

SAW Single Filter

for B1 / Unbalanced / 5pin /1109

Pinnacle PN: SA0111092G14AT

Key Feature:

- ✓ **LTE B1 RX SAW Filter(2110-2170MHz)**
- ✓ **Low Insertion Loss**

1 Description

SA0111092G14AT is a high-performance Surface Acoustic Wave (SAW) Band pass filter optimized for FDD-LTE applications operating in the range of 2.110-2.170 GHz. It is designed to provide both low insertion loss in the Band 1 and high rejection in the adjacent cellular Bands for mobile devices.

SA0111092G14AT uses advanced Chip Scale Package (CSP) technology and is housed in an industry-standard, 5-pin 1.1 mm x 0.9 mm package with a low profile of 0.6 mm max.

2 Features

- Low Insertion Loss: 1.2dB at Mid-Band
- High Rejection in B1 TX Band (1920~1980MHz)
- 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:

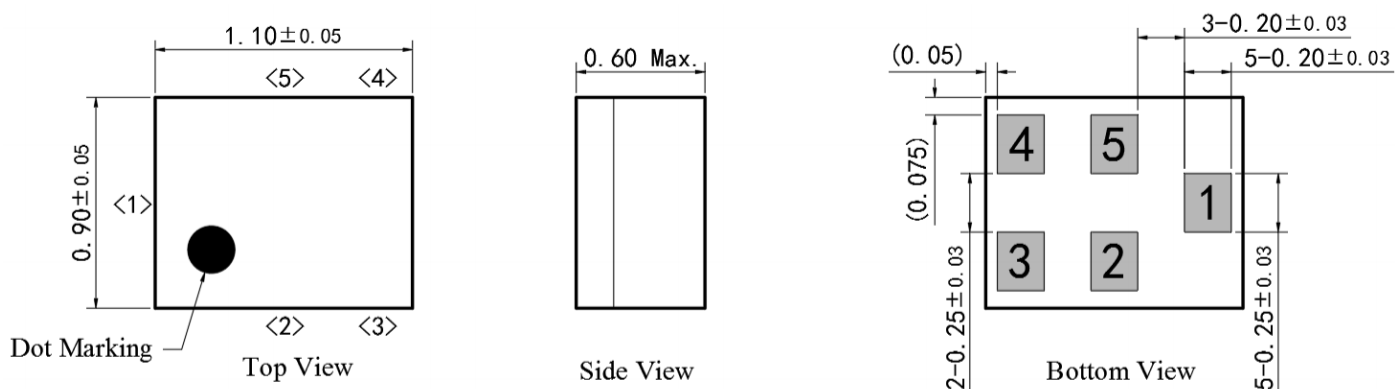


Figure 1: Drawing of Package with each tolerance range

4 Pin configuration

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

5 Matching Circuit(recommended)

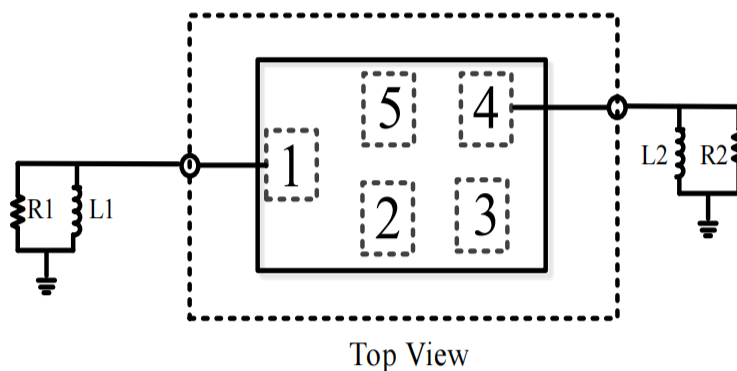


Figure 2: Schematic of matching circuit.

| | |
|------------|---------------------------------------|
| R1: 50 Ohm | L1: 4.3 nH (Q \approx 30 @2.140GHz) |
| R2: 50 Ohm | L2: 4.3 nH (Q \approx 30 @2.140GHz) |

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 5000h@55°C | |

7 Recommended Soldering Profile

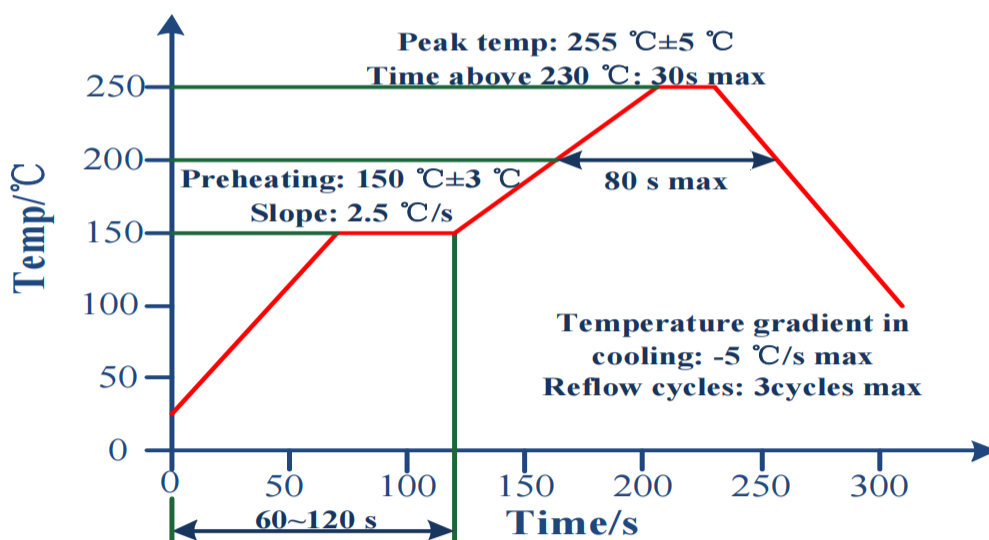


Figure 3: Recommended Reflow profile for convection and infrared soldering-lead-free solder.

8 Electrical Specifications

| Parameter | Conditions | Min | Typ. | Max | Unit | Note |
|-----------------|-----------------|-----|------|------|------|------------------|
| Insertion Loss | 2110 - 2170 MHz | - | 1.50 | 2.00 | dB | |
| Passband Ripple | 2110 - 2170 MHz | - | 0.50 | 1.00 | dB | |
| Attenuation | 100 - 824 MHz | 45 | 50 | - | dB | |
| | 824 - 925 MHz | 40 | 45 | - | dB | |
| | 1710 – 1755 MHz | 25 | 30 | - | dB | |
| | 1920 - 1980 MHz | 30 | 35 | - | dB | +23 °C to +85 °C |
| | 2400 - 2484 MHz | 25 | 30 | - | dB | +23 °C to +85 °C |
| | 4222 - 4340 MHz | 30 | 35 | - | dB | |
| | 4340 - 6000 MHz | 24 | 26 | - | dB | |
| VSWR(input) | 2110 - 2170 MHz | - | 1.3 | 2.00 | - | |
| VSWR(output) | 2110 - 2170 MHz | - | 1.3 | 2.00 | - | |

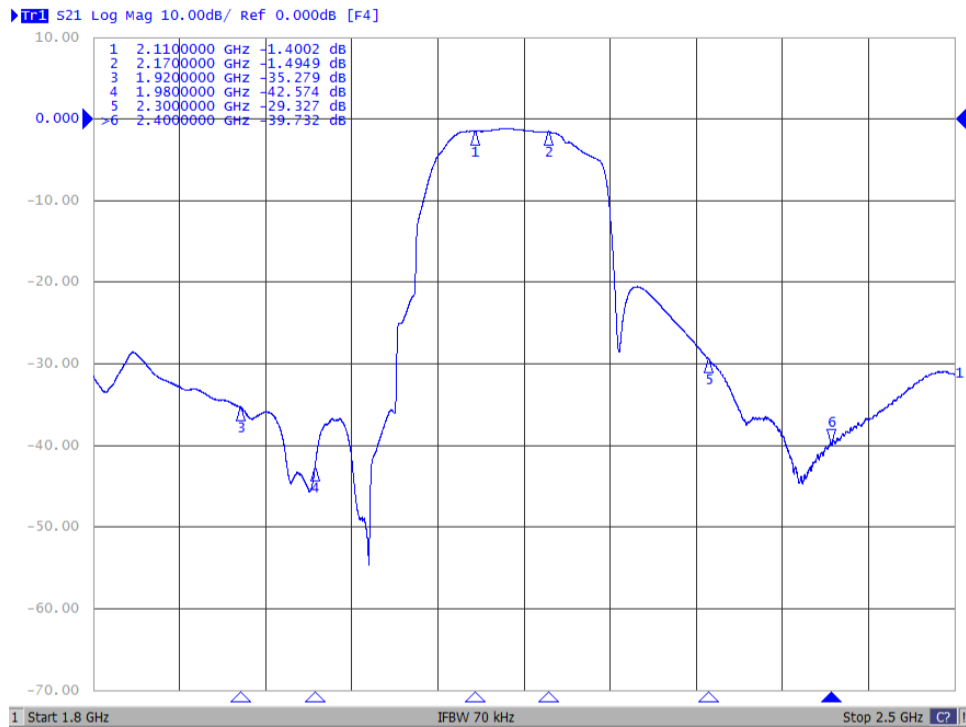
9 Transmission coefficient


Figure 4: |S21|

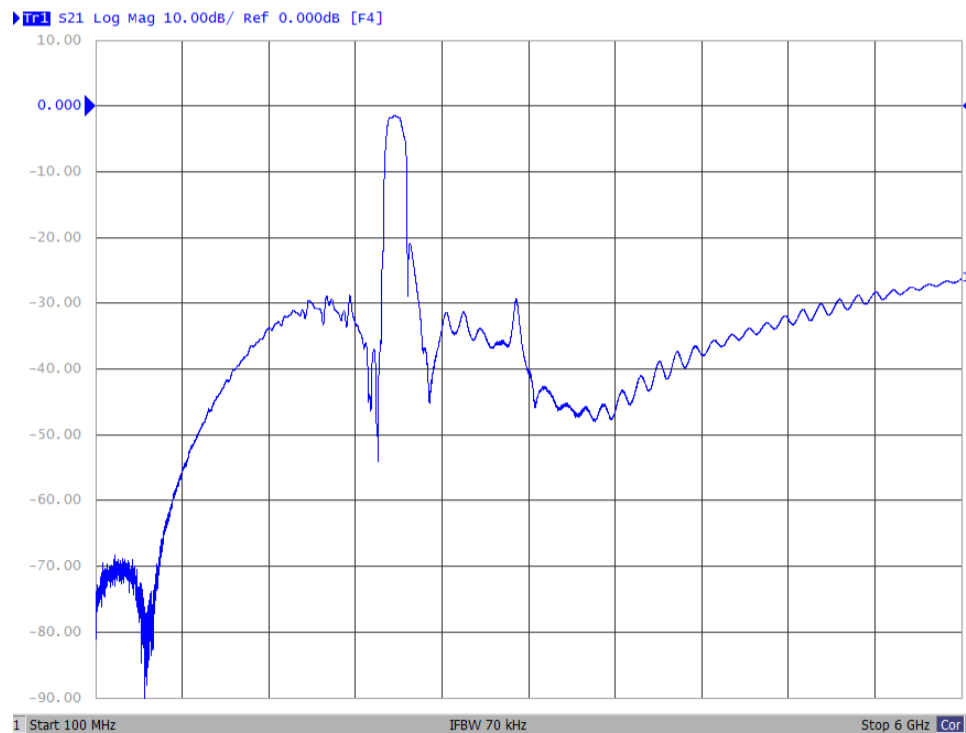
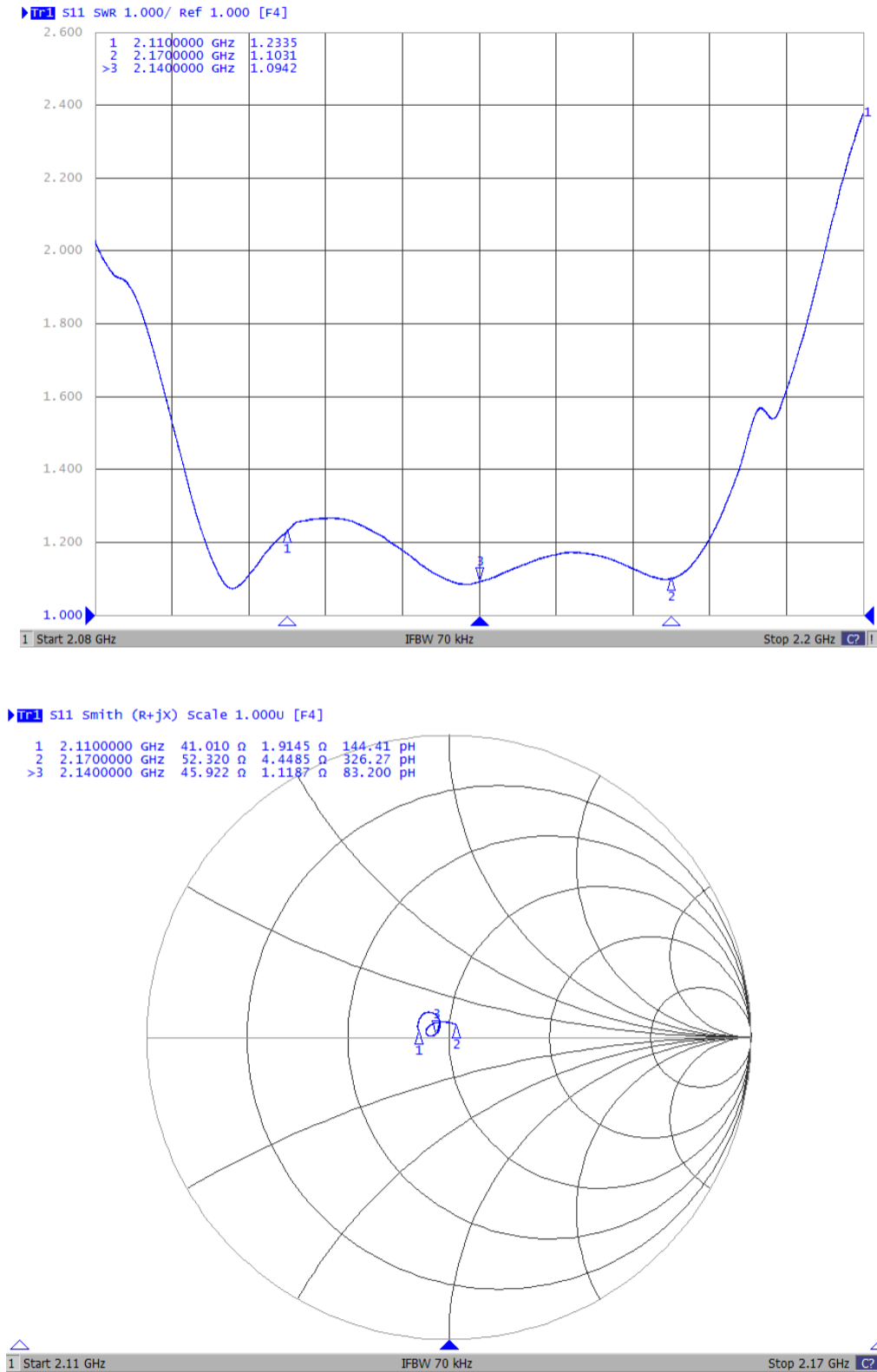


Figure 5: Wide Band |S21|

10 Reflection coefficients

Figure 6: Reflection coefficient for S11

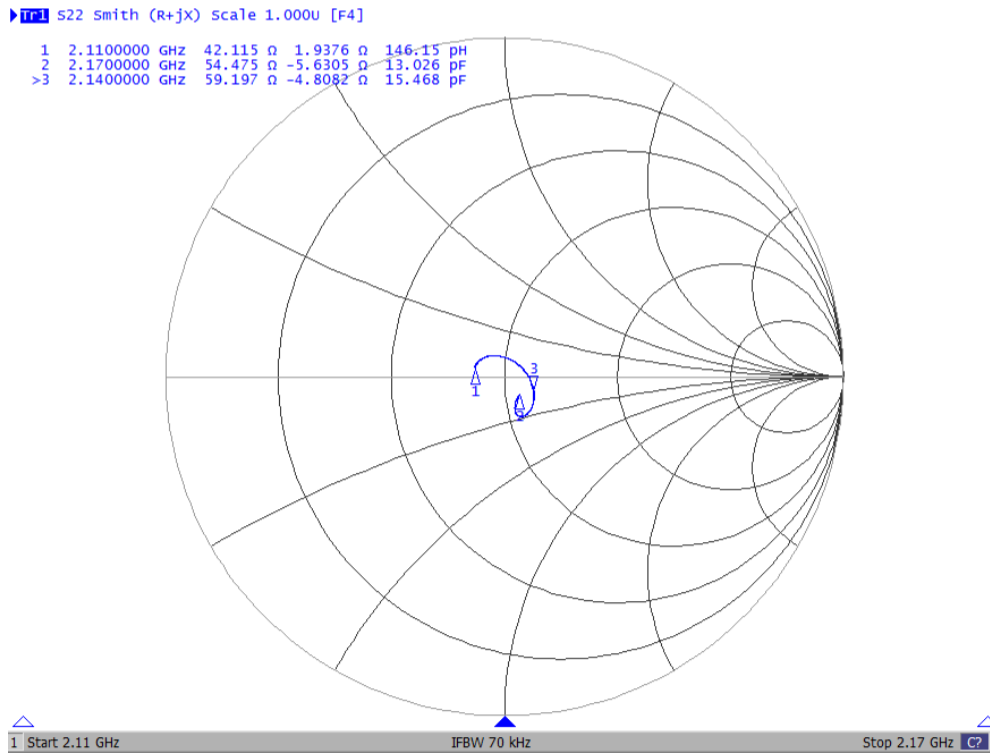
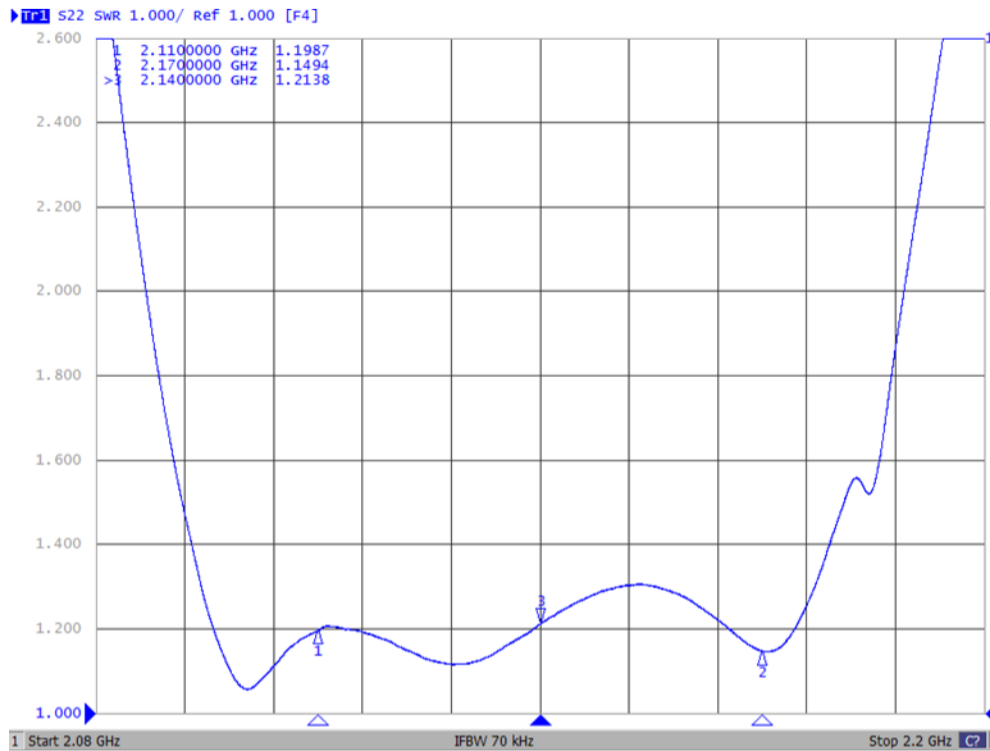


Figure 7: Reflection coefficient for S22

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.

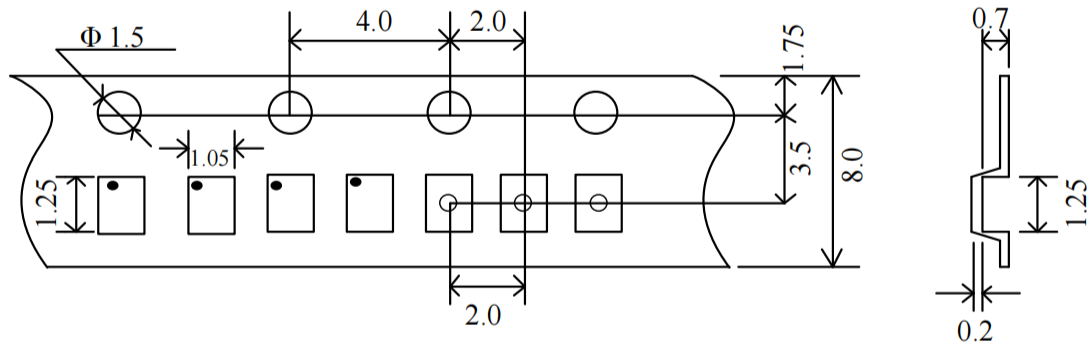


Figure 8: Drawing of tape with tape dimensions according above.

11.2 Reel with diameter of 178mm

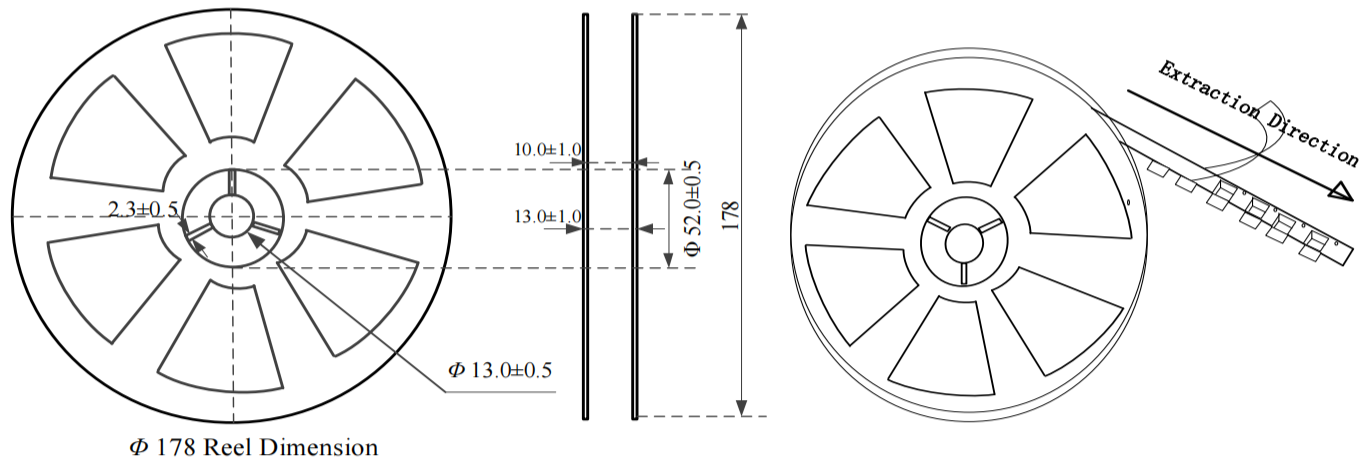


Figure 9: Drawing of reel with diameter of 178mm.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Signal Conditioning](#) category:

Click to view products by [Sunltech](#) manufacturer:

Other Similar products are found below :

[PD0409J5050S2HF](#) [HHS-109-PIN](#) [AFS14A35-1591.50-T3](#) [JP510S](#) [LFB322G45SN1A504](#) [SF2159E](#) [FM-104-PIN](#) [CER0813B](#)
[MAPDCC0005](#) [3A325](#) [BD0810N50100AHF](#) [DC0710J5005AHF](#) [DC2327J5005AHF](#) [LFL15869MTC1B787](#) [X3C19F1-20S](#)
[CDBLB455KCAX39-B0](#) [RF1353C](#) [051157-0000](#) [PD0922J5050D2HF](#) [600S150FTRB](#) [1E1305-3](#) [1F1304-3S](#) [TP-103-PIN](#)
[BD1222J50200AHF](#) [BD1722J50100AHF](#) [2450DP39K5400E](#) [BD0810J50150AHF](#) [BD1722J50200AHF](#) [DS-327-PIN](#) [MACP-008125-](#)
[CK07F0](#) [DS-329-PIN](#) [DS-313-PIN](#) [TP-104-PIN](#) [TP-101-PIN](#) [HH-128-PIN](#) [8594810000](#) [T-1000-N](#) [JP506S](#) [XC0900P-10S](#) [XC0900B-30S](#)
[CHE1260-QAG](#) [11305-10](#) [5962-9091202MXA](#) [3A412S](#) [X3C06A4-03S](#) [B39000Z3410A4](#) [DSS-333-PIN](#) [PD2425J5050S2HF](#)
[B39242B4360P810](#) [B39781B8005P810](#)