

Reference Schematic For XMC Spi Nor Flash

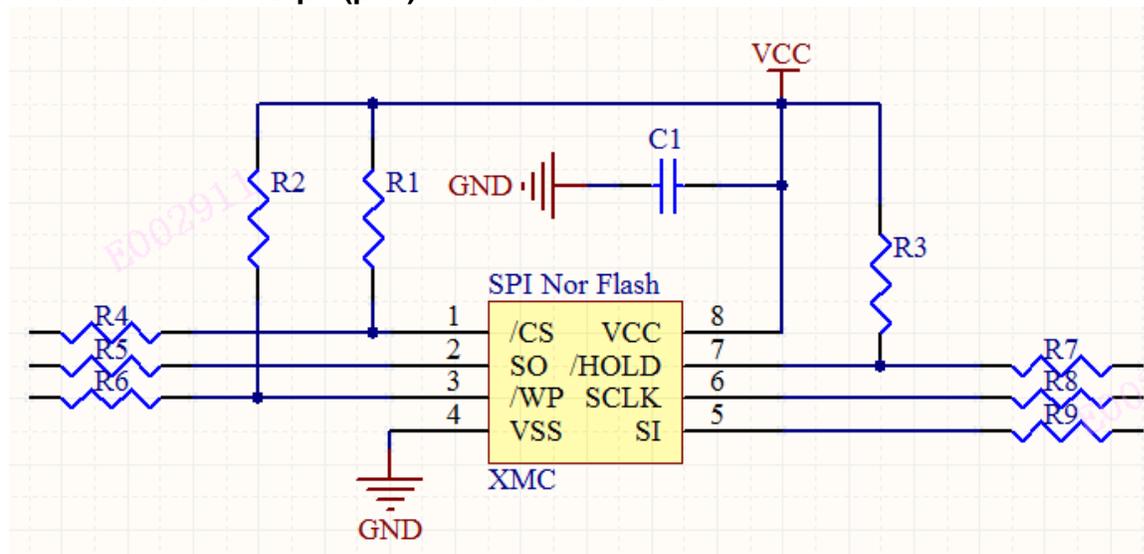
Purpose

The purpose of this application note is to avoid some hardware issue that may occur on customer side by recommend the schematic of connections between SPI Flash controller and XMC SPI NOR Flash devices

Detailed description

SPI NOR Flash device is passive device which is connected to SPI Flash controllers like CPU/MCU directly. If there is any parallel connected devices other than SPI Flash, it has to be included to be calculated for impedance matching.

1、 Schematic for 8-pin(pad) device of SPI NOR Flash.



2、 Pull Up Resistors (R1,R2,R3)

Pin floating may lead to abnormal issue because of the uncertainty pin level. Such as /CS signal low may lead to initial fail when power up; /WP signal low lead to protected state; /Hold signal low will stop current operation. Many resistive sensors 4.7K-20K(typical 10K) is a very common range of values.

3、 Decoupling or Bypass Capacitance (C1)

For suppressing the power supply signal's high frequency noises like voltage ripples or overshoot/undershoot. 0.1 μ F is most common value for low DC power supply. Customers also can modify the value of Bypass Capacitance according to the actual situation

4、 Impedance Matching Resistance (R4,R5,R6,R7,R8,R9)

There is some parallel connected devices other than SPI Flash in some applications, which may lead to signal reflection because of mismatched impedance. So suggest connecting a resistor near the I/O pin. Many resistive sensors 33Ohm-75Ohm(typical 50Ohm) is a very common range of values.

Revisions List

Revision No	Description	Date
A	Initial Release	2019/11/25
B	Correct Schematic for 8-pin(pad) device of SPI NOR Flash	2020/4/15