

Touch front panel and IR remote control with RTC demonstration board based on the STLED325, STMPE24M31 and STM8S

Data brief



Features

- 4- digit , 7 segment (and decimal point) LED display
- 8 x discrete LEDs
- 8 front panel touch keys for channel and brightness up/down, OK, MENU, and standby (in touch interface mode)
- 8-channel touch status type rotator on STEVAL-CBP007V1 for brightness control (clockwise/anticlockwise) (in touch interface mode)
- 8 front panel mechanical keys for channel and brightness up/down, OK, MENU, and standby (in standalone mode with no touch interface)
- A bicolor power/standby LED
- An interrupt LED (blinks with the interrupt)
- A potentiometer for adjusting the brightness of the display (accessible in standalone mode)
- Demo mode
- Multi format remote control operation (only RC5 supported currently, but easily extendable for various other formats)
- Embedded in-circuit programming using SWIM interface for STM8S10
- RoHS compliant

Description

The STEVAL-ILL029V2 demonstration board shows the operation of the front panel demonstration board based on the advanced LED controller driver STLED325 and 8-bit microcontroller STM8S as I2C master.

This system can be operated along with the STMPE24M31 based touch panel or the mechanical keys.

The objective of this demo board is to demonstrate the features of the STLED325 LED controller driver, such as key scanning, RTC, IR decoding, STANDBY management, etc., as well as features of the advanced S-Touch device STMPE24M31 to fit the market segment of DVD players, DVD recorders, set-top boxes, washing machines and many more, keeping the system cost as low as possible.

The system can be operated using the various touch keys or mechanical front panel keys provided on the system, as well as from a remote control. System I/O is handled completely by STLED325 and STMPE24M31 with minimal load on the host processor.

The system can be operated in two modes: touch interface mode or standalone mode (with mechanical keys on STEVAL-ILL029V2).

On power-up, the system automatically detects the presence of the touch interface daughter card (STEVAL-CBP007V1) and goes into touch interface mode.

If there is no touch card plugged in, the system enters into standalone mode and can be operated using mechanical keys.

The STEVAL-CBP007V1 is included in the kit.

1 Circuit schematic for STEVAL-ILL029V2

Figure 1: Microcontroller section

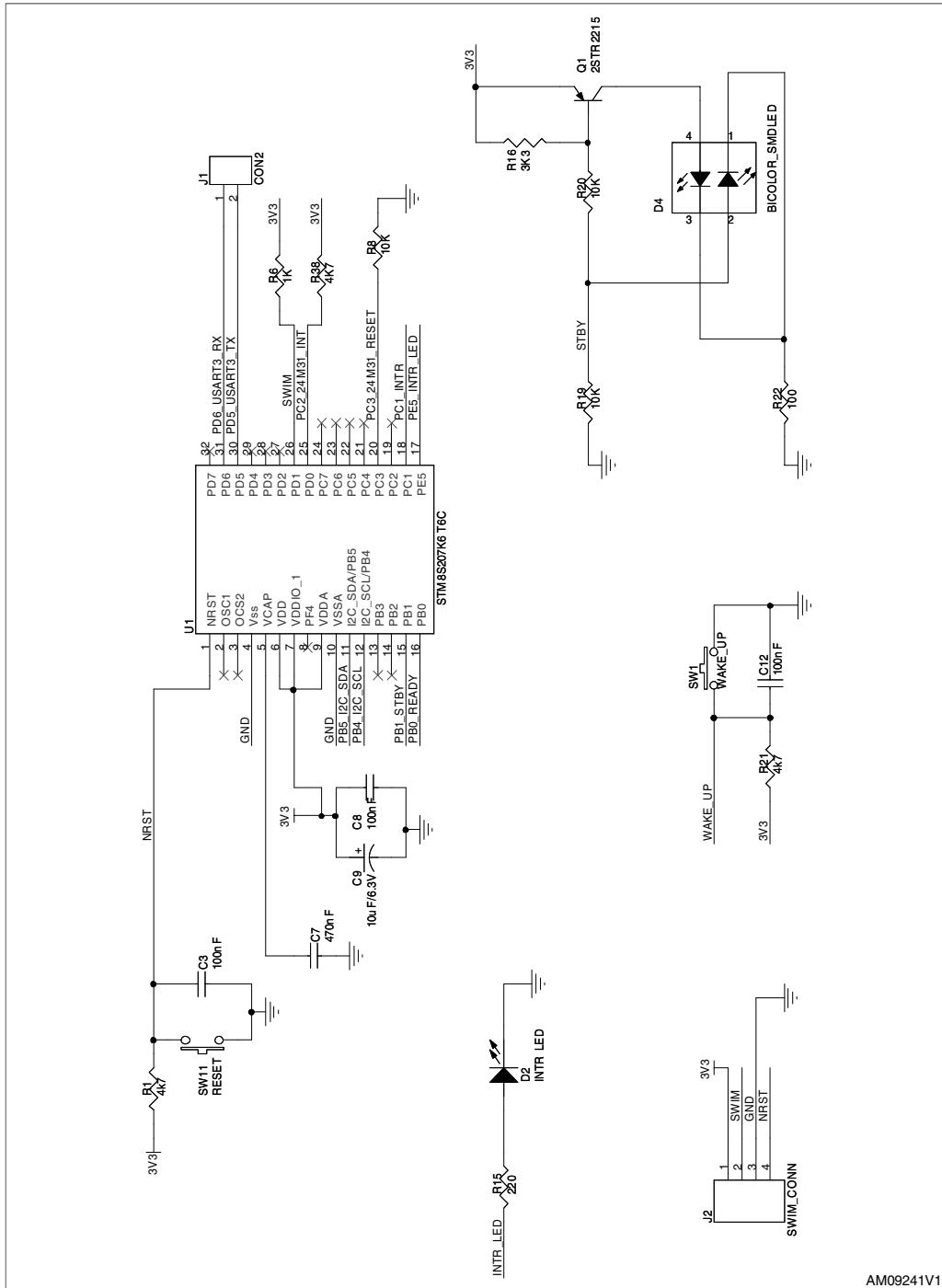


Figure 2: Power supply section

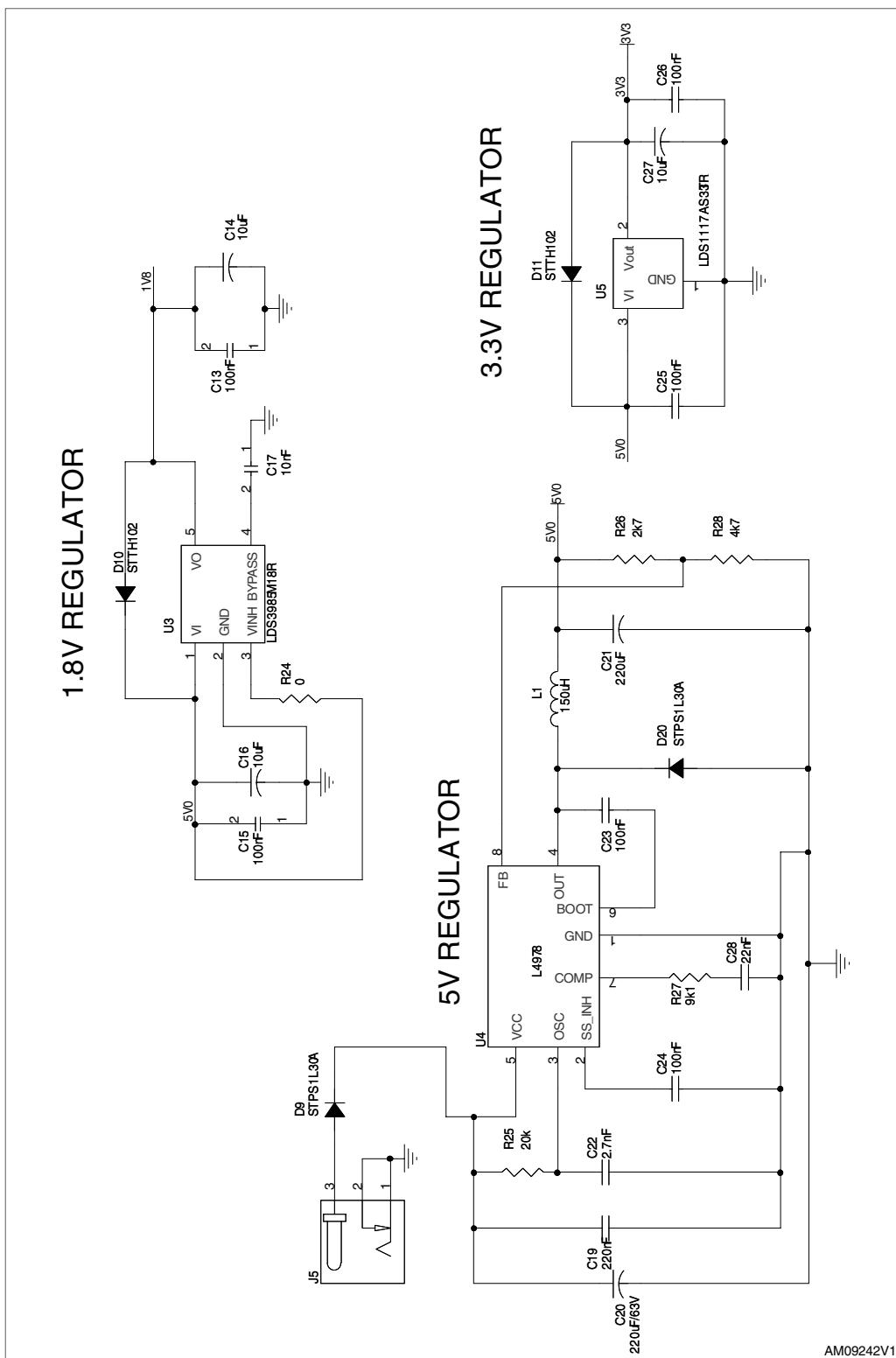


Figure 3: STLED325 section

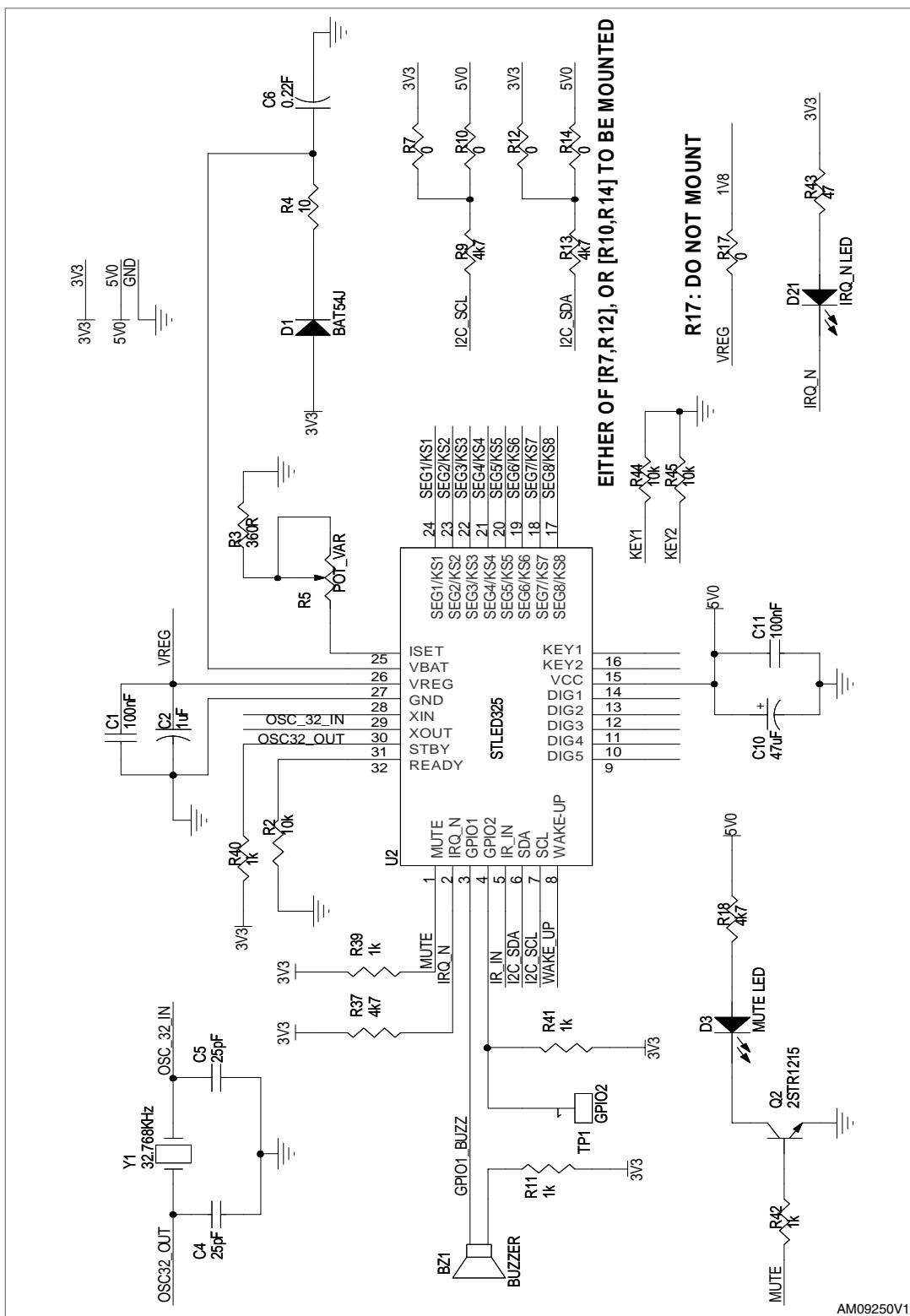


Figure 4: Connectors

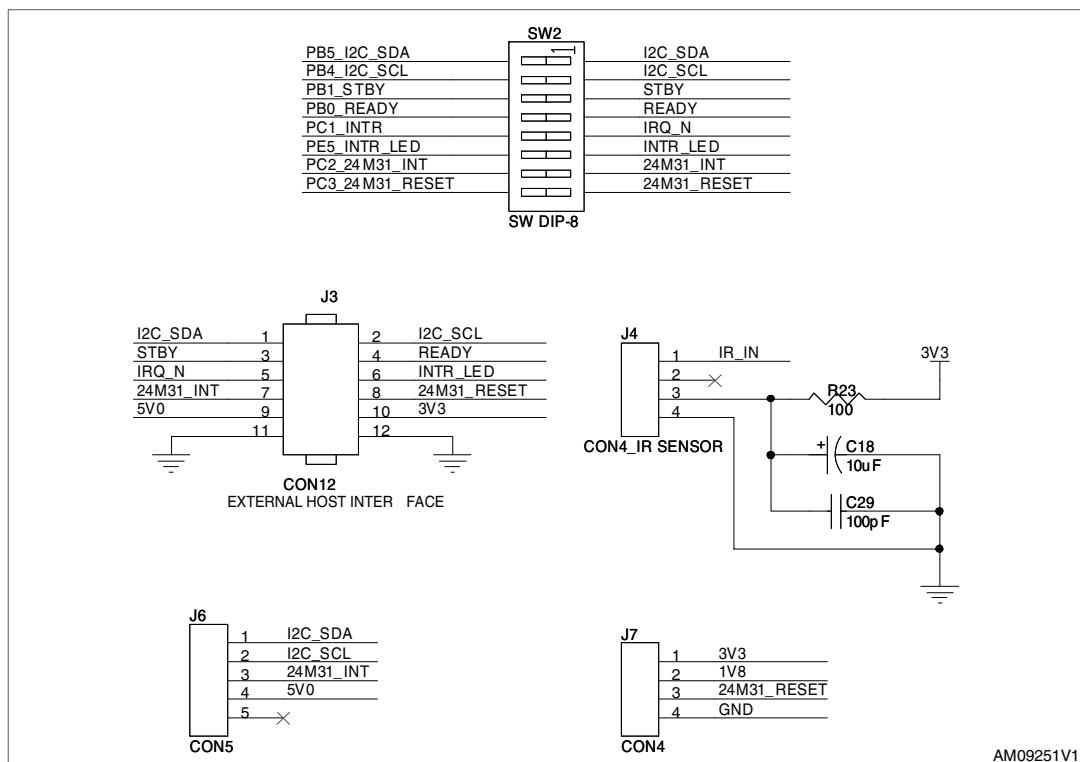


Figure 5: Keypad circuit

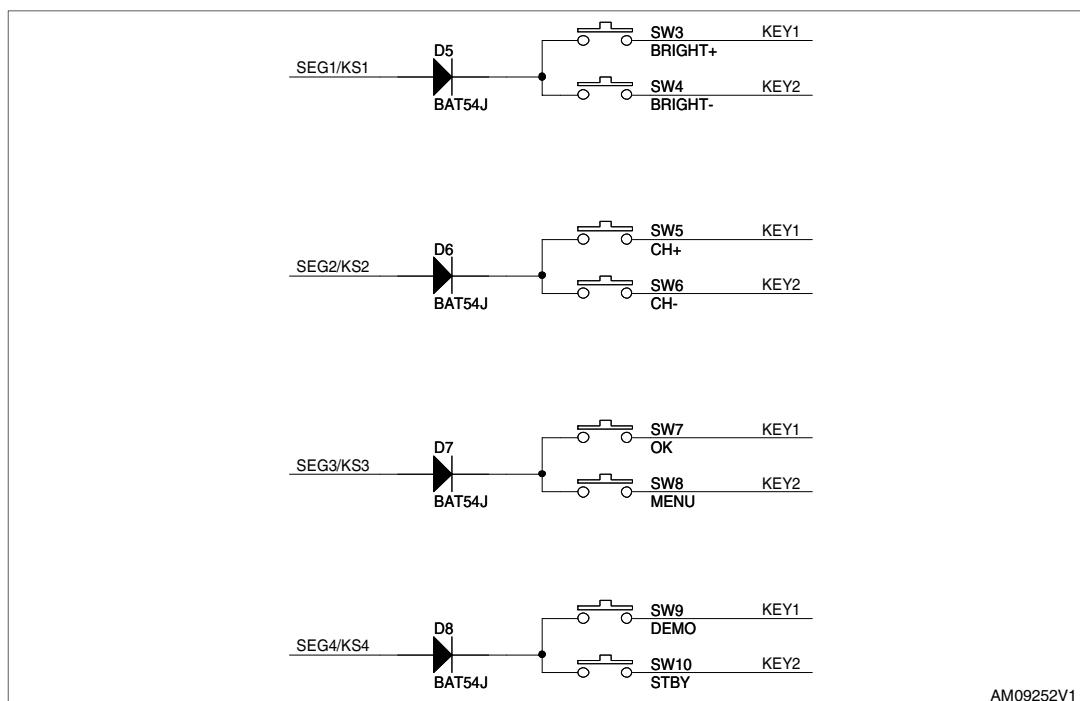
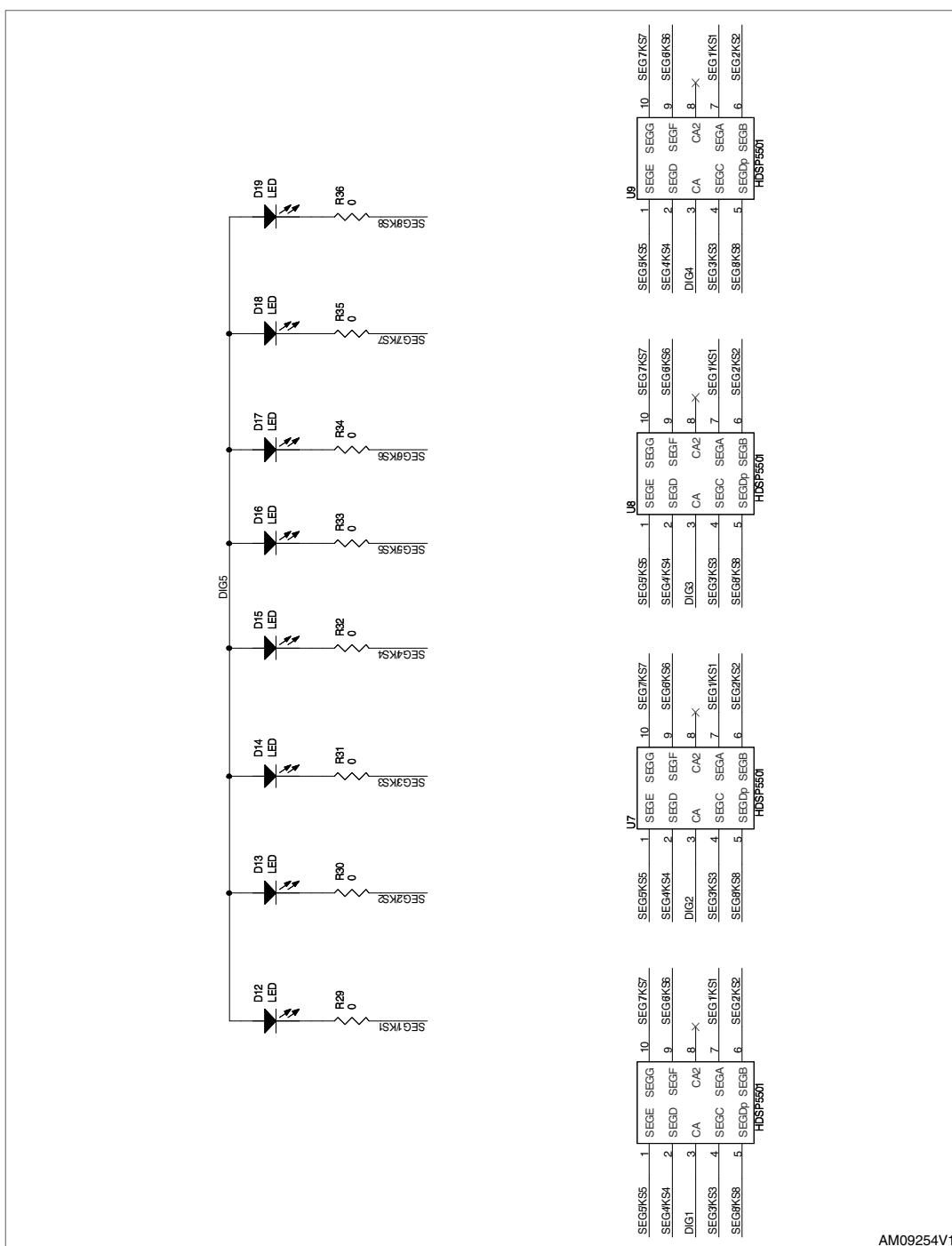


Figure 6: Discrete LED and seven segments LED



2 Revision history

Table 1: Document revision history

Date	Revision	Changes
25-May-2011	1	Initial release.

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