

Abstract

AKD4182A-A is the board for evaluation of the touch screen controller AK4182A which adopted the QFN small package suitable for the cellular phone, the handheld game machine, etc. Since AKD4182A-A has a touch-panel I/F and a digital I/O power supply input terminal, it is easily connectable with a target system of low power/voltage drive. Furthermore, since the analog input terminal is equipped analog voltage and external battery voltage can also be measured.

Function

- AK4182A (QFN16 package)
- Digital I/F for uP
- Touch-panel I/F
- Analog input terminal
- Digital I/O power supply terminal

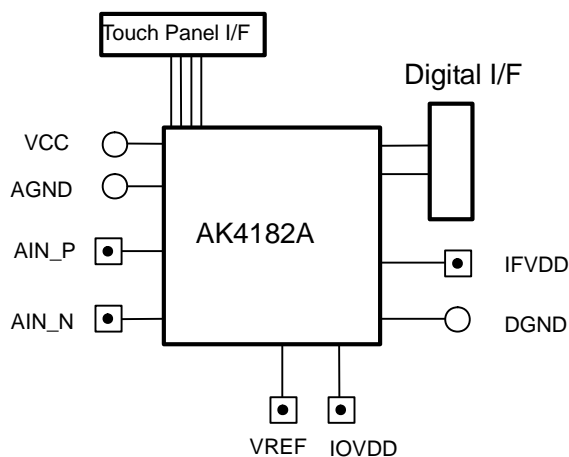


Figure 1 AKD4182A-A Block Diagram

■ Operation procedure

1. Wiring of a power supply
 - VCC (Red) = 2.2V~3.6V
 - AGND (Black) = 0V
 - DGND (Black) = 0V
 - IOVDD (Blue) = IFVDD (Orange) = 1.5V~VCC
 - JP1, JP5-short
2. A setup of evaluation mode and a jumper
3. Power supply injection

■ Evaluation mode selection

- 1) Position, Pen Pressure
- 2) Analog input voltage measurement

- 1) Position, Pen Pressure
 - 4 wire touch-panel (X+, X-, Y+, and Y-) is connected to J1 connector.
 - Jumper setup
 - JP2 (XPSEL) -----select XP
 - JP3 (YPSEL) -----select YP
 - JP4 (XNSEL) -----select XN
 - JP6 (YNSEL) -----select YN

- 2) Analog input voltage measurement
 AIN_P (Green) ----- Analog input
 AIN_N (Black) ----- AGND
 Input pin selection: PORT2 (VBAT, IN)

■ Power supply injection, Evaluation

1) Digital serial data input

When the control command data indicated by specification from digital I/F (P1 or PORT3) was inputted the AD conversion is carried out and is outputted from a DOUT.

■ Driver install

Attached software is the application software which checks the function of the AK4182A. Windows(R) Win98, Win2K, and WinXP are supported. However, to make it operate on Win2K and XP, it is necessary to install driver in advance. Please follow a procedure with reference to DriverSetupe.pdf. Installation of a driver is unnecessary to use it by the Windows 98 system.

■ Run the software

First match Port Address of your PC environment. Measurements are started when the start button is clicked after select Channel Selection, MODE, and Power Down 1 and 2. A result will be displayed on AD OUT Section. When carrying out position detection, the position where pen clicked on the touch panel is measured.

Operation can set up two control commands. Continuation operation can be performed. Each data (mean, max, and min) is also displayed at the same time. PENIRQN can be seen by the break of a command.

■ Trouble Shooting

1. Application error is occurred and doesn't start up
If the operating system is Windows 2000/XP, Please install AKMport driver first.
2. MEAN value in AD OUT section does not change when click start button (cannot write control command to AK4182A)
Please set the port address to your PC platform environment.
3. The MEAN, MAX, MIN value doesn't change wherever the pen pushes down on the panel.
There is a possibility of the trouble of the contact of the relay connector (plat 8pin-8-wire converter) that connects the touch panel. Please open JP2, 3, 4, and 6 on the evaluation board, measure panel seat resistance (XP-XN, YP-YN), and check the resistance. Generally, the panel seat resistance is hundreds of Ω . There is a possibility that the touch panel is not correctly connected if the value is over thousands of $k\Omega$. Please connect the relay connector and check the resistance value again.

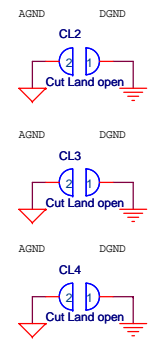
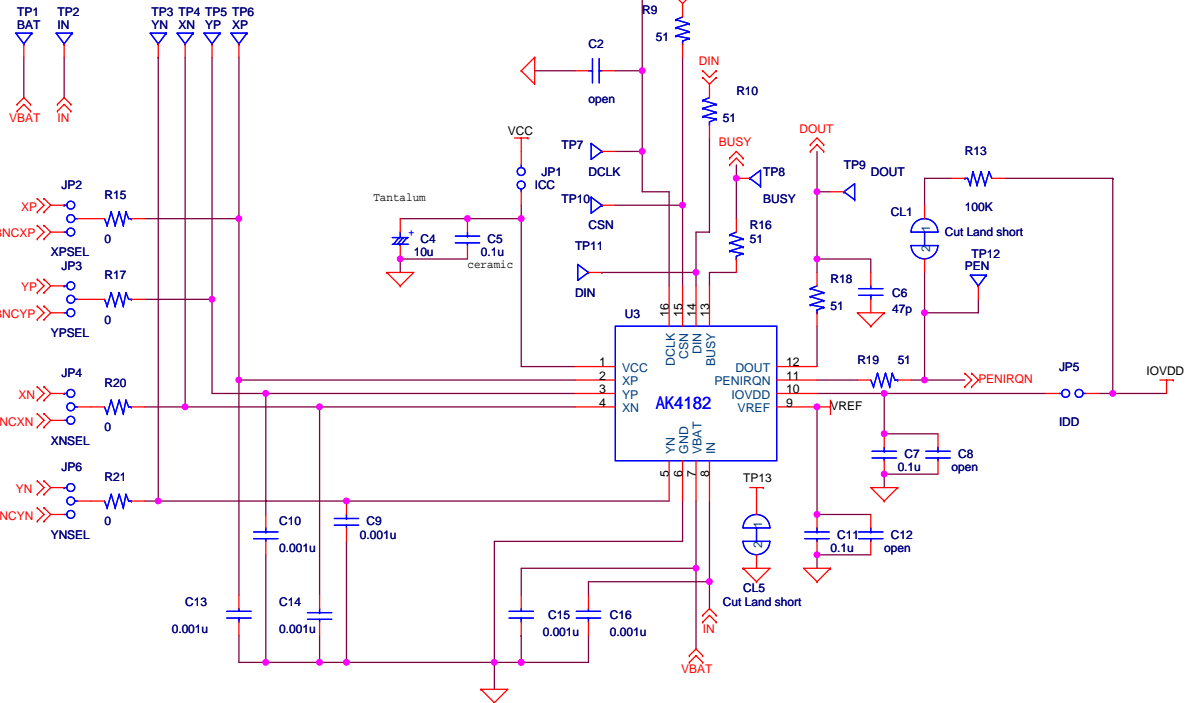
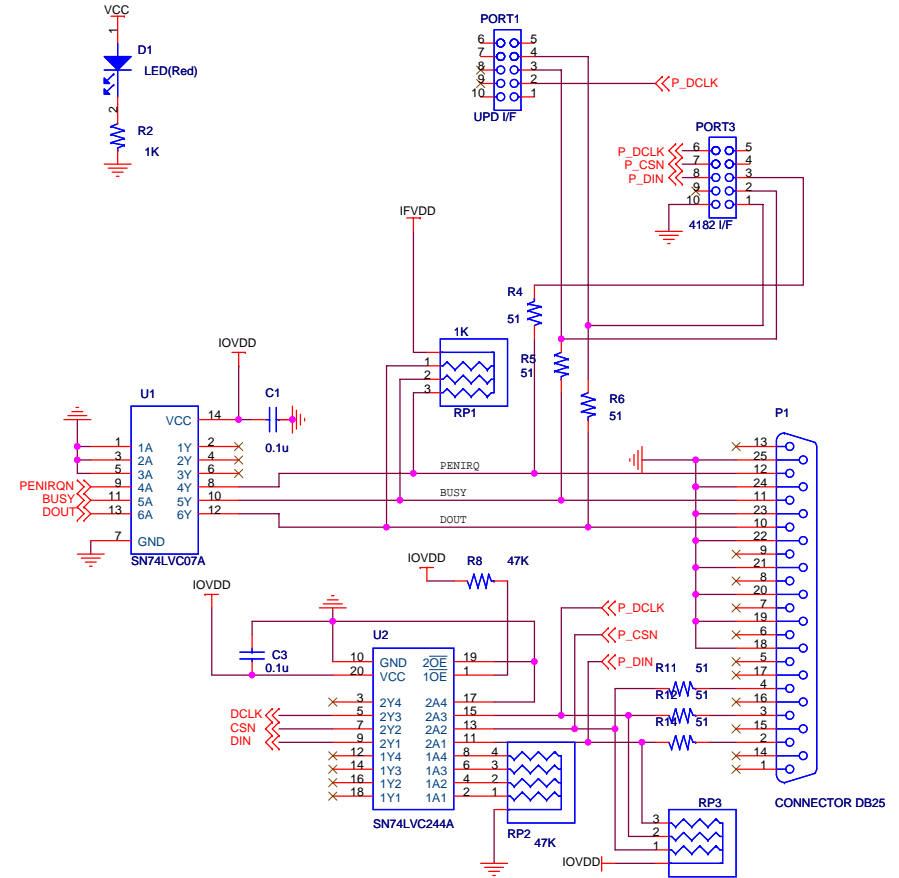
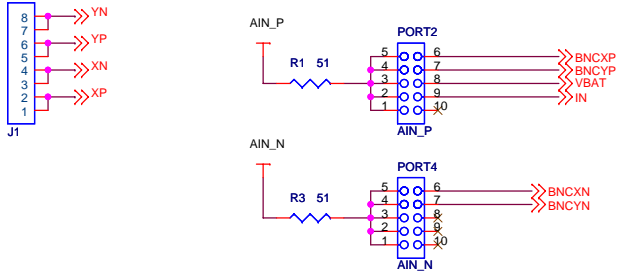
Revision History

Date (YY/MM/DD)	Manual Revision	Board Revision	Reason	Page	Contents
07/07/09	KM077600	0	First Edition		

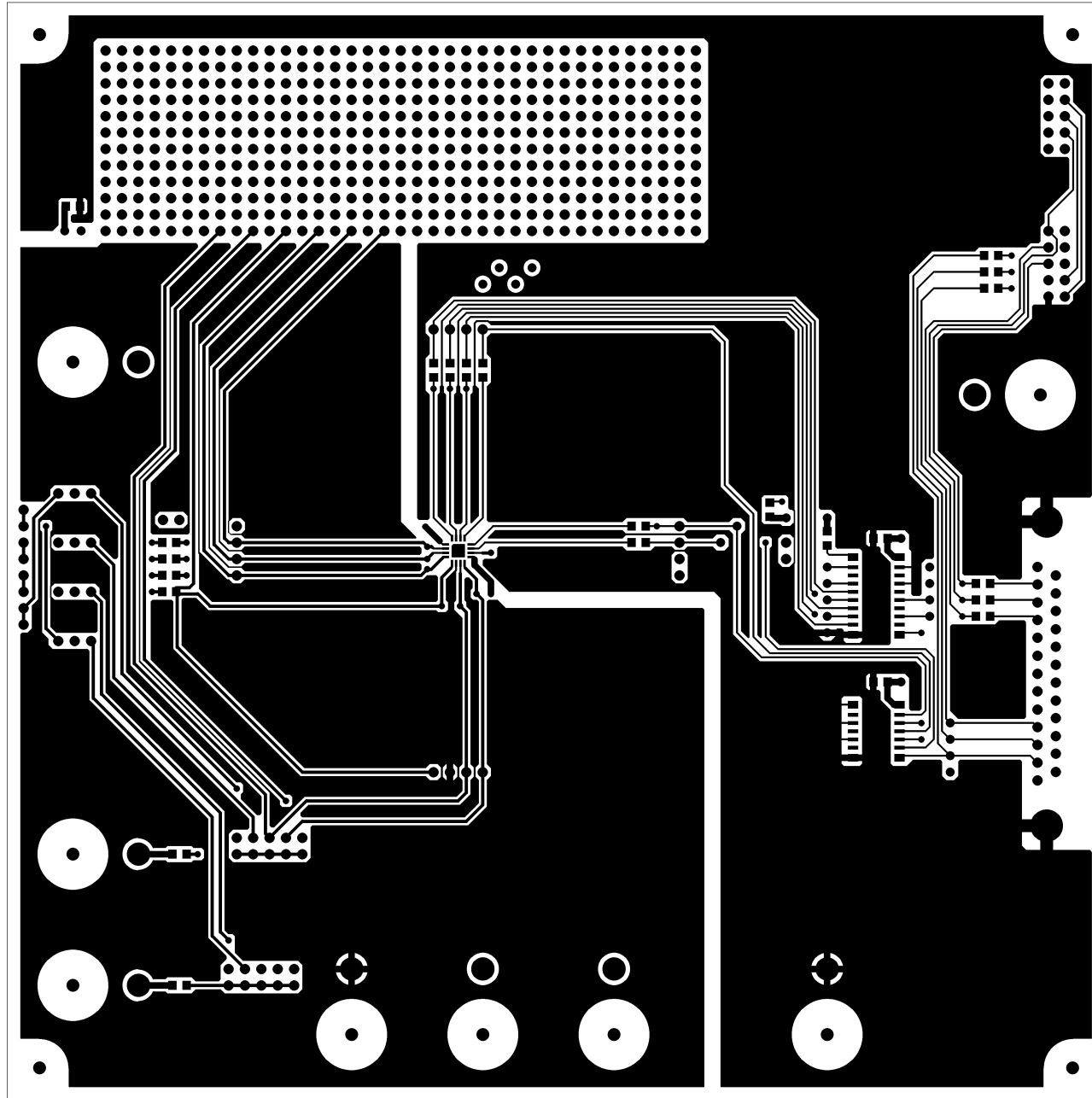
IMPORTANT NOTICE

- These products and their specifications are subject to change without notice.
When you consider any use or application of these products, please make inquiries the sales office of Asahi Kasei EMD Corporation (AKEMD) or authorized distributors as to current status of the products.
- AKEMD assumes no liability for infringement of any patent, intellectual property, or other rights in the application or use of any information contained herein.
- Any export of these products, or devices or systems containing them, may require an export license or other official approval under the law and regulations of the country of export pertaining to customs and tariffs, currency exchange, or strategic materials.
- AKEMD products are neither intended nor authorized for use as critical components^{Note1)} in any safety, life support, or other hazard related device or system^{Note2)}, and AKEMD assumes no responsibility for such use, except for the use approved with the express written consent by Representative Director of AKEMD. As used here:
 - Note1) A critical component is one whose failure to function or perform may reasonably be expected to result, whether directly or indirectly, in the loss of the safety or effectiveness of the device or system containing it, and which must therefore meet very high standards of performance and reliability.
 - Note2) A hazard related device or system is one designed or intended for life support or maintenance of safety or for applications in medicine, aerospace, nuclear energy, or other fields, in which its failure to function or perform may reasonably be expected to result in loss of life or in significant injury or damage to person or property.
- It is the responsibility of the buyer or distributor of AKEMD products, who distributes, disposes of, or otherwise places the product with a third party, to notify such third party in advance of the above content and conditions, and the buyer or distributor agrees to assume any and all responsibility and liability for and hold AKEMD harmless from any and all claims arising from the use of said product in the absence of such notification.

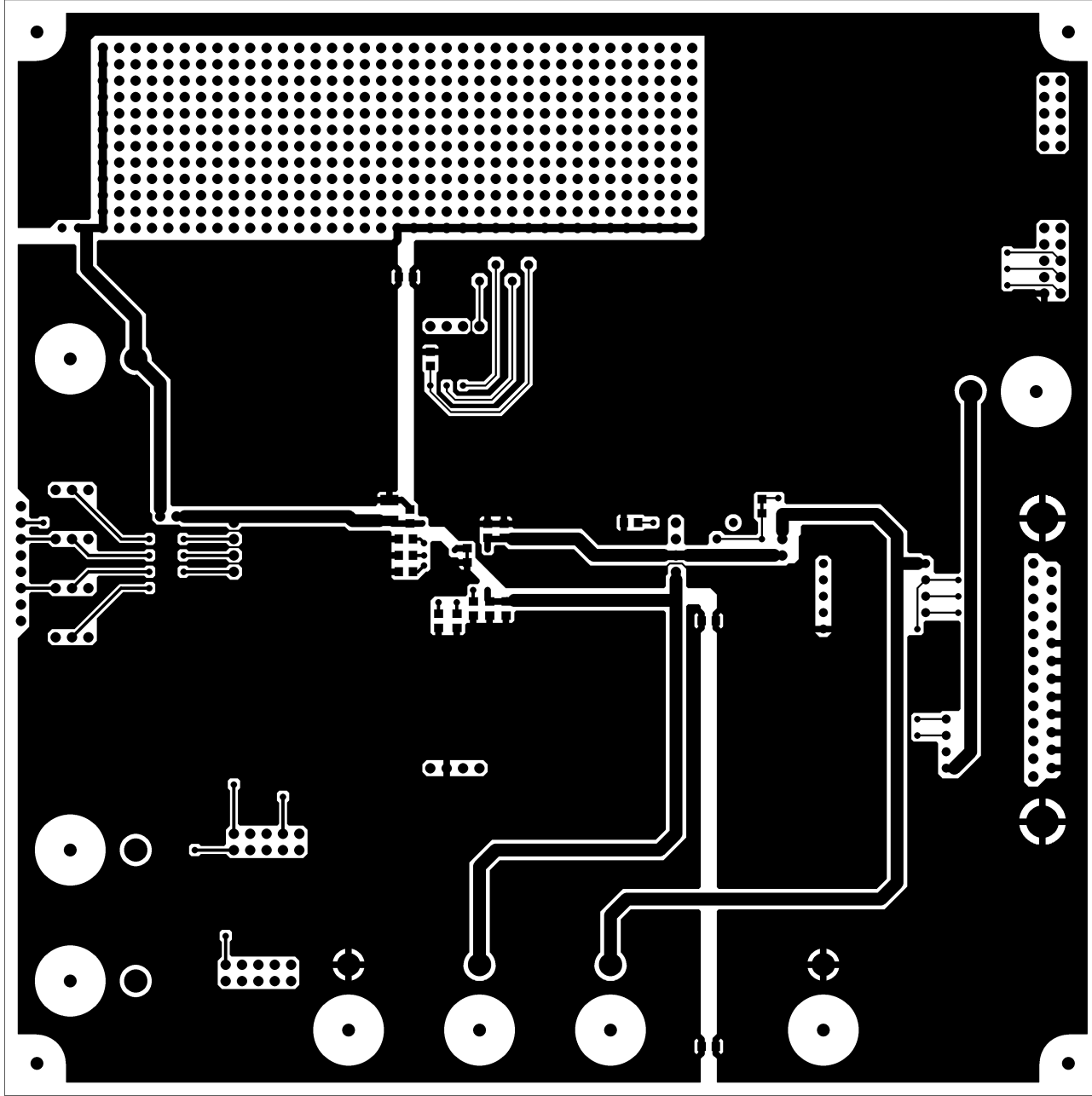
TouchScreen



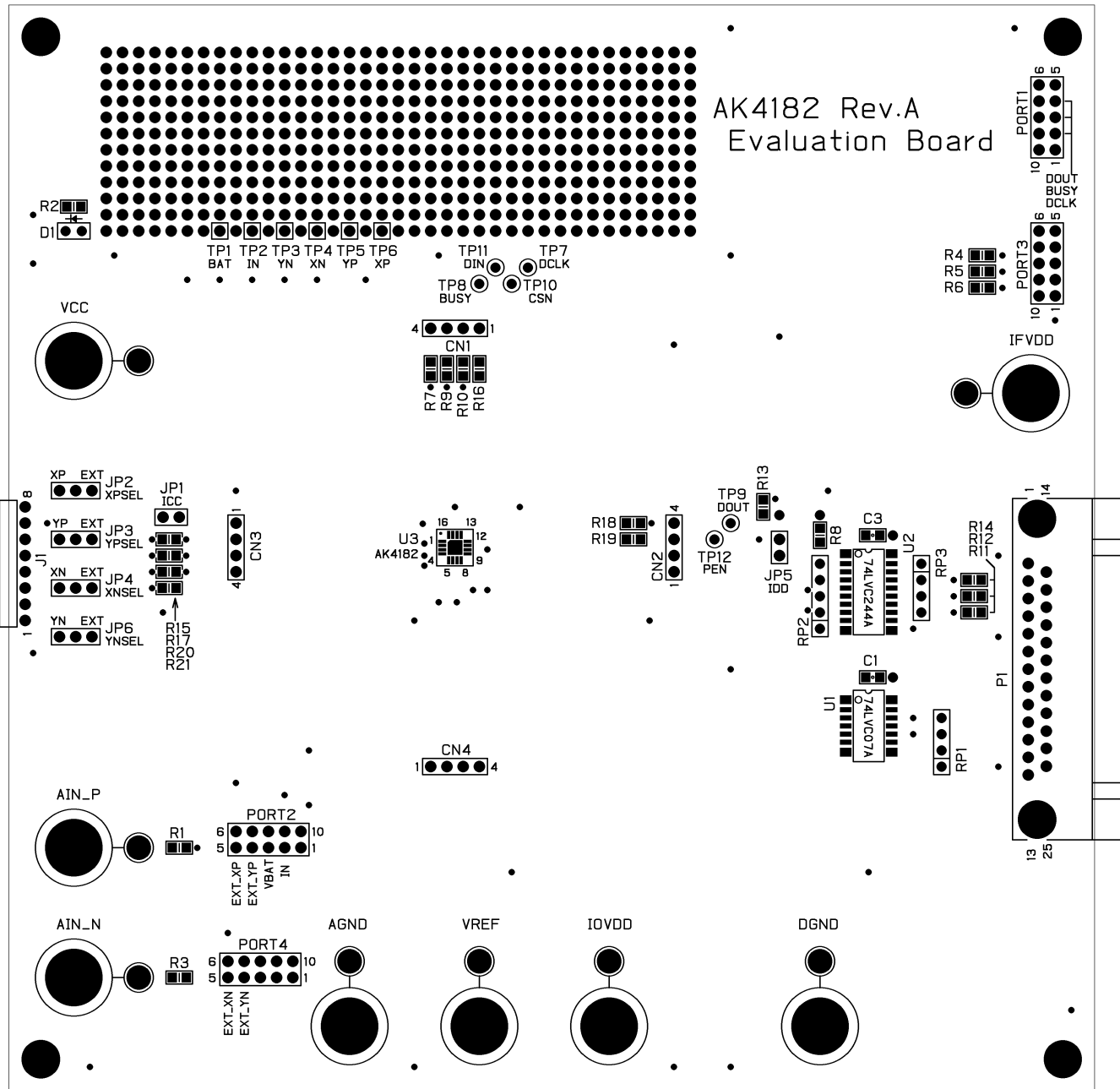
Title		
AKD4182-A Main board		
Size	Document Number	Rev
A3	<Doc>	0.84
Date:	Monday, July 09, 2007	Sheet 1 of 1



AK4182 Rev.A L1



AK418Z Rev.A LS



AK4182 Rev.A L1 SR SILK

