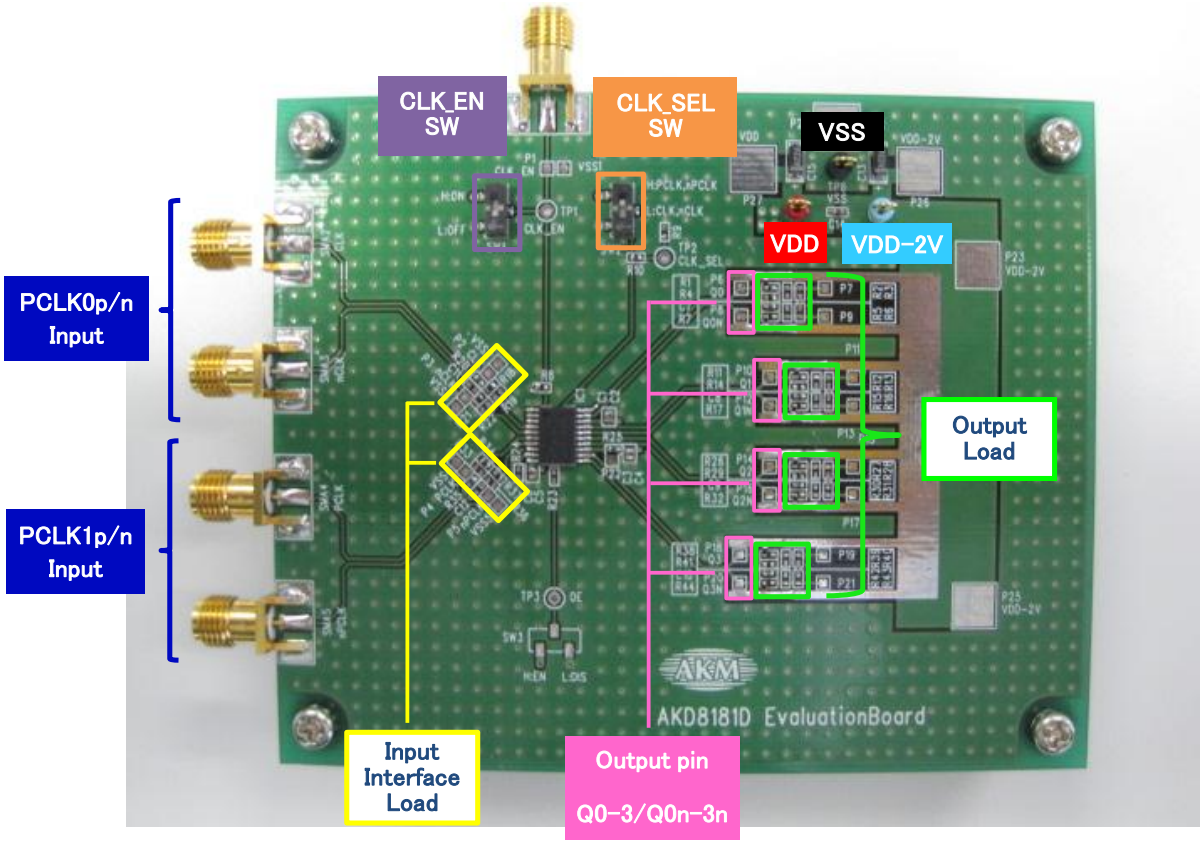
AKD8181D

AK8181D Evaluation Board

The AKD8181D is an evaluation board for AK8181D. Therefore, it is easy to evaluate DC/AC characteristics and confirm product functions.

- SMA terminal of the differntial input
- Enable to construct input load circuit for interface
- Enable to construct three types of output load circuit
- Preparing terminal and land pattern for VDD/VSS/VDD-2V
- CLK_SEL and CLK_EN control switch



Power

There are the following three power supplies.
※If you have configured a termination circuit with resistor only (Pattern B or C), it becomes possible to evaluate even without applying power to the VDD−2V terminal.

- VDD The core power supply of AK8181D (3.3V)
- VSS The core power supply of AK8181D (GND)
- VDD−2V Power supply for the end of the output load resistor (=VDD−2V)

Note) GND of the SMA terminal is connected to the VSS inside the substrate.

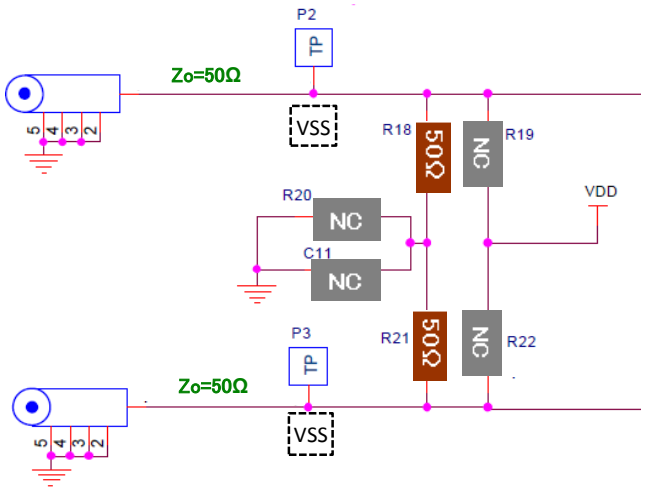
Clock input

AK8181D inputs the clock selected by CLK_SEL switch. (Differential input or LVPECL)
The clock input signal can terminate if needed.

Input load circuit for interface

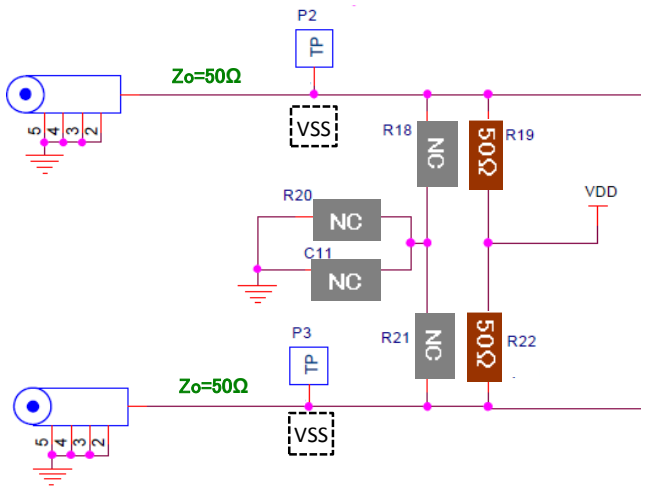
It can construct interface load circuit for input differential clock.
Examples are shown below.
The state of initial shipment is【Pattern c】.

Pattern a

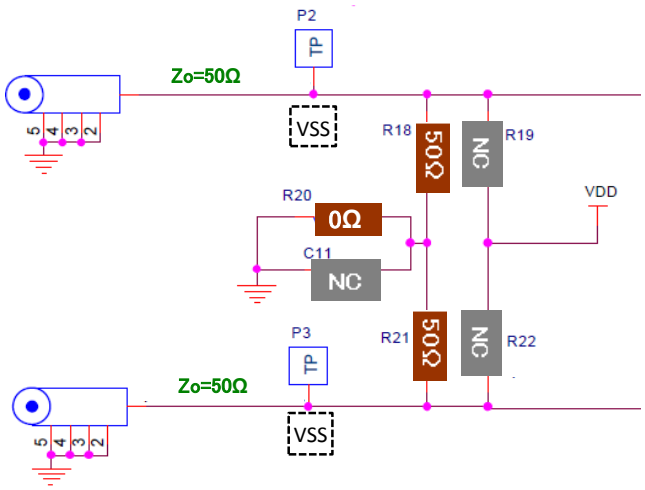


NC：No components

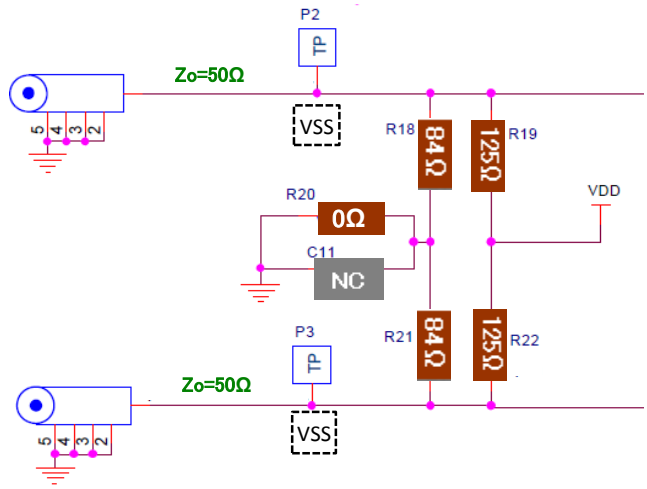
Pattern b



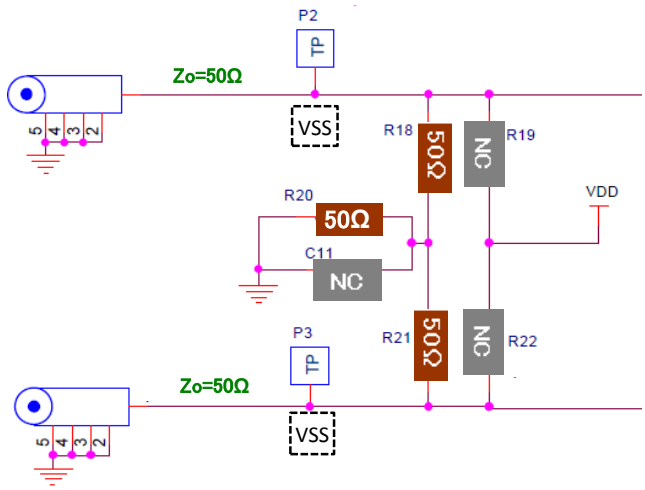
Pattern c



Pattern d



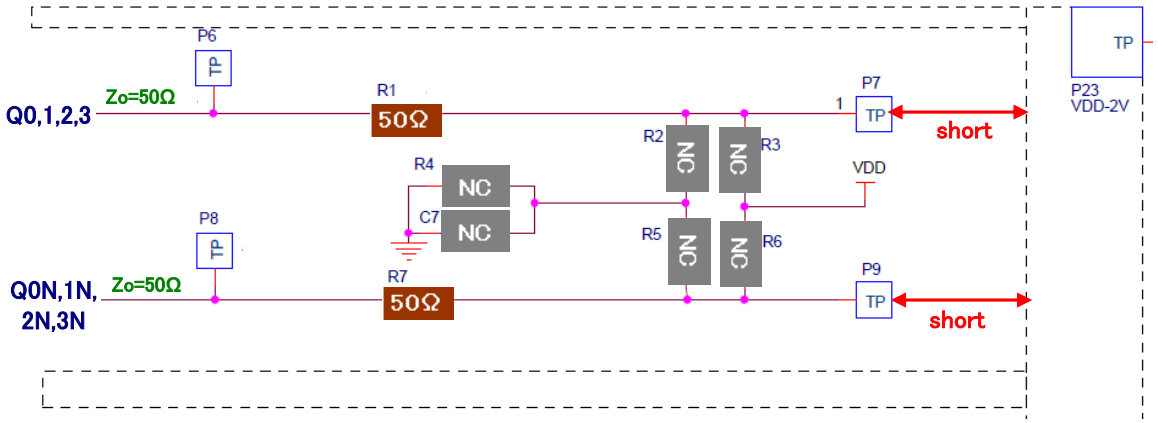
Pattern e



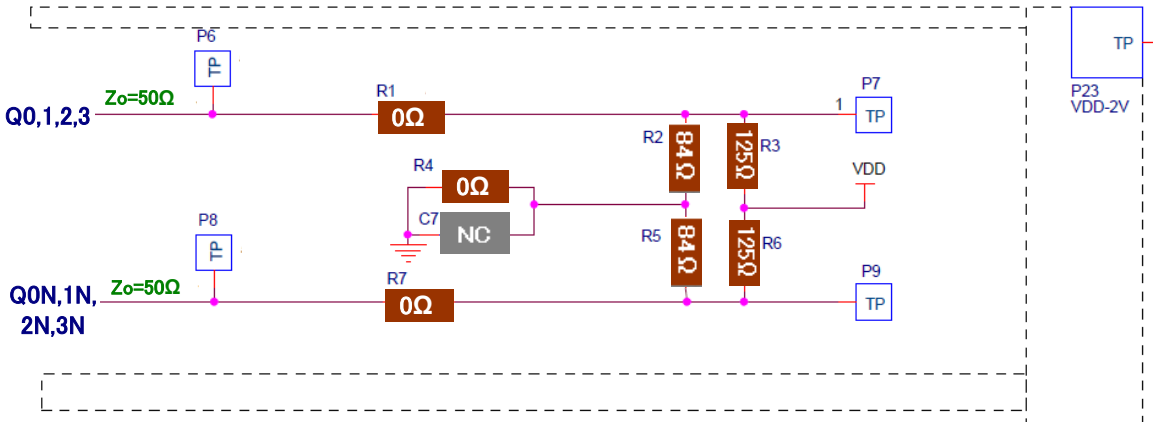
Output load circuit

It can terminate by the following three methods. (Pattern A/B/C)
The state of initial shipment is【Pattern A】.

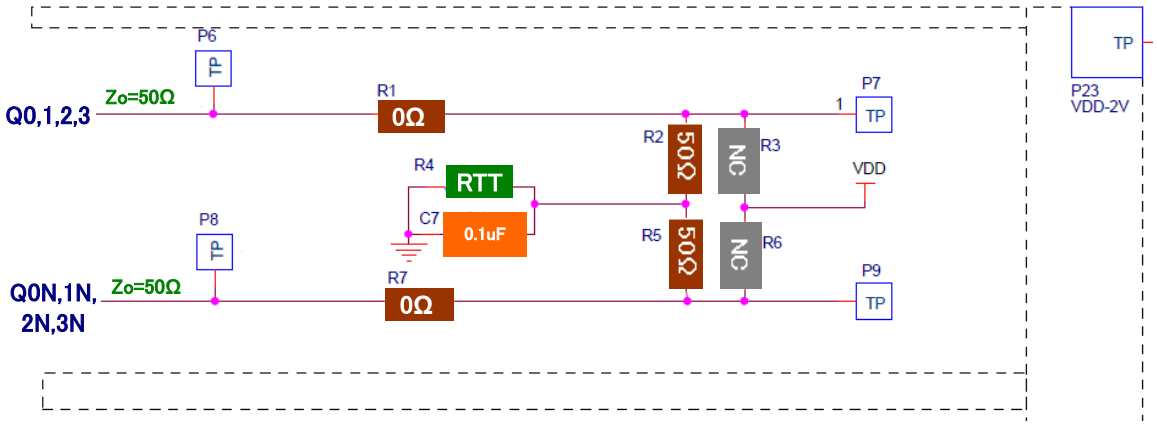
Pattern A ※with applying power to the VDD−2V terminal



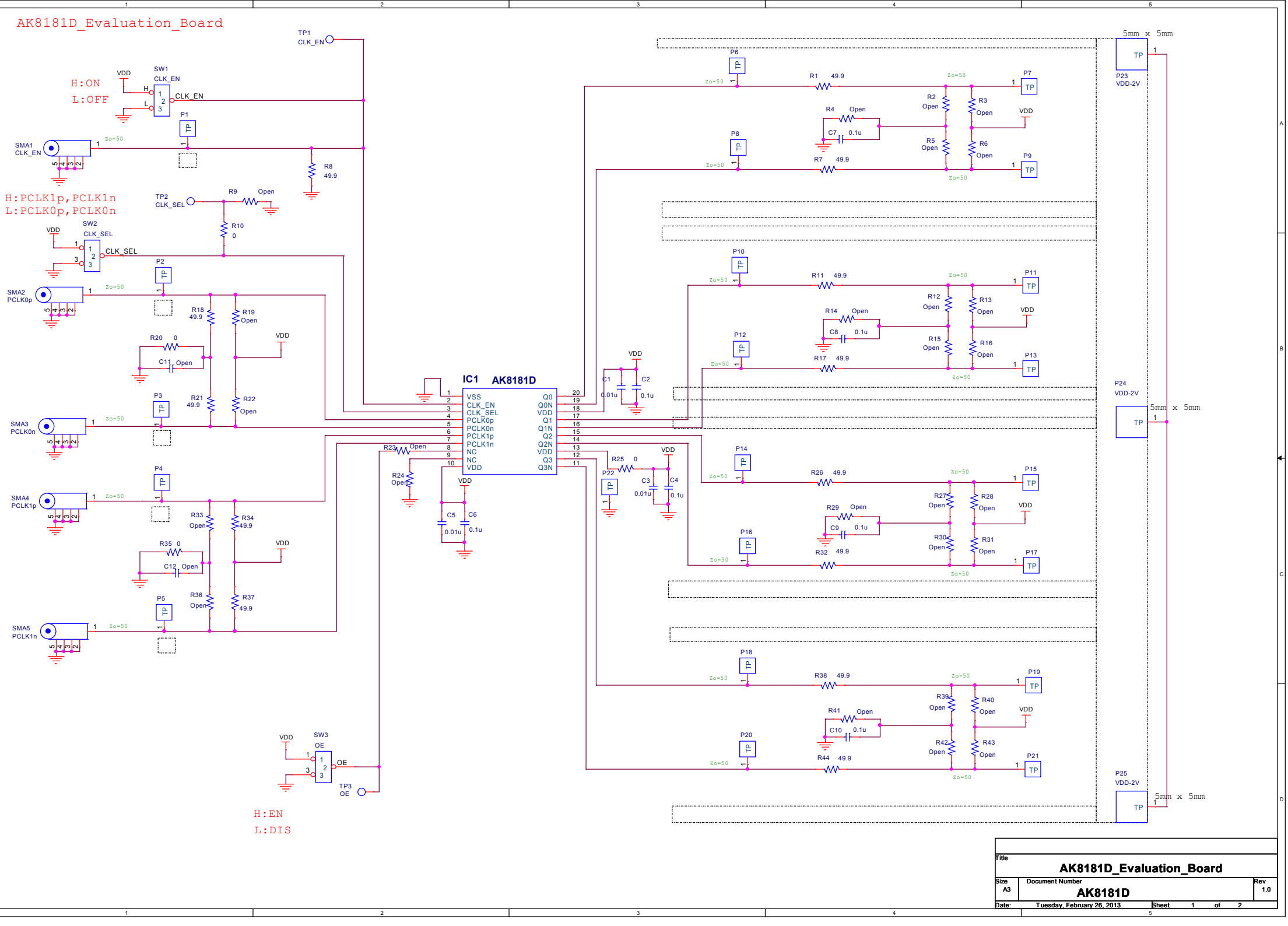
Pattern B ※without applying power to the VDD−2V terminal

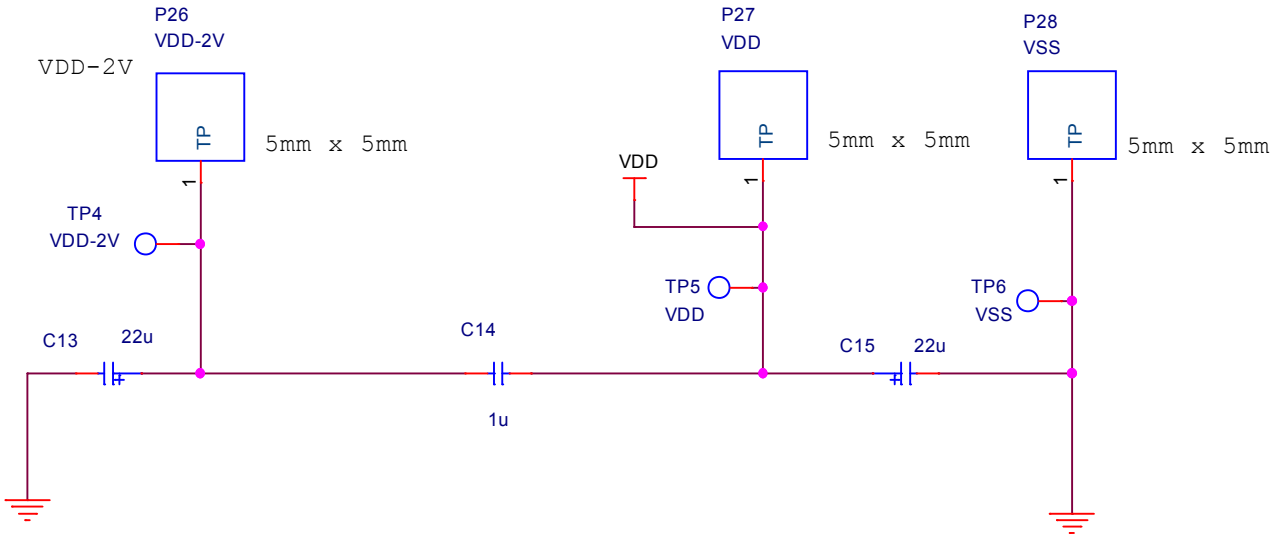


Pattern C ※without applying power to the VDD−2V terminal



$$※\ RTT = \left[\frac{1}{((V_{OH}+V_{OL})/(VDD-2))}\right] Z_0$$


AK8181D_Evaluation_Board
H:ON
L:OFF
H:PCLK1p,PCLK1n
L:PCLK0p,PCLK0n
H:EN
L:DIS
IC1 AK8181D
VSS
CLK_EN
CLK_SEL
PCLK0p
PCLK0n
PCLK1p
PCLK1n
NC
NC
VDD
Q0
Q0N
VDD
Q1
Q1N
Q2
Q2N
VDD
Q3
Q3N
5mm x 5mm
5mm x 5mm
5mm x 5mm
Title
AK8181D_Evaluation_Board
Size A3
Document Number AK8181D
Rev 1.0
Date: Tuesday, February 26, 2013
Sheet 1 of 2



Title	**AK8181D_Evaluation_Board**	
Size A	Document Number **Power**	Rev 1.0
Date: Monday, December 03, 2012	Sheet 2 of 2	