

SAW Single Filter

for B7 / Unbalanced / 5pin /1109

Pinnacle PN: SA0711092G65AT

Key Feature:

✓ LTE B7 RX

1 Description

SA0711092G65AT is a high-performance Surface Acoustic Wave (SAW) Bandpass filter optimized for FDD LTE B7 applications operating in the range of 2.62-2.69GHz. It is designed to provide both low insertion loss in the Band7 and high rejection in the adjacent cellular Bands for mobile devices.

SA0711092G65AT uses advanced Chip Scale Package (CSP) technology and is housed in an industry-standard, 5-pin 1.1mm x0.9mm package with a low profile of 0.6mm max.

2 Features

- Low Insertion Loss: 1.20dB at Mid-Band
- High Rejection in B7 TX
- Small Footprint: $0.25 \pm 0.03\text{mm} \times 0.20 \pm 0.03\text{mm}$.
- Package size $1.1 \pm 0.05\text{mm} \times 0.9 \pm 0.05\text{mm}$
- Electrostatic Sensitive Device(ESD)
- Package height 0.6mm max.
- Single-Ended Operation
- RoHS Compliant

3 Package & Dimensions:

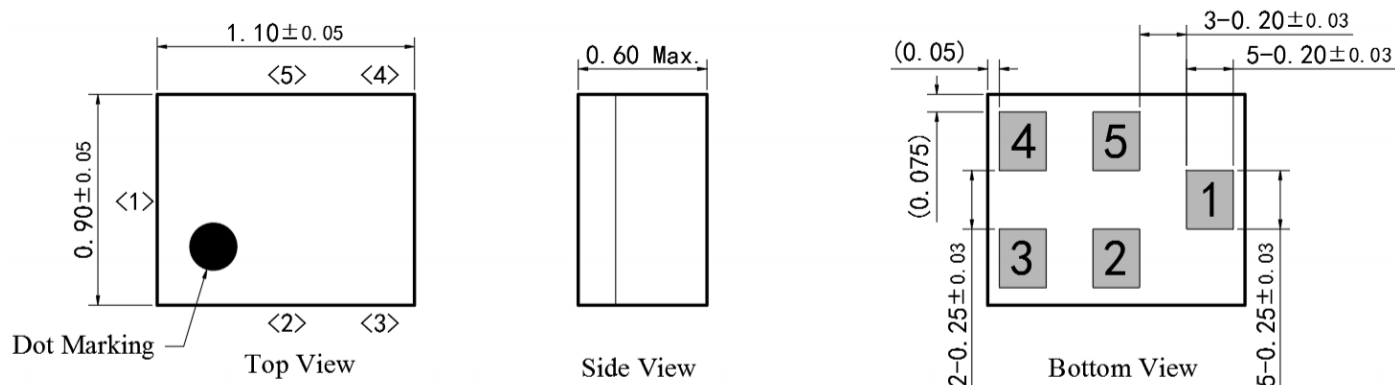


Figure 1: Drawing of Package with each tolerance range

4 Pin configuration

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

5 Matching Circuit(recommended)

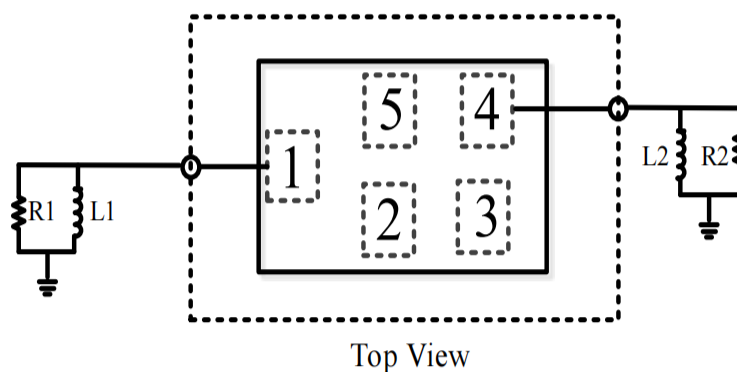


Figure 2: Schematic of matching circuit.

R1: 50 Ohm	L1: 5.1 nH ($Q \approx 15 @ 2650\text{Mhz}$)
R2: 50 Ohm	L2: 4.7 nH ($Q \approx 15 @ 2650\text{Mhz}$)

6 Absolute Maximum Ratings

Parameter	Rating	Unit
Operating Temperature	-30 to +85	°C
Storage Temperature	-40 to +85	°C
Maximum Input Power	+15	dBm
Maximum DC Voltage	5	V
Input terminating impedance	50	Ω
Output terminating impedance	50	Ω
Input Power@input port	Pin=15dBm Continuous wave for 2000h@+55°C	

7 Recommended Soldering Profile

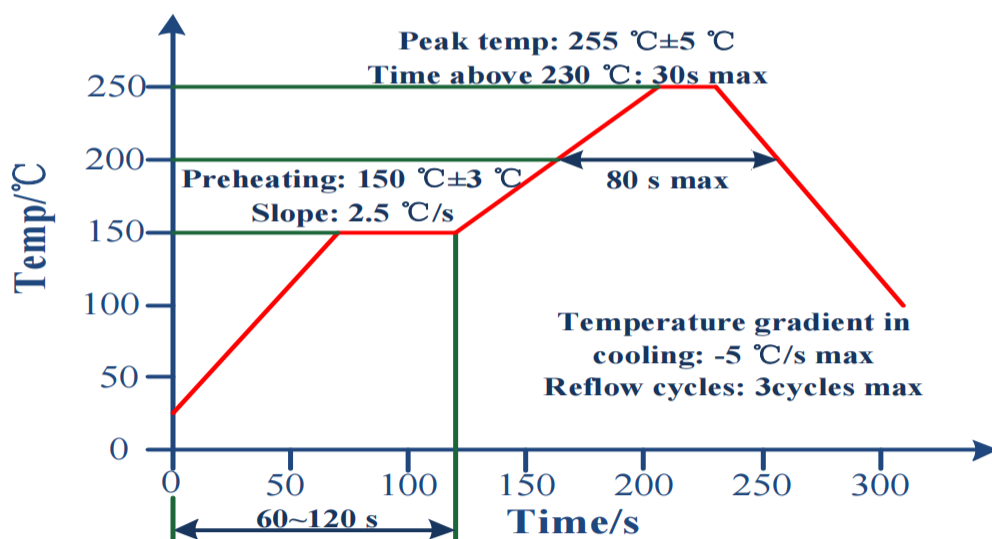


Figure 3: Recommended Reflow profile for convection and infrared soldering -lead-free solder.

8 Electrical Specifications

Parameter	Conditions	Min	Typ.	Max	Unit
Insertion Loss	2620 - 2690 MHz	-	1.9	2.5	dB
Passband Ripple	2620 - 2690 MHz	-	1.1	1.5	dB
Attenuation	10 – 2500 MHz		30	34	dB
	832 – 862 MHz		40	50	dB
	1710 – 1785 MHz		30	35	dB
	2500 - 2570 MHz		33	38	dB
	2775-6000 MHz		24	27	dB
VSWR(input)	2620 – 2690MHz	-	1.4	2	-
VSWR(output)	2620 - 2690 MHz	-	1.4	2	-

9 Transmission coefficient

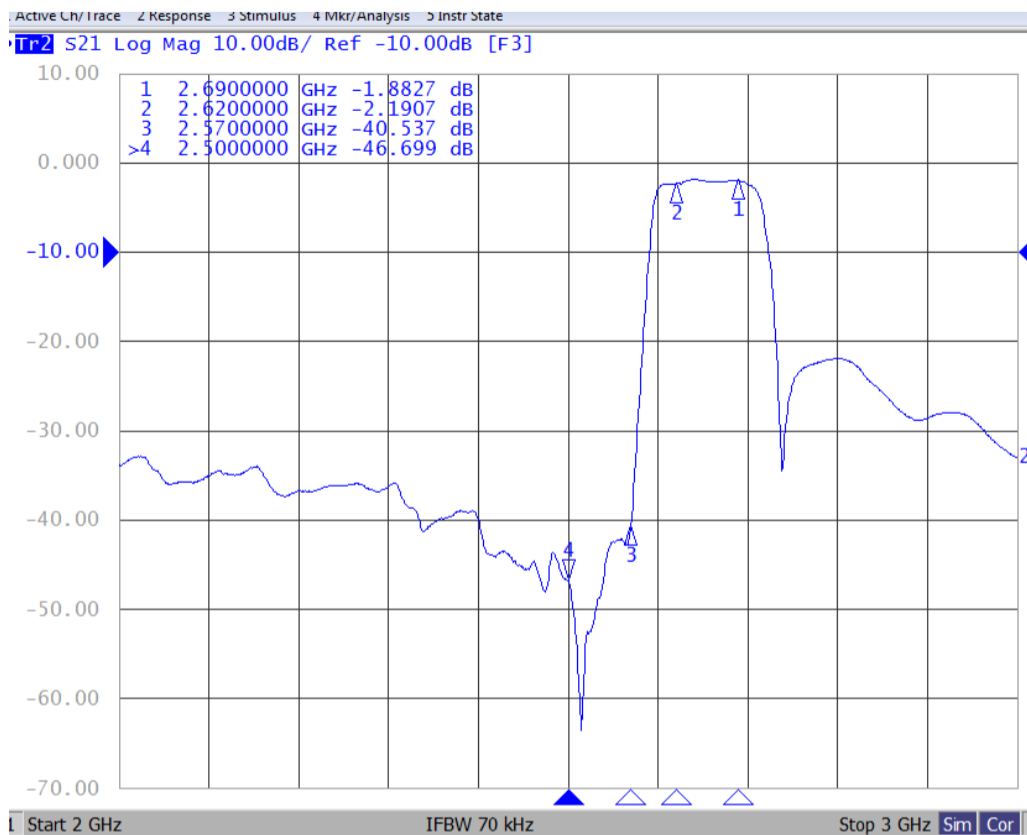


Figure 4: |S21|

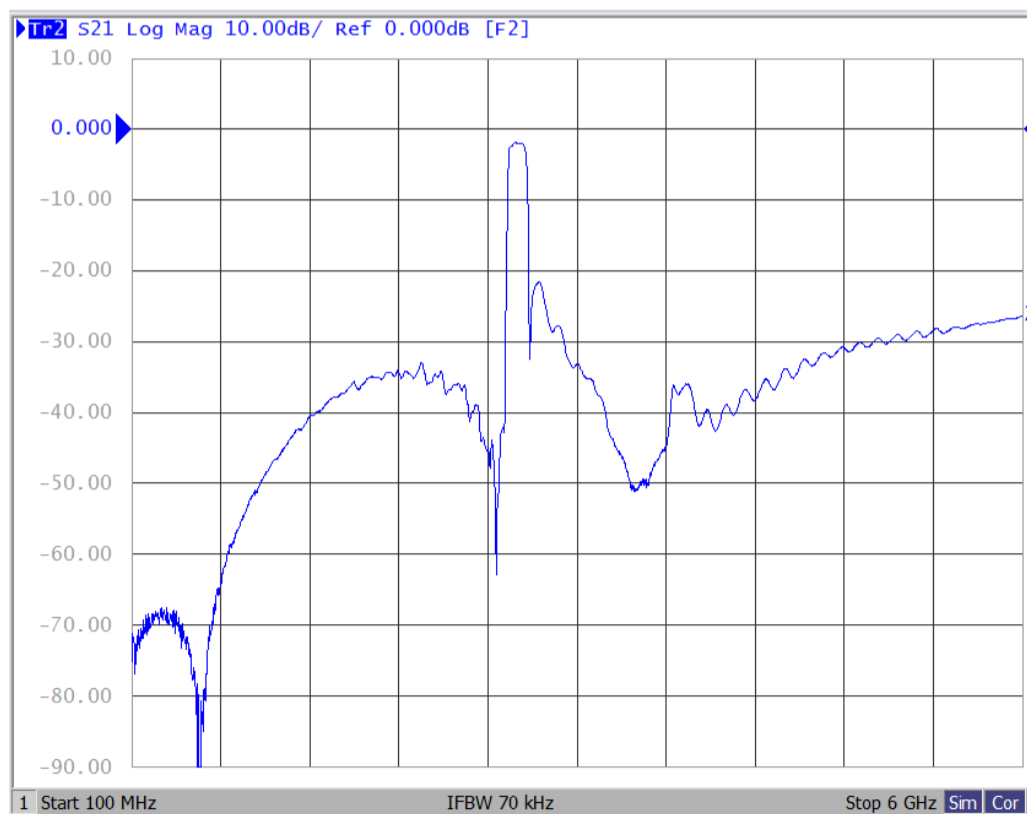


Figure 5: Wide Band |S21|

10 Reflection coefficients

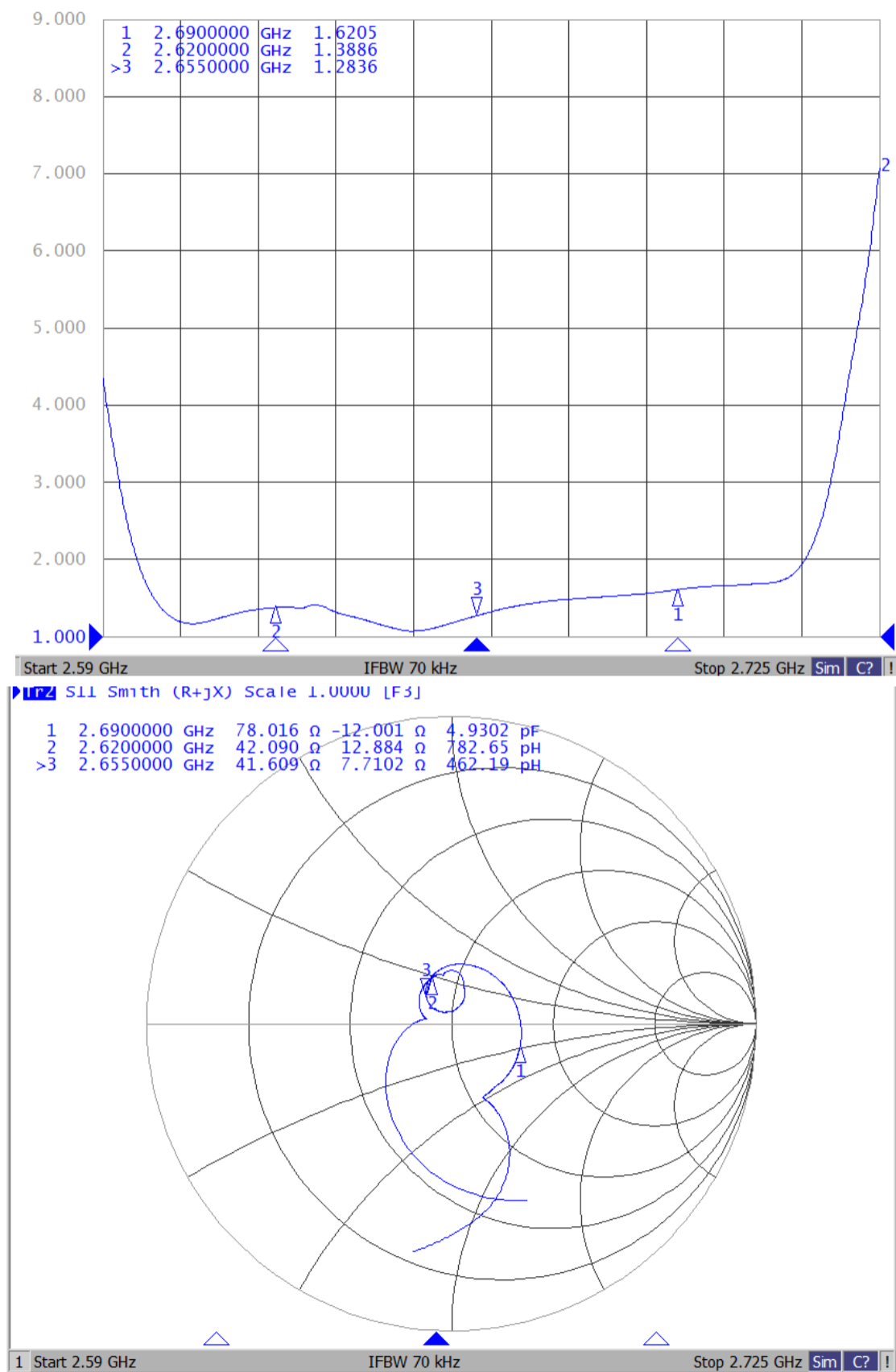


Figure 6: Reflection coefficient (S11)

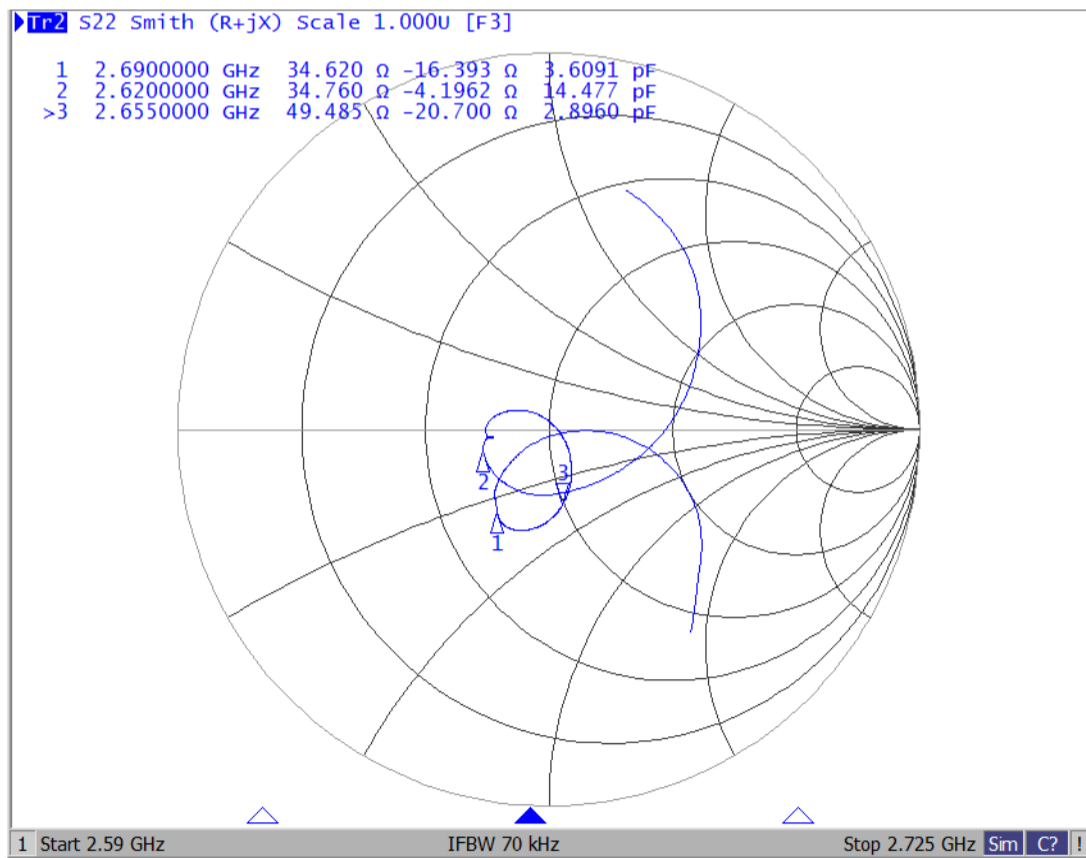
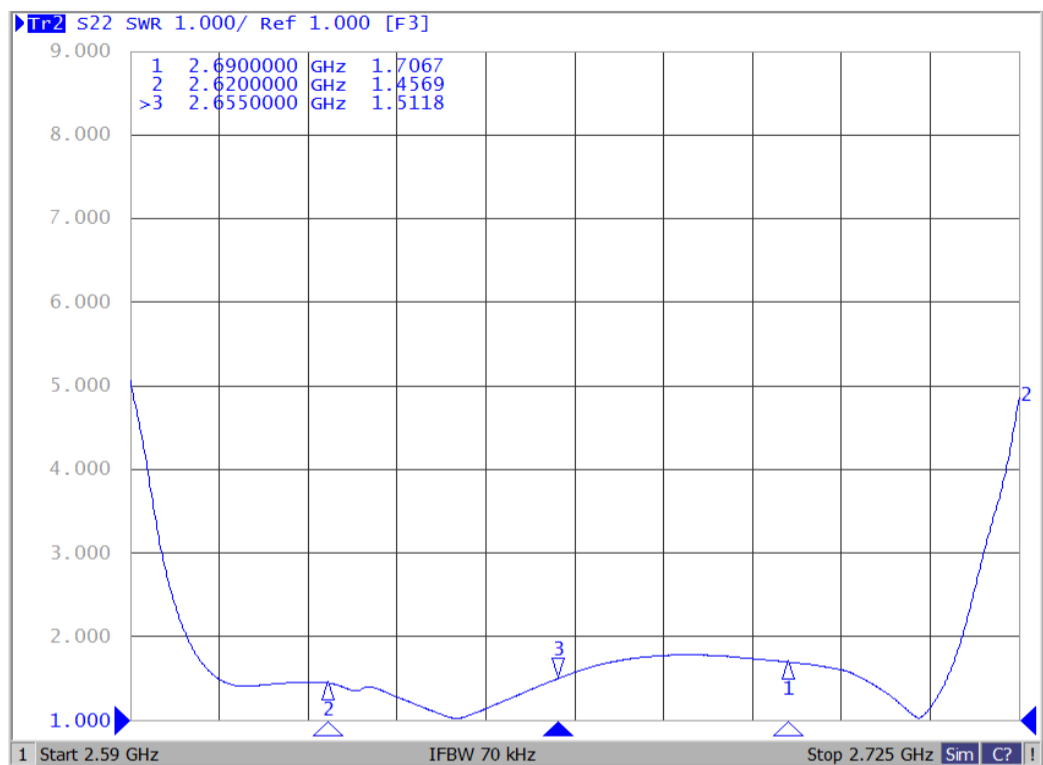


Figure 7: Reflection coefficient (S22)

11 Packing material

11.1 Tape

Tensile Strength of Carrier Tape: Carrier tape 10N or more; Cover tape 5N or more. Packaging quantities: 5000 PCS / Reel.

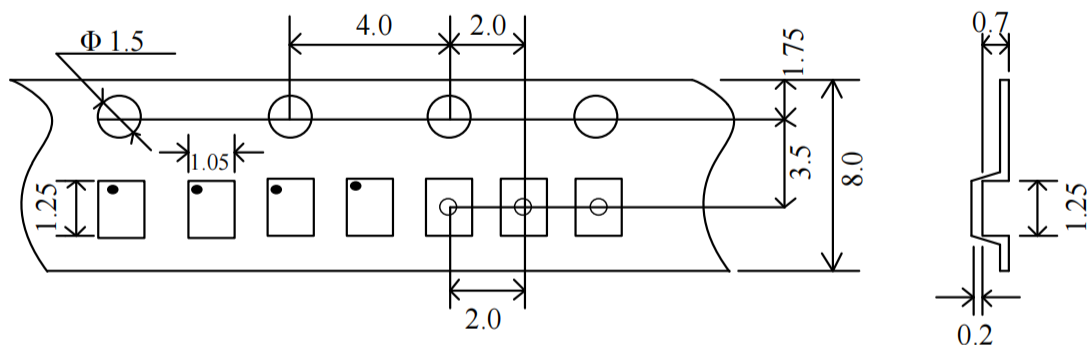


Figure 8: Drawing of tape with tape dimensions according to above.

11.2 Reel with diameter of 178mm

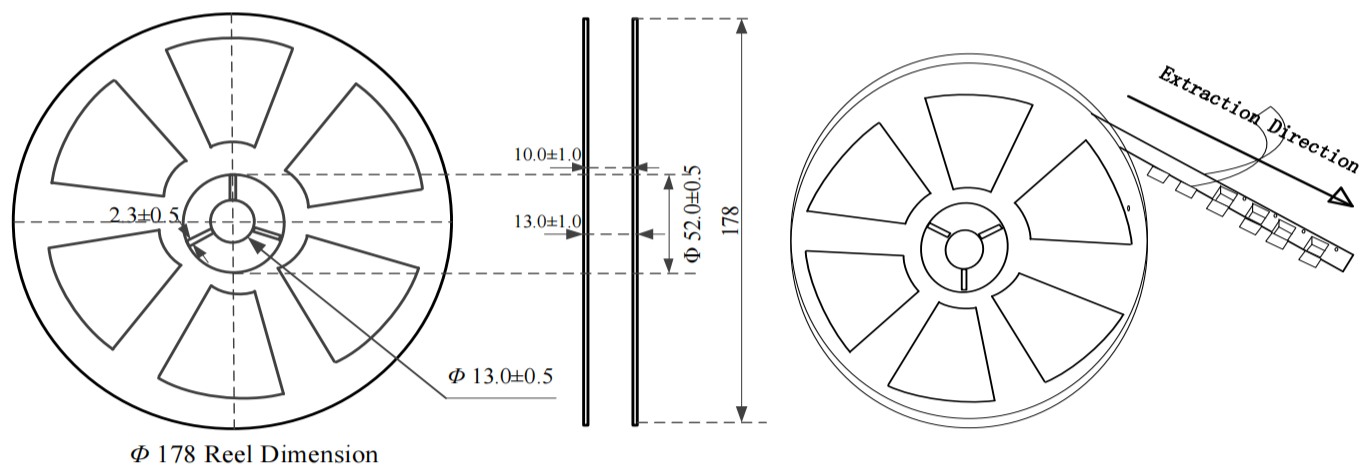


Figure 8: Drawing of reel with diameter of 178mm.