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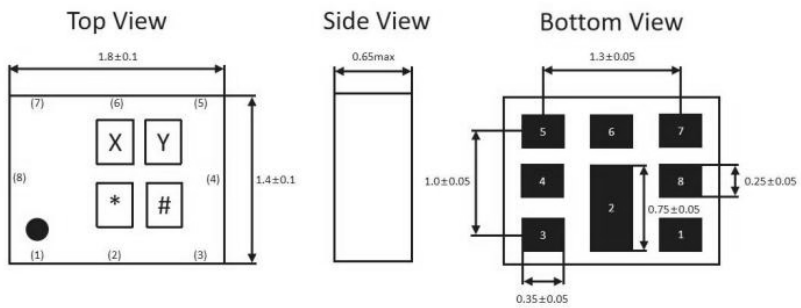
Specification Sheet

Customer Name	XXXX	CUST P/N	NA
Approval No.	PD	Temwell P/N	STSD-793-763-S1814W
Lot No.		Date	2025.04.18
Description	SAW Duplexer	Version	A1

(1)Size Diagram（Unit：MM）



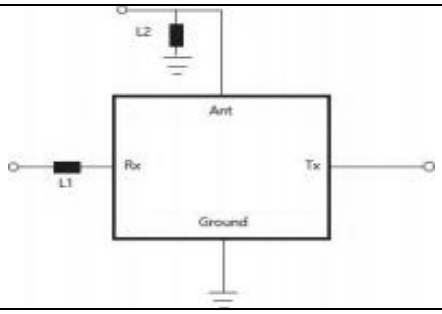
PinNo.	Description
3	Tx
1	Rx
6	Antenna
2,4,5,7,8	Ground
Tolerance	±0.1mm

(2)Electrical Specifications

Item			Specification		
Parameter	MHz	Unit	Min.	Typical	Max.
Center Frequency	-	MHz	-	793 / 763	-
Insertion Loss	788-798	dB	-	1.9	2.2
	758-768	dB	-	2.0	2.5
Ripple Deviation	788-798	dB	-	0.5	1.0
	758-768	dB	-	0.5	1.0
VSWR of Tx Port	788-798	-	-	1.5	1.8
VSWR of Rx Port	758-768	-	-	1.3	1.6
VSWR of Ant Port	788-798	-	-	1.3	1.6
	758-768	-	-	1.3	1.6
Attenuation (788-798)	758-768	dB	55	64	-
	869-894	dB	37	42	-
	1559-1563	dB	44	50	-
	1574.42-1576.42	dB	48	50	-
	1576-1596	dB	45	50	-
	1805-1880	dB	45	56	-
	1930-2000	dB	53	61	-
	1364-2394	dB	45	60	-
	3152-3192	dB	40	47	-
	4900-5950	dB	30	39	-
Attenuation (758-768)	1-698	dB	41	47	-
	698-716	dB	40	46	-
	716-728	dB	40	47	-
	776-787	dB	14	24	-
	788-798	dB	45	54	-
	798-6000	dB	20	23	-
	2274-2304	dB	40	50	-
	2400-2500	dB	40	49	-
	4900-5950	dB	40	49	-
Isolation	758-768	dB	55	60	-
	788-798	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
Rx	L1 : 3.5 nH (Ideal inductor)
Ant	L2 : 12 nH (Ideal inductor)

Figure 1 Electrical Characteristics: Tx to Ant.

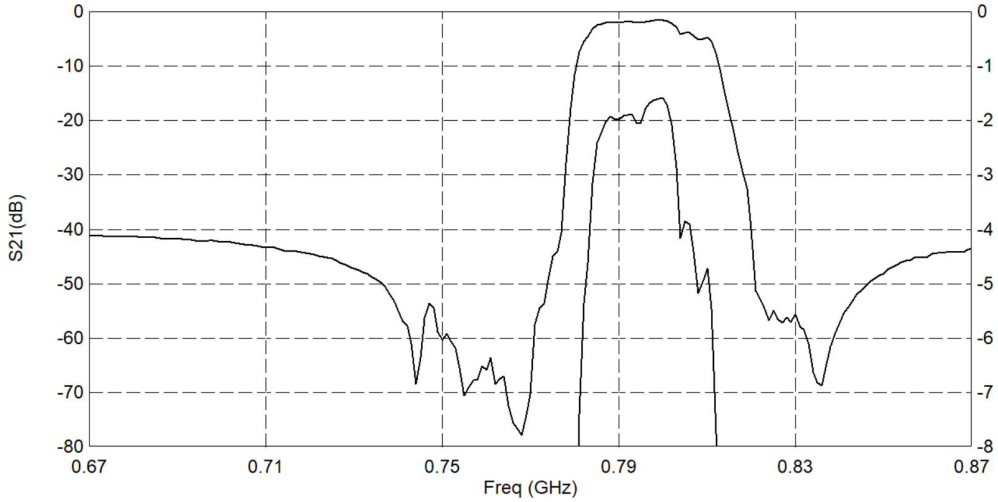


Figure 2 Electrical Characteristics: Tx to Ant.

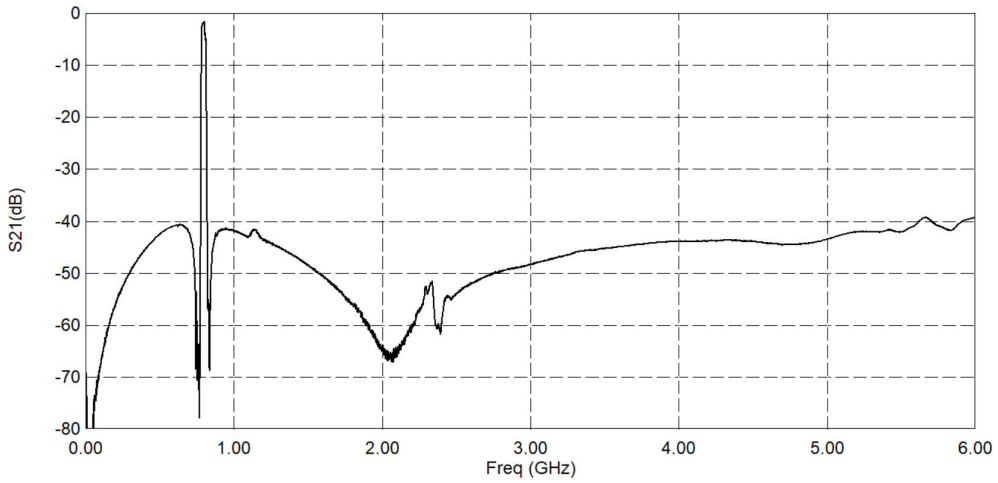


Figure 3 Electrical Characteristics: Ant to Rx.

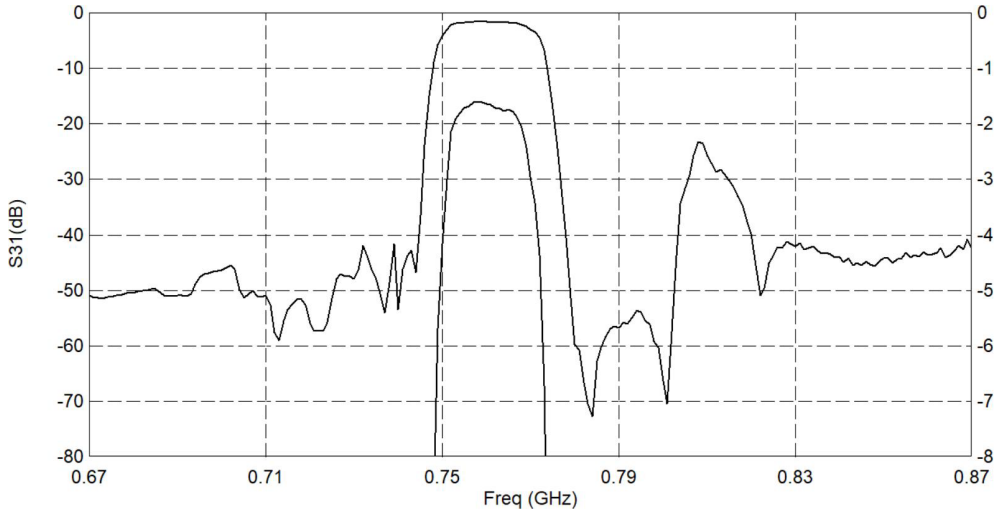


Figure 4 Electrical Characteristics: Ant to Rx.

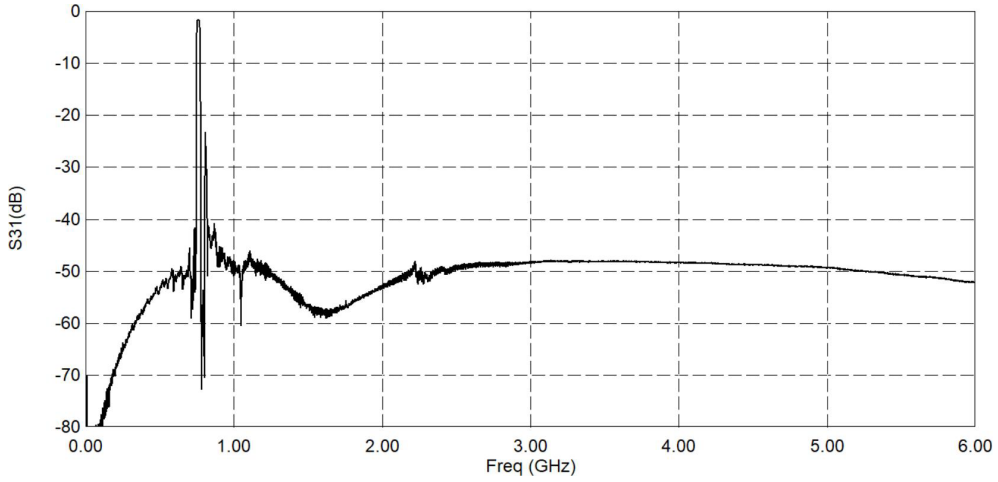


Figure 5 Electrical Characteristics: Tx to Rx.

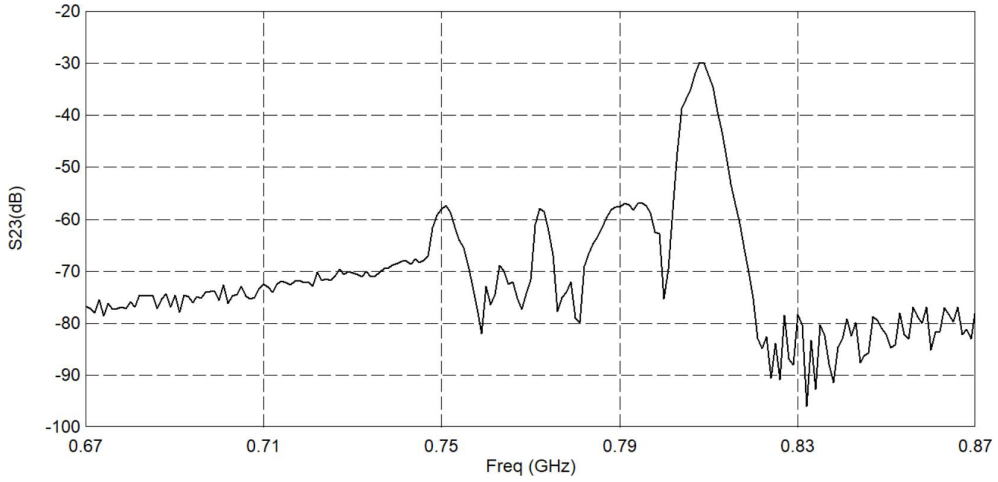


Figure 6 Electrical Characteristics: Tx to Rx.

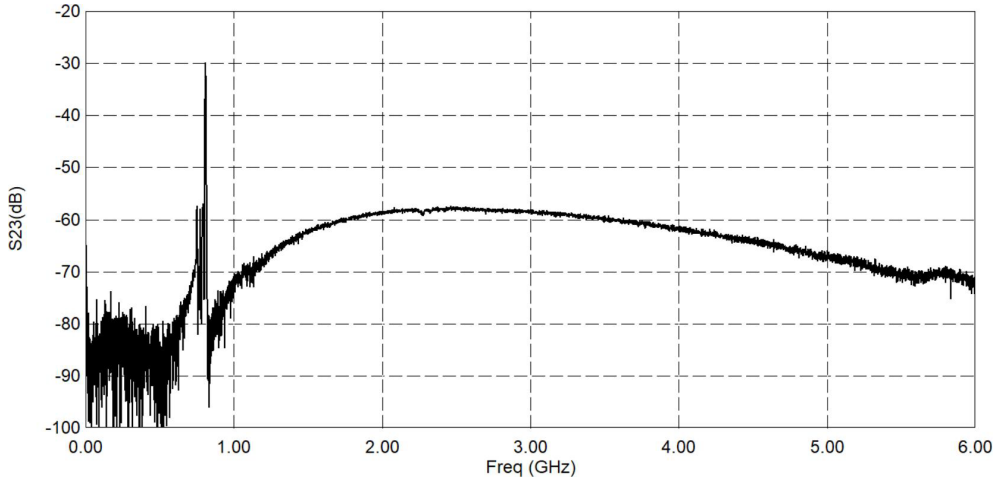
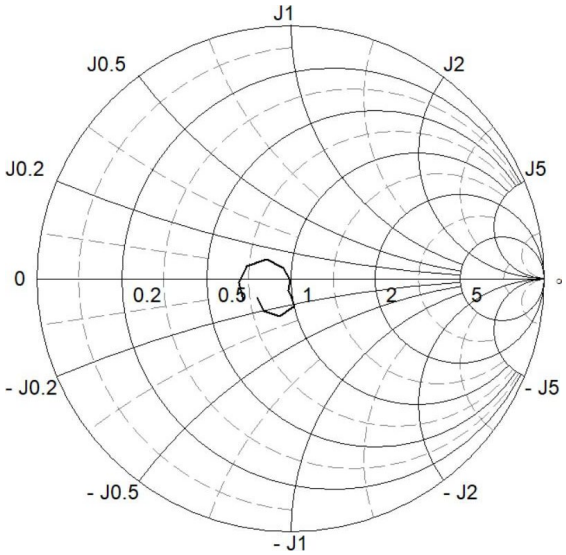
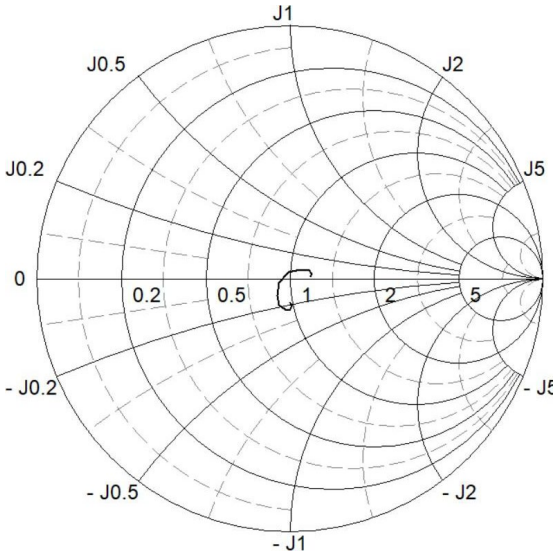


Figure 7 Smith chart

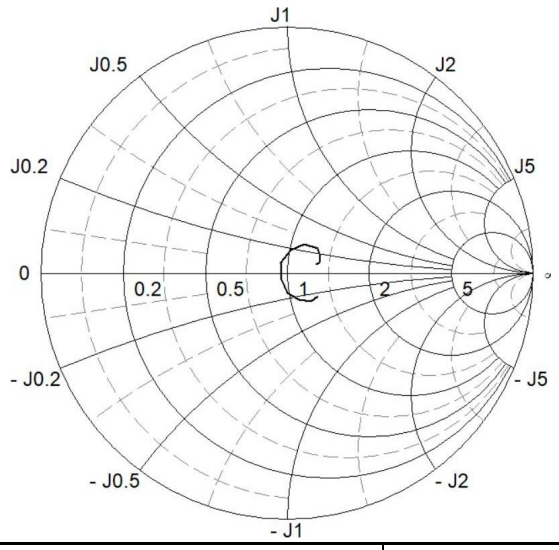
Tx Input Impedance (788MHz to 798MHz)



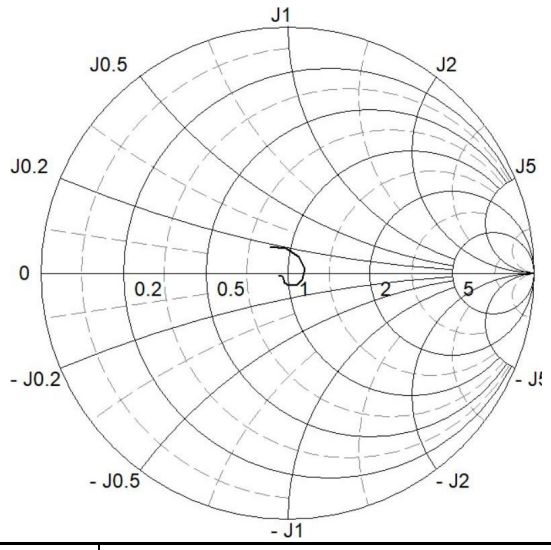
Rx Input Impedance (758MHz to 768MHz)



Ant Input Impedance (Tx Band)

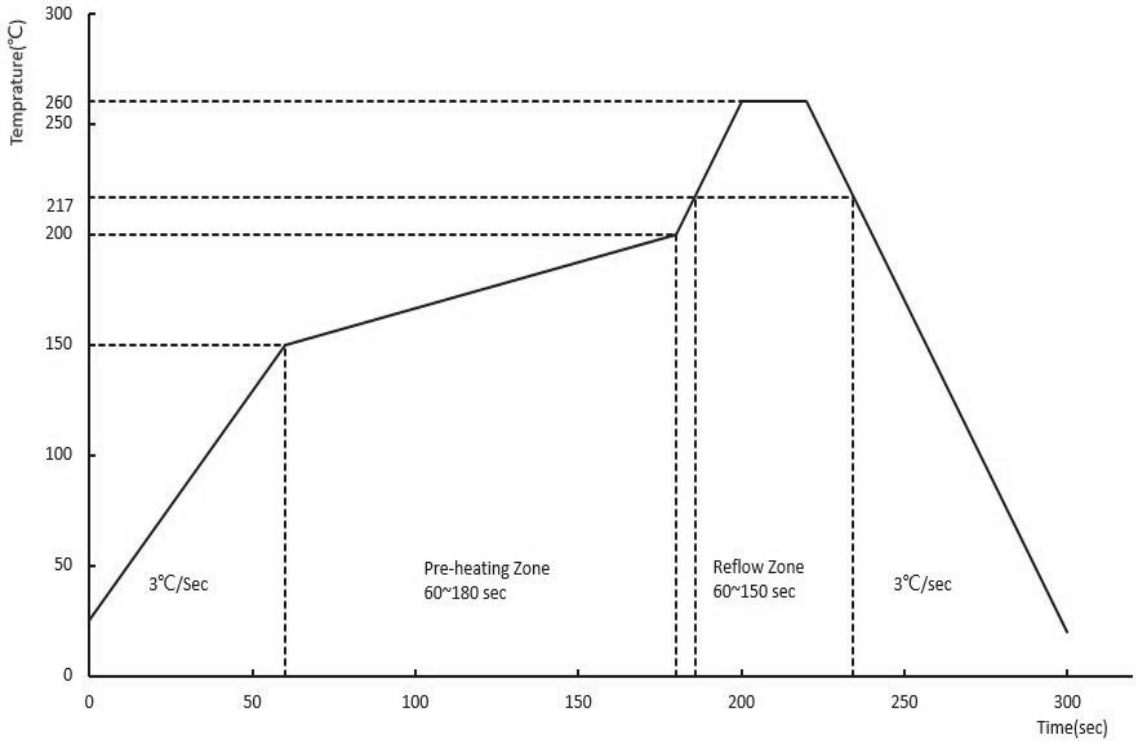


Ant Input Impedance (Rx Band)



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	