

# Renesas Starter Kit for RL78/L13

## CPU Board Schematics

|      |         |            |          |
|------|---------|------------|----------|
| REV  | REF     | DATE       | DRAWN BY |
| 1.00 | Release | 02.08.2013 | YOI      |

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**Note:**

- R : Fixed Resistor
- RV : Potentiometer
- U : Integrated Circuit
- X : Crystal
- RES : Reset Switch
- SW : Switch
- LED : Light Emitting Diode
- PWR : Power Jack
- J : Connector, Jumper

\* "DNF" marking means that component does not fit by default.

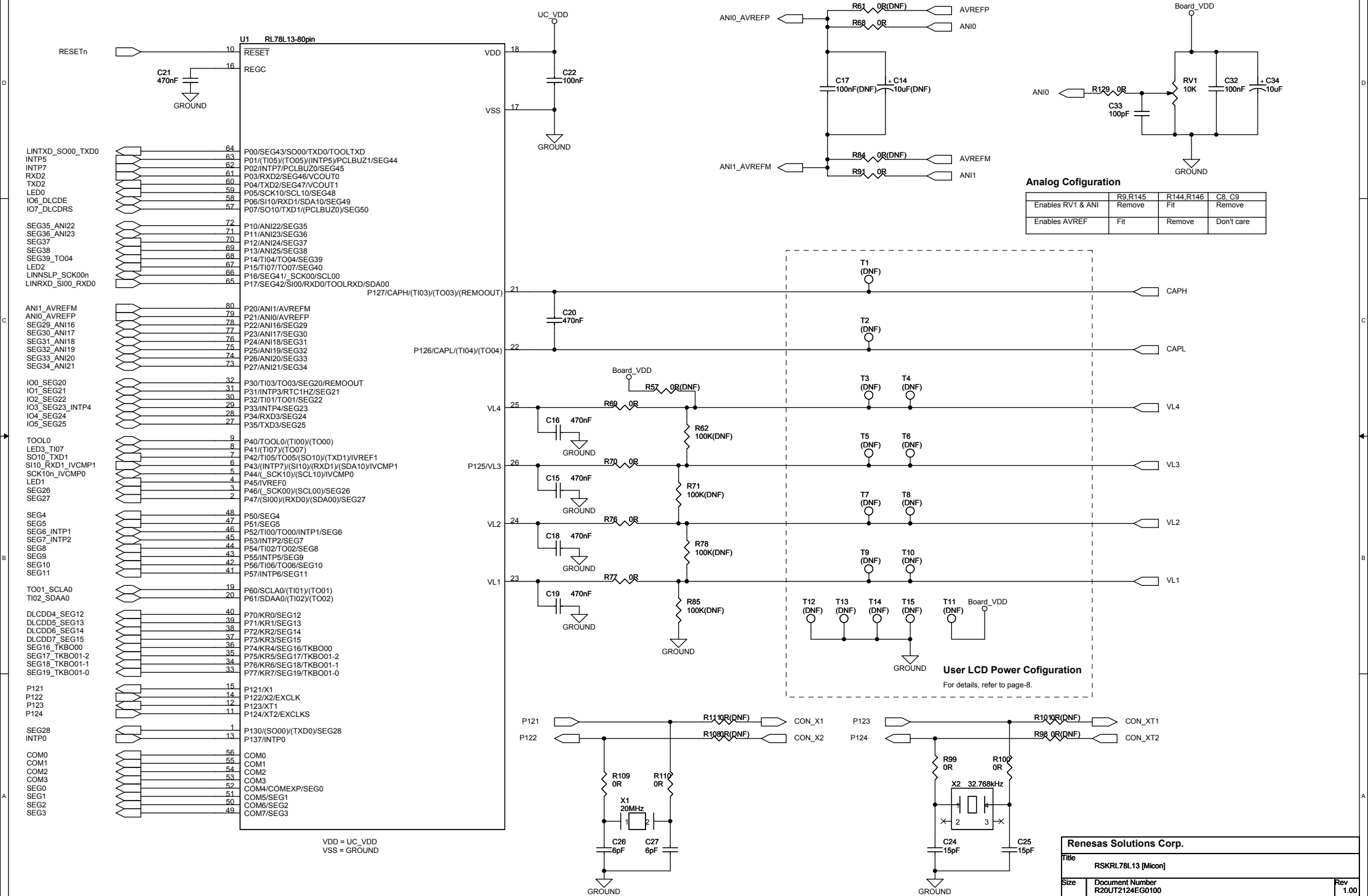
**Board Variation:**

R0K5010WMC000BE : MP Board

REE Drawing No. D011492\_04

|                         |                                    |                    |              |
|-------------------------|------------------------------------|--------------------|--------------|
| Renesas Solutions Corp. |                                    |                    |              |
| Title                   |                                    | RSKRL78L13 [INDEX] |              |
| Size                    | Document Number<br>R20UT2124EG0100 |                    | Rev<br>1.00  |
| Date:                   | Friday, August 02, 2013            |                    | Sheet 1 of 8 |

RL78/L13(80LQFP, 12x12) Microcontroller



Renesas Solutions Corp.

Title  
RSKRL78L13 [Micon]

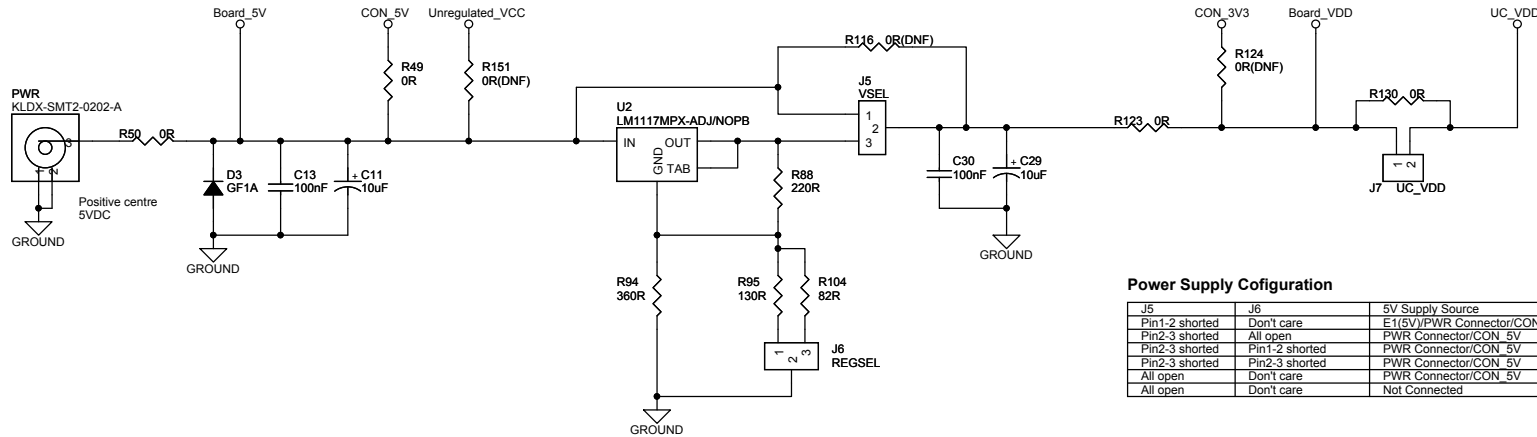
Size  
Document Number  
R20UT124EG0100

Date: Friday, August 02, 2013

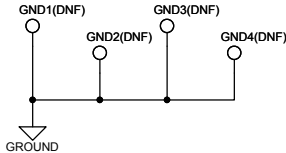
Sheet 2 of 8

Rev  
1.00

Power Supply Unit



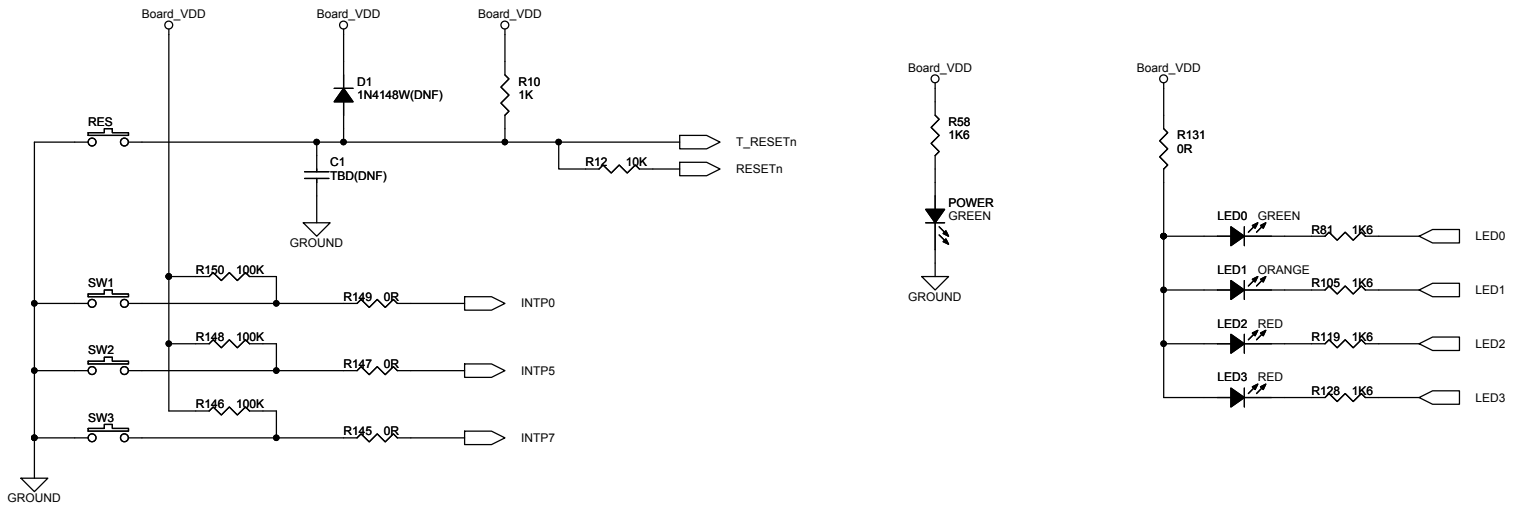
Ground Test Point



Power Supply Configuration

| J5             | J6             | 5V Supply Source            | 3V3 Supply Source | Board_5V | Board_VDD |
|----------------|----------------|-----------------------------|-------------------|----------|-----------|
| Pin1-2 shorted | Don't care     | E1(5V)/PWR Connector/CON_5V | Not Connected     | 5V       | 5V        |
| Pin2-3 shorted | All open       | PWR Connector/CON_5V        | Not Connected     | 5V       | 3V3       |
| Pin2-3 shorted | Pin1-2 shorted | PWR Connector/CON_5V        | Not Connected     | 5V       | 1V8       |
| Pin2-3 shorted | Pin2-3 shorted | PWR Connector/CON_5V        | Not Connected     | 5V       | 1V6       |
| All open       | Don't care     | PWR Connector/CON_5V        | E1(3V3)/CON_3V3   | 5V       | 3V3       |
| All open       | Don't care     | Not Connected               | E1(3V3)/CON_3V3   | 0V       | 3V3       |

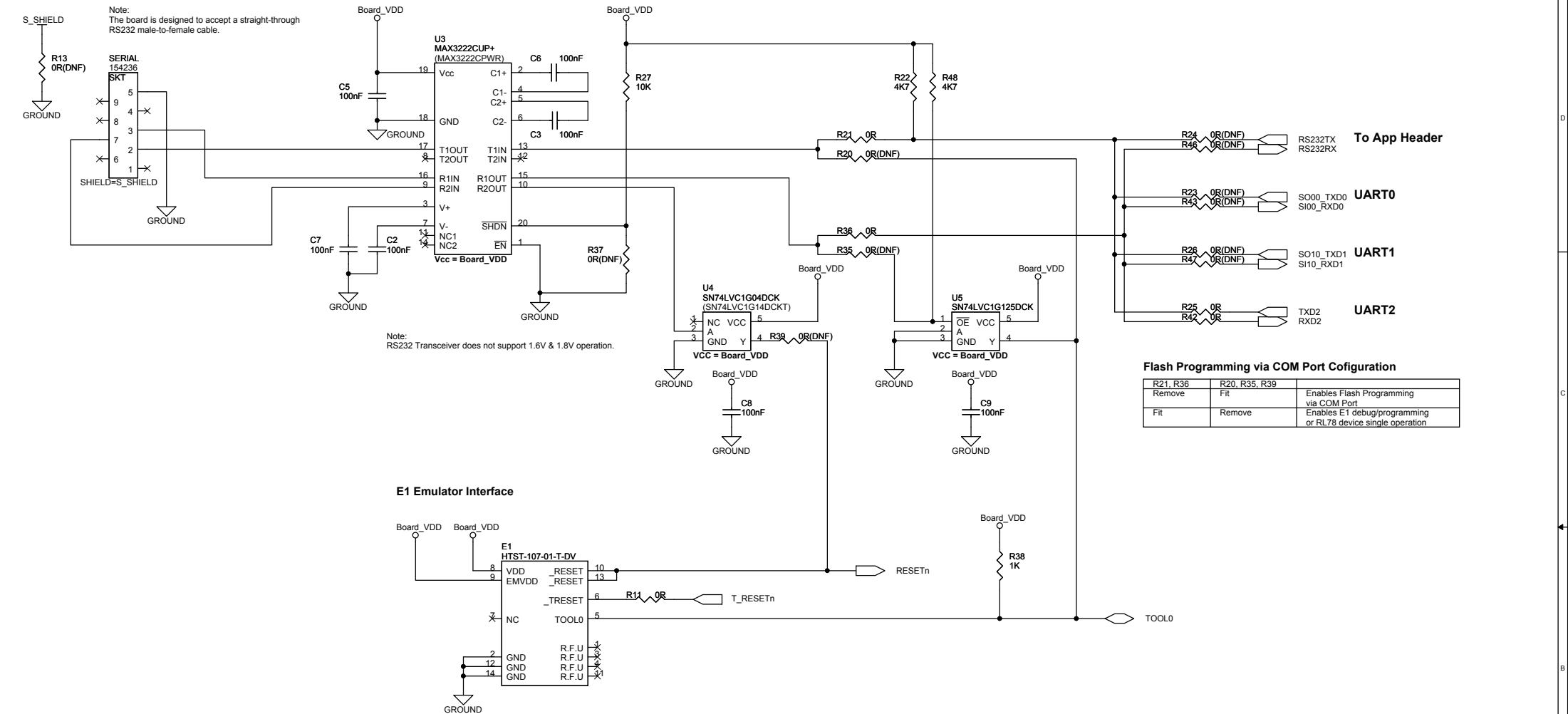
Switches, Reset, LEDs



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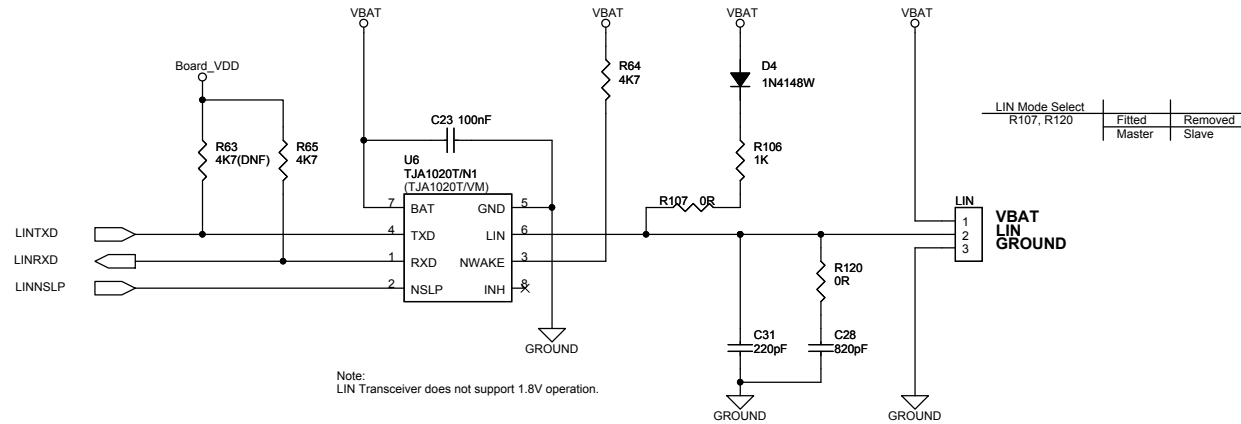
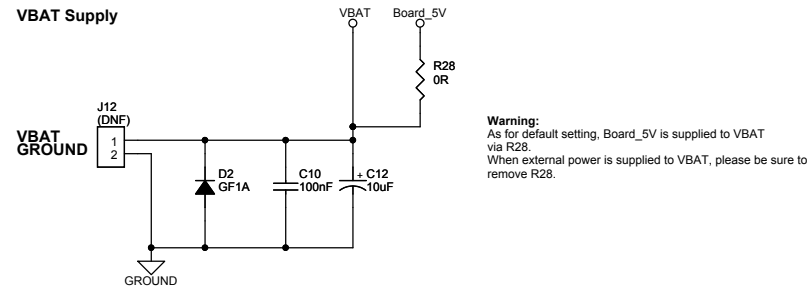
|                                         |                         |       |        |
|-----------------------------------------|-------------------------|-------|--------|
| Title                                   |                         |       |        |
| RSKRL78L13 [PSU, Reset, Switches, LEDs] |                         |       |        |
| Size                                    | Document Number         |       | Rev    |
|                                         | R20UT2124EG0100         |       | 1.00   |
| Date:                                   | Friday, August 02, 2013 | Sheet | 3 of 8 |

Serial Port

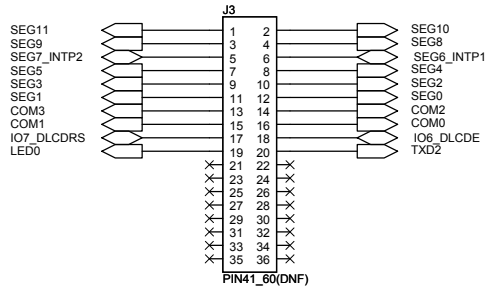
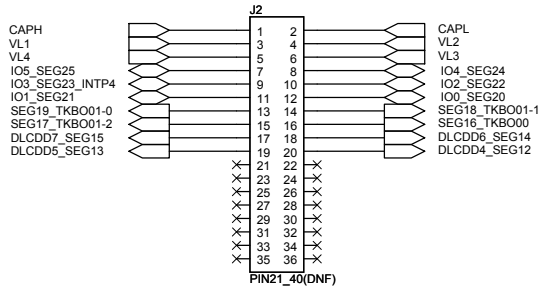
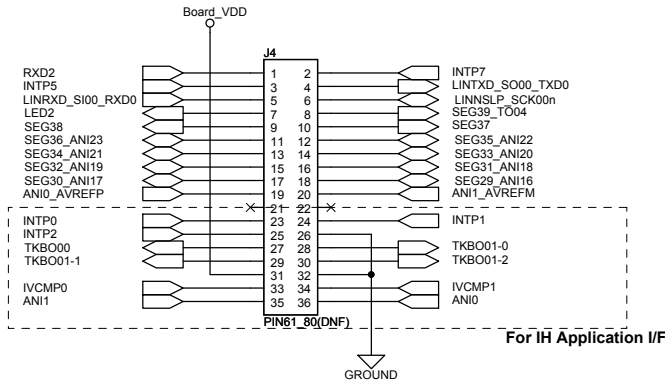
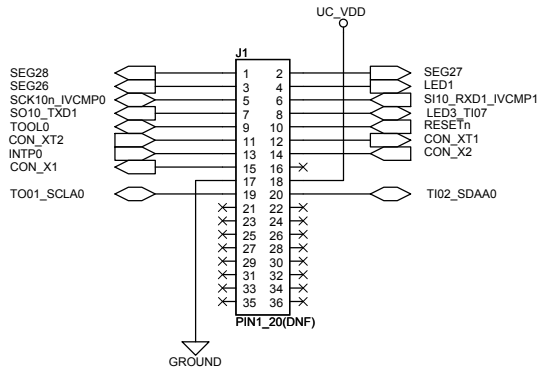




## LIN

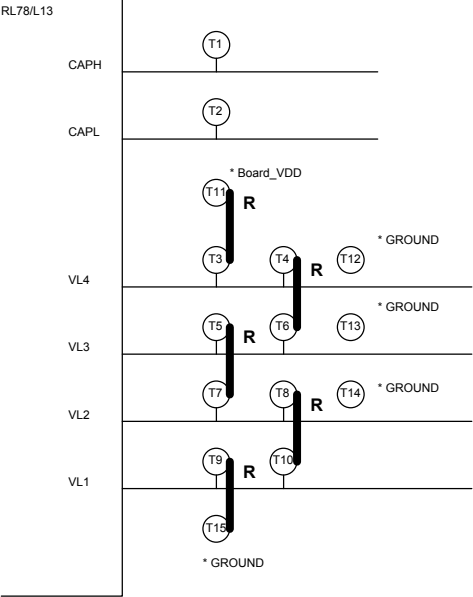
**VBAT Supply**

Microcontroller Pin Headers

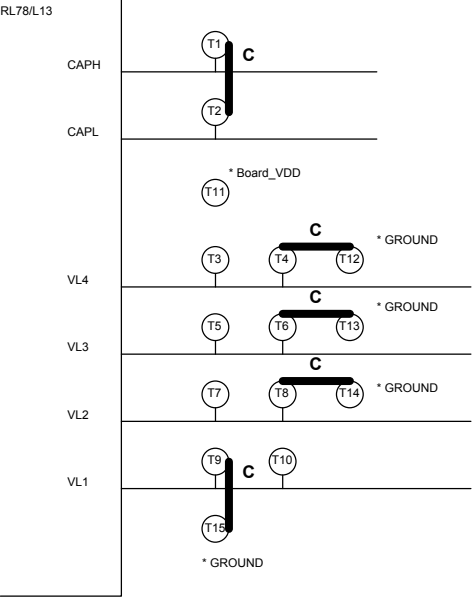


Appendix (User LCD Power Configurations)

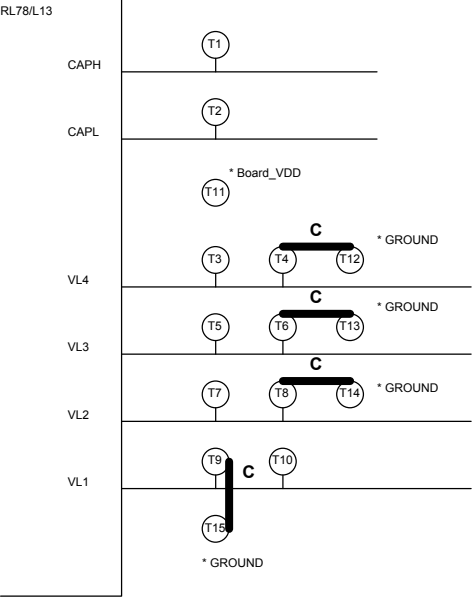
Example-1



Example-2



Example-3



# Revision History

| REV  | DATE       | PAGE | DESCRIPTION          |
|------|------------|------|----------------------|
| 1.00 | 02.08.2013 | ---  | 1st release edition. |