SAW Single Filter

for B41 / Unbalanced / 5pin /1109

Pinnacle PN: SA4111092G60AT

Key Feature:

- √ **B41 RX SAW Filter (2535-2655MHz)**
- √ **Small Size**

1 Description

SA4111092G60AT is a high-performance Surface Acoustic Wave (SAW) Bandpass filter optimized for B41 operating in the range of 2.535-2.655 GHz. It is designed to provide both low insertion loss in the Band 41 and high rejection in the adjacent cellular Bands for mobile devices.

SA4111092G60AT uses advanced Chip Scale Package (CSP) technology and is housed in an industry-standard, 5-pin 1.1mm x 0.9mm package with a low profile of 0.6mm max.

2 Features

- Low Insertion Loss: 1.5dB at Mid-Band
- High Rejection in WIFI
- Small Footprint: 0.25±0.03mm x 0.20±0.03mm.
- Package size 1.1±0.05mm x 0.9±0.05mm
- Electrostatic Sensitive Device (ESD)
- Package height 0.6mm max.
- Single-Ended Operation
- RoHS Compliant

3 Package & Dimensions:

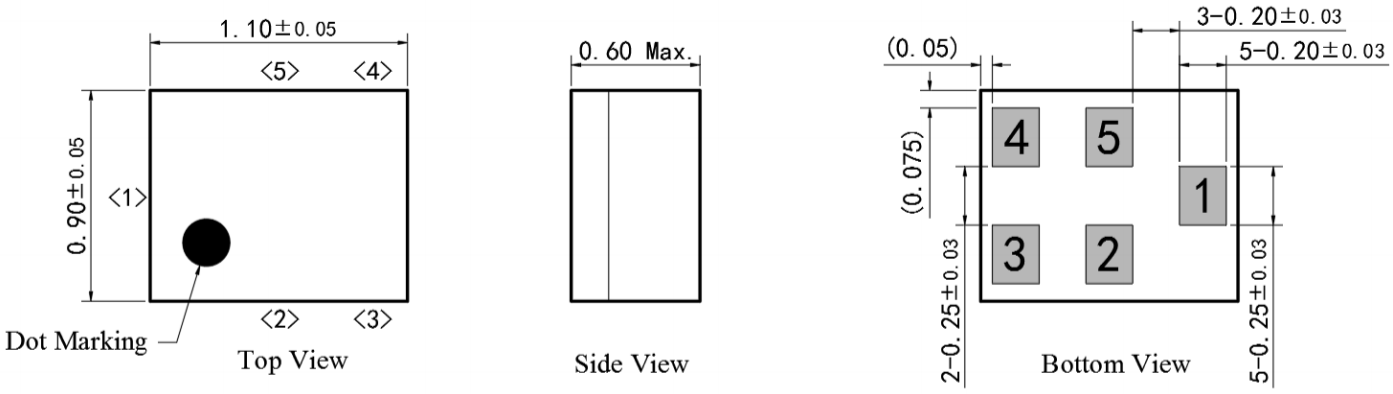


Figure 1: Drawing of Package with each tolerance range

4 Pin configuration

- 1 Input (recommended)
- 4 Output (recommended)
- 2,3,5 To be grounded

5 Matching Circuit(recommended)

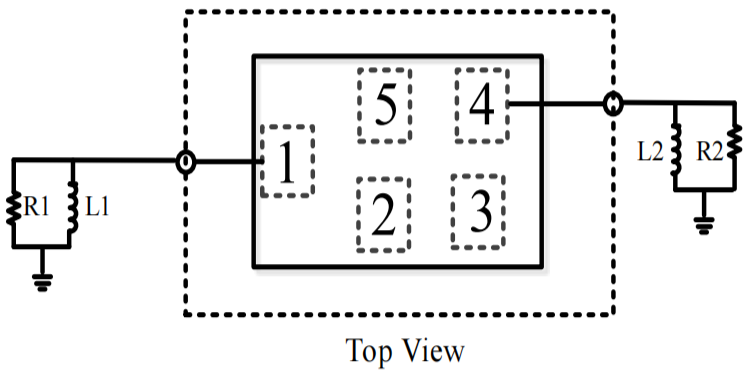


Figure 2: Schematic of matching circuit.

R1：50 Ohm	L1：1.8 nH （Q≈30 @2.600MHz）
R2：50 Ohm	L2：2 nH （Q≈30 @2.600MHz）

6 Absolute Maximum Ratings

Parameter	Rating	Unit
Operating Temperature	-30 to +85	°C
Storage Temperature	-40 to +85	°C
Maximum Input Power	+15	dBm
Moisture Sensitivity Levels	3	MSL
Maximum DC Voltage	5	V

7 Recommended Soldering Profile

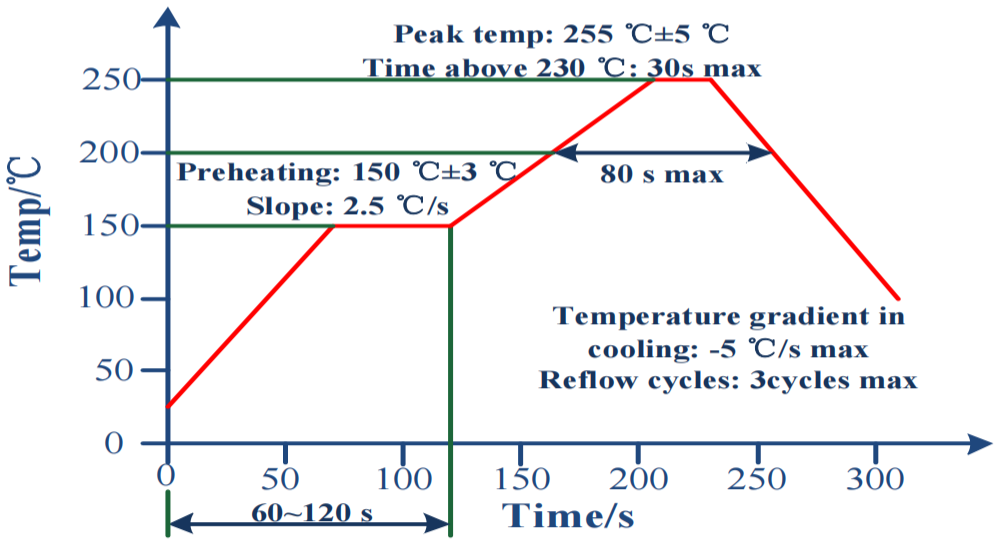


Figure 3: Recommended Reflow profile for convection and infrared soldering-lead-free solder.

8 Electrical Specifications

Parameter	Conditions	Min	Typ.	Max	Unit	Note
Insertion Loss	2535 - 2655 MHz	-	2	2.6	dB	
Passband Ripple	2535 - 2655 MHz	-	1.2	1.6	dB	
Attenuation	10 - 1225 MHz	45	55	-	dB	
	1225 - 1559 MHz	35	37	-	dB	
	1559 - 1606 MHz	32	35	-	dB	
	1606 - 1710 MHz	30	32	-	dB	
	1710 - 2170 MHz	30	32	-	dB	
	2170 - 2400 MHz	40	45	-	dB	
	2401- 2483 MHz	36	42	-	dB	
	2750- 4900 MHz	16	30			
	4901- 6000 MHz	20	30			
VSWR(input)	2535 - 2655 MHz	-	1.5	2	-	
VSWR(output)	2535 - 2655 MHz	-	1.5	2	-	

9 Transmission coefficient

Figure 4: |S21|

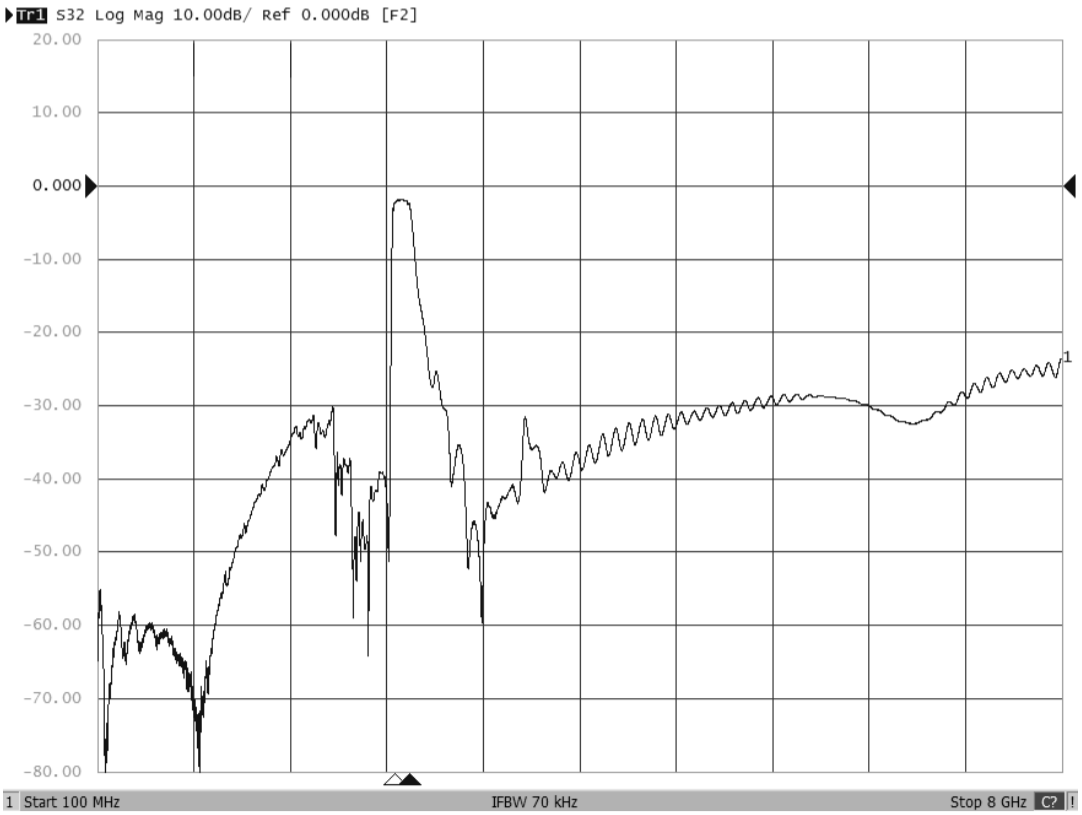
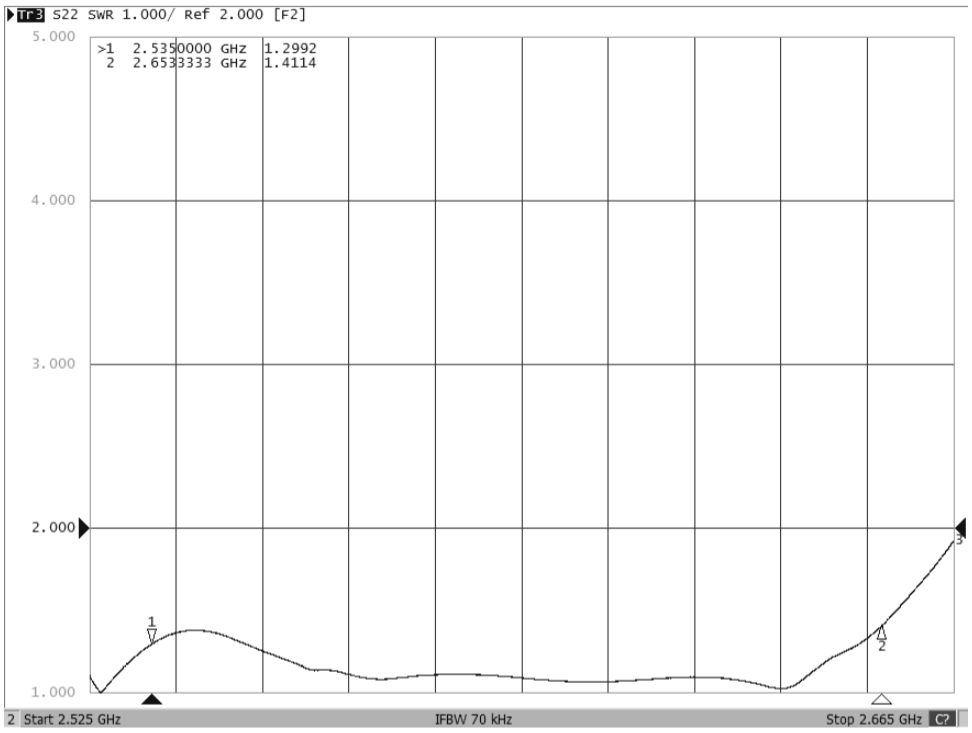


Figure 5: Wide Band |S21|

10 Reflection coefficients



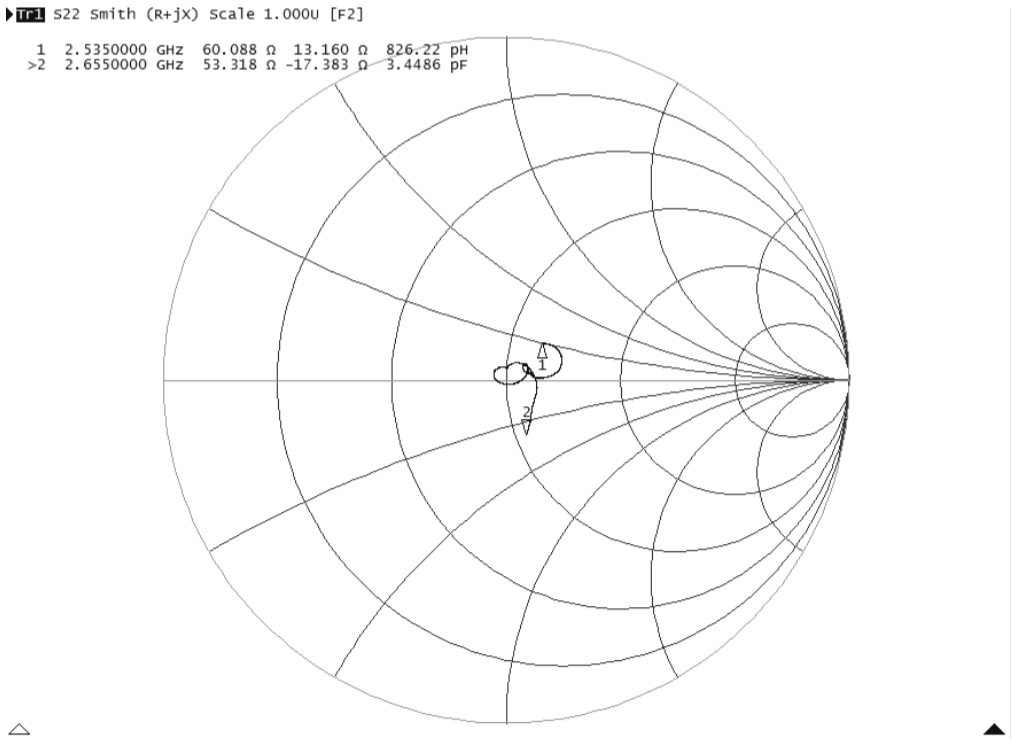
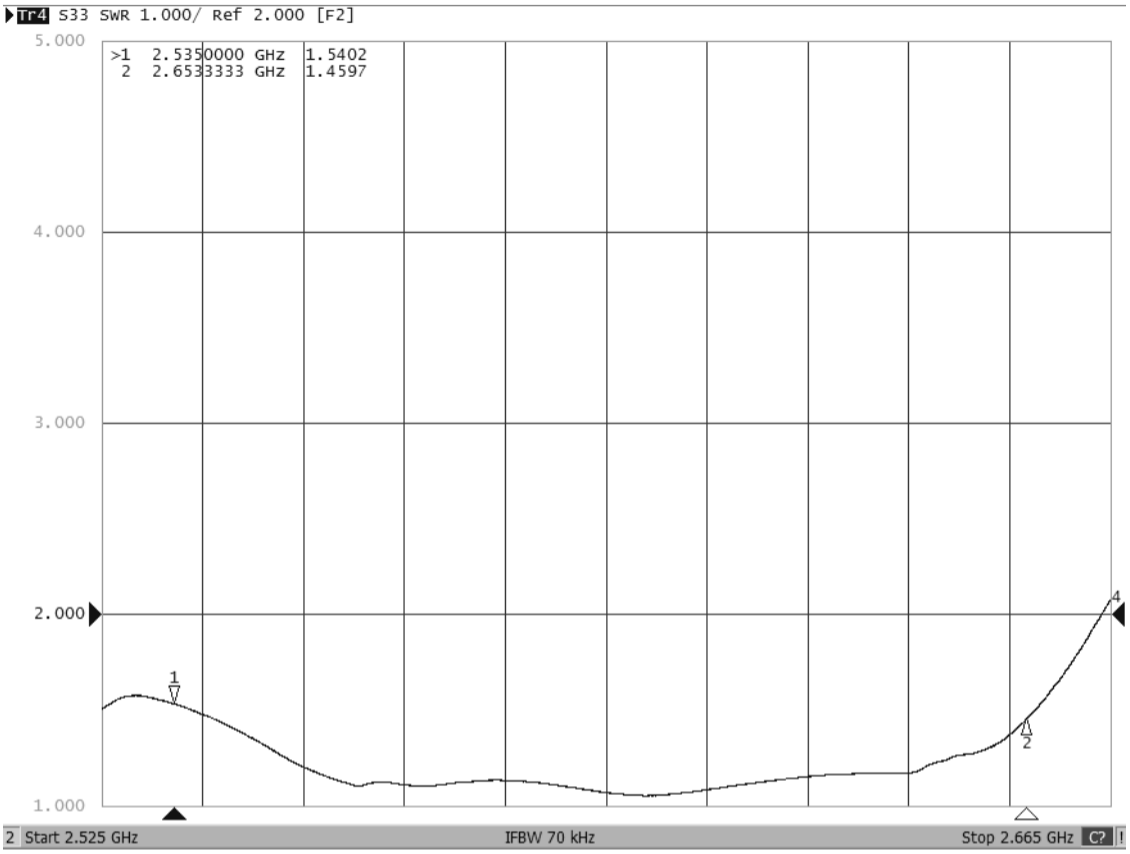


Figure 6: Reflection coefficient （S11）



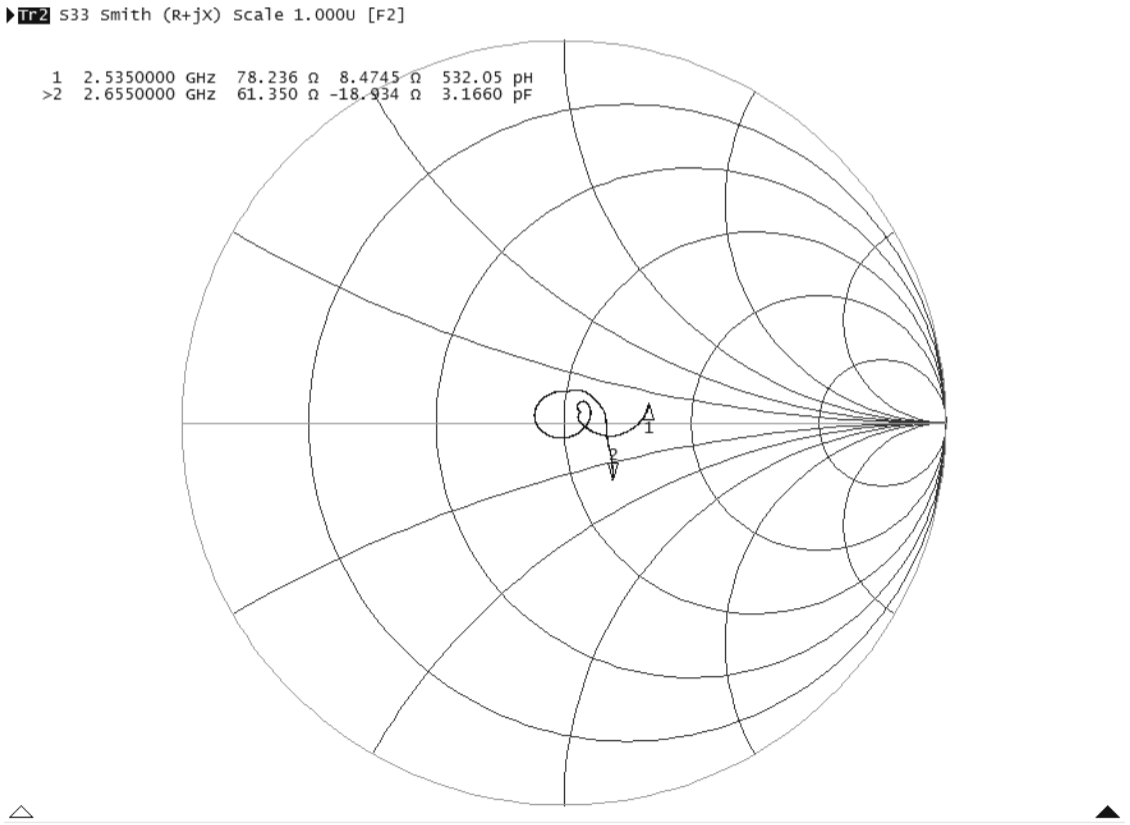


Figure 7: Reflection coefficient （S22）

11 Packing material

11.1 Tape

Tensile Strength of Carrier Tape: Carrier tape10N or more; Cover tape 5N or more. Packaging quantities: 5000 PCS / Reel.

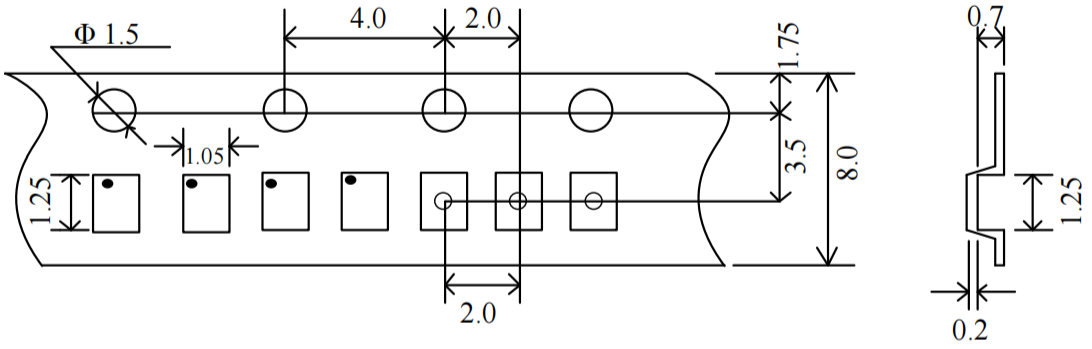
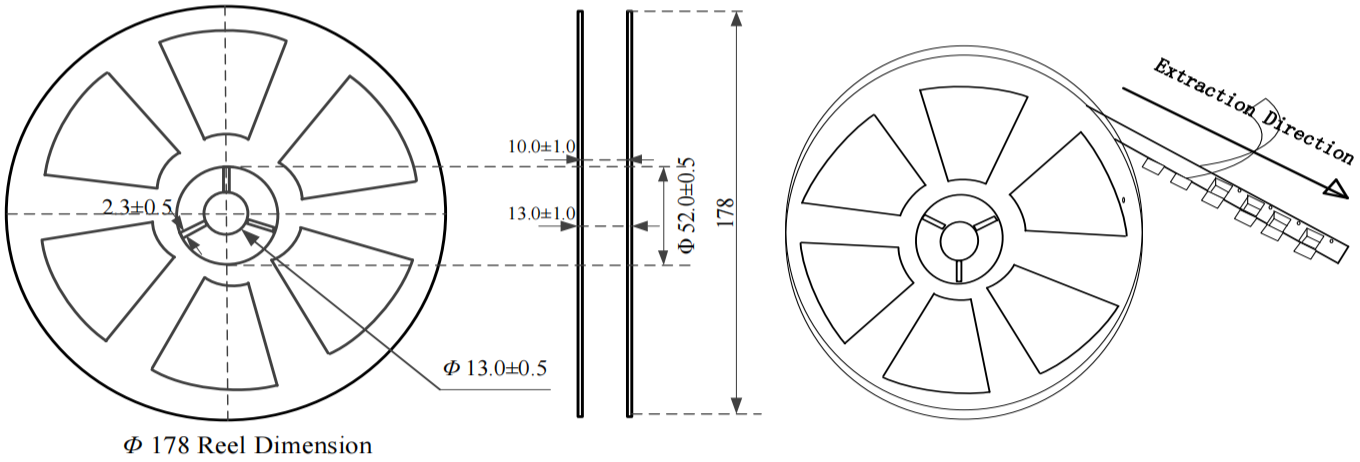


Figure 8: Drawing of tape with tape dimensions according above.

11.2 Reel with diameter of 178mm



Φ 178 Reel Dimension

Figure 9: Drawing of reel with diameter of 178mm.