SIMCom WCDMA Wireless Module

SIM5xxx_Multi-Simcard_Application_Note

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Contents

Figure Index

Version history

Date	Version	Description of change	Author
2011-12-22	1.01	Origin	3G team

1 Introduction

This document describes how to switch between two SIM cards by an analog switch.

2 Scope of the document

The following SIM5XXX modules are related in this document.
•SIM5215/SIM5216
•SIM5218
•SIM5320

3 Design guide

SIMCom recommends some SIM card Switch reference design according to the application of module. These reference designs include single-module mode and the controlled-by-CPU mode, which can be used in user's design.

NOTE: Can not try to switch the SIM card when the SIM card is being written. Otherwise it will damage the module or SIM card.

3.1 Controlled-by-CPU mode

If SIM5xxx serial port or USB is used to communicate with MCU, the analog switches controlled by a MCU GPIO can be used to switch between two SIM cards. The reference circuit is shown as below.

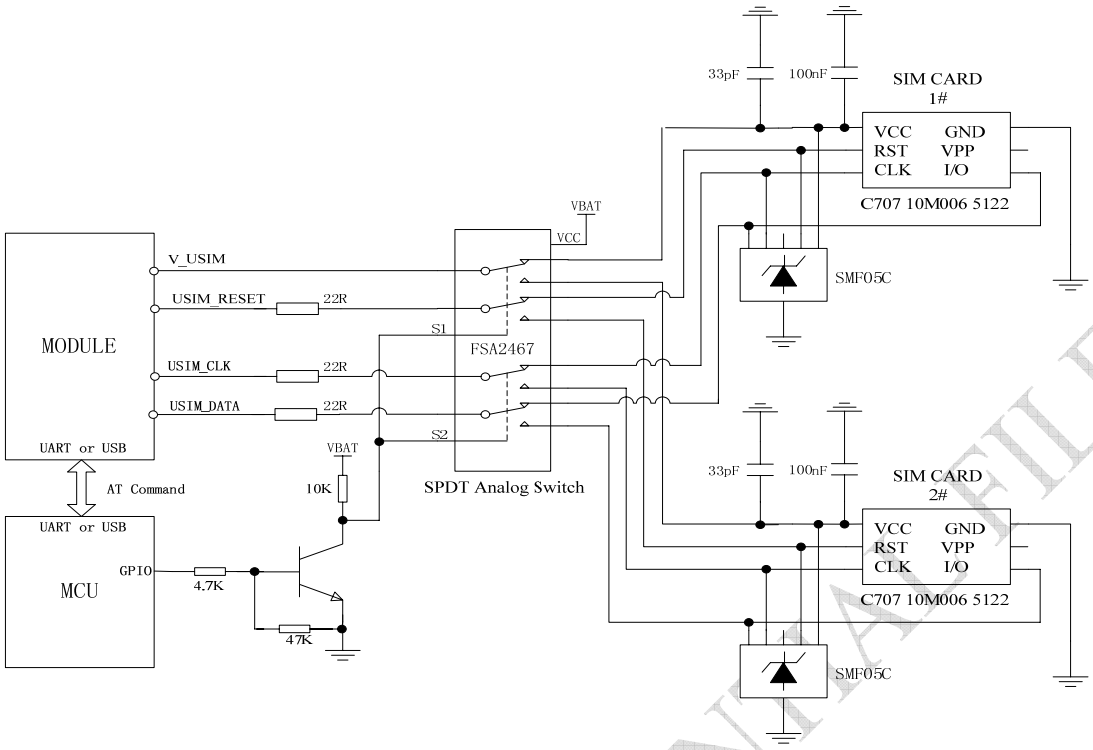

Figure 1: SIM card SPDT switch circuit (MCU control)

Some steps can be followed as below.

(1) Install two SIM cards;

(2) Select one SIM card (such as SIM 1#) by setting the output level of MUC GPIO;

(3) Power on the module;

(3) The SIM card is initialized at module OS startup.

(4) The SIM 1# can be used now;

(5) Another SIM card (such as SIM 2#) is selected by changing the MCU GPIO output level.

(6) AT command “AT+CRFSIM” is used to re-initialize SIM 2#.

(7) The SIM 2# can be used now.

3.2 Single-module mode

SIMCom module can control itself peripheral devices via embedded LUA script. The SIM5XXX LUA extension is aimed at light applications where the application was usually done by a small microcontroller that managed some I/O pins and the module through the AT command interface.

If SIM1 # can not be used (for example, the signal is poor or none network service), SIM 2# can be selected. AT command “AT+CRFSIM” is also used to re-initialize SIM 2# card, and do not need to restart the module.

The reference circuit is shown as below.

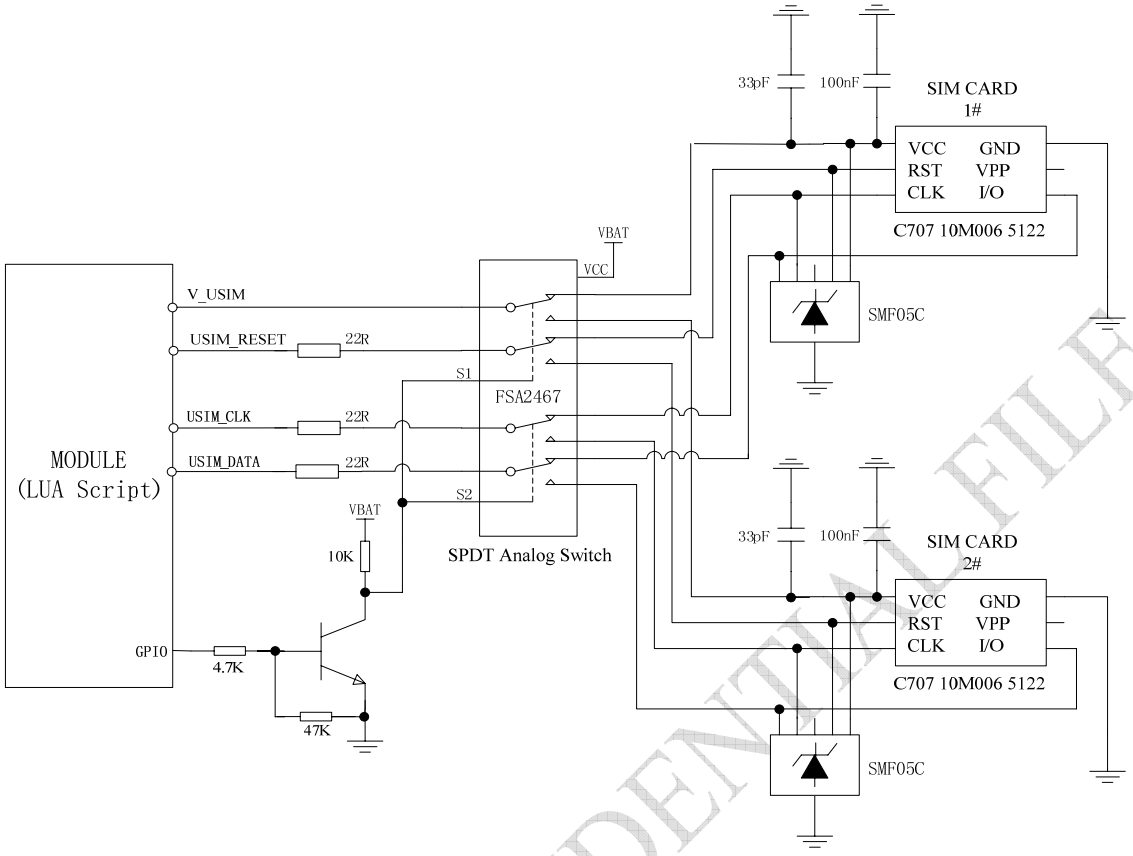

Figure 2: SIM card SPDT switch circuit (Single-module mode)

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