



Evaluation Board for AK8141 & 811x

AKD8141_811x ver.2

For AK811x evaluation

Description

AKD8141_811x_Evaluation Board is a common evaluation board for the ICs; AK8141 and AK811x series.

Ordering Information

■ AKD8141_811x

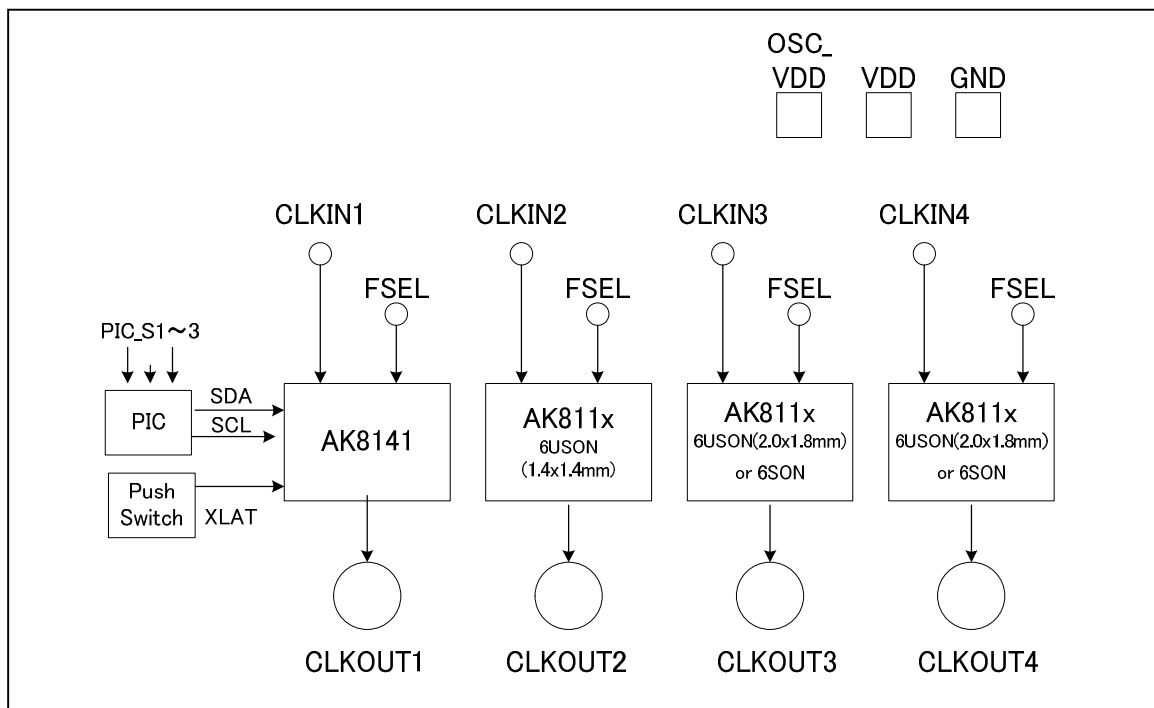
◆ Device type

- 1) AK8141
- 2) AK811x

※PKG type : 6SON (2.0x1.6mm)
6USON (2.0x1.8mm)
6USON (1.4x1.4mm)

Configuration

Block Diagram



AK8141_811x Evaluation Board

Functions

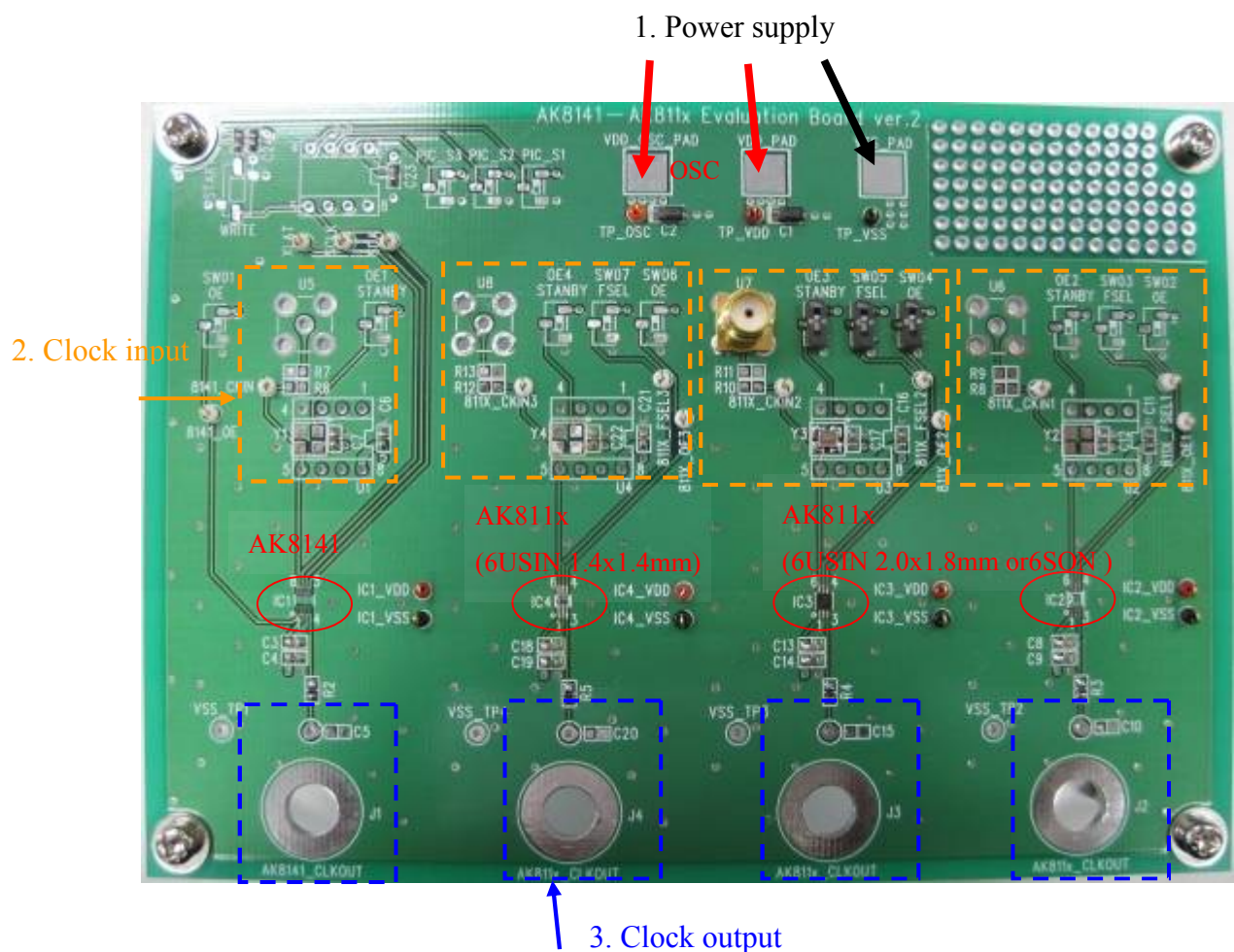


Figure 1. AKD8141_811x top view

Circuit Diagram is attached in last page.

※ **AK8141 Settings**

This manual only refer to AK811x evaluation.

Please refer to AK8141 Datasheet and another manual for AK8141 evaluation.

1. Power Supply

Please connect the lead line to VDD (3.3V; Red) and VSS (GND; Black).
When using a crystal oscillator as an input, please supply 3.3V to VDD_OSC PAD (Orange) too.

2. Clock Input

It is possible to input the clock from Crystal oscillator (DIP 8 pin compatible type or SMD type) and external clock from SMA-A connector.

- **Crystal Unit**

Y1-4: 2520 type crystal oscillator is mountable.
Clock output from crystal oscillator is selected by setting "OE1-4 STANBY".

"OE1-4 STANBY"=H: Clock output from Crystal oscillator is enabled
"OE1-4 STANBY"=L: Oscillation stop

U1-4: 8pin DIP compatible type crystal oscillator is available here.

- **External Clock**

U5-8: It is possible to input clock from SMA-A connector.

R6.8.10.12 need to be connected, when using clock from SMA-A connector.

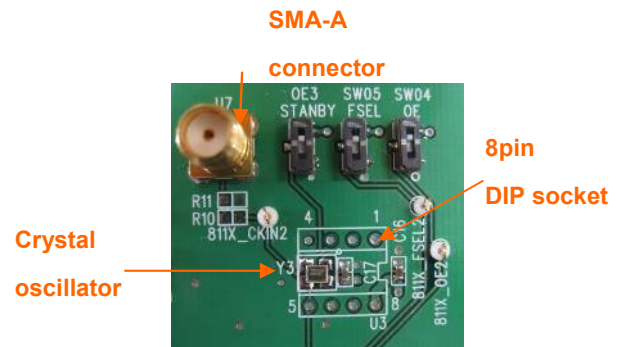


Figure.2 Clock Input

3. Clock output

Clock output from AK8141_811x leads to each connector. Spectrum Analyzer or Oscilloscope is available to measure clock performances by connecting here.

There are dummy capacitor loads, C5, C10, C15, and C20 beside each IC clock output. It is useful to measure clock performance or current consumption by loading capacitor which is virtually assumed in the system. A clock outputs from AK8141 and 811x lead to J1-4. Chassis mount test jacks for miniature probe (Tektronix 131-0258-00) are available by mounting there.

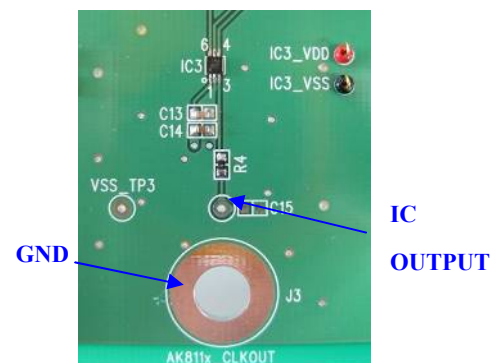


Figure.3 Clock Output

4. AK811x Settings

- **Clock output enable**

"SW0x OE" enables each IC clock output.

"SW0x OE"=H: Clock output from Crystal oscillator is enabled

"SW0x OE"=L: Oscillation stop

(x= 2, 4, 6)



H : VDD
M : OPEN
L : GND

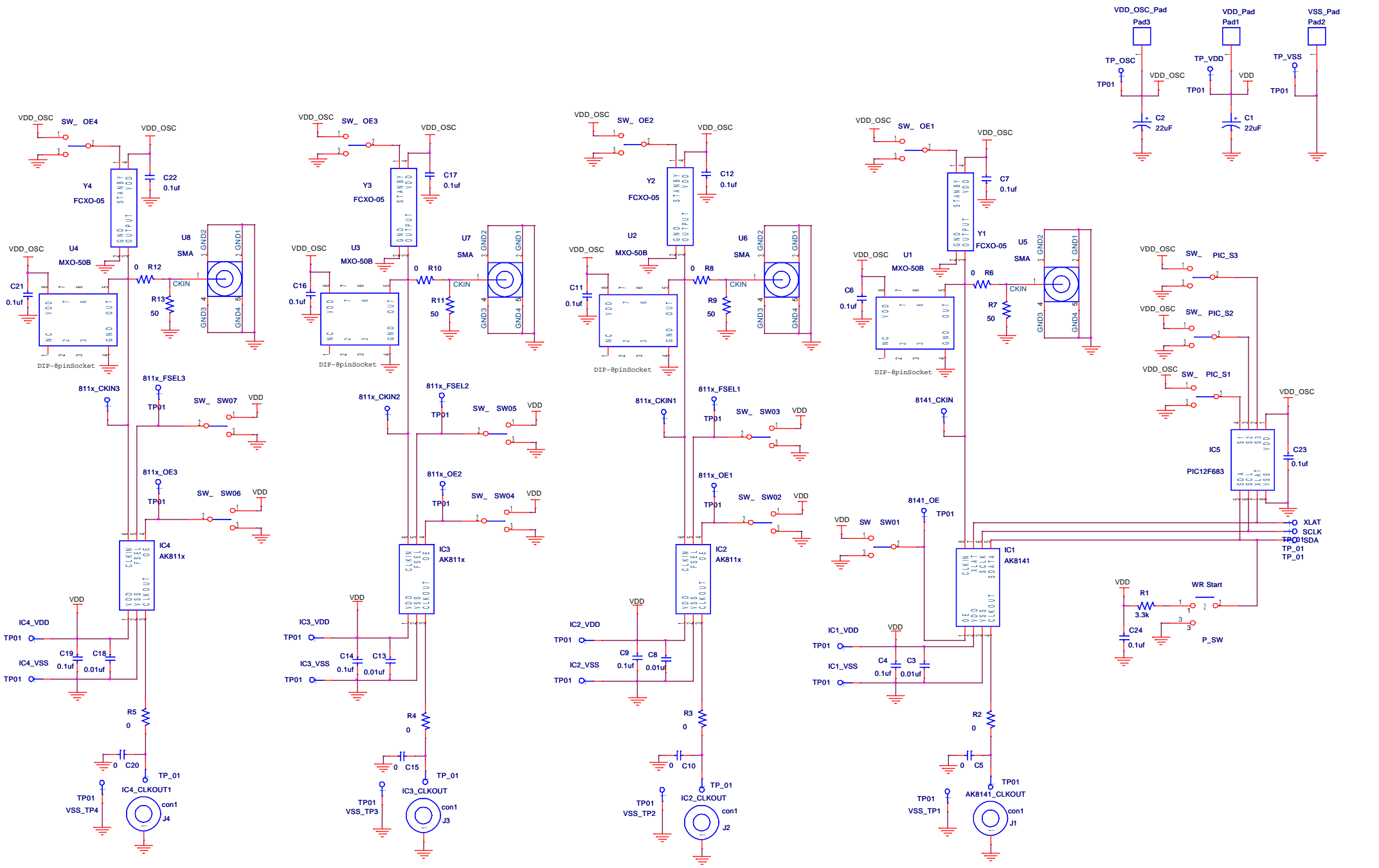
Figure.4 Switch
(SW0x_OE, SW0x_FSEL)

- **Clock output Frequency settings**

"SW0x FSEL" select output frequency of each IC (AK811x).

Please refer to AK811x datasheet to see each IC output frequency.

(x= 3, 5, 7)



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