



SIM68 Reference

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Version History

Version	Chapter	What is new
V1.00	New version	Created the doc

Preface

This document introduces SIM68 Reference Design Guide application.

Abbreviations

ESD	Electrostatic Sensitive Devices
TVS	Transient Voltage Suppressor

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1. ESD Protection

Sim68 is a highly sensitive GPS + GLONASS module. It should be kept away from ESD destruction for best performance. It is strongly recommended to use cap and TVS to protect the module, especially for pin 8, 9, 14, 16, and 17 which are shown in Figure1. Note that 1uF cap must be added to pin 14 (NRESET). Adding Zener diode to protect pin27 (VCC_3V3) is recommended.

if use passive antenna,L101 C107 should be removed

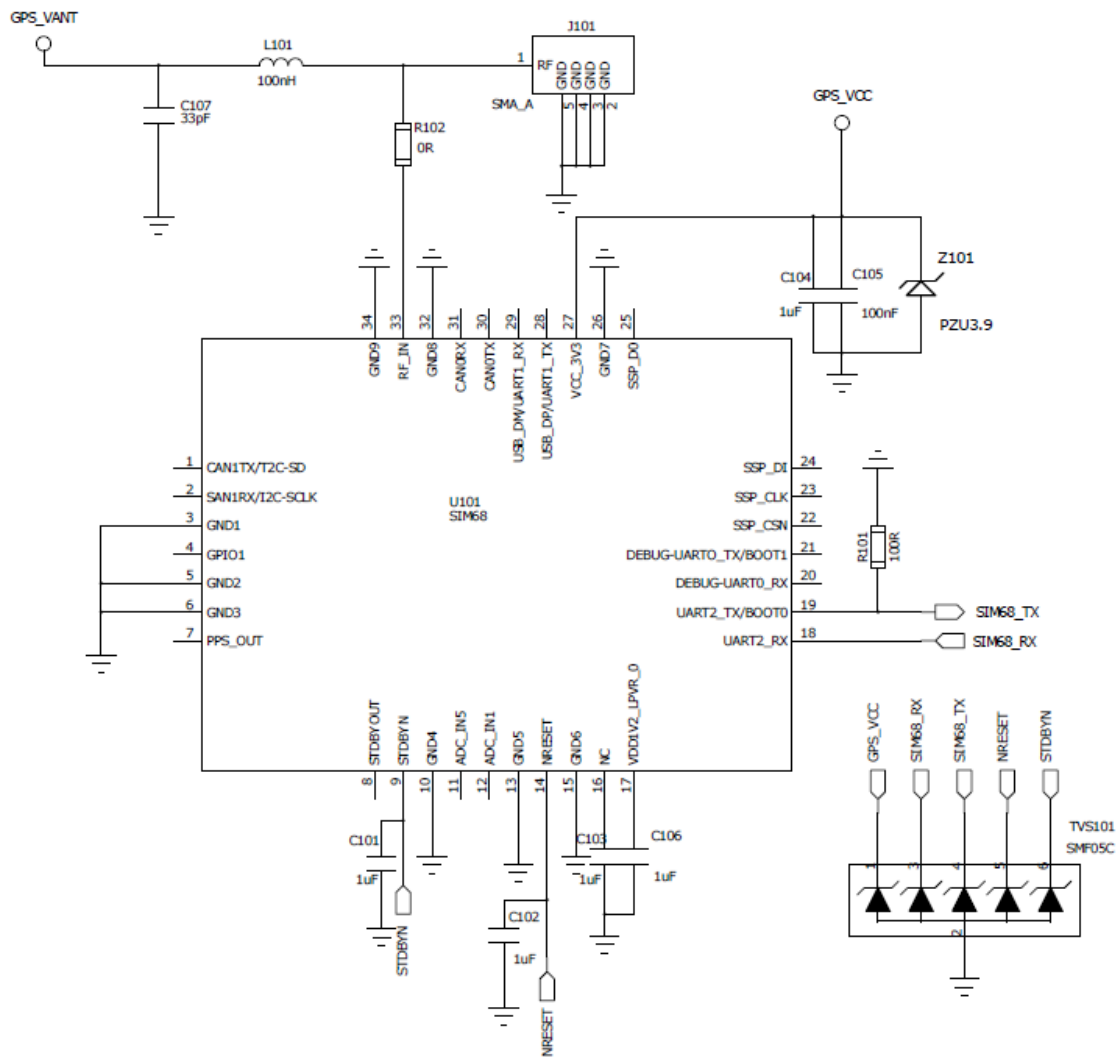


Figure 1 ESD protection

2. Electrical Isolation

If pin27 (VCC_3V3) of the module has voltage before it is powered on, the module will work abnormally, it is possible that it can not be running or RESET, it might even break down, so SIMCom recommends to add an isolation circuit to avoid this kind of situation. It is shown in figure 2. If pin 27 (VCC_3V3) of the module has voltage below 1V, then R1 needs to be removed, and user should put 0 ohm resistor instead of D1. Otherwise just add an isolation circuit as shown in figure 2.

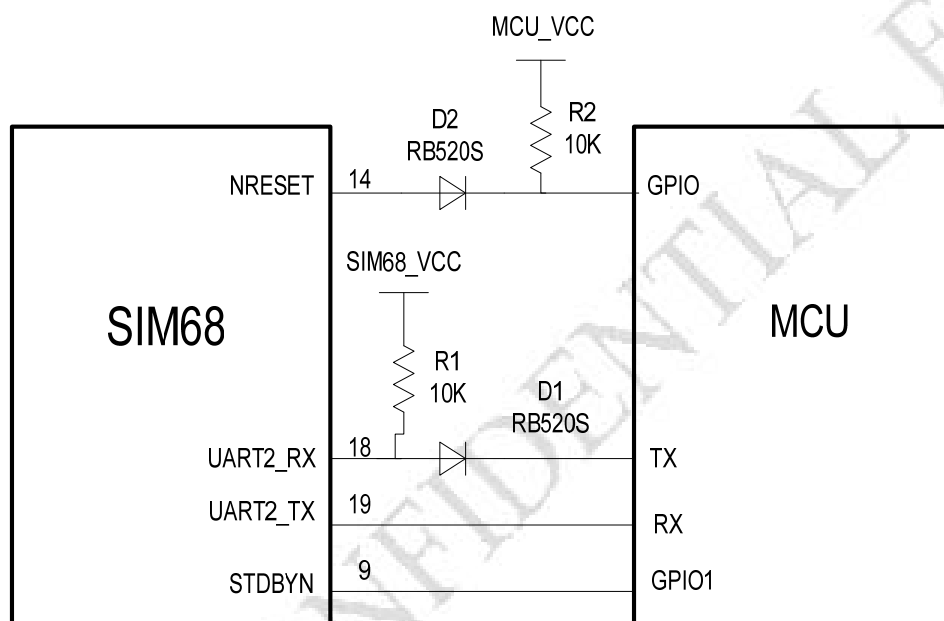


Figure 2 Electrical isolation

3 Power-on Sequence

When module is first powered on, Figure 3's sequence should be followed. The STDBYN, VCC_3V3, NRESET power-on sequence must be controlled, otherwise the module may not work. If the customer sets the STDBYN to low level in order to make the module coming into sleep mode, when the module comes out of sleep mode, customer needs to set the STDBYN High enough, make sure not to control the NRESET.

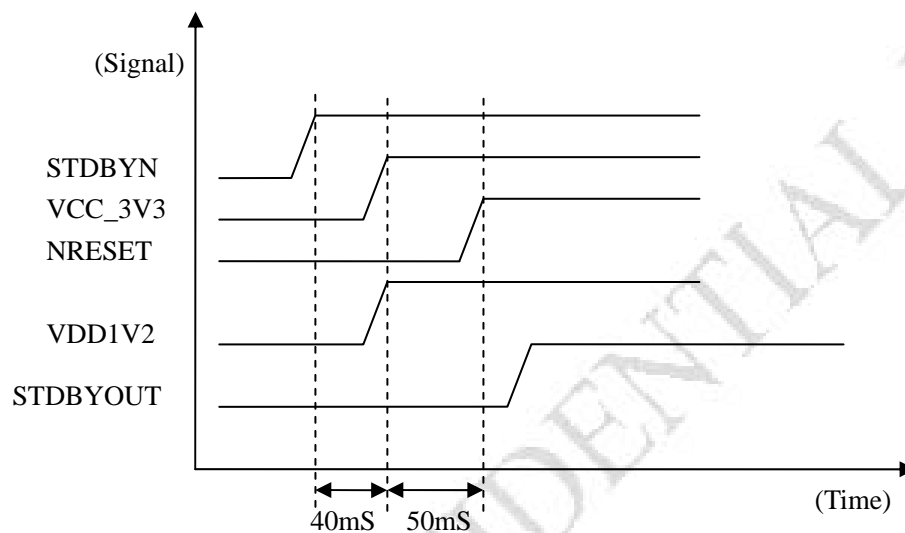


Figure 3 poweron sequence

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