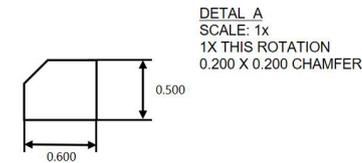
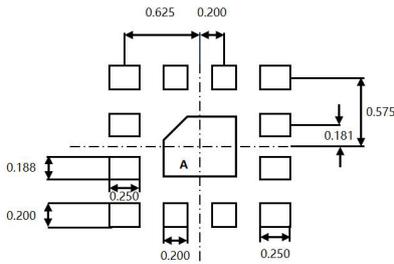
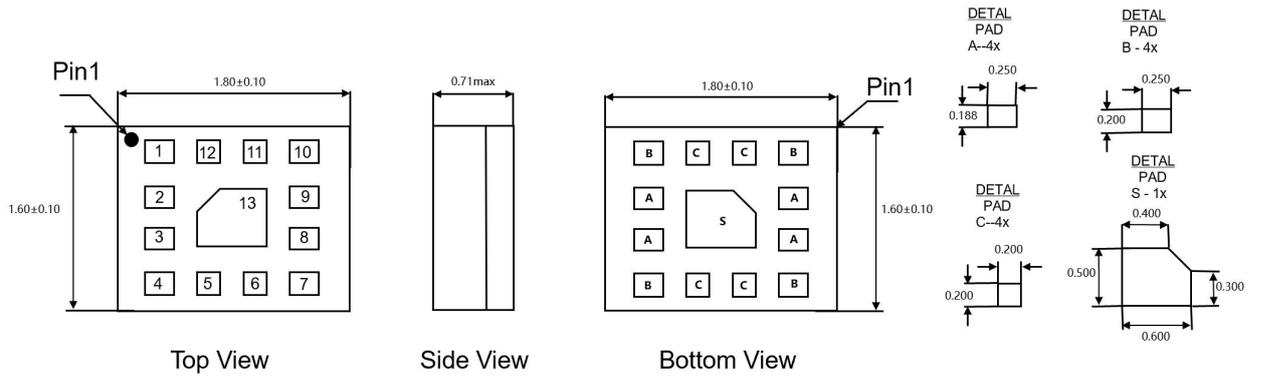


# Specification Sheet

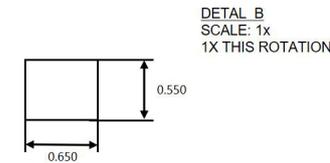
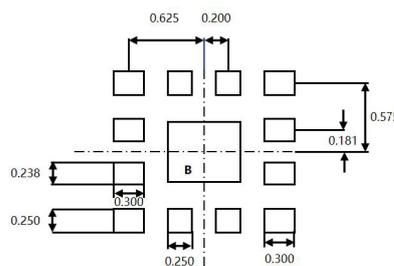
Customer Name	XXXX	CUST P/N	NA
Approval No.	PD	Temwell P/N	STSF-5502B665-S1816W
Lot No.		Date	2025.06.13
Description	SAW Filter (BandPass)	Version	A1

(1) Size Diagram and PCB Mounting Pattern (Unit : MM)

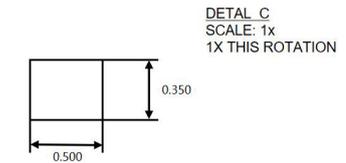
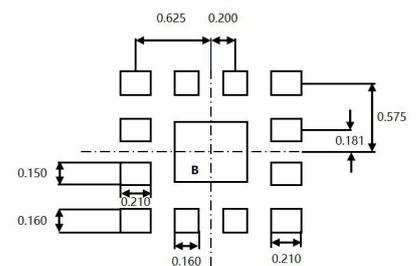
- All tolerances are  $\pm 0.1$  mm



Recommended PCB Metal Top View

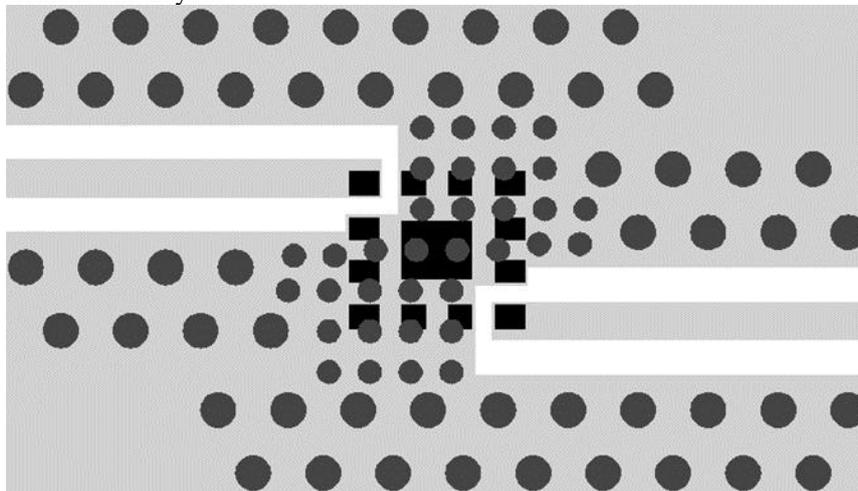


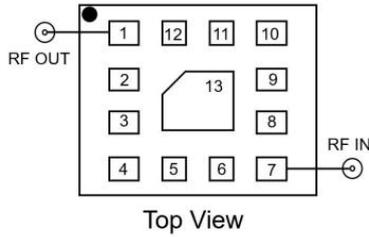
Recommended Solder Mask Opening Top View



Recommended Stencil Pattern Top View

- Evaluation Board Schematic and Layout



**(2) Test Circuit**


Pin No.	Label	Description
1	OUTPUT	RF Output matched to 50 Ω .
7	INPUT	RF Input matched to 50 Ω .
Other Pads	GND	RF/DC ground. Use the recommended via pattern to minimize inductance and thermal resistance. Refer to PCB Mounting Pattern for suggested footprint.

**(3) Electrical Specifications**

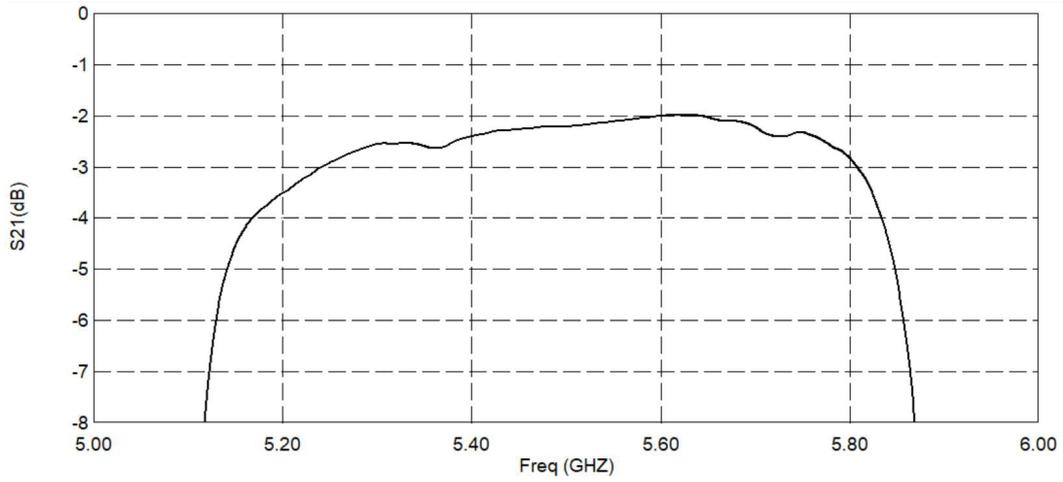
Item			Specification		
Parameter	MHz	Unit	Min.	Typical	Max.
Center Frequency	-	MHz	-	5502	-
Insertion Loss	5170-5330 (160MHz)	dB	-	2.9	3.2
	5490-5650 (160MHz)	dB	-	2.3	2.5
	5650-5730 (80MHz)	-	-	2.3	2.5
	5735-5815 (80MHz)	-	-	2.7	2.9
	5815-5835 (20MHz)	-	-	3.6	3.9
Inband Ripple	5170-5835	dB	-	1.9	2.1
VSWR of Ant Port	5170-5835	dB	-	1.5	1.9
VSWR of TRx Port	5170-5835	dB	-	1.5	1.9
Attenuation	30-1000	dB	65	66	-
	1000-2400	dB	33	37	-
	2400-2500	dB	33	36	-
	3300-3800	dB	22	25	-
	3800-4200	dB	20	23	-
	4400-5000	dB	20	23	-
	5945-6105 (160MHz)	dB	51	53	-
	6105-6265 (160MHz)	dB	40	43	-
	6265-6425 (160MHz)	dB	40	43	-
	6425-6585 (160MHz)	dB	41	44	-
	6585-6745 (160MHz)	dB	37	41	-
	6745-6905 (160MHz)	dB	35	38	-
	6905-7065 (160MHz)	dB	30	33	-
	7065-7105 (40MHz)	dB	31	34	-
7105-7125 (20MHz)	dB	32	35	-	
7200-8000	dB	10	13	-	
Operation Temperature	-40°C~+105°C	°C	-	-	-
Storage Temperature	-40°C~+105°C	°C	-	-	-
RF Power Dissipation	+31	dBm	-	-	-
DC Voltage	3	V	-	-	-

Remark

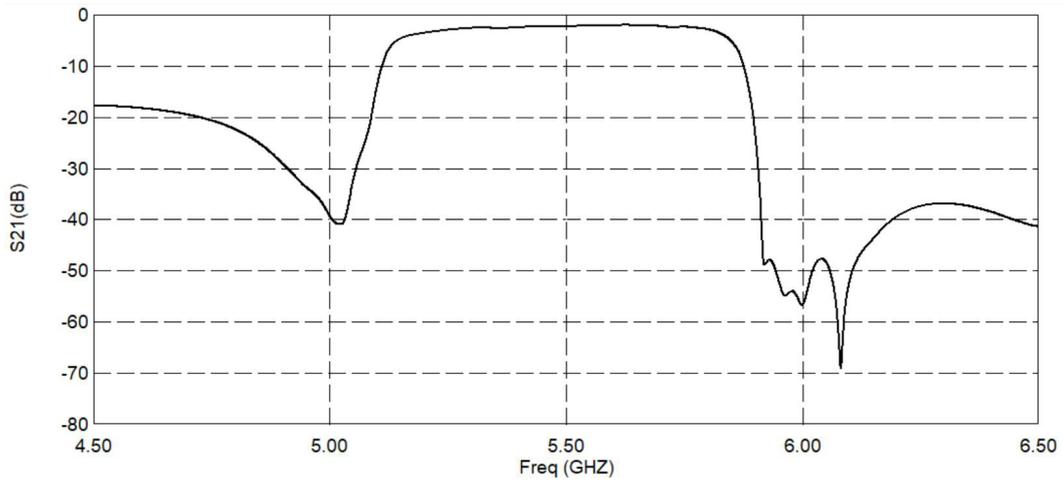
Note 1: Test Temperature: 25°C±2°C

Note 2: Terminating source impedance: 50Ω. Terminating load impedance: 50Ω

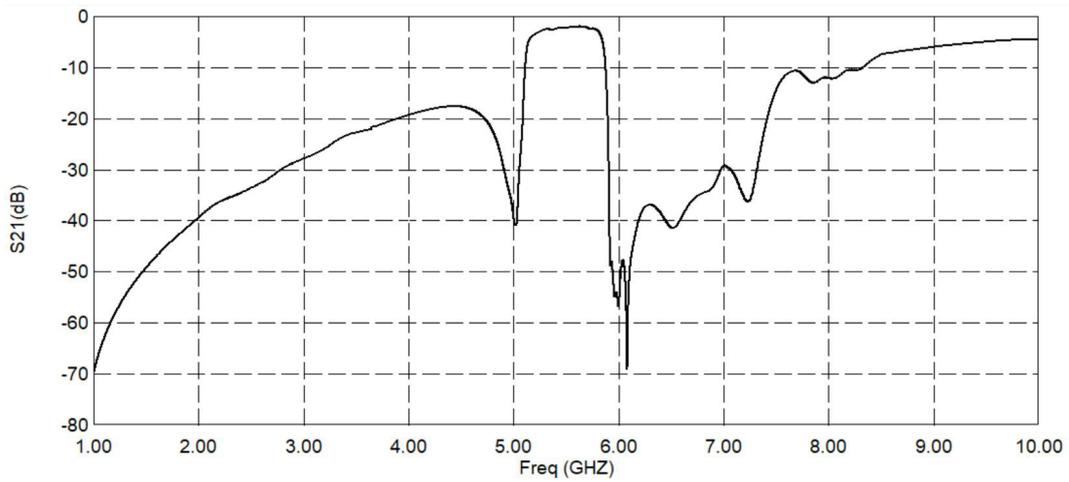
**Figure 1 Electrical Characteristics: Passband**



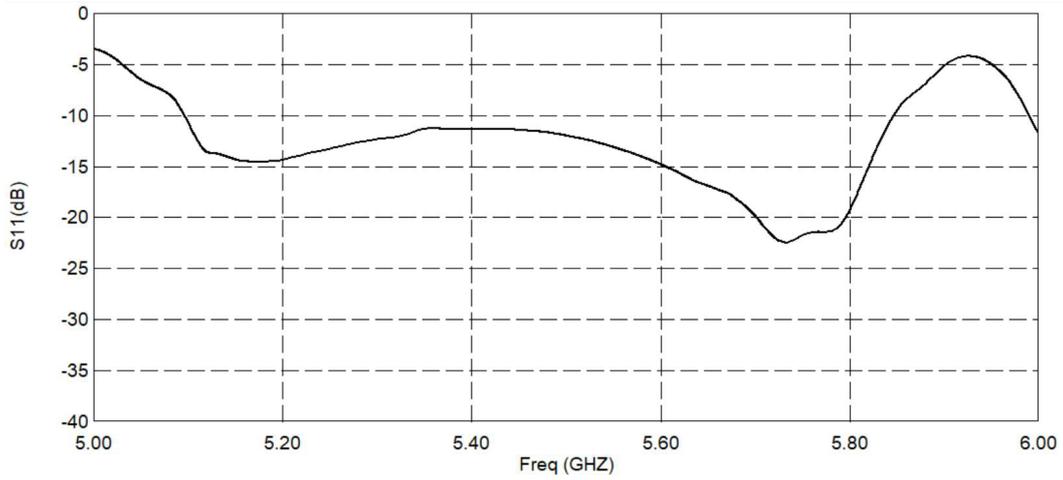
**Figure 2 Electrical Characteristics: Narrowband**



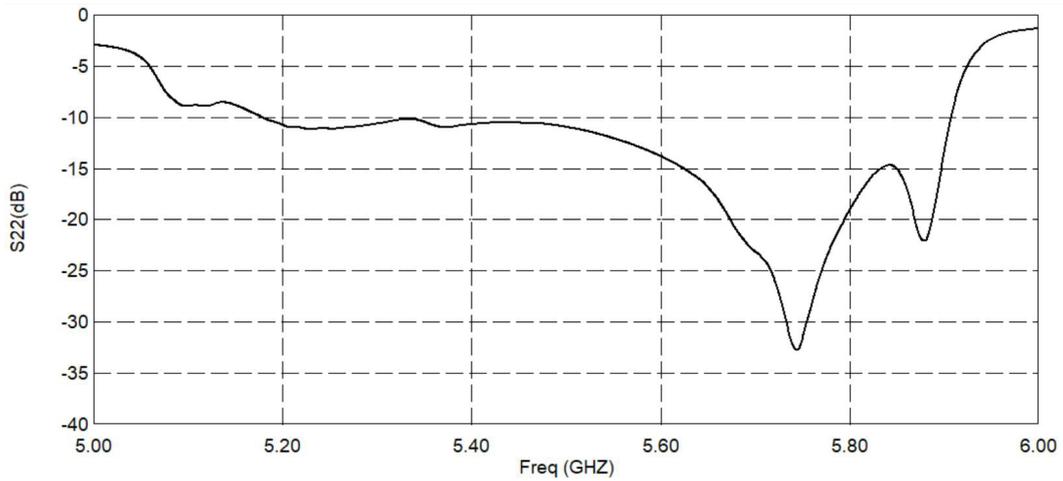
**Figure 3 Electrical Characteristics: Wideband**



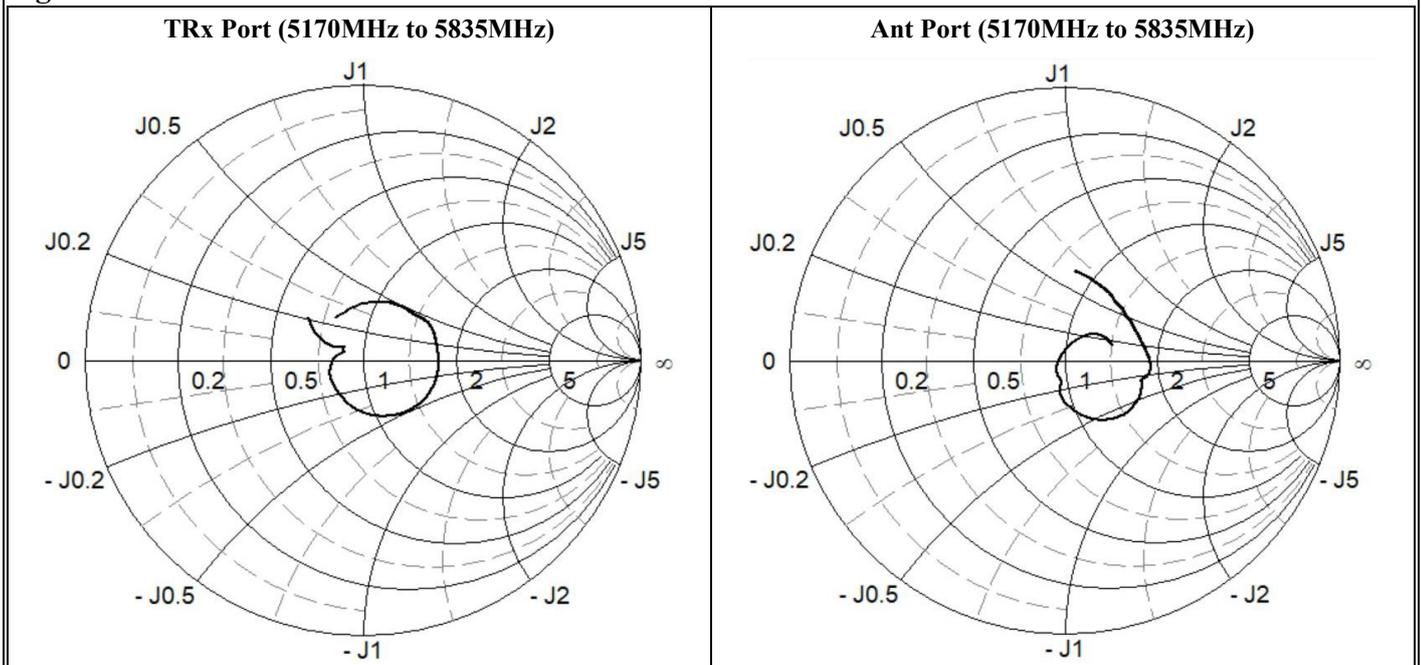
**Figure 4 Electrical Characteristics: TRx Port Return Loss**



**Figure 5 Electrical Characteristics: Ant Port Return Loss**

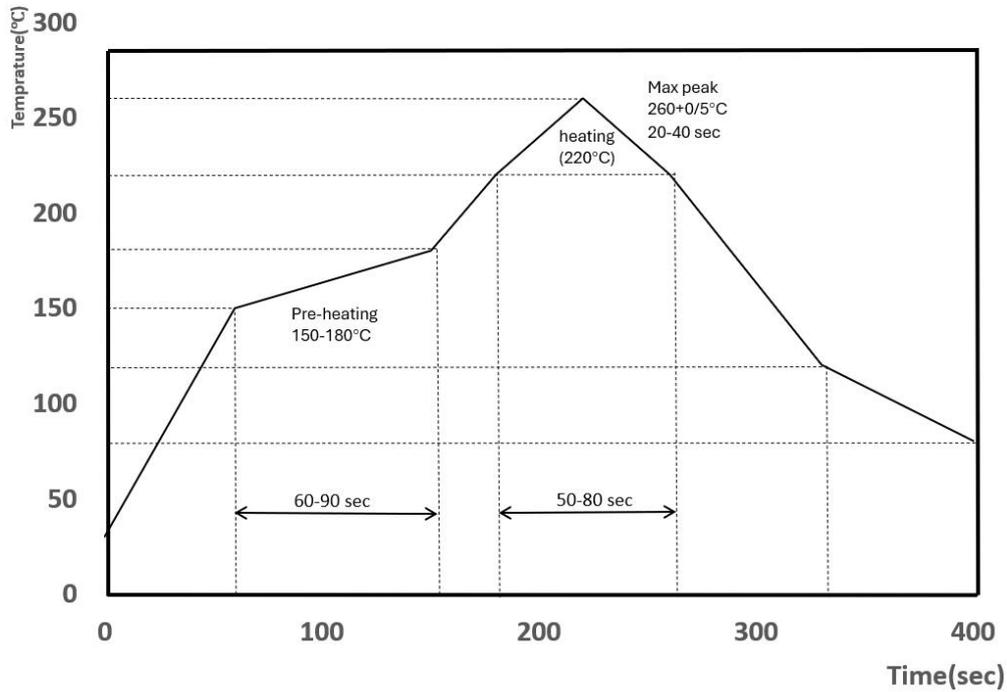


**Figure 6 Smith Chart**



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: 105°C±2°C , Duration: 250h , Recovery time: 2h±0.5h Temperature: -40°C±3°C , Duration: 250h ,Recovery time: 2h±0.5h	
2	Humidity Test	Conditions: 60°C±2°C ,90~95%RH	Duration:250h
3	Thermal Shock	Heat cycle conditions: TA=-40°C±3°C, TB=85°C±2°C, 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°C±5°C Depth: DIP--2/3, SMD--1/5	Duration:3.0s--5.0s
7	Resistance to Soldering Heat	Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration:10±1s Temperature of Soldering Iron: 350°C±10°C, Duration: 3~4s, Recovery time : 2 ± 0.5h	