

To our customers,

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## Old Company Name in Catalogs and Other Documents

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April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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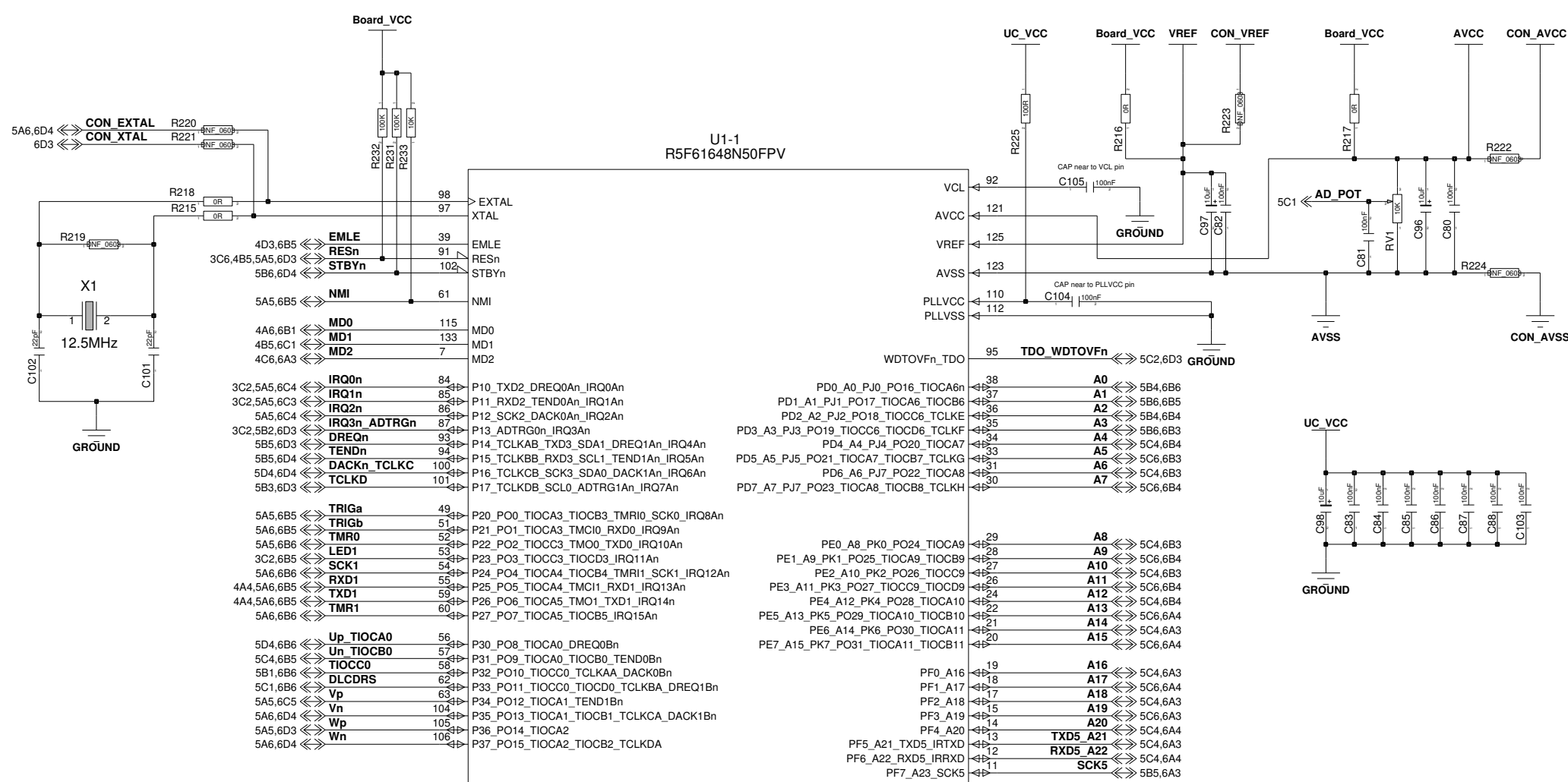
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| REV | REF      | DATE       | DRAWN BY |
|-----|----------|------------|----------|
| 1   | TRAC#691 | 10.07.2007 | VNA      |
| 2   | ECO888   | 18.10.2007 | VNA      |



SIZE A4

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 Dukess Meadow, Bourne End, Buckinghamshire  
 UNITED KINGDOM

SCHEMATIC TITLE  
**RSKH8SX1648**

SHEET TITLE  
**Microcontroller 1**

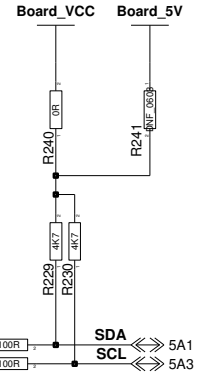
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| DRAWN BY<br>VNA | DATE<br>18-10-07 | REV<br>2 | DRAWING NUMBER<br>D007932_04 | PAGE<br>1/6 |
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U1-2  
R5F61648N50FPV

|         |   |            |   |     |
|---------|---|------------|---|-----|
| 5B1,6C1 | ↔ | AN8        | ↔ | 129 |
| 5B3,6C2 | ↔ | AN9        | ↔ | 130 |
| 5B1,6C1 | ↔ | AN10       | ↔ | 131 |
| 5B3,6C2 | ↔ | AN11       | ↔ | 132 |
| 5C2,6B2 | ↔ | ADPOT_AN0  | ↔ | 118 |
| 5A3,6B1 | ↔ | AN1        | ↔ | 119 |
| 5A1,6B2 | ↔ | AN2        | ↔ | 120 |
| 5A3,6B2 | ↔ | AN3        | ↔ | 122 |
| 5B1,6B2 | ↔ | AN4        | ↔ | 124 |
| 5B3,6B2 | ↔ | AN5        | ↔ | 126 |
| 5D4,6C1 | ↔ | DA0_AN6    | ↔ | 127 |
| 5D4,6C2 | ↔ | DA1_AN7    | ↔ | 128 |
| 5D4,6D3 | ↔ | PTTX_TXD4  | ↔ | 107 |
| 5D4,6D4 | ↔ | PTRX_RXD4  | ↔ | 108 |
| 5D4,6B1 | ↔ | TRSTn_SCK4 | ↔ | 109 |
| 4D3,6B1 | ↔ | TMS        | ↔ | 111 |
| 4D3,6B1 | ↔ | TDI        | ↔ | 113 |
| 4D3,6B2 | ↔ | TCK        | ↔ | 114 |
| 3D2,6D3 | ↔ | LED2       | ↔ | 89  |
| 3D2,6D4 | ↔ | LED3       | ↔ | 90  |
| 5A5,6C2 | ↔ | UD         | ↔ | 134 |
| 5C6,6C1 | ↔ | WRn        | ↔ | 135 |
| 5A6,6C2 | ↔ | TRISTn     | ↔ | 136 |
| 5D6,6C1 | ↔ | LLWRn      | ↔ | 137 |
| 5D4,6C2 | ↔ | LHWRn      | ↔ | 138 |
| 5C4,6C1 | ↔ | RDn        | ↔ | 139 |
| 5C6,6C2 | ↔ | ASn        | ↔ | 140 |
| 5C6,6C2 | ↔ | BCLK       | ↔ | 142 |
| 5C4,6C2 | ↔ | CS0n_IO0   | ↔ | 144 |
| 5C4,6A3 | ↔ | CS1n_IO1   | ↔ | 1   |
| 5A1,6A4 | ↔ | IO 2       | ↔ | 2   |
| 5C4,6A3 | ↔ | CS3n_IO3   | ↔ | 3   |
| 5A1,6B6 | ↔ | IO 4       | ↔ | 4   |
| 5A3,6B5 | ↔ | IO 5       | ↔ | 4   |
| 5A1,6B6 | ↔ | IO 6       | ↔ | 4   |
| 5A3,6A3 | ↔ | IO 7       | ↔ | 5   |

|                                    |                             |   |     |
|------------------------------------|-----------------------------|---|-----|
| P44_AN8                            | PC0_CS3Bn_WAITBn_ADTRG1Bn   | ↔ | 45  |
| P45_AN9                            | PC1_CS4Cn_CS5Cn_CS6Cn_CS7Cn | ↔ | 46  |
| P46_AN10                           | PC2                         | ↔ | 116 |
| P47_AN11                           | PC3                         | ↔ | 117 |
| P50_AN0_IRQ0Bn                     | PC4_ADTRG2n                 | ↔ | 47  |
| P51_AN1_IRQ1Bn                     | PC5                         | ↔ | 10  |
| P52_AN2_IRQ2Bn                     |                             |   |     |
| P53_AN3_IRQ3Bn                     |                             |   |     |
| P54_AN4_IRQ4Bn                     |                             |   |     |
| P55_AN5_IRQ5Bn                     |                             |   |     |
| P56_AN6_DA0_IRQ6Bn                 |                             |   |     |
| P57_AN7_DA1_IRQ7Bn                 |                             |   |     |
| P60_TMRI2_TXD4_DREQ2n_IRQ8Bn       |                             |   |     |
| P61_TMCI2_RXD4_TEND2n_IRQ9Bn       |                             |   |     |
| P62_TMO2_SCK4_DACK2n_IRQ10Bn_TRSTn |                             |   |     |
| P63_TMRI3_TXD6_DREQ3n_IRQ11Bn_TMS  |                             |   |     |
| P64_TMCI3_RXD6_TEND3n_IRQ12Bn_TDI  |                             |   |     |
| P65_TMO3_SCK6_DACK3n_IRQ13Bn_TCK   |                             |   |     |
| P66                                |                             |   |     |
| P67_IRQ15Bn                        |                             |   |     |
| PA0_BREQOn_BSA                     |                             |   |     |
| PA1_BACKn_RD_WRA                   |                             |   |     |
| PA2_BREQn_WAITA                    |                             |   |     |
| PA3_LLWRn_LL                       |                             |   |     |
| PA4_LHWRn_LUB                      |                             |   |     |
| PA5_RDn                            |                             |   |     |
| PA6_ASn_AHn_BSB                    |                             |   |     |
| PA7_BPHI                           |                             |   |     |
| PB0_CS0n_CS4An_CS5Bn               |                             |   |     |
| PB1_CS1n_CS2Bn_CS5An_CS6Bn_CS7Bn   |                             |   |     |
| PB2_CS2An_CS6An                    |                             |   |     |
| PB3_CS3An_CS7An                    |                             |   |     |
| PB4_CS4Bn                          |                             |   |     |
| PB5_CS5Dn                          |                             |   |     |
| PB6_CS6Dn_RD_WRBn_ADTRG0Bn         |                             |   |     |
| PB7_CS7Dn                          |                             |   |     |

|        |   |         |
|--------|---|---------|
| DLCDD4 | ↔ | 5D1,6B5 |
| DLCDD5 | ↔ | 5D1,6B6 |
| DLCDD6 | ↔ | 5D1,6B2 |
| DLCDD7 | ↔ | 5D1,6B1 |
| DLCDE  | ↔ | 5C1,6B5 |
| LED0   | ↔ | 3C2,6A4 |
| D0     | ↔ | 5C4,6C5 |
| D1     | ↔ | 5C6,6C6 |
| D2     | ↔ | 5C4,6C5 |
| D3     | ↔ | 5C6,6C6 |
| D4     | ↔ | 5C4,6C6 |
| D5     | ↔ | 5C6,6C5 |
| D6     | ↔ | 5C4,6C6 |
| D7     | ↔ | 5C6,6C3 |
| D8     | ↔ | 5C4,6C3 |
| D9     | ↔ | 5C6,6C4 |
| D10    | ↔ | 5C4,6C3 |
| D11    | ↔ | 5C6,6C4 |
| D12    | ↔ | 5C4,6C4 |
| D13    | ↔ | 5C6,6C3 |
| D14    | ↔ | 5C4,6C4 |
| D15    | ↔ | 5C6,6C3 |
| PIN8   | ↔ | 6A4     |
| PIN9   | ↔ | 6A3     |
| PIN40  | ↔ | 6B6     |
| PIN41  | ↔ | 6B5     |



VCC=UC\_VCC

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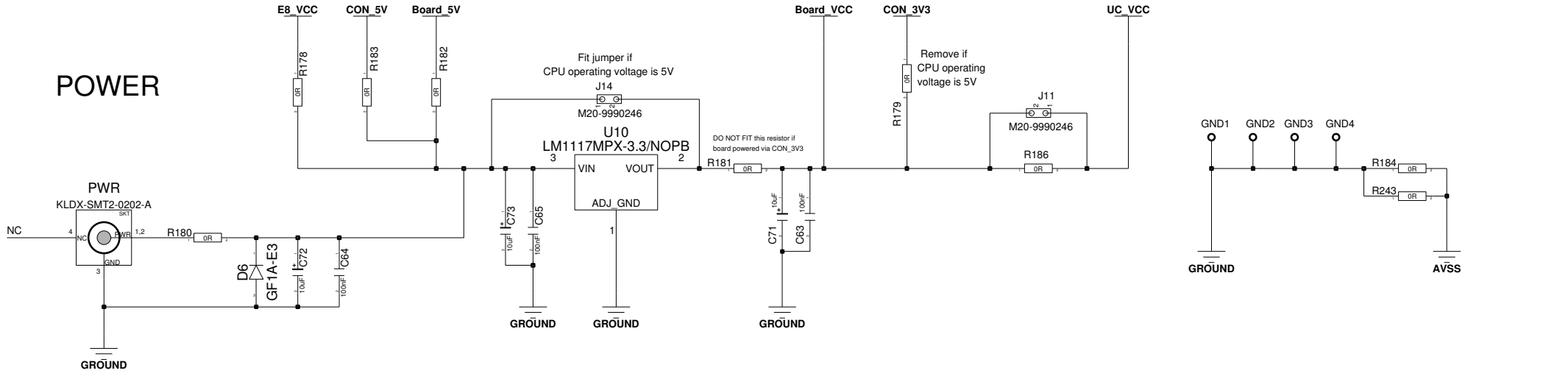
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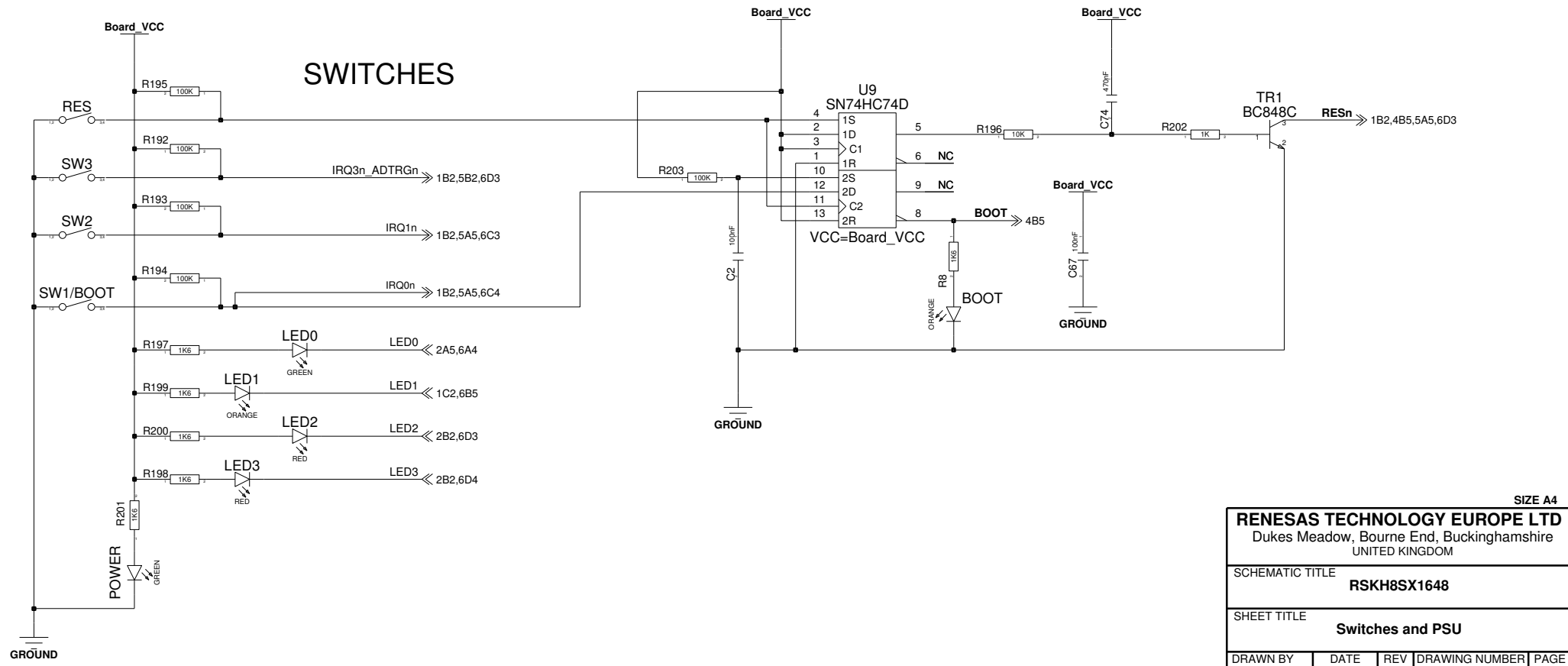
SHEET TITLE  
**Microcontroller 2**

|                 |                  |          |                              |             |
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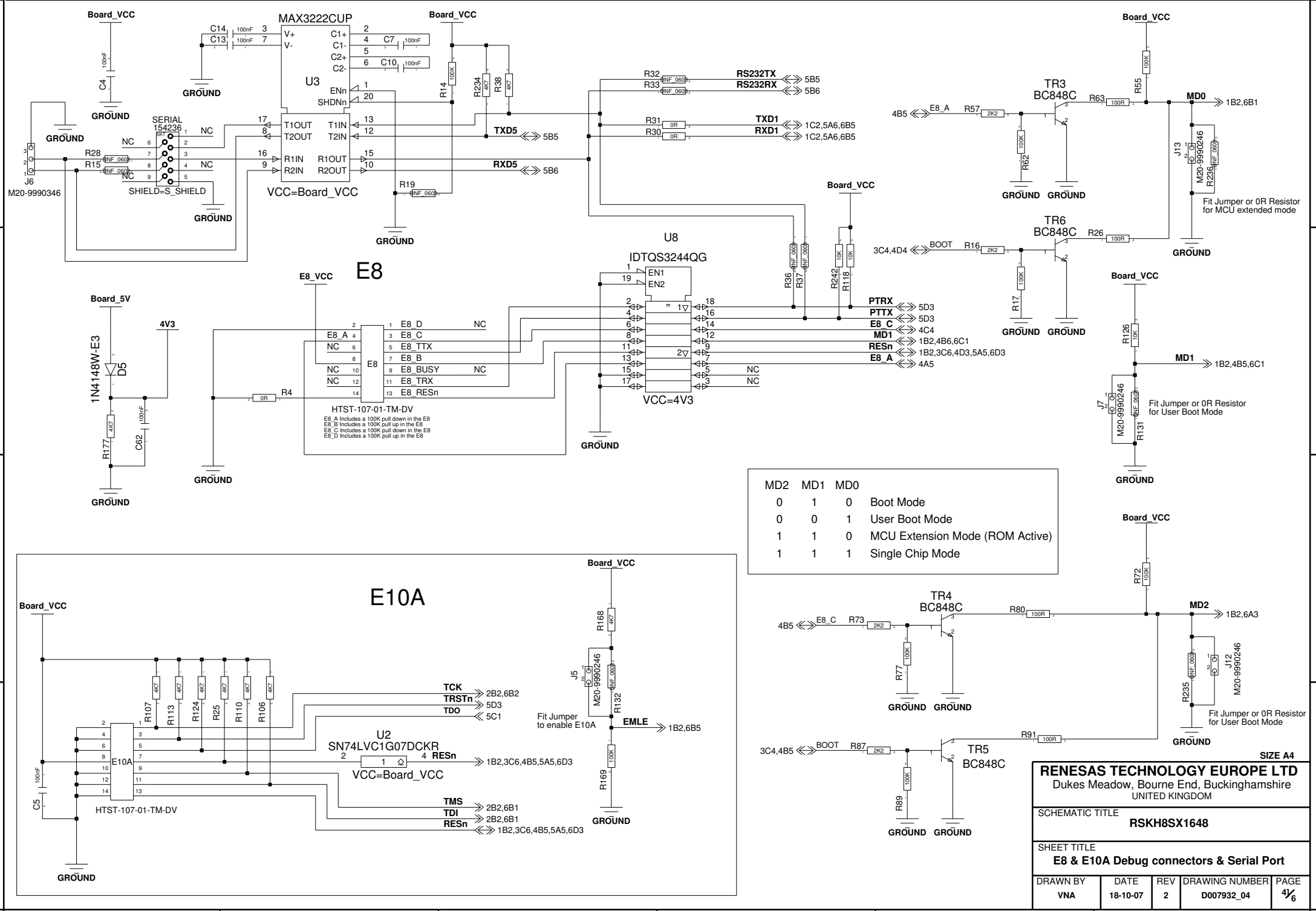
# POWER



# SWITCHES



|   |                  |          |                              |             |
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| MD2 | MD1 | MD0 | Mode                            |
|-----|-----|-----|---------------------------------|
| 0   | 1   | 0   | Boot Mode                       |
| 0   | 0   | 1   | User Boot Mode                  |
| 1   | 1   | 0   | MCU Extension Mode (ROM Active) |
| 1   | 1   | 1   | Single Chip Mode                |

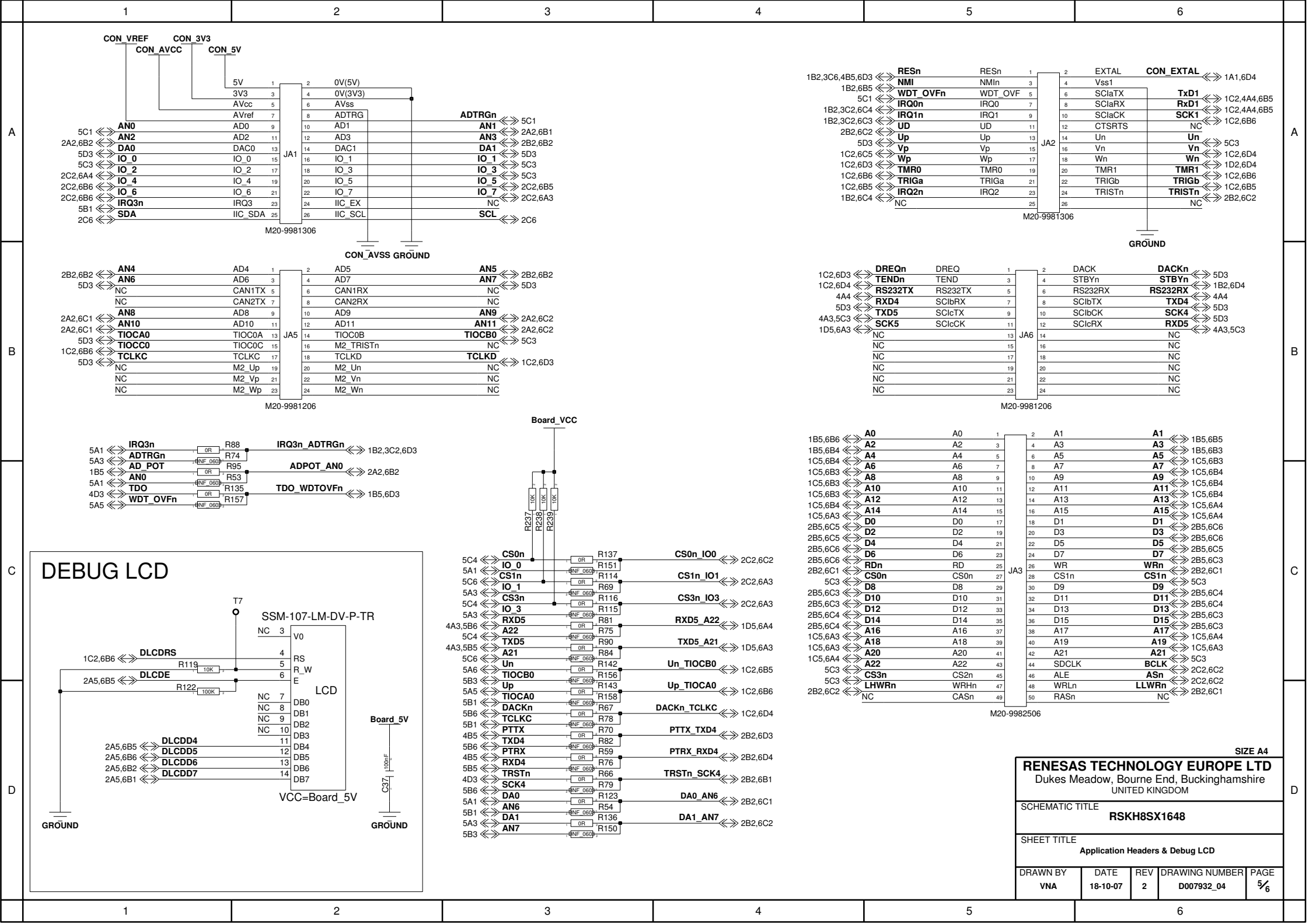
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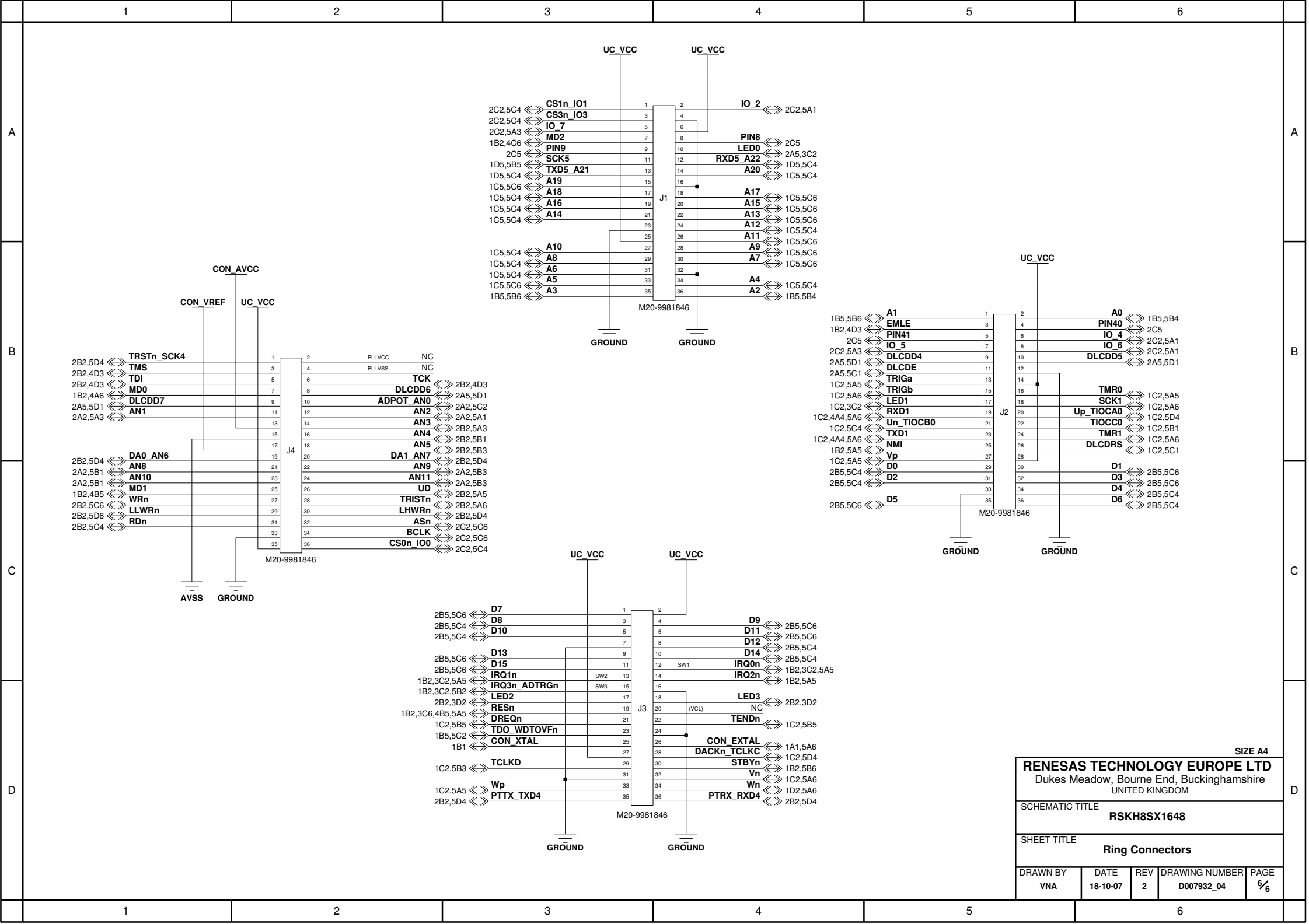
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SCHEMATIC TITLE  
**RSKH8SX1648**

SHEET TITLE  
**E8 & E10A Debug connectors & Serial Port**

|                 |                  |          |                              |             |
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SCHEMATIC TITLE  
**RSKH8SX1648**

SHEET TITLE  
**Ring Connectors**

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