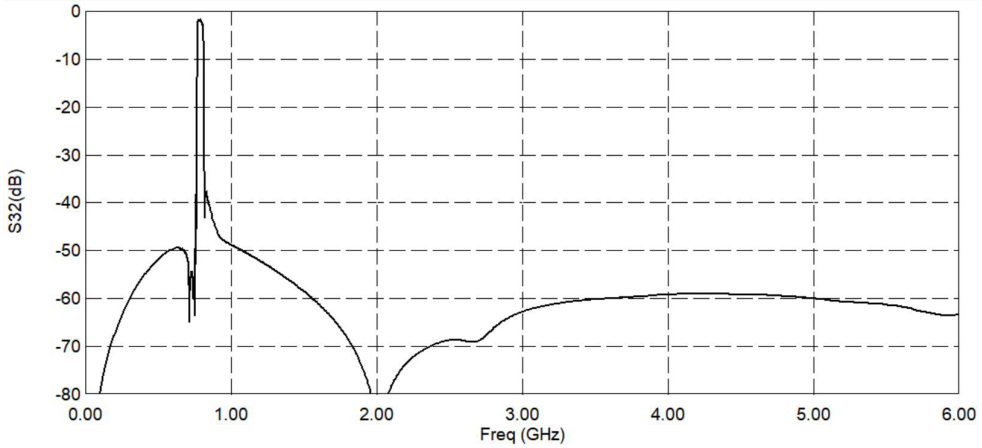


Figure 5 Electrical Characteristics: Tx to Rx.

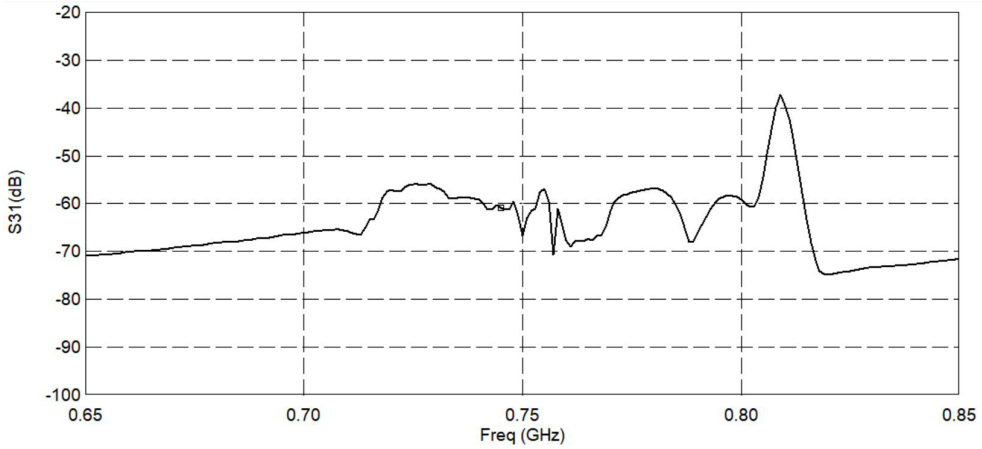


Figure 6 Electrical Characteristics: Tx to Rx.

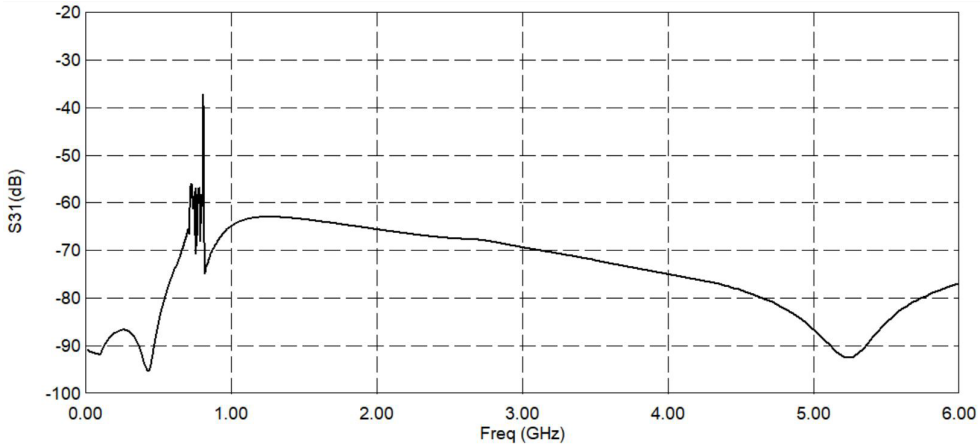
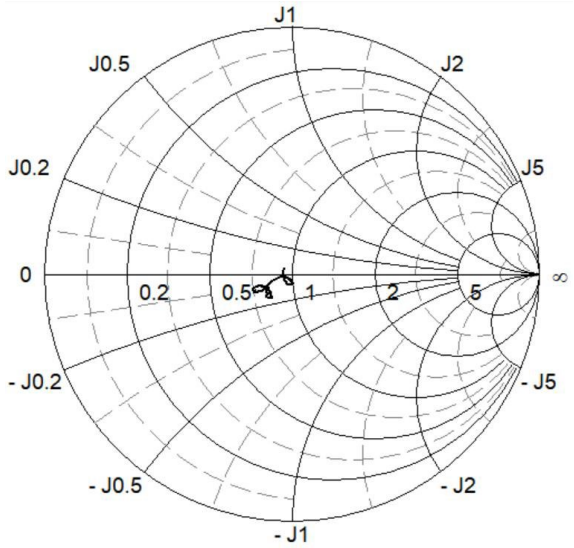
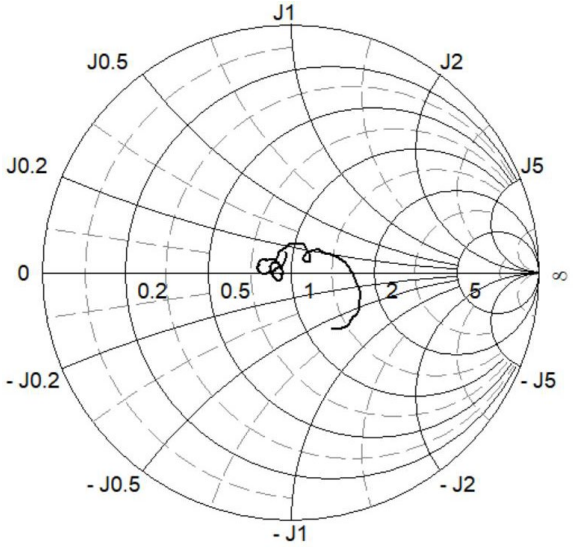


Figure 7 Smith chart

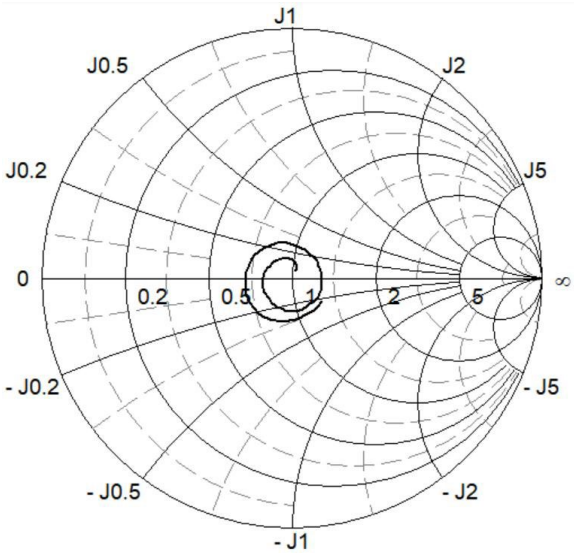
Tx Input Impedance (718MHz to 748MHz)



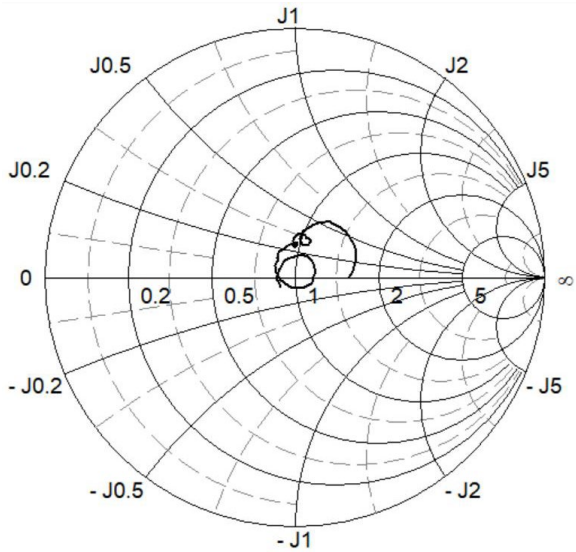
Rx Input Impedance (773MHz to 803MHz)



Ant Input Impedance (Tx Band)

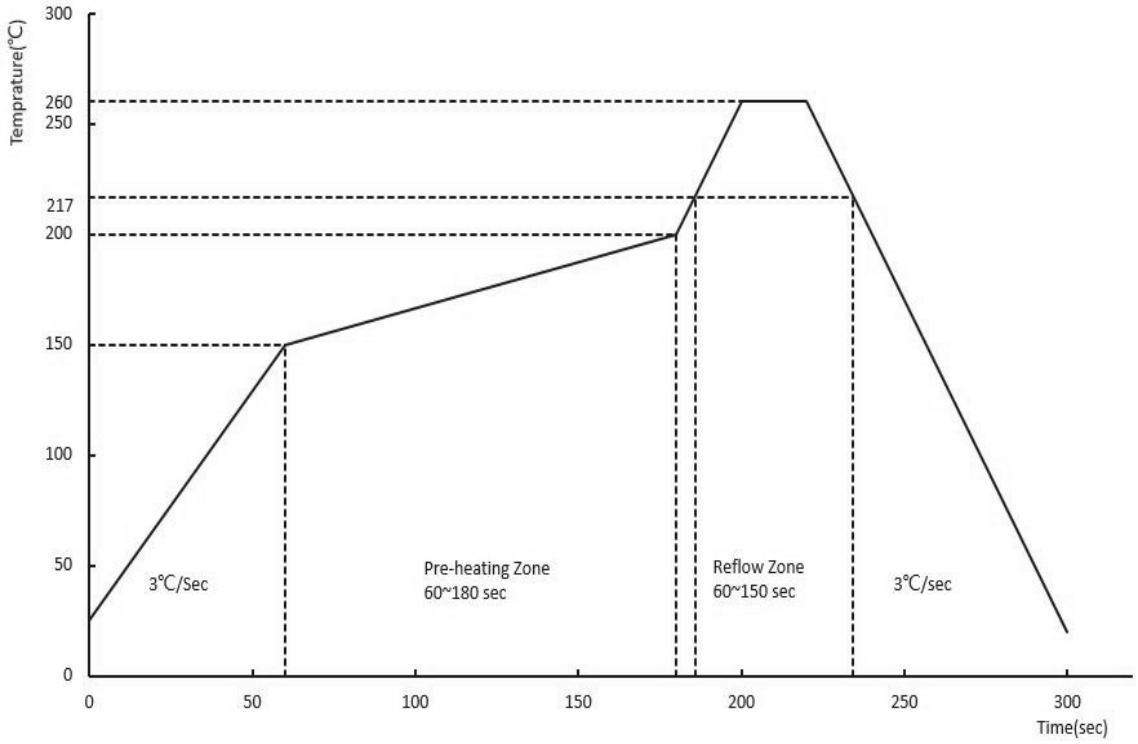


Ant Input Impedance (Rx Band)



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	