



# STEVAL-MKI031V1

## Multi sensor application (MuSA) board platform

Data brief

### Features

- Multi pole connector for platform expansion using sensor-specific modules
- 4 buttons for menu navigation
- 128 x 64 pixel, black and white LCD
- Piezoelectric buzzer
- MicroSD socket for data logging applications
- RoHS compliant

### Description

The STEVAL-MKI031V1 MuSA (multi sensor application board) platform is intended to demonstrate the performance and possible uses of MEMS devices.

The MuSA platform is based on an ST7 8-bit microcontroller, which manages the output signals from the MEMS accelerometer.

The platform comes with the LIS331DLH pre-installed on the board, but can support any digital-output accelerometer from ST in 3x3 or 3x5 mm packages connected to the microcontroller through an SPI interface, as well as the LIS344ALH analog-output accelerometer.

The MuSA platform features four buttons for navigating the menus. A mini-USB connector is available to exchange data with a PC, depending on the specific application, and also recharges the internal Li-ion battery. The battery is capable of providing power for approximately 7 hours of operation.

A USB interface is available for firmware upgrades (DFU), and for exchanging data with user-developed software running on a host PC.



**Figure 1. ST7 microcontroller**

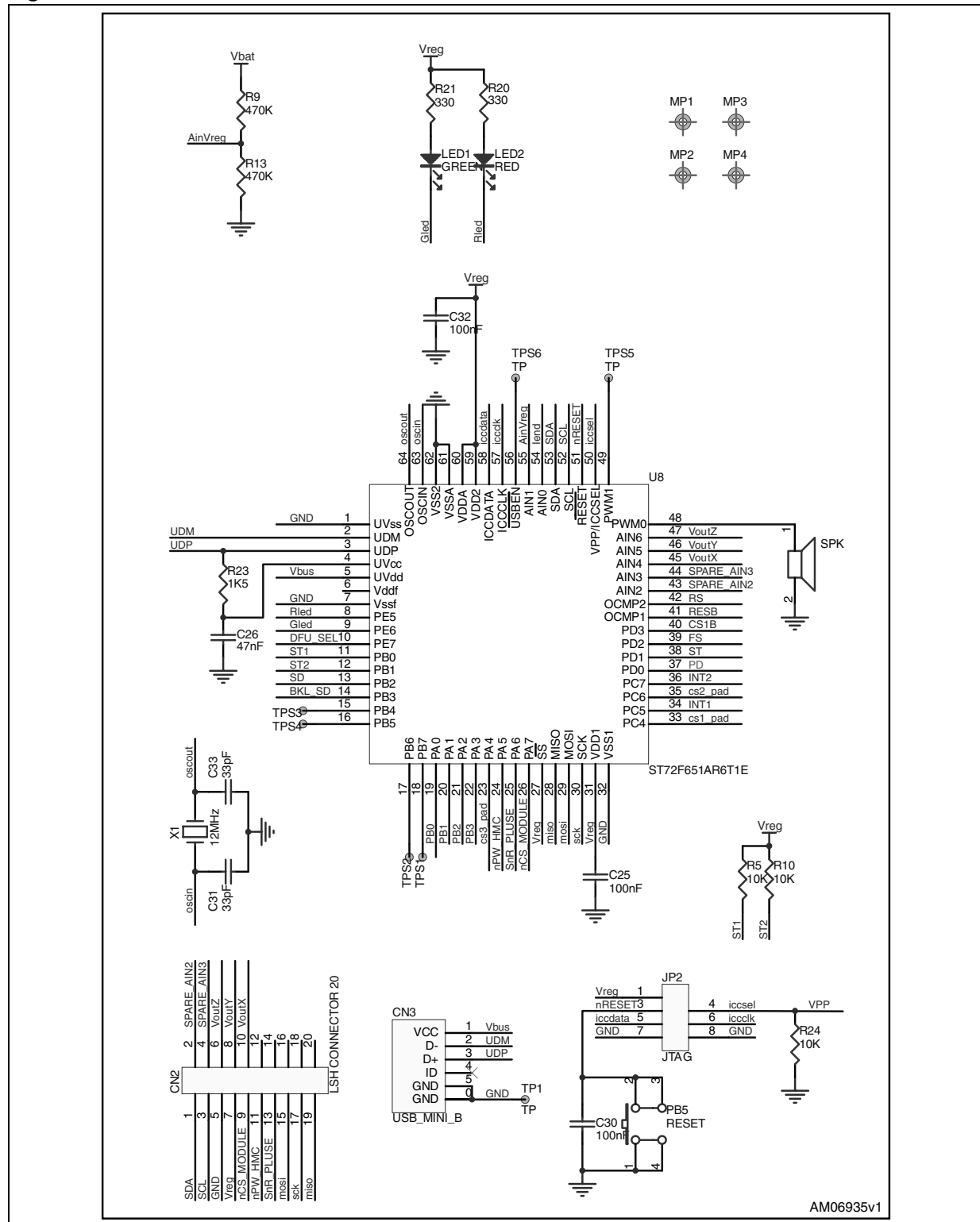
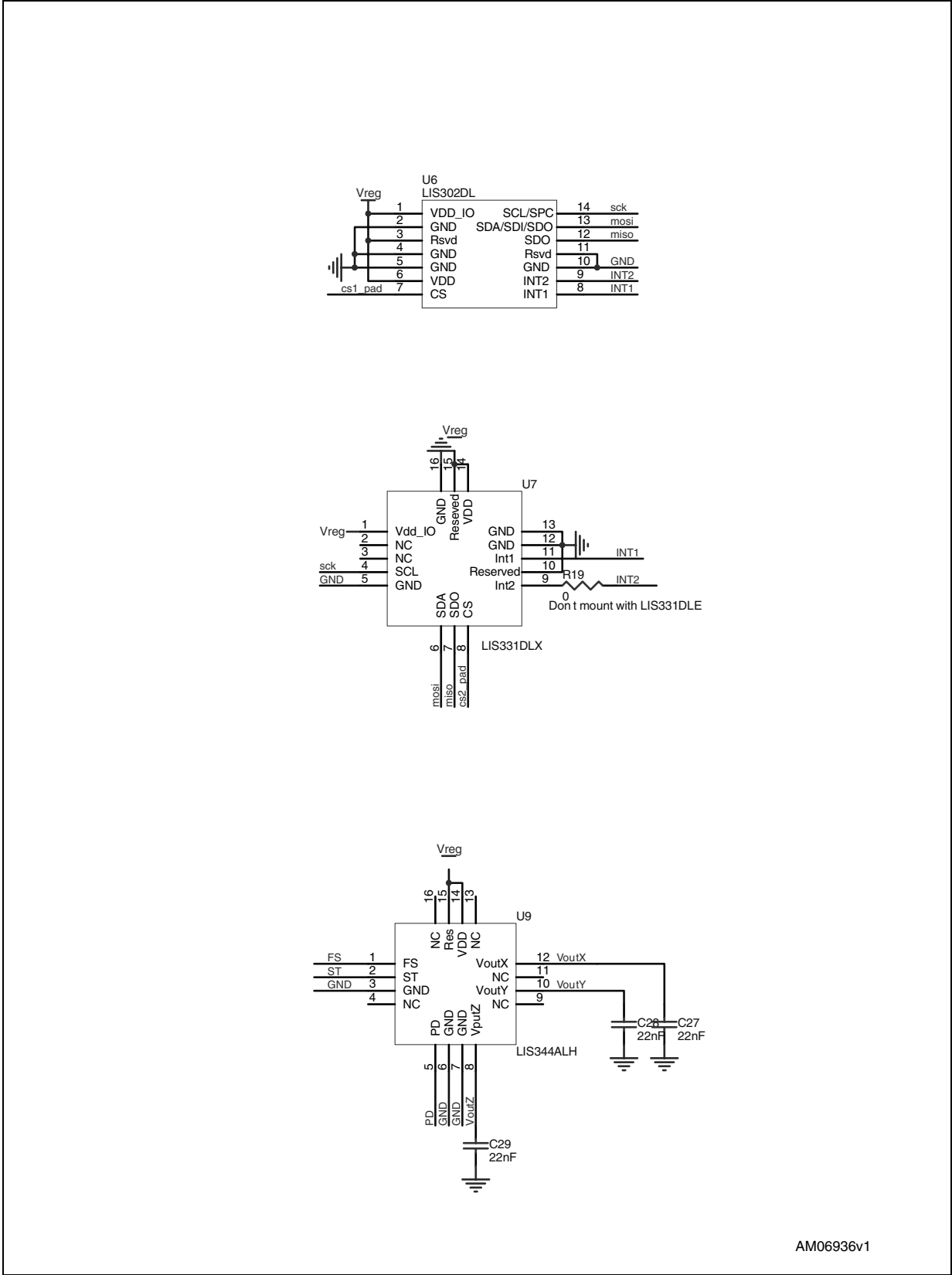


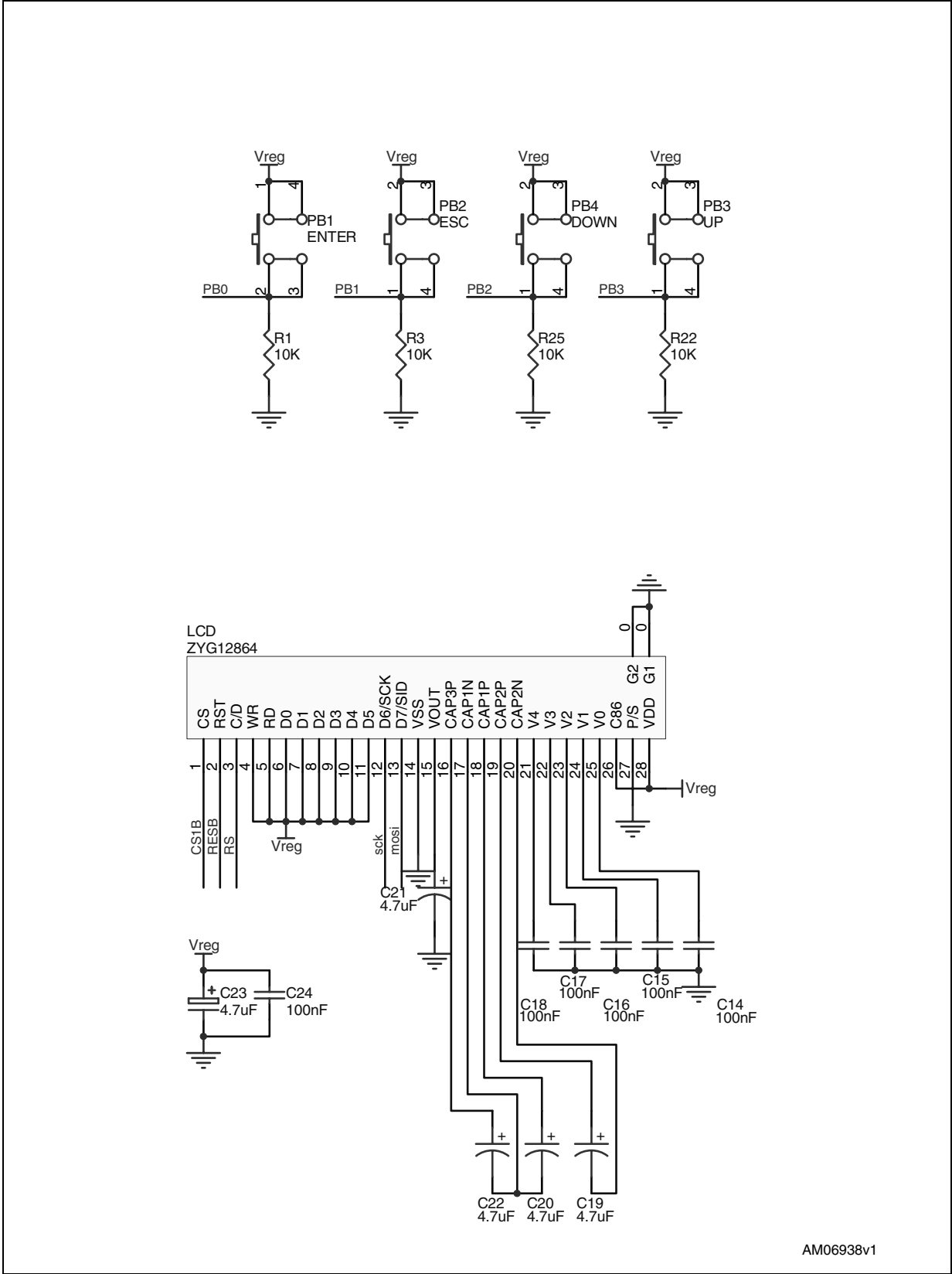
Figure 2. Accelerometers



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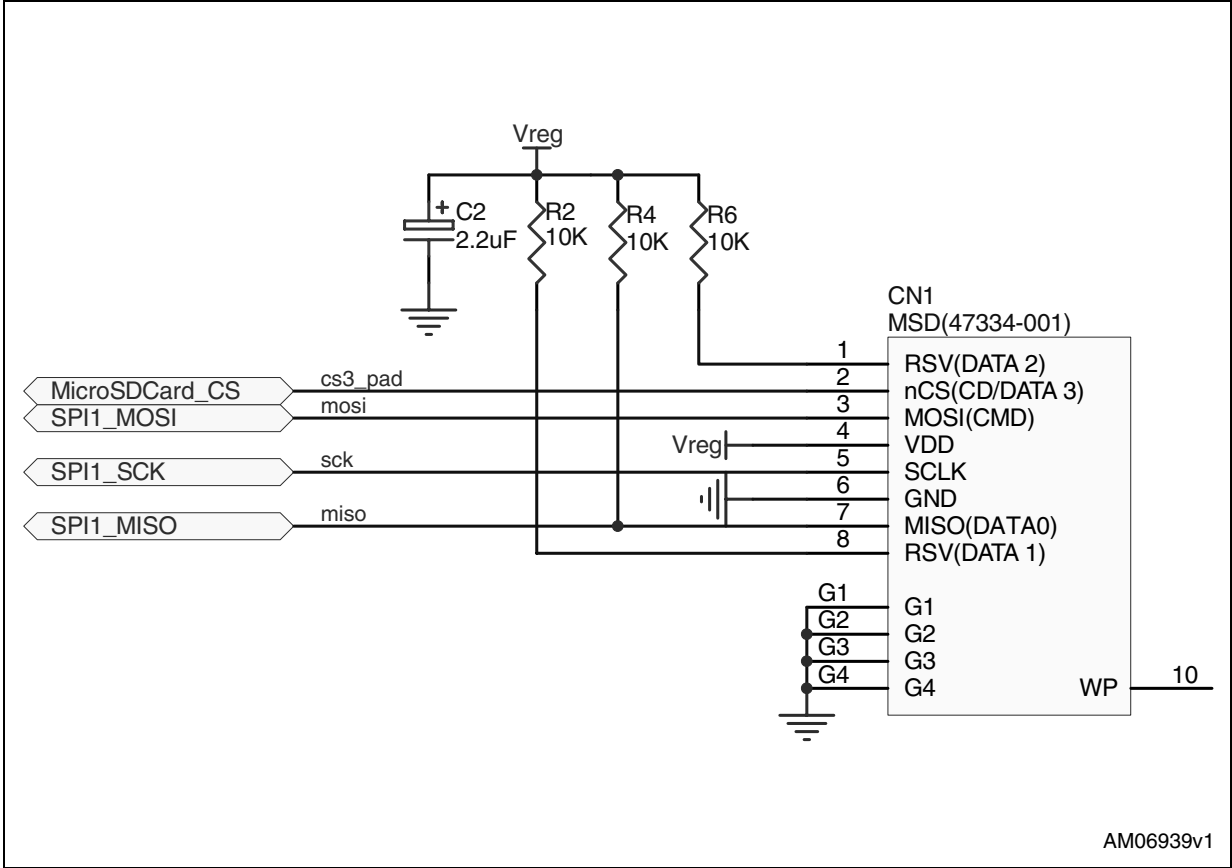


Figure 4. LCD

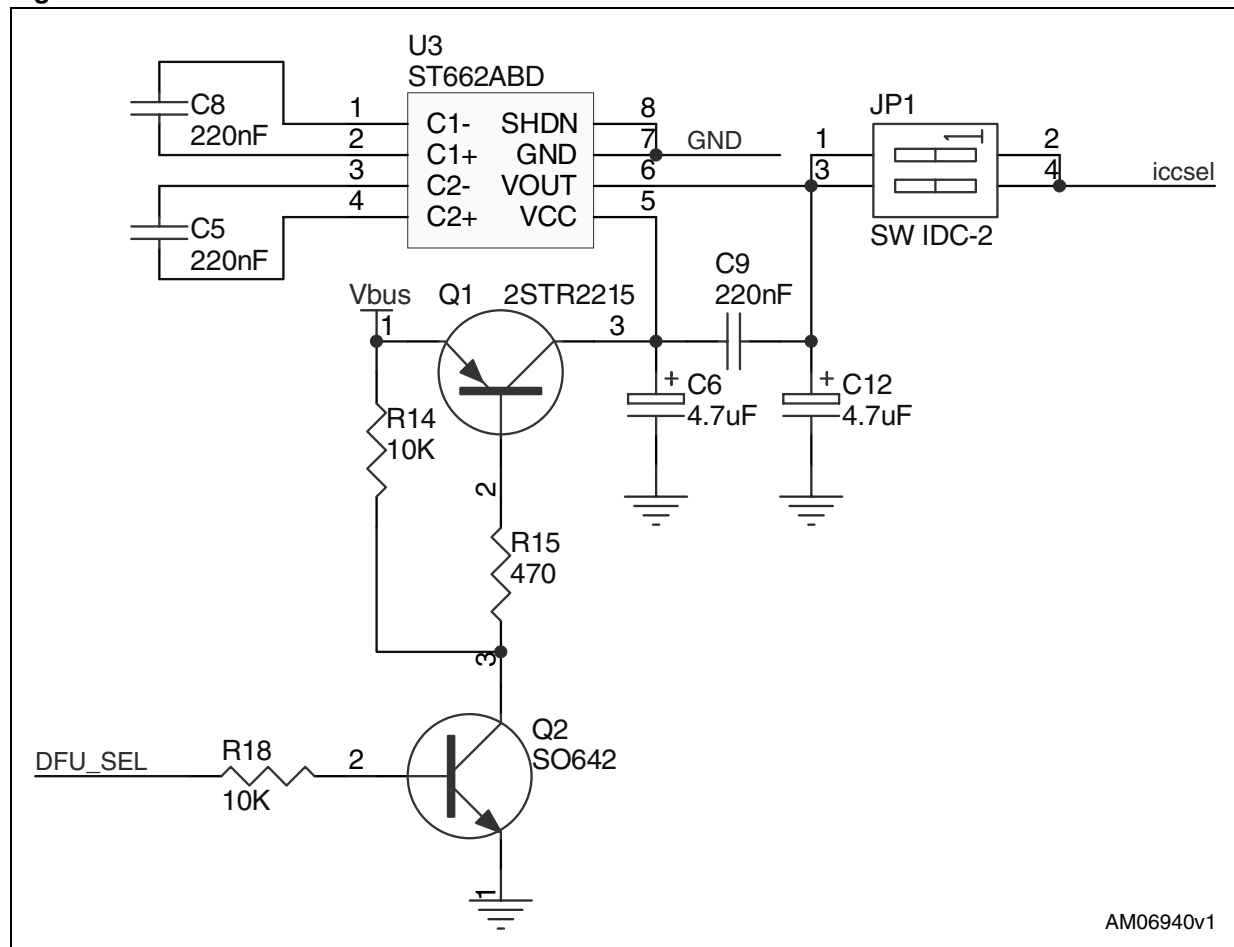


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Figure 5. MicroSD



### Figure 6. DFU



## 2 Revision history

**Table 1. Document revision history**

| Date        | Revision | Changes          |
|-------------|----------|------------------|
| 16-Sep-2010 | 1        | Initial release. |



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