



# AK9223 Reference Design

This document shows circuit and layout diagrams of the AK9223 as the reference design.

## ■ Circuit Diagram

It shows compositions of power supply decoupling capacitors and analog input filters. Switching land patterns are also shown here since the internal/external VREF or CLK can be selected with the AK9223.

### Peripheral Parts/Pattern Details

R1, R2, C1, C2, C3:	Low-pass Filter of the AIN1
R3, R4, C4, C5, C6:	Low-pass Filter of the AIN0
C7, C8, C12, C13:	Decoupling Capacitor for AVDD
C9:	Decoupling Capacitor for DVDD
C10:	Decoupling Capacitor for REF11
C11:	Decoupling Capacitor for REF10
SH0, SH1:	Internal/External Switching of the VREF
EXT, INT:	Internal/External Switching of the CLK

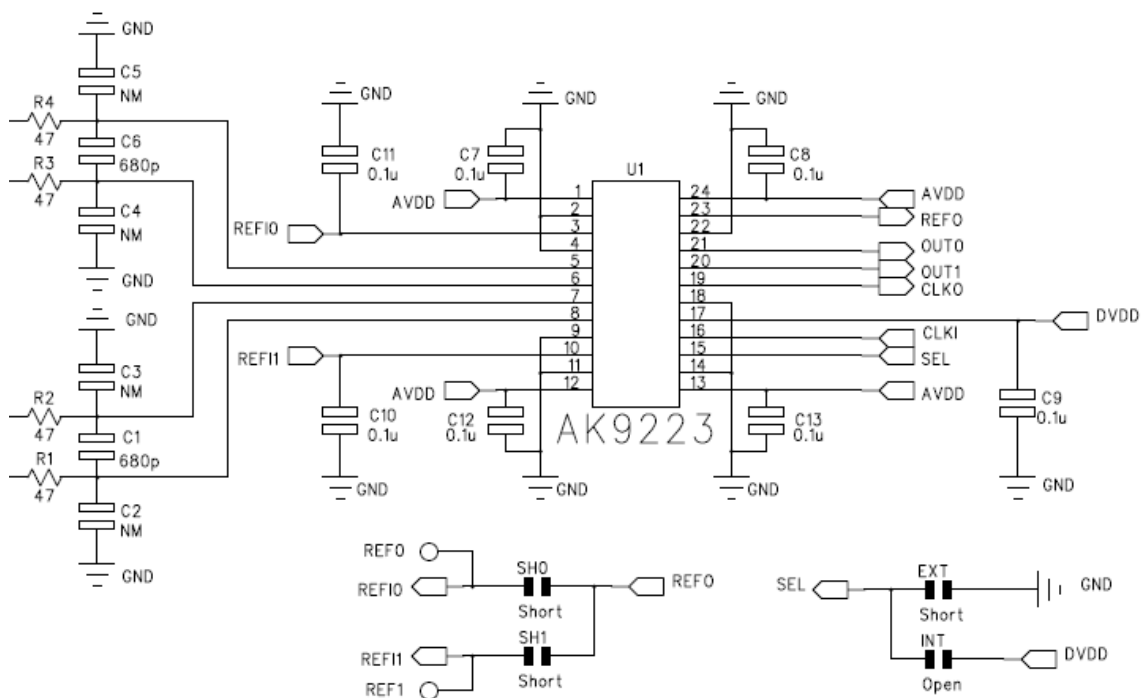


Figure 1. AK9223 Circuit Diagram

## ■ Layout

Four layered printing board is used. The second layer is for the ground and the third layer is for power supply. AVDD and DVDD are separated on the power supply layer.

All areas except parts and wirings are GND in the first and the fourth layers.

All used chip parts here are located as 1005 (1.0mm x 0.5mm) size layout.

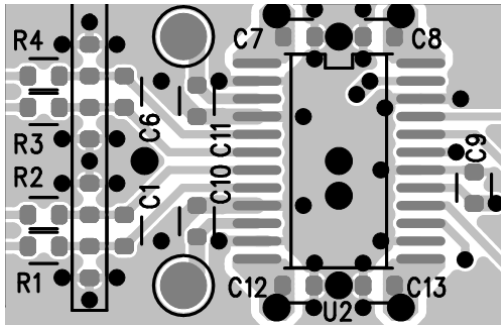


Figure 2. First Layer Layout

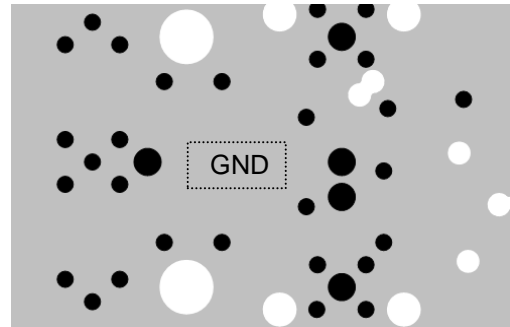


Figure 3. Second Layer Layout

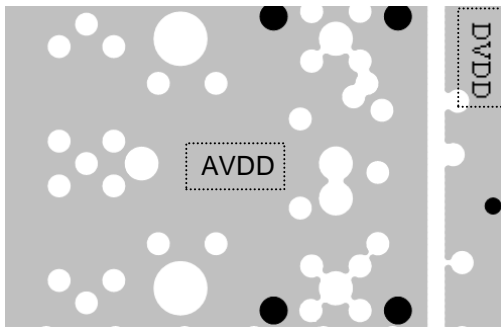


Figure 4. Third Layer Layout

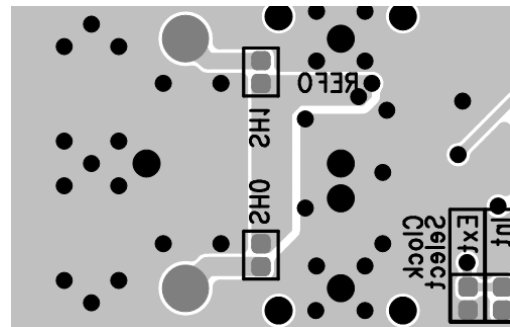


Figure 5. Fourth Layer Layout (Reverse Side)

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