
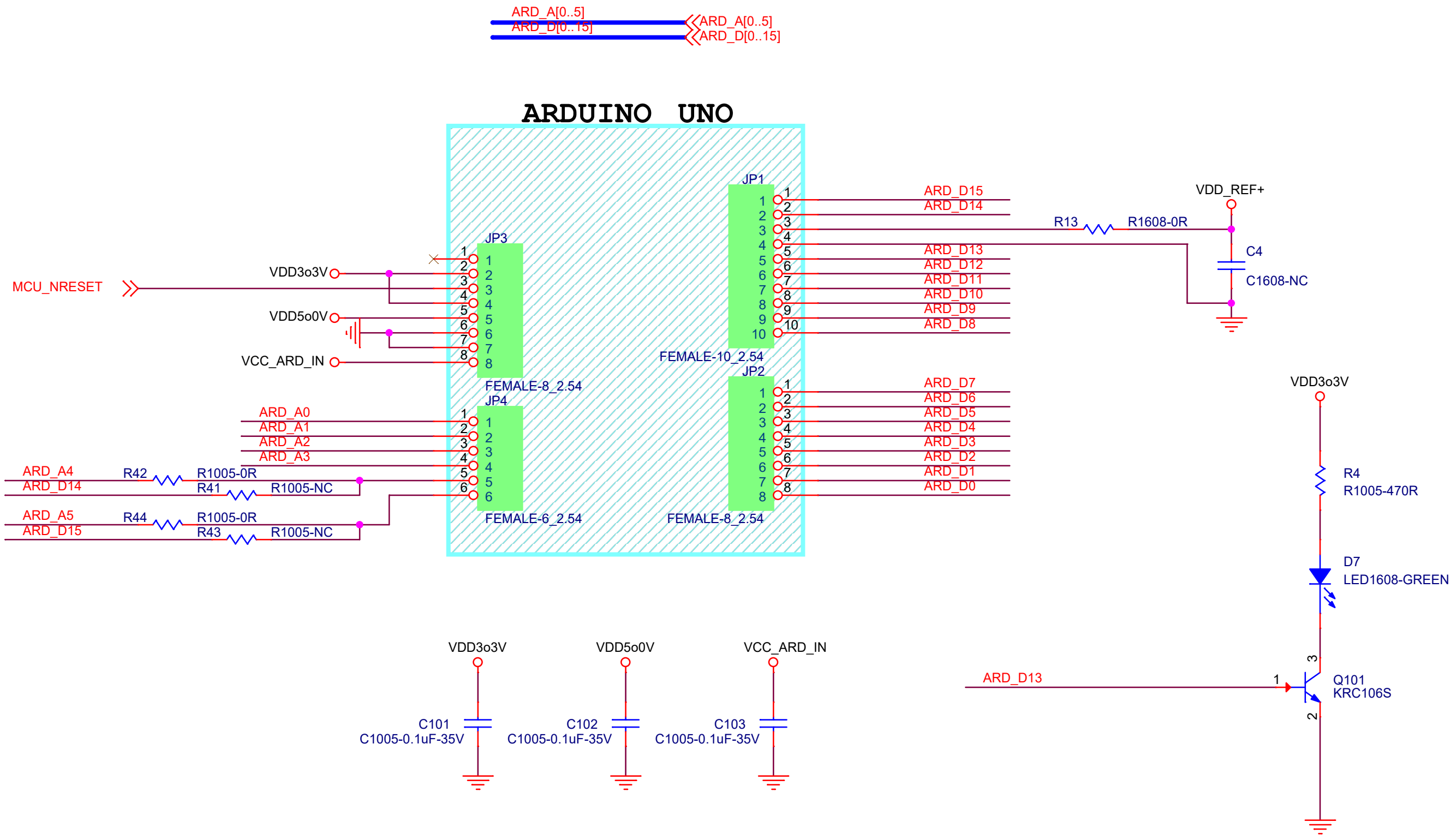
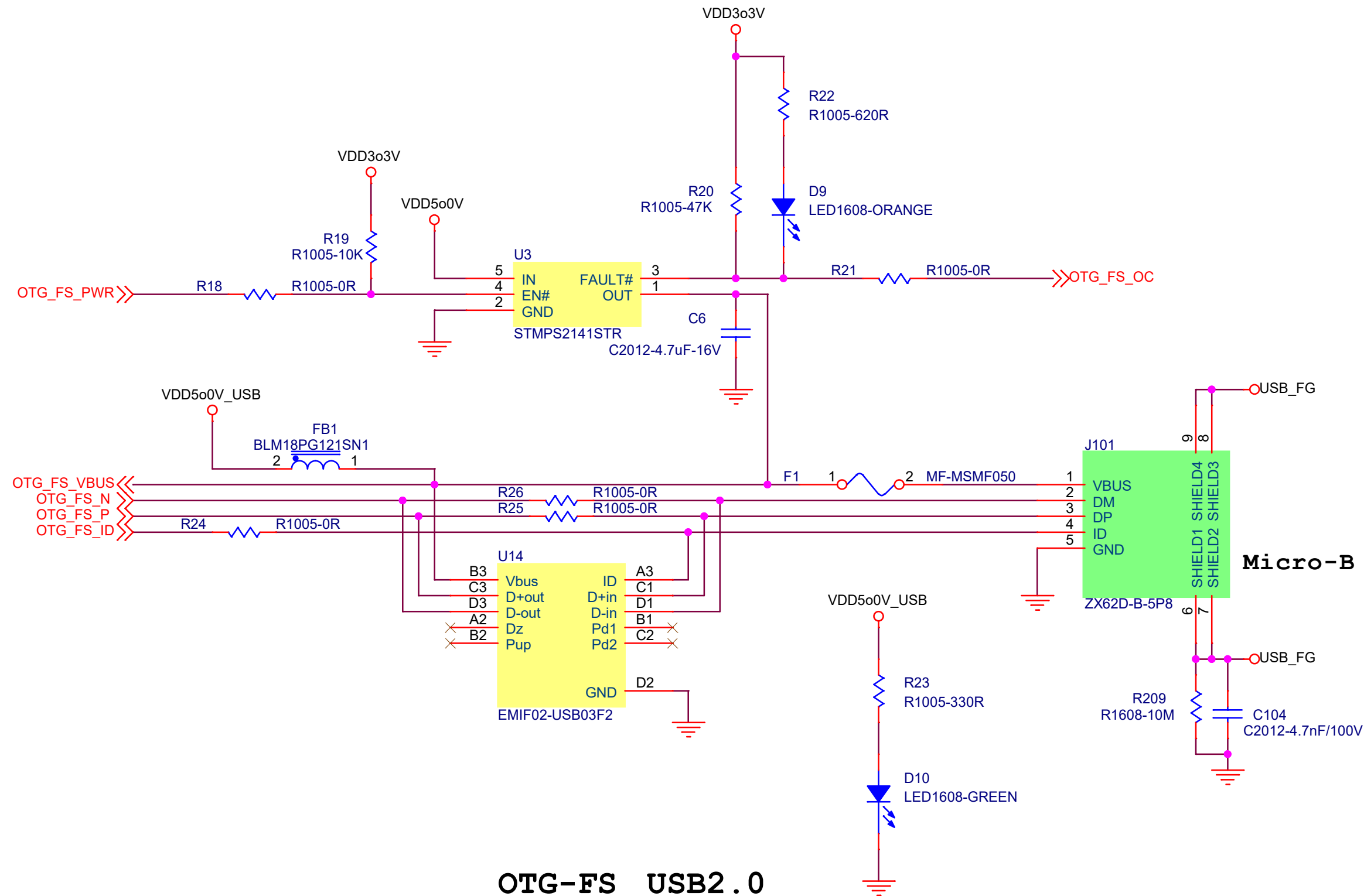
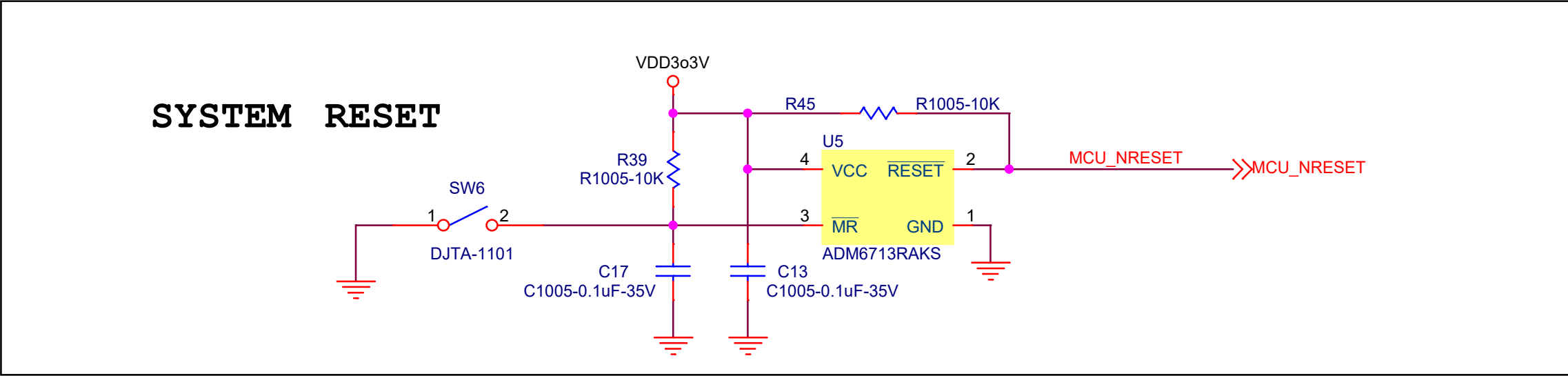
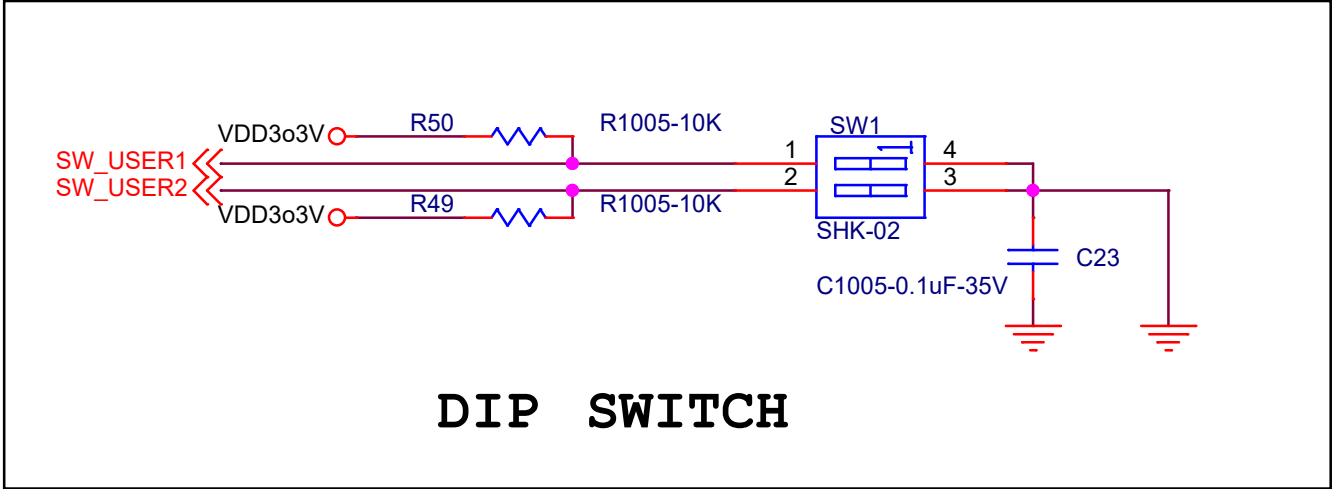
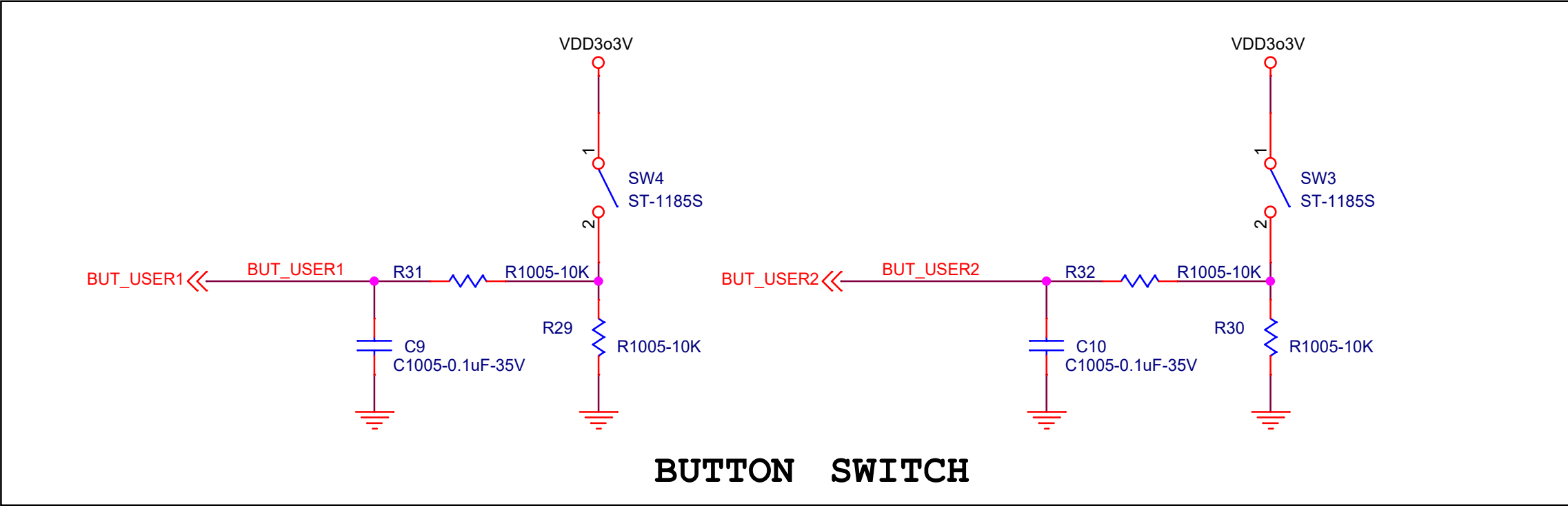


Flash Memory

|   |        |                          |               |
|---|--------|--------------------------|---------------|
|  | Title  |                          |               |
|   | OpenCR |                          |               |
|   | Size   | Document Name            | Rev           |
|   | A4     | FLASH MEMORY             | TP V2.0       |
| Date:   |        | Tuesday, August 30, 2016 | Sheet 2 of 13 |

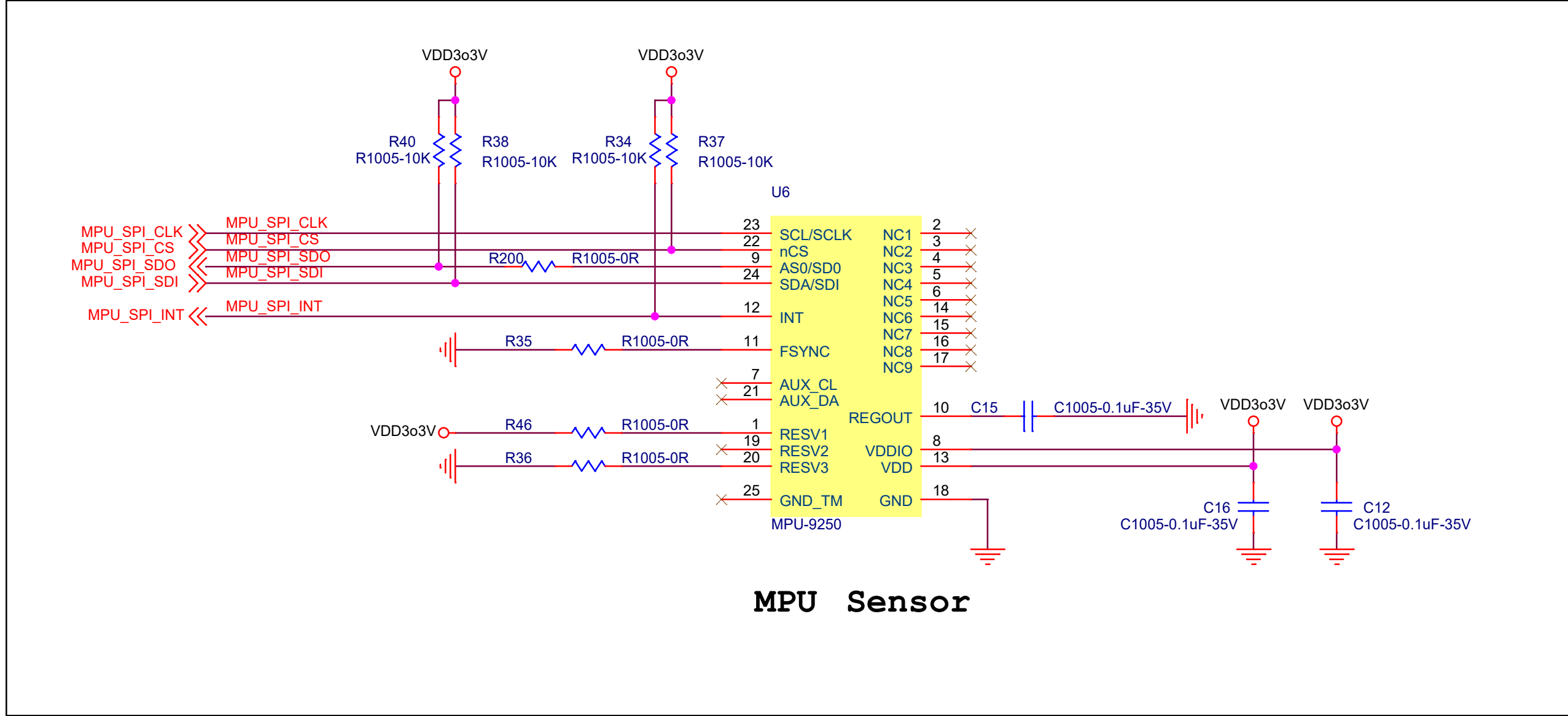




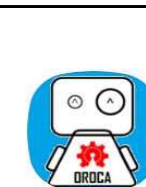
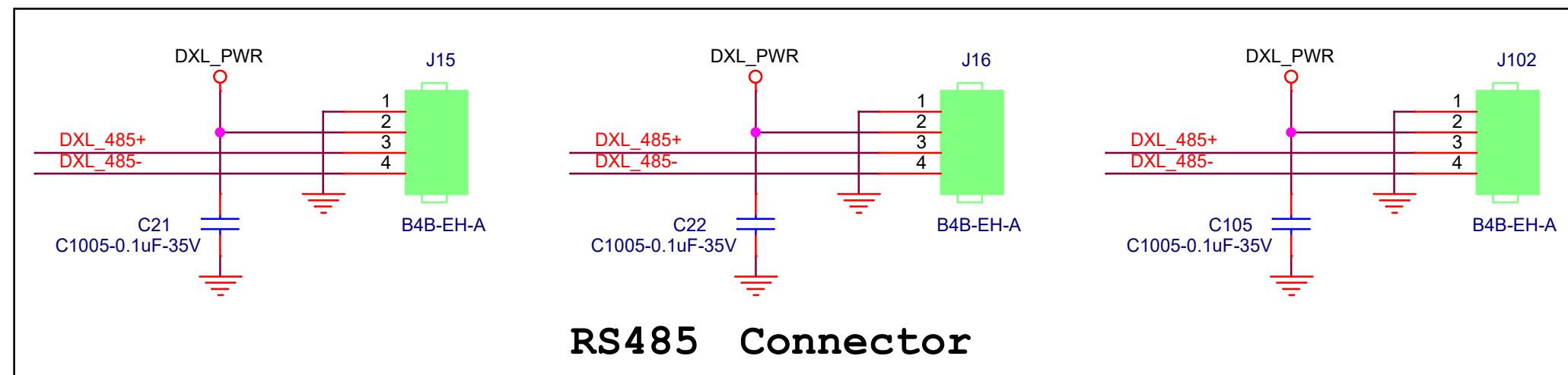
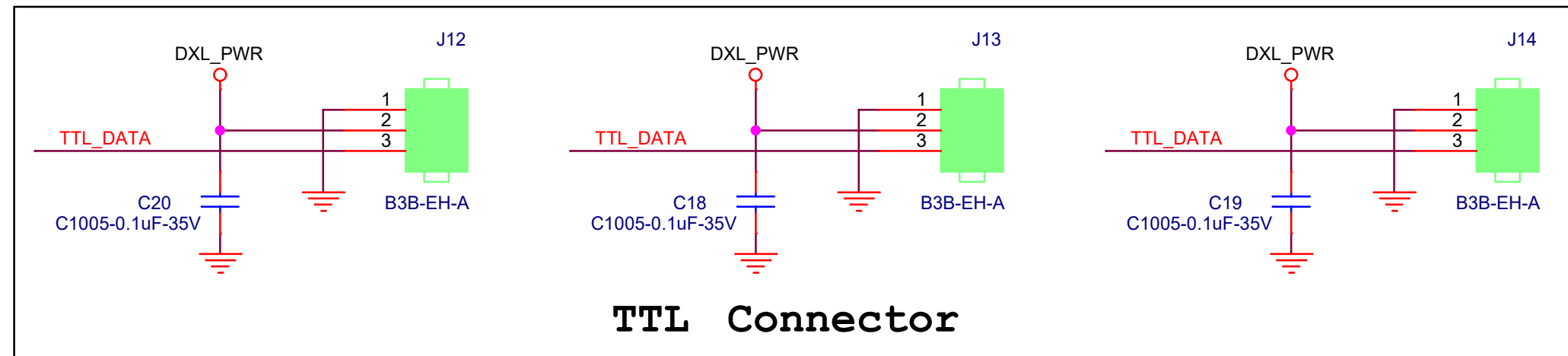
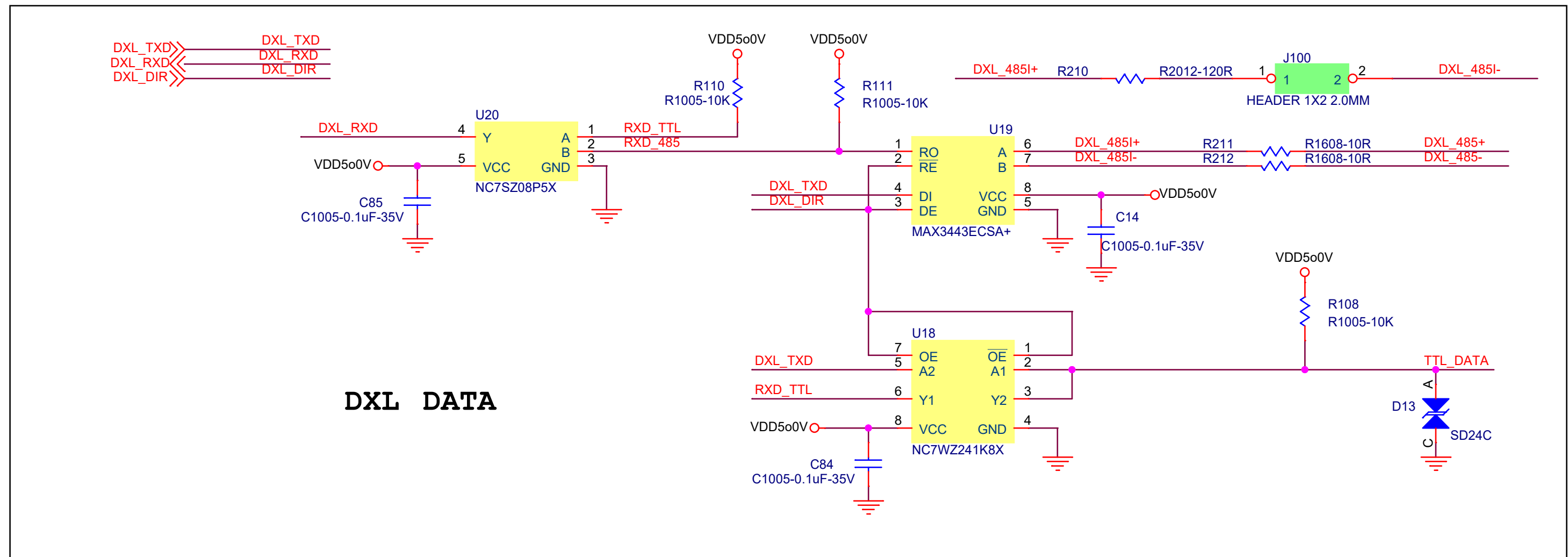


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| Title  |                          |               |
| OpenCR |                          |               |
| Size   | Document Name            | Rev           |
| A4     | PUSH/SIIDE SW            | TP V2.0       |
| Date:  | Tuesday, August 30, 2016 | Sheet 5 of 13 |



MPU Sensor



# OROCA

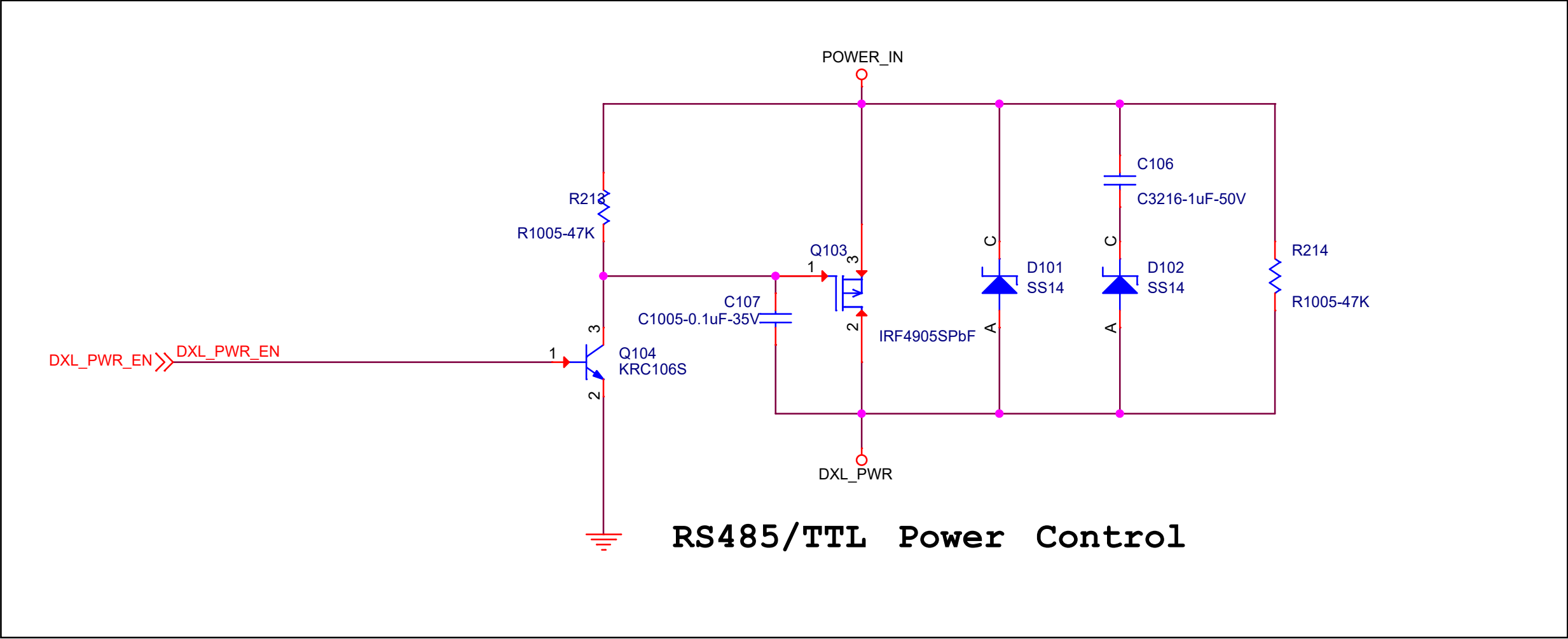
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| Document Name | RS485/TTL DXL |
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| Rev     |  |
| TP V2.0 |  |

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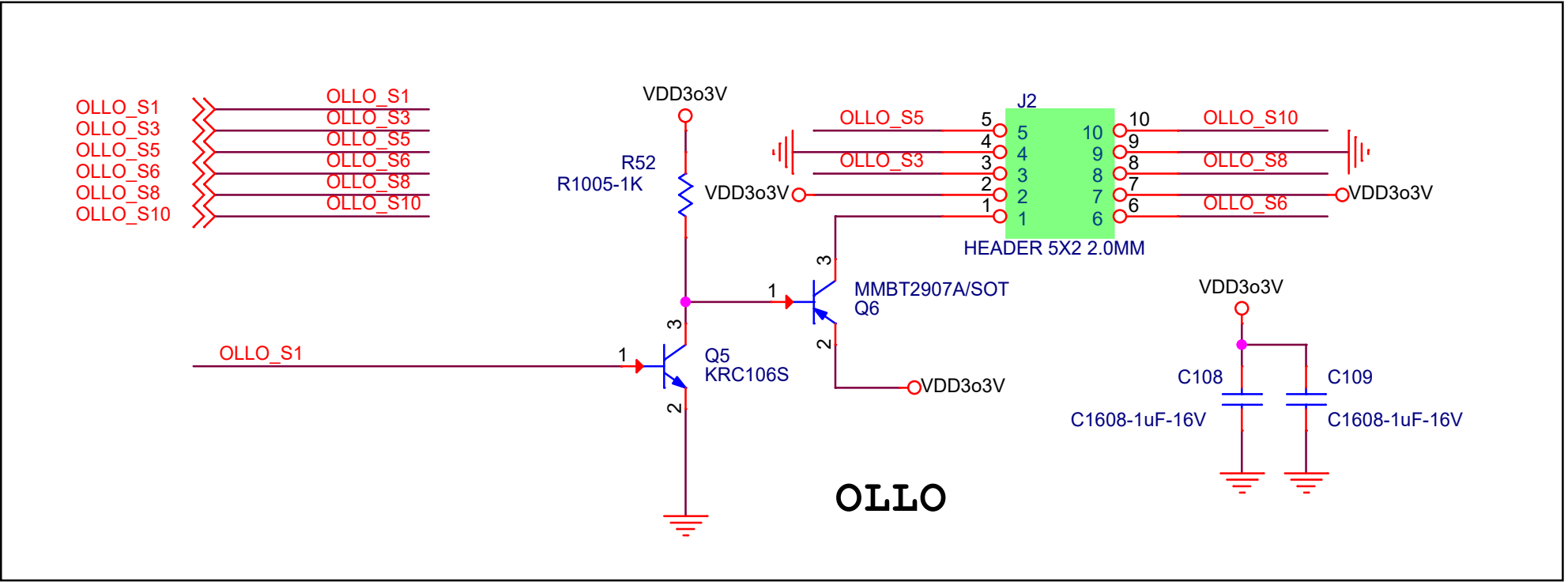
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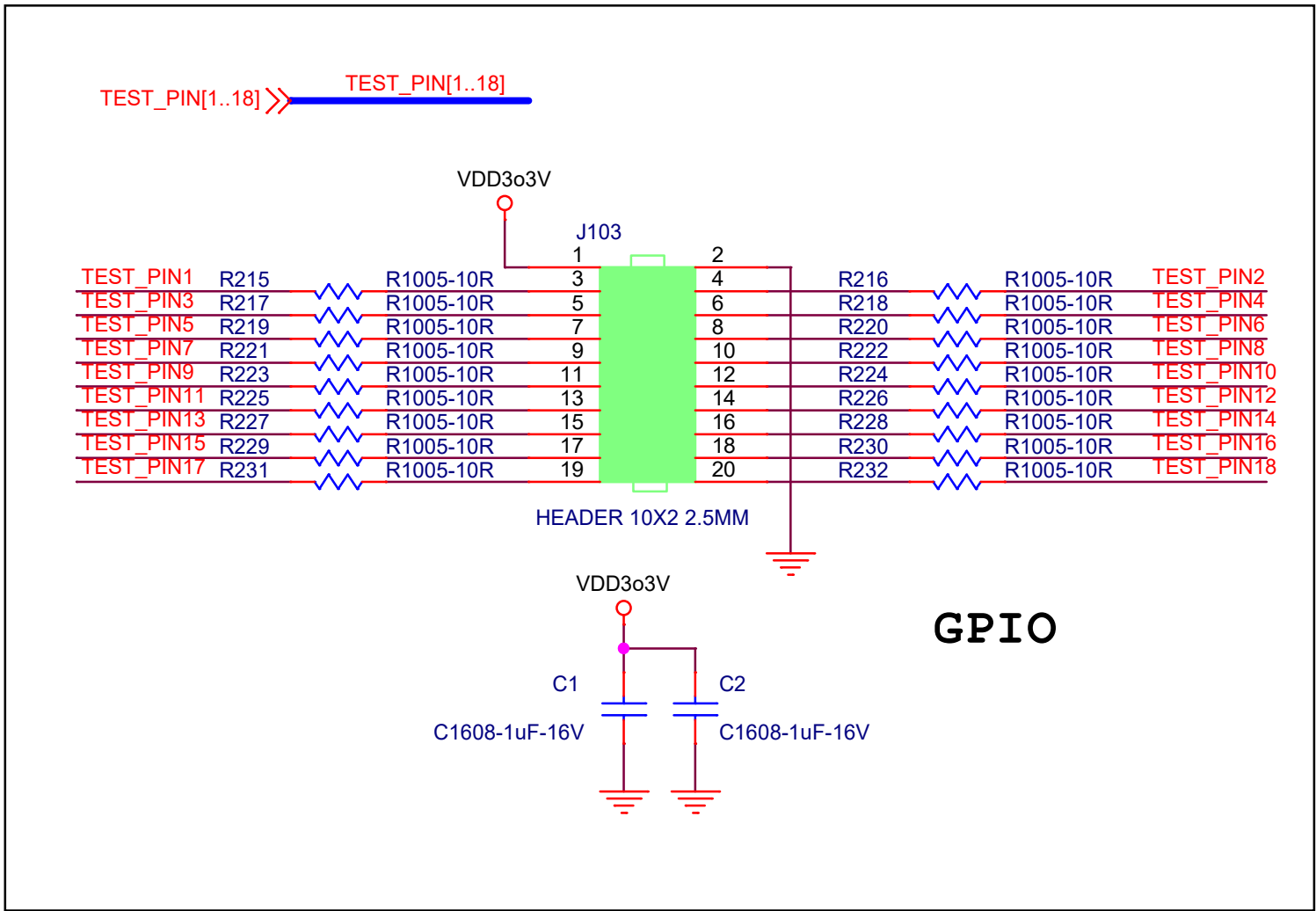
| Size | Document Name         | Rev     |
|------|-----------------------|---------|
| A4   | RS485/TTL PWR CONTROL | TP V2.0 |

| Date:                    | Sheet | of |
|--------------------------|-------|----|
| Tuesday, August 30, 2016 | 8     | 13 |

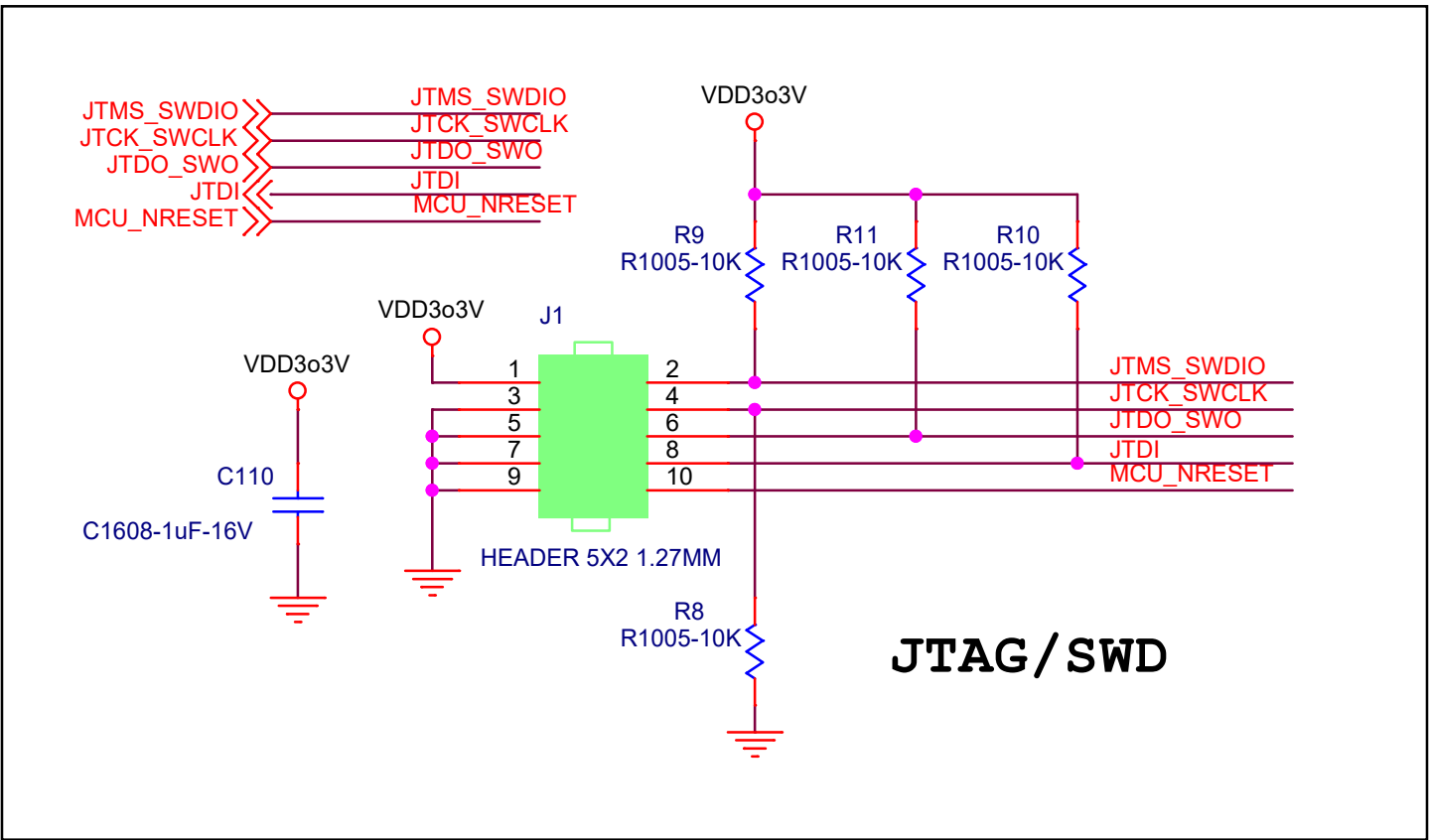




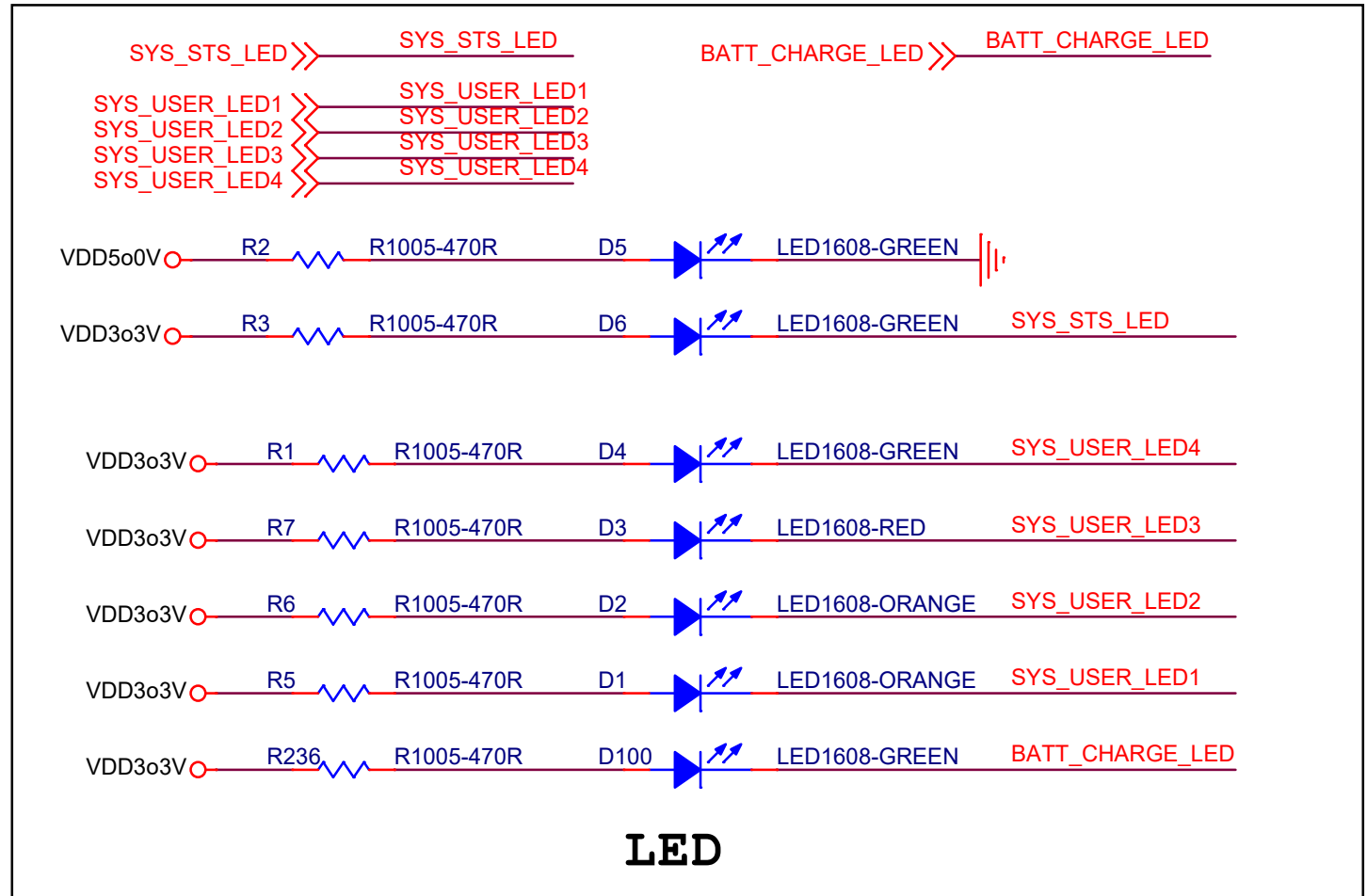
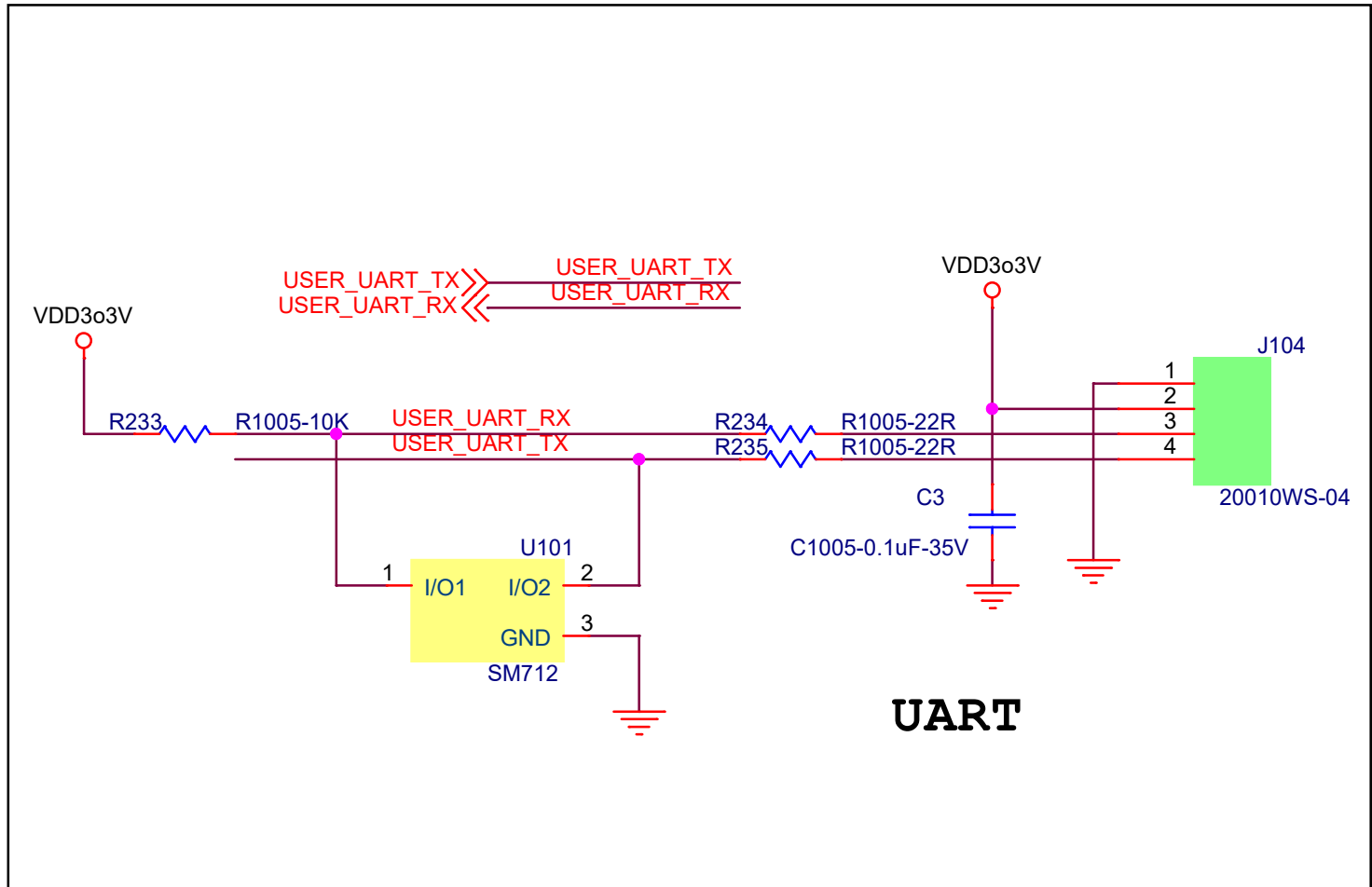
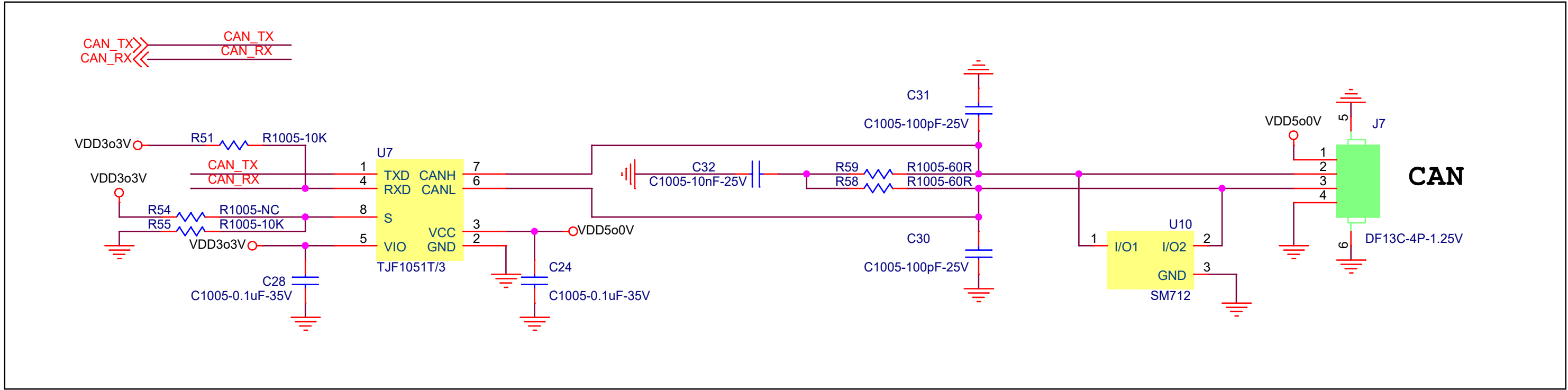
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GPIO



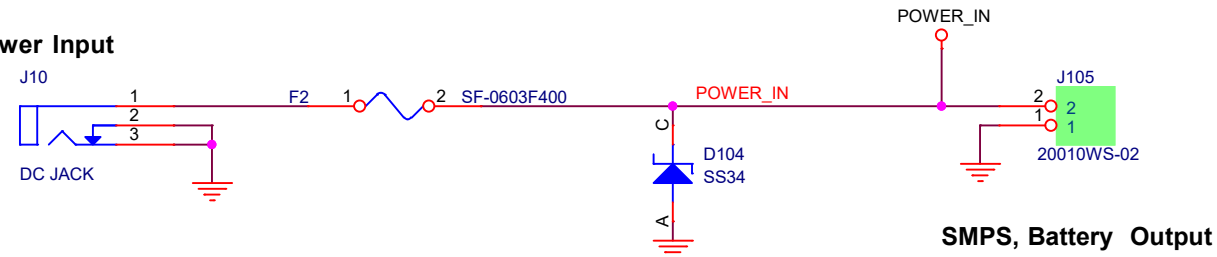
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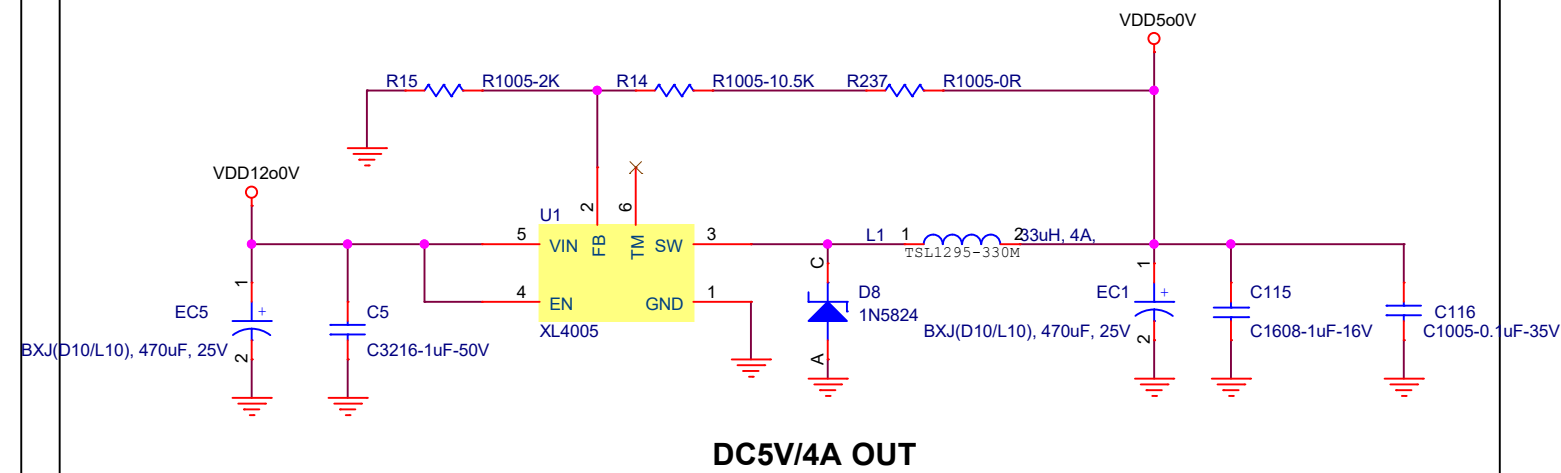
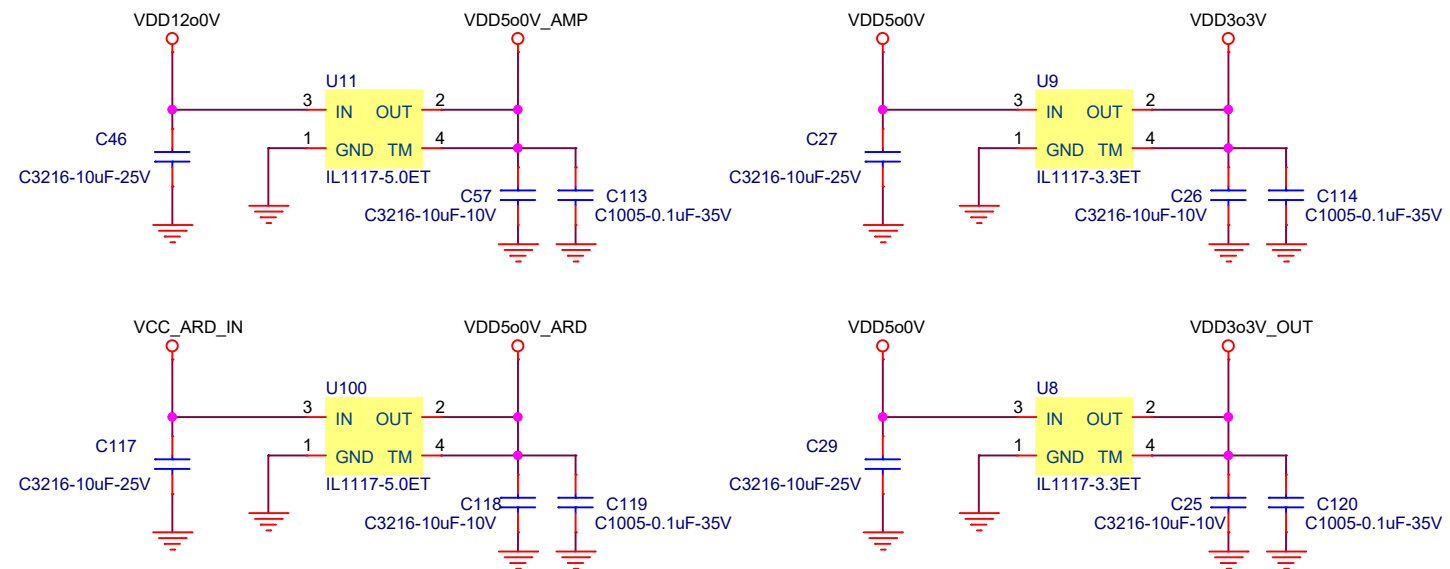
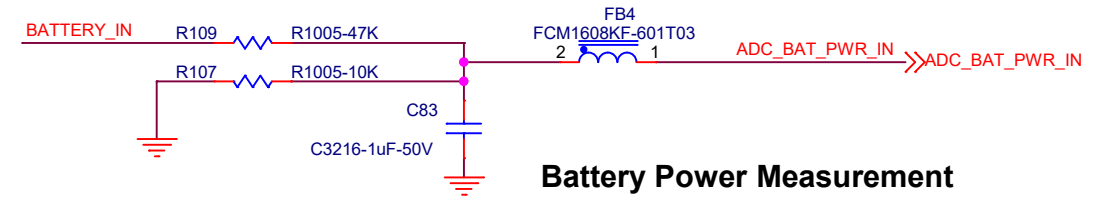
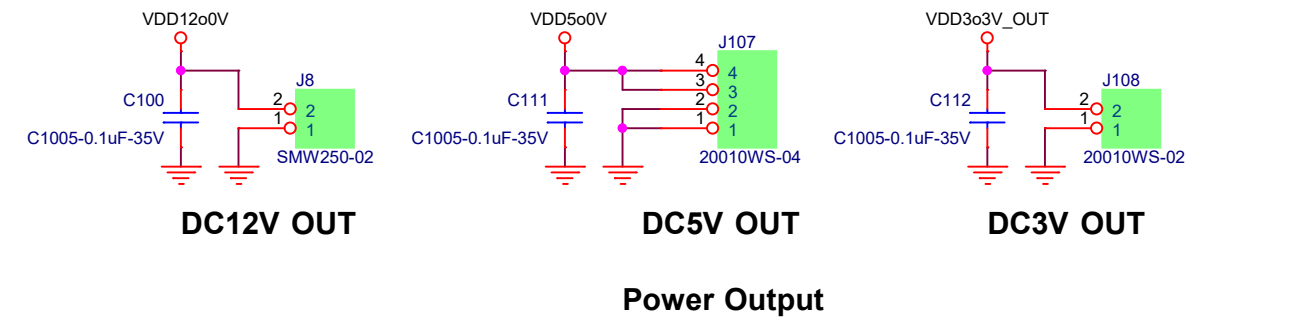
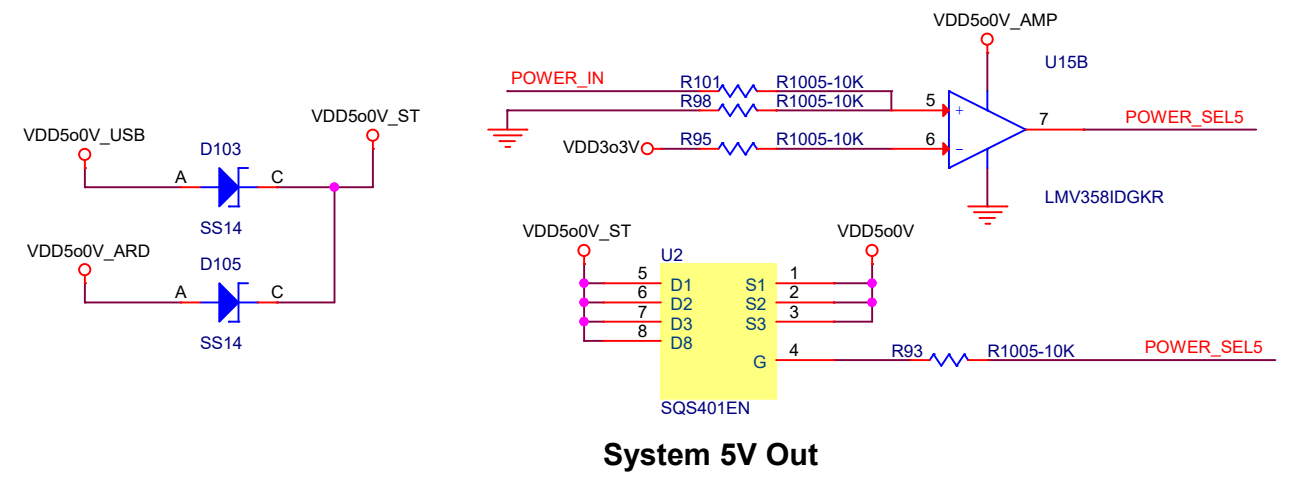
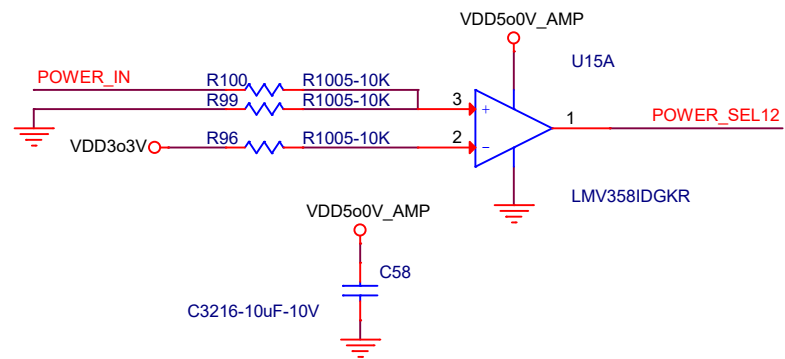
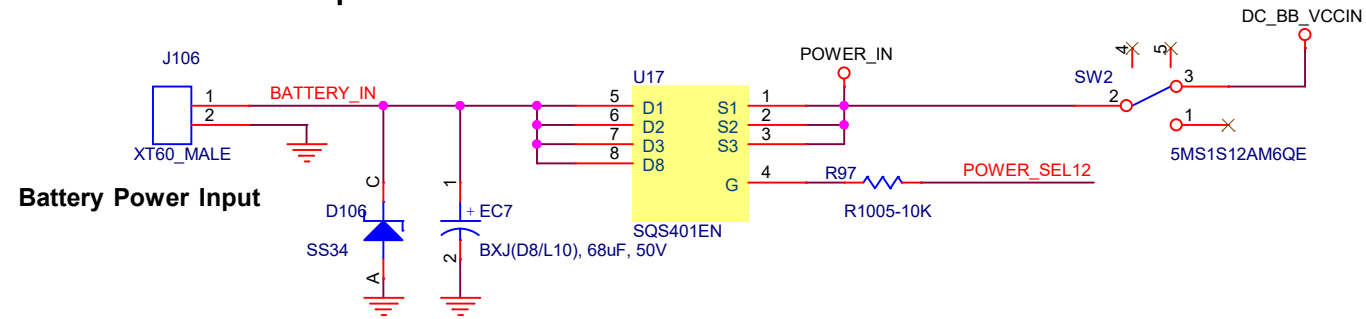
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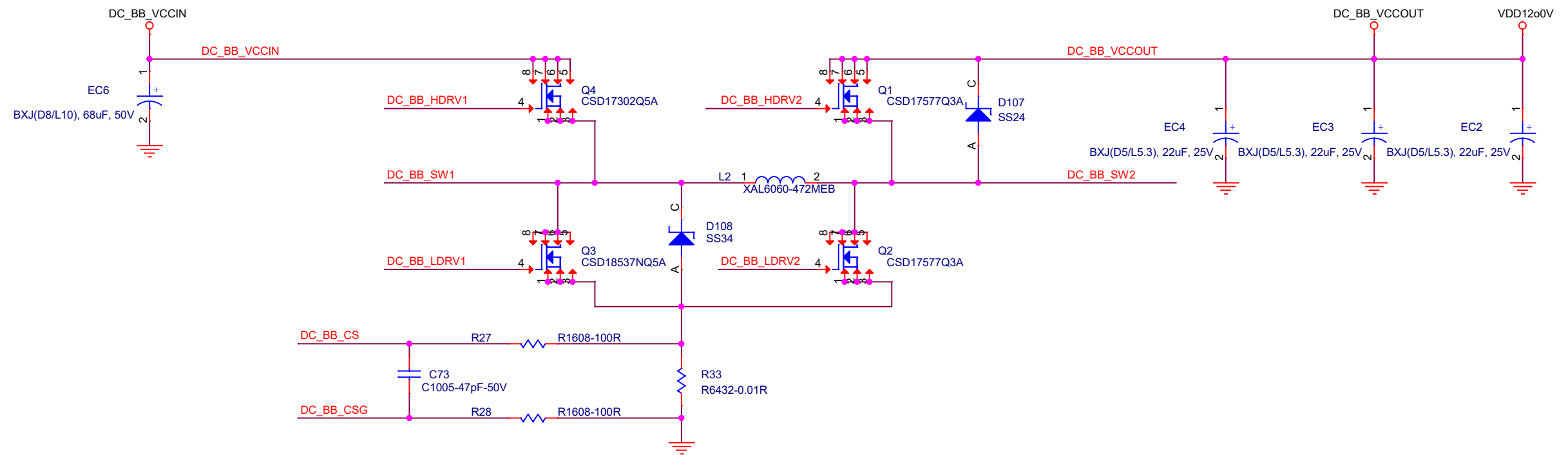
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| Title |                          |  | OpenCR |    |         |
| Size  | Document Name            |  |        |    | Rev     |
| A4    | CAN/UART/LED             |  |        |    | TP V2.0 |
| Date: | Tuesday, August 30, 2016 |  | Sheet  | 10 | of 13   |

### SMPS Power Input

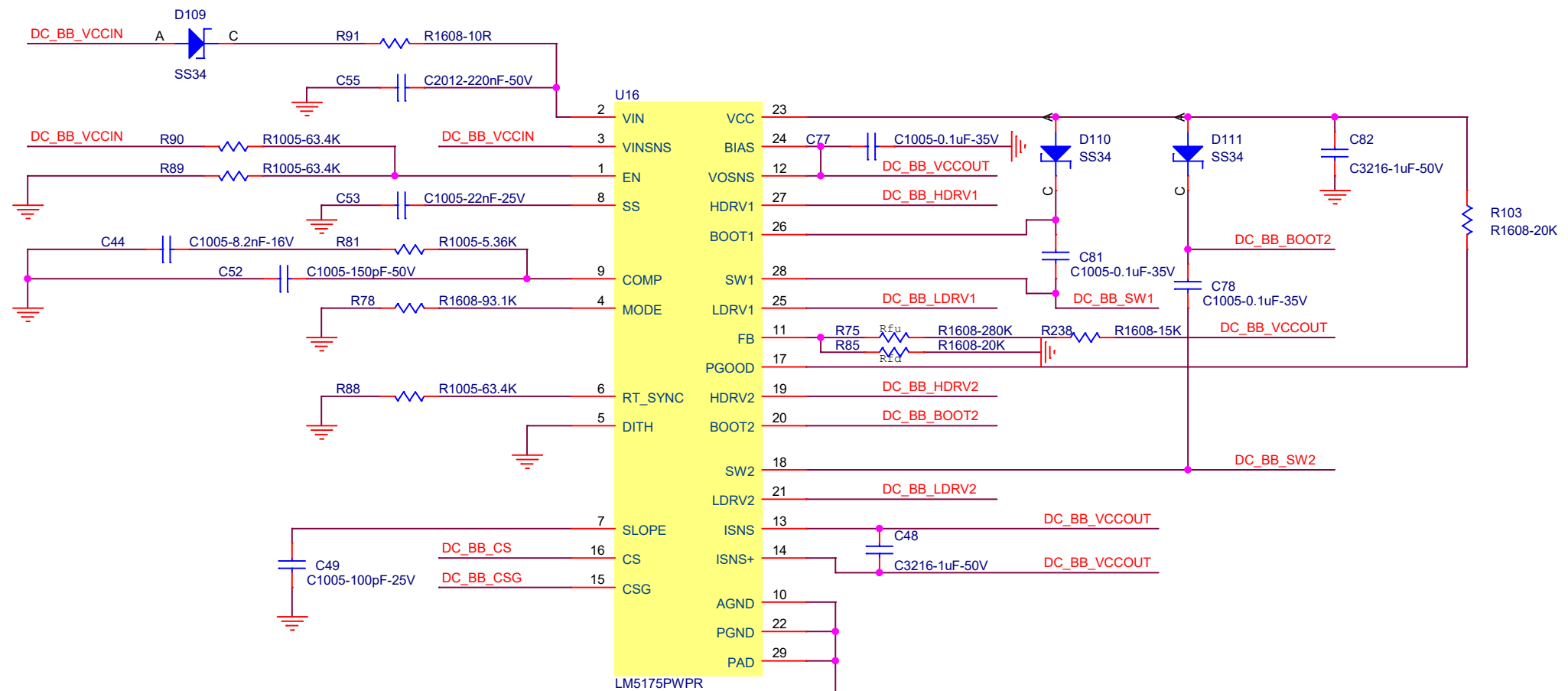


### DC 7V ~ 24V Power Input





**Buck-Boost Power**



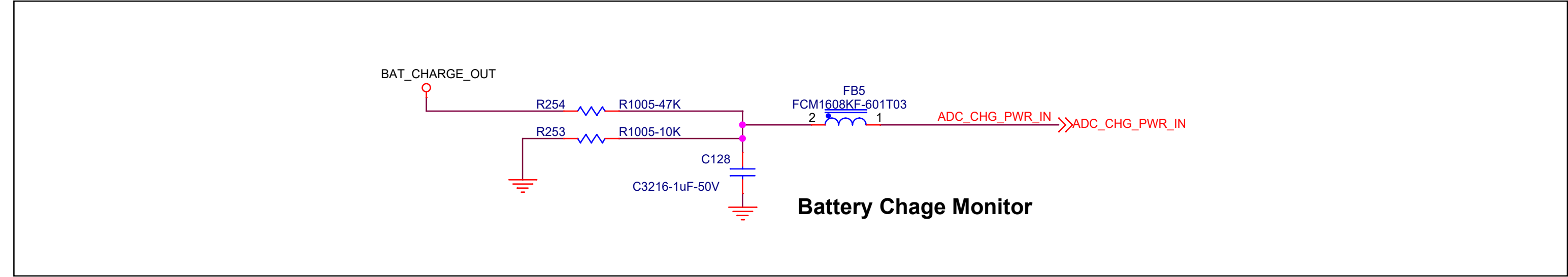
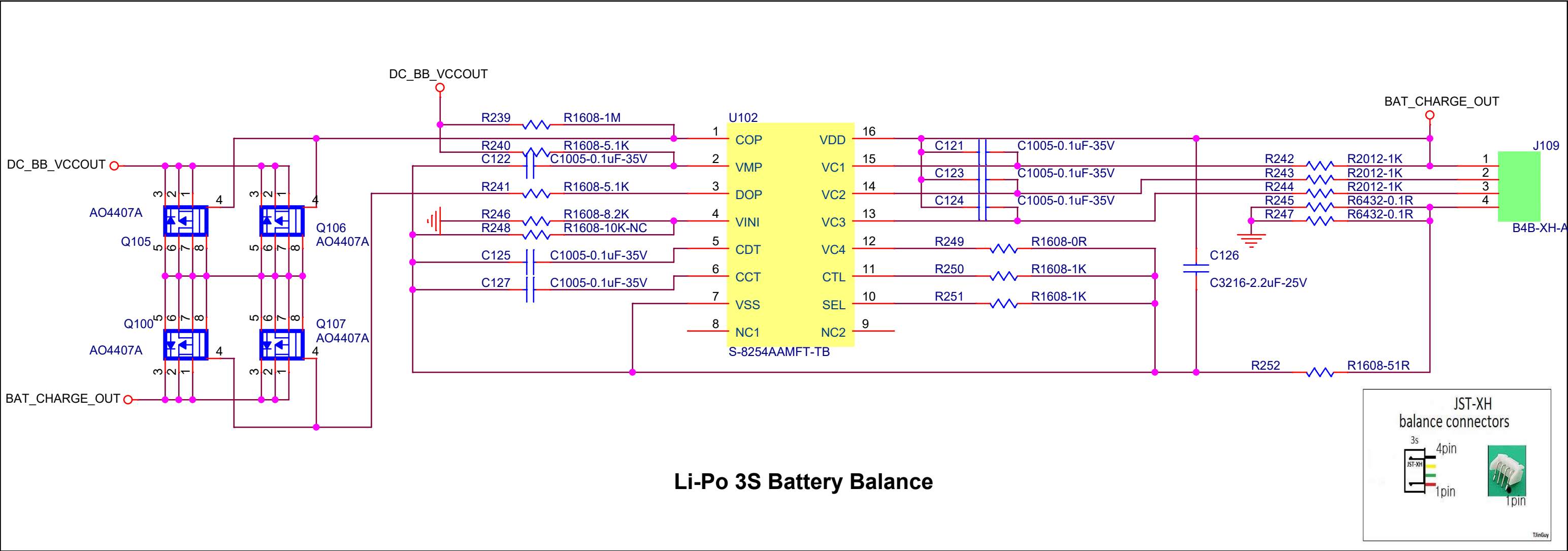
**Buck-Boost Controller**

$$R_{fu} = ((V_{out} - 0.8) / 0.8) * R_{fd}$$



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| Title<br>OpenCR |                                |                |
| Size<br>A3      | Document Name<br>BUK-BST POWER | Rev<br>TP V2.0 |
| Date:           | Tuesday, August 30, 2016       | Sheet 12 of 13 |



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|-------|--------------------------|---------|----------|
| Title |                          |         | OpenCR   |
| Size  | Document Name            | Rev     |          |
| A4    | Li-Po 3S Battery Balance | TP V2.0 |          |
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