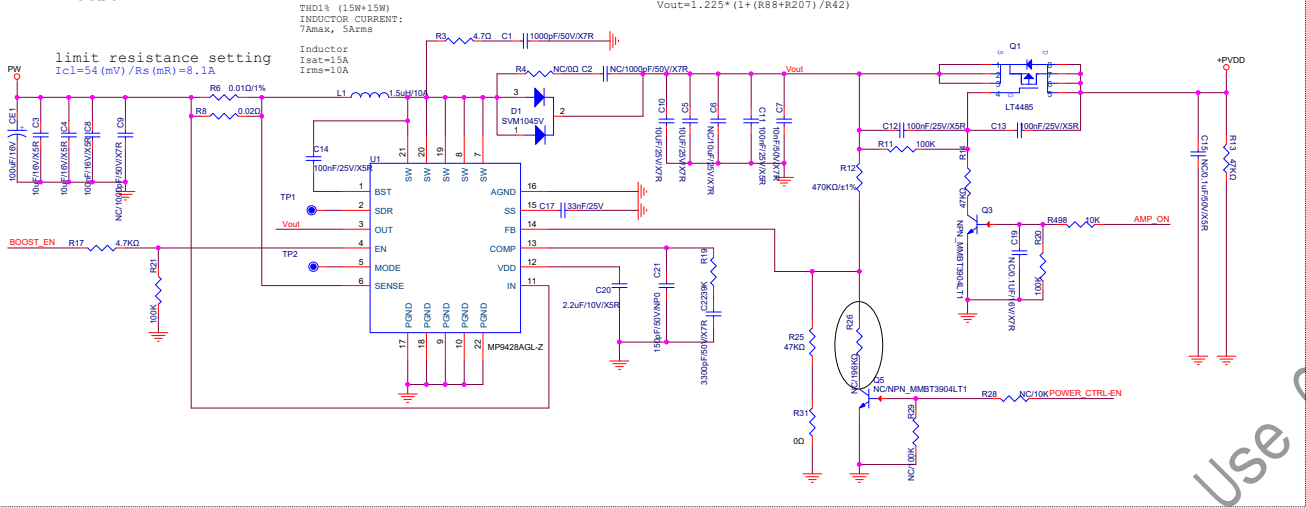
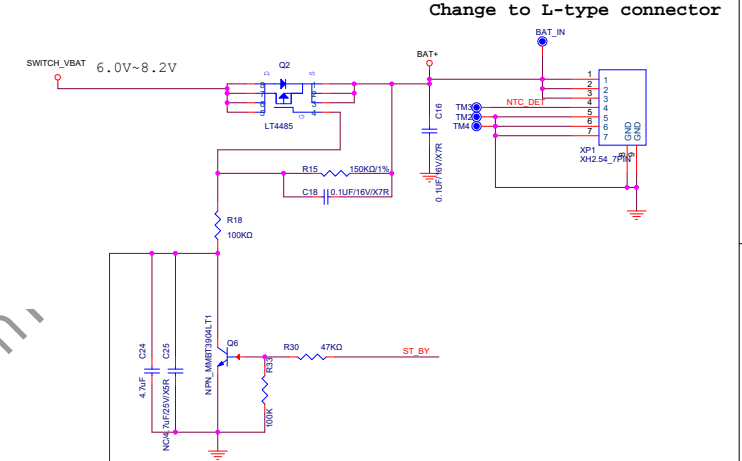


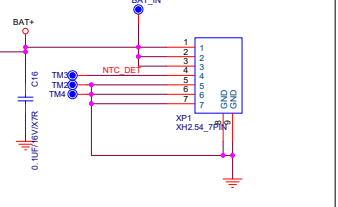
**FVDD Boost**



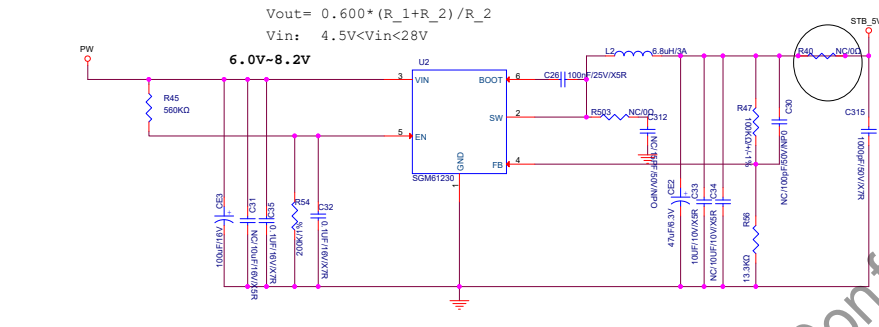
**BATTERY CONNECTION & POWER ON SWITCH**



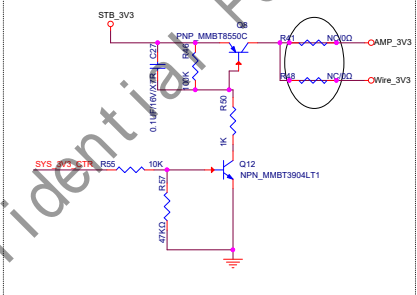
**Change to L-type connector**



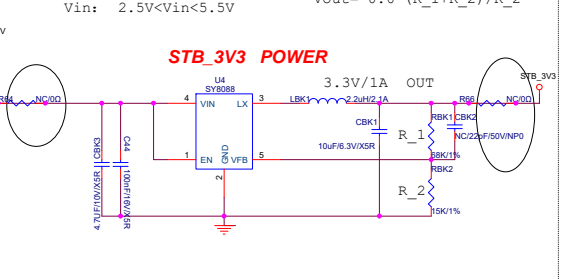
EN: 1.21V<=EN<5.5V  
Vout= 0.600\*(R\_1+R\_2)/R\_2  
Vin: 4.5V<Vin<28V



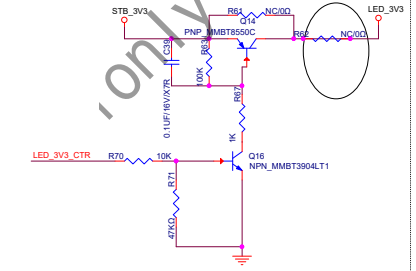
**POWER CONTROL AMP\_3.3V & WIRELESS 3V3**



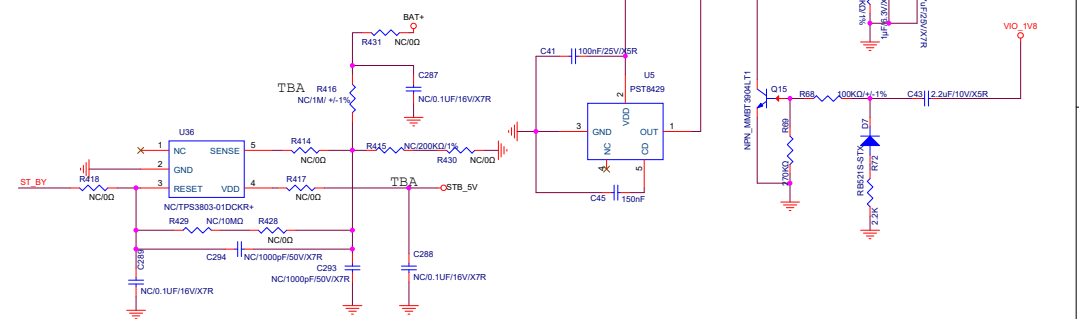
EN: 1.2V<=EN<6.6V  
Vout= 0.6\*(R\_1+R\_2)/R\_2  
Vin: 2.5V<Vin<5.5V



**POWER CONTROL 3.3V\_LED**



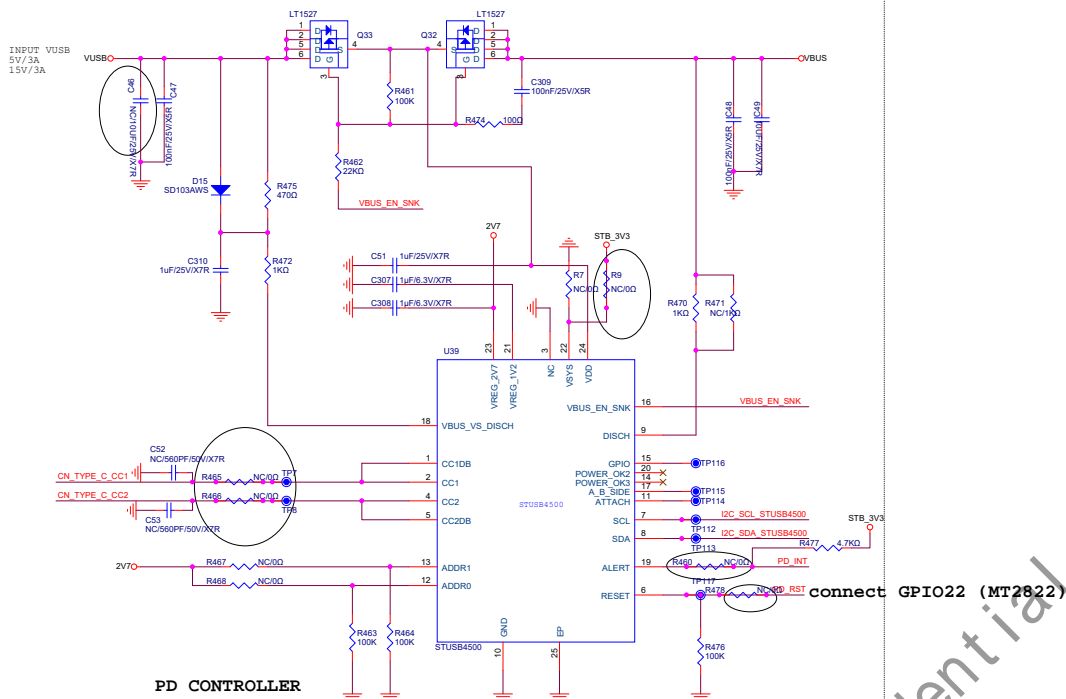
- POWER MANGEMENT**
- 7 POWER\_KEY\_DELAY >>> POWER\_KEY\_DELAY
  - 11 KEY\_POWER >>> KEY\_POWER
  - 4.7 POW\_ONOFF >>> POW\_ONOFF
  - 6.7 ST\_BY >>> ST\_BY
  - 10 BOOST\_EN >>> BOOST\_EN
  - 10 POWER\_CTRL-EN >>> POWER\_CTRL-EN
  - 7 LED\_3V3\_CTR >>> LED\_3V3\_CTR
  - 10 AMP\_ON >>> AMP\_ON
  - 7 SYS\_3V3\_CTR >>> SYS\_3V3\_CTR
  - 6 NTC\_DET >>> NTC\_DET



|  |  |   |   |
|--|--|---|---|
| <p>1. 满足SONY GP标准(SONY标志使用)</p> <p><input type="checkbox"/> 符合IEC60950-2005中规定的有害物质限制要求</p> <p><input type="checkbox"/> 符合RoHS指令要求</p> <p>2. 符合《中华人民共和国环境标志产品技术要求》的要求，符合下列：</p> <ul style="list-style-type: none"> <li>■ 满足RoHS2.0</li> <li>■ 满足RoHS4.0</li> <li>■ 满足CPS标准</li> <li>■ 满足无铅要求</li> <li>■ 不含有害重金属</li> </ul> |  | <p>Design: 田瑞</p> <p>Check: 谢振雄</p> <p>Approve:</p> | <p>Date: 2023-03-02</p> <p>Date: 2023-03-02</p> <p>Date: 2023-03-02</p> |
| <p>Model No: &lt;MB SPEAKER&gt;</p> <p>Title: 04_BOOST</p>   | <p>Sch Ver: 01GSN0MB-MA300U1E</p> <p>PCB Ver: &lt;&lt;40-XXXXXX-XXXXXX&gt;&gt;</p> | <p>Sheet: A2</p> <p>Page: 4</p> <p>Count: 14</p>    |   |

PD CONTROLLER - UFP mode

Need to confirm temperature

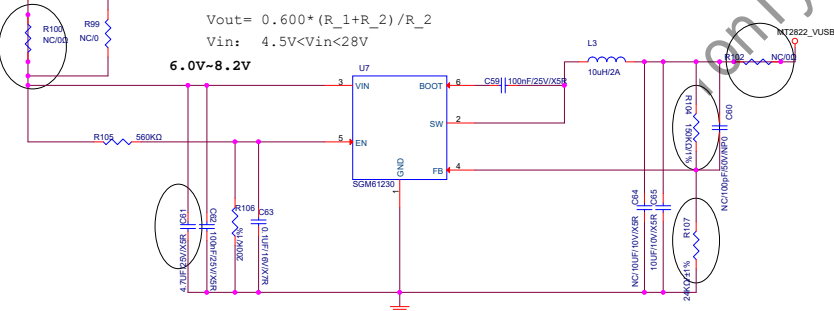


PD CONTROLLER

DC SUPPLY TO BALLET 2 VBUS

EN: 1.21V <= EN < 5.5V  
 $V_{out} = 0.600 * (R_{1+R_2}) / R_2$   
 Vin: 4.5V < Vin < 28V

need to recheck inductance & the whole DCDC



|                   |                   |        |
|-------------------|-------------------|--------|
| PD_INT            | <<< PD_INT        | 7      |
| PD_RST            | <<< PD_RST        | 7      |
| I2C_SDA_STUSB4500 | <<< I2C0_SDA      | 6,7,10 |
| I2C_SCL_STUSB4500 | <<< I2C0_SCL      | 6,7,10 |
| CN_TYPE_C_CC2     | <<< CN_TYPE_C_CC2 | 11     |
| CN_TYPE_C_CC1     | <<< CN_TYPE_C_CC1 | 11     |

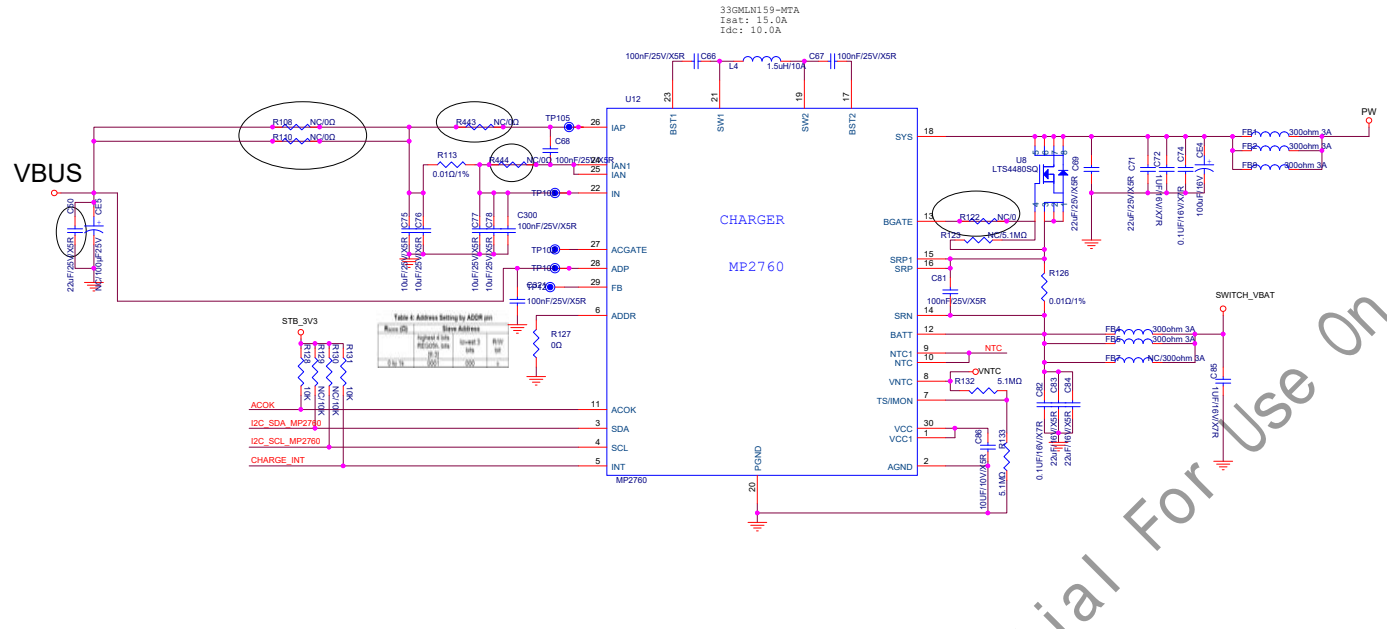
PD control IO

|                        |                           |                  |
|------------------------|---------------------------|------------------|
|                        | Design: 田刚*               | Date: 2022-03-02 |
|                        | Check: 谢振雄                | Date: 2022-03-02 |
| Approve:               | Date: 2022-03-02          |                  |
| Model No: <MB SPEAKER> | Sch Ver: 01GSN0MB-MA300认证 | Size: A2         |
| Title: 05 PD CTRL      | PCB Ver: <40-XXXXXX-XXXX> | Page: 5          |
|                        |                           | Count: 14        |

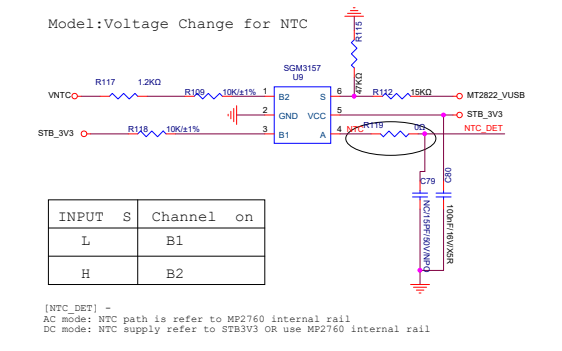
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BUCK-BOOST CHARGER

VIA hole quantity not enough, need to full check

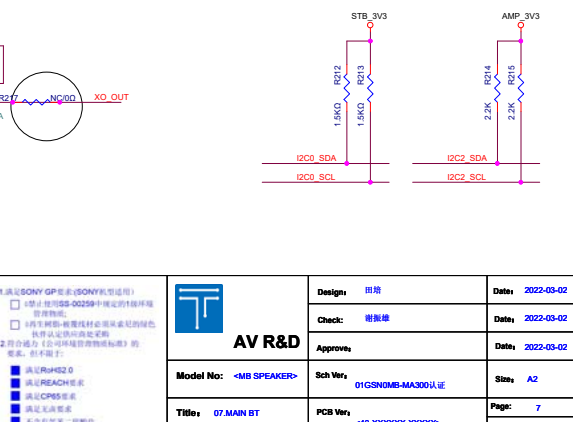
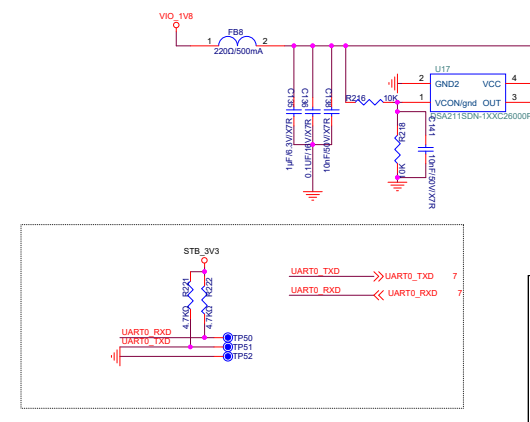
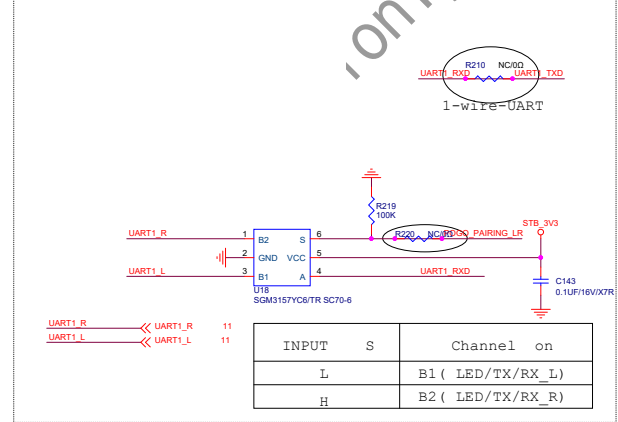
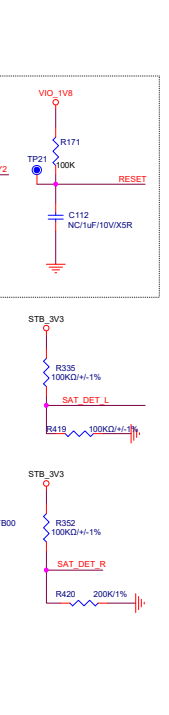
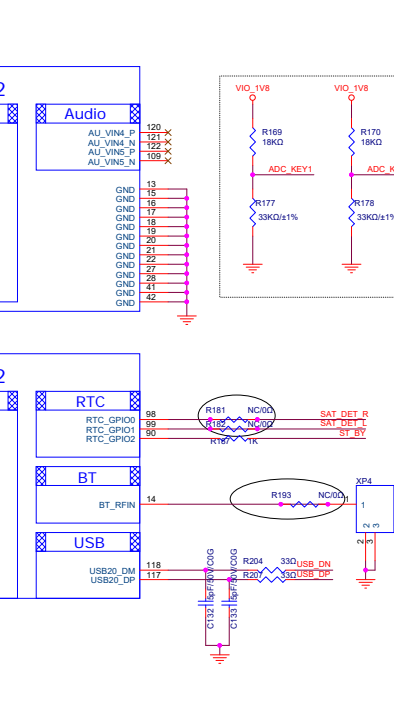
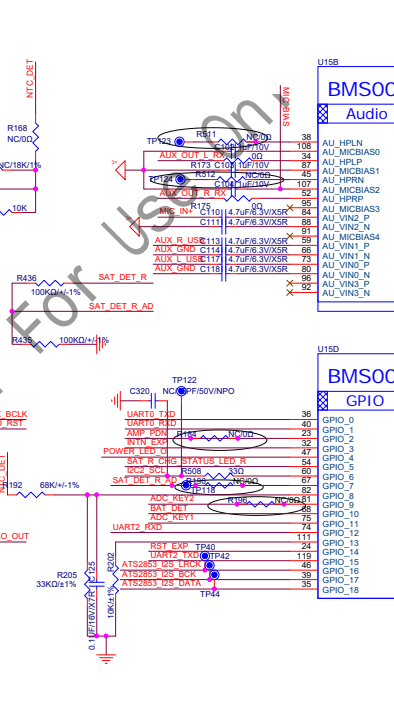
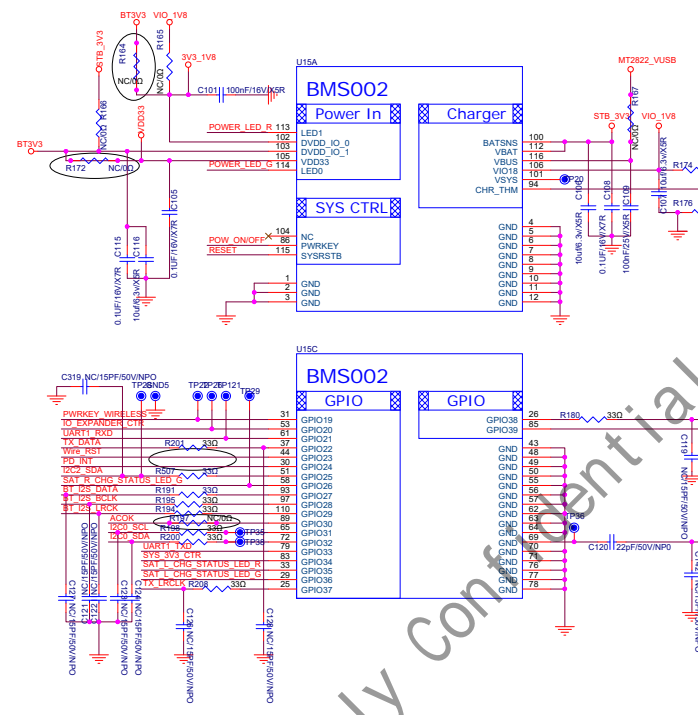
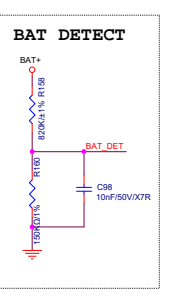
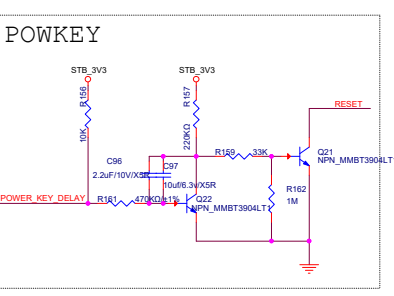
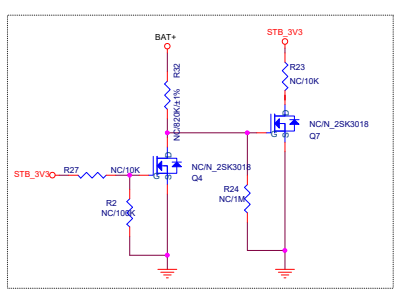
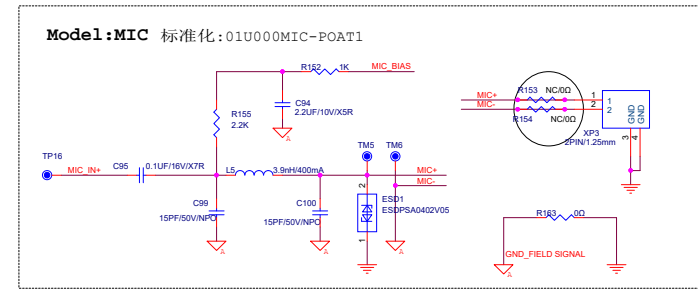
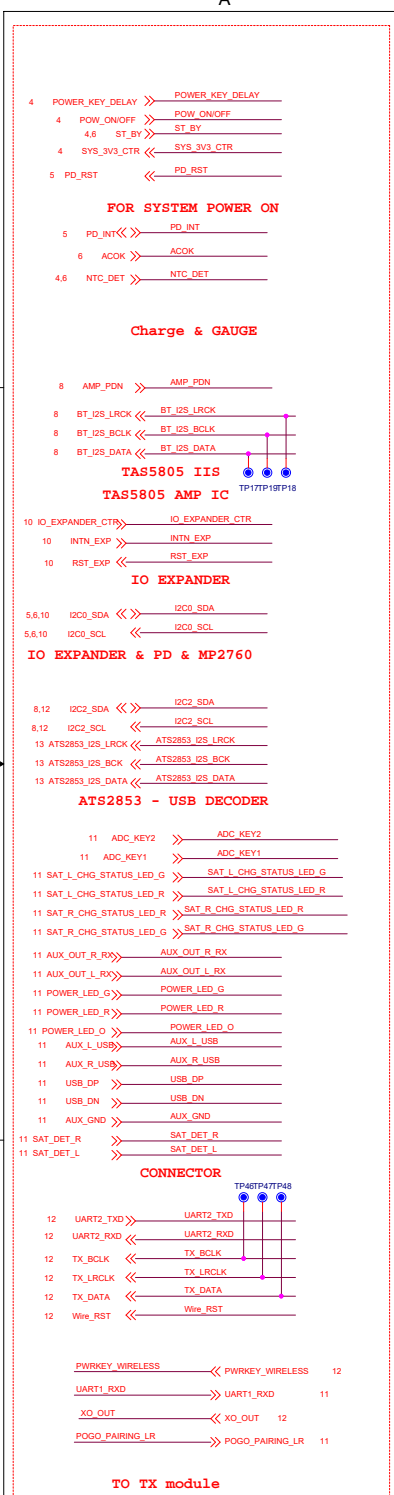


NTC VOLTAGE RAIL SELECTOR



- I2C\_SDA\_MP2760 R148 330Ω <<>> I2C0\_SDA 5.7.10
- I2C\_SCL\_MP2760 R149 330Ω <<>> I2C0\_SCL 5.7.10
- ST\_BY <<>> ST\_BY 4
- ACOK <<>> ACOK 7
- CHARGE\_INT <<>> CHARGE\_INT 6
- NTC\_DET <<>> NTC\_DET 4.7

|   |                             |            |                  |
|---|-----------------------------|------------|------------------|
| 1.满足SONY GP要求(SONY机型适用)<br><input type="checkbox"/> 符合内部SPE-00259中规定的特殊环境管理事项;<br><input type="checkbox"/> 符合特殊规格要求时必须满足规格书的要求, 特殊要求应在规格书中明确。<br>2.符合索尼《公司环境管理规格书》的要求, 如下所示:<br><input checked="" type="checkbox"/> 满足RoHS2.0<br><input checked="" type="checkbox"/> 满足REACH法规<br><input checked="" type="checkbox"/> 满足CPLP要求<br><input checked="" type="checkbox"/> 满足无卤要求<br><input checked="" type="checkbox"/> 不含有害第三类物质 |                             | Design: 田瑛 | Date: 2022-03-02 |
|   |                             | Check: 崔楠楠 | Date: 2022-03-02 |
| Model No: <MB SPEAKER>  | Sch Ver: 01G5N0MB-MA300认证   | Approve:   | Date: 2022-03-02 |
| Title: 06.CHARGER MAIN  | PCB Ver: <40-XXXXXX-XXXXXX> | Page: 6    | Count: 14        |



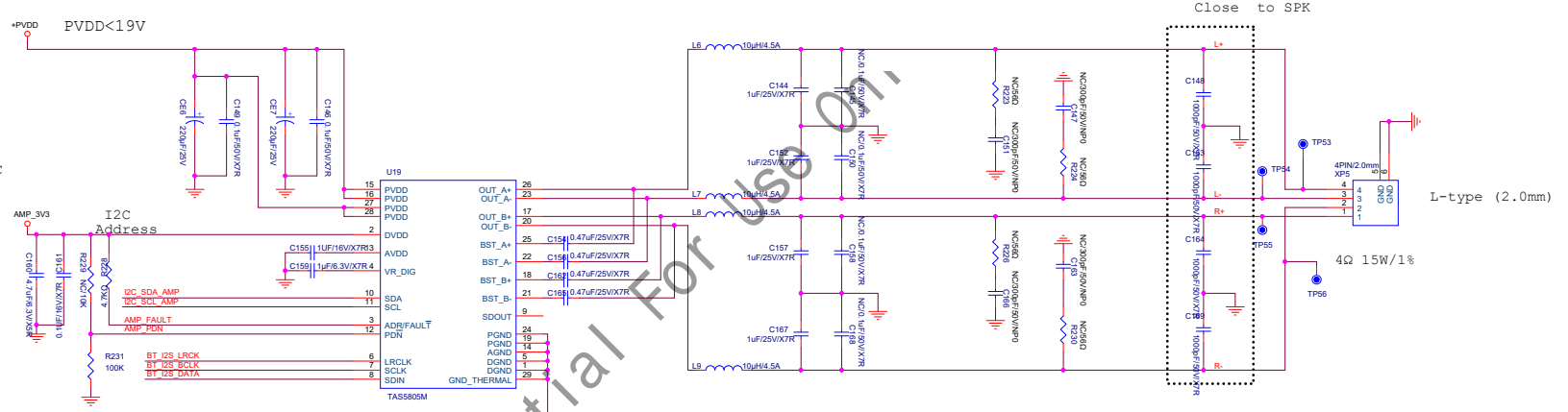
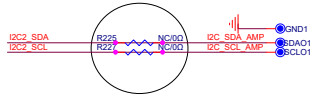
|  |                           |                        |                           |
|--|---------------------------|------------------------|---------------------------|
| <p>1. 请认准SONY GP标志 (SONY标志使用)<br/>         2. 请参照本图进行PCB设计, 并严格按照本图进行物料采购。<br/>         3. 请参照本图进行物料采购, 并严格按照本图进行物料采购。<br/>         4. 请参照本图进行物料采购, 并严格按照本图进行物料采购。</p> | <p><b>AV R&amp;D</b></p>  | Design: 田瑞             | Date: 2023-03-02          |
|  |                           | Check: 谢林林             | Date: 2023-03-02          |
|  |                           | Approve:               | Date: 2023-03-02          |
|  |                           | Model No: <MB SPEAKER> | Sch Ver: 01GSN0MB-MA300U1 |
| Title: 07_MAIN_BT  | PCB Ver: <40-XXXXXX-XXXX> | Page: 7                | Count: 14                 |

|      |             |    |             |
|------|-------------|----|-------------|
| 10   | AMP_FAULT   | << | AMP_FAULT   |
| 10   | AMP_PDN     | >> | AMP_PDN     |
| 7    | BT_I2S_LRCK | >> | BT_I2S_LRCK |
| 7    | BT_I2S_BCLK | >> | BT_I2S_BCLK |
| 7    | BT_I2S_DATA | >> | BT_I2S_DATA |
| 7,12 | I2C2_SDA    | << | I2C2_SDA    |
| 7,12 | I2C2_SCL    | >> | I2C2_SCL    |

**AMP I2S & I2C**

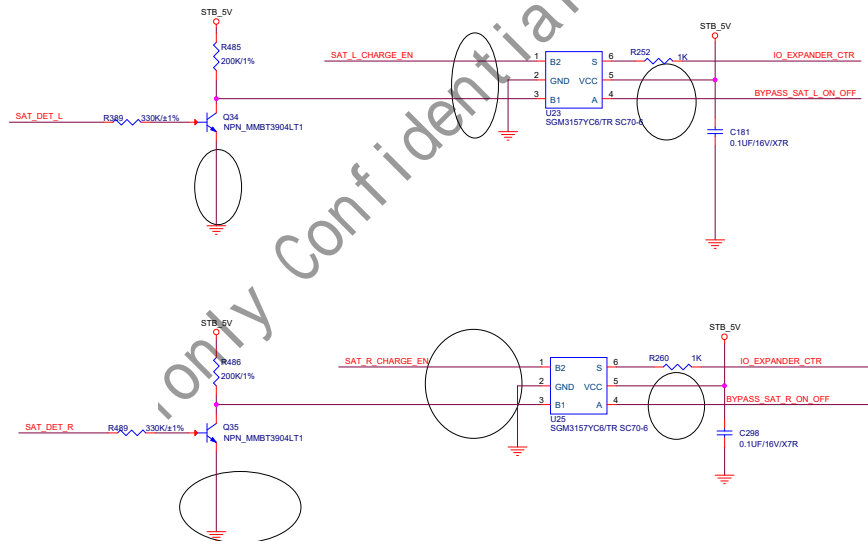
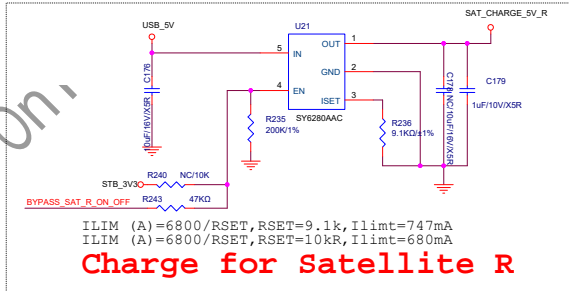
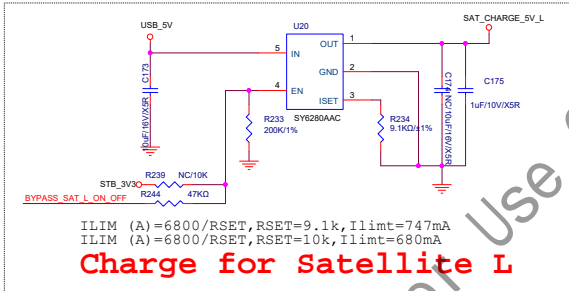
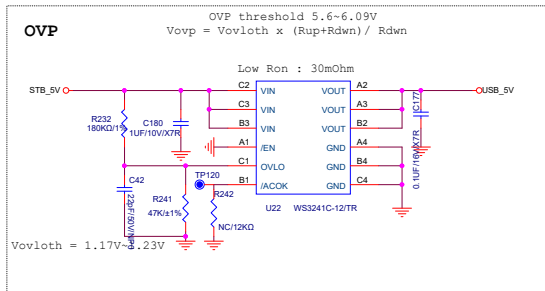
TAS5805 PULL-UP RES, I2C address (7 BIT) :  
 4.7K, 0101100=2C  
 15K, 0101101=2D  
 47K, 0101110=2E

I2C ADDRESS=0x2C  
 max speed=400k



'only Confidential For Use On'

|   |                               |                        |                           |
|---|-------------------------------|------------------------|---------------------------|
| 1.满足SONY GP要求 (SONY机型适用)<br><input type="checkbox"/> 符合索尼2025年中规定的环境管理要求<br><input type="checkbox"/> 符合索尼2025年中规定的有害物质限制要求<br>2.符合索尼《公司环境管理标准》的要求, 如下:<br><input checked="" type="checkbox"/> 满足RoHS2.0<br><input checked="" type="checkbox"/> 满足REACH<br><input checked="" type="checkbox"/> 满足CPL<br><input checked="" type="checkbox"/> 满足无卤素<br><input checked="" type="checkbox"/> 不含有害重金属 |                               | Design: 田瑛             | Date: 2022-03-02          |
|   |                               | Check: 梅振雄             | Date: 2022-03-02          |
|   |                               | Approve:               | Date: 2022-03-02          |
|   |                               | Model No: <MB SPEAKER> | Sch Ver: 01G5N0MB-MA300认证 |
| Title: 08_AMP   | PCB Ver: <<40-XXXXXX-XXXXXX>> | Page: 8                | Count: 14                 |



10.11 SAT\_R\_CHARGE\_EN <<< SAT\_R CHARGE\_EN  
 10.11 SAT\_L\_CHARGE\_EN <<< SAT\_L CHARGE\_EN  
**For Pogo PIN interface**

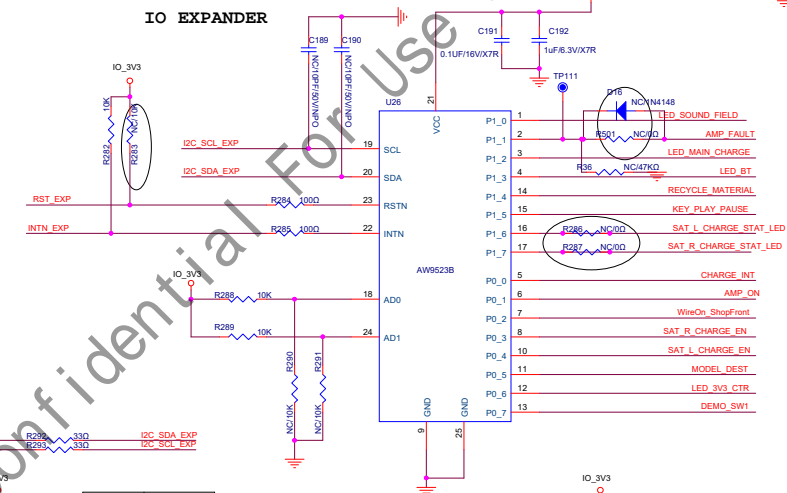
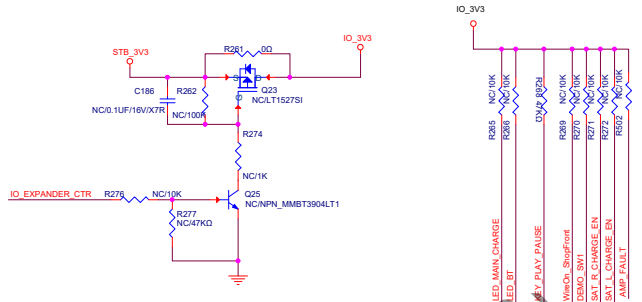
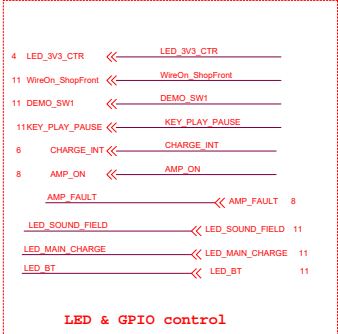
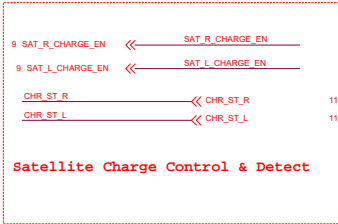
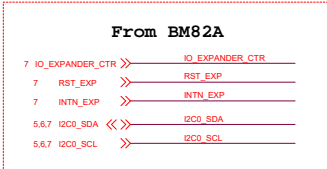
10.11 IO\_EXPANDER\_CTR <<< IO\_EXPANDER\_CTR  
 10.11 SAT\_DET\_R <<< SAT\_DET\_R  
 10.11 SAT\_DET\_L <<< SAT\_DET\_L

| INPUT |         | CHANNEL ON    |
|-------|---------|---------------|
| S     | SAT_DET |               |
| L     | L       | B1            |
| H     | L       | B2 (OUTPUT H) |
| H     | H       | B2 (OUTPUT L) |

SGM3157 SPDT WITH DIGITAL SELECT (S)

- 满足SONY GP要求(SONY机型适用)
  - 符合JEDEC 93-0259中规定的环保管理要求;
  - 符合RoHS指令要求; 特殊用途的环保要求, 特殊用途的环保要求
- 符合通用《公司环保管理标准》的要求, 如下:
  - 满足RoHS2.0
  - 满足REACH要求
  - 满足CMMS要求
  - 满足无铅要求
  - 不含有害第三类物质

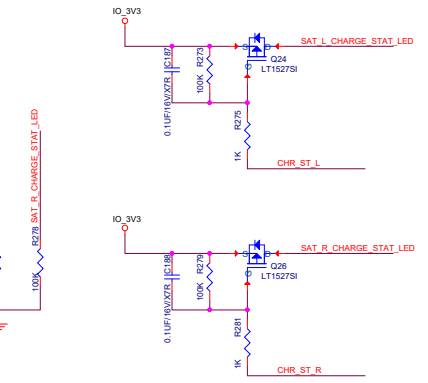
|                            |                          |                  |
|----------------------------|--------------------------|------------------|
|                            | Design: 田博               | Date: 2022-03-02 |
|                            | Check: 梅振雄               | Date: 2022-03-02 |
| Model No: 09.CHARGER       | Approve:                 | Date: 2022-03-02 |
| Sch Ver: 01G5N0MB-MA3001   | Sch Ver: 01G5N0MB-MA3001 | Site: A2         |
| Title: 09.CHARGE_SATELLITE | Page: 9                  | Count: 14        |



| TYPE1          | TYPE2      |
|----------------|------------|
| NON US VERSION | US VERSION |
| 0              | 1          |

DEFAULT BEFORE IIC INITIALIZE  
 ADO, AD1 = PULL-UP  
 P1\_0~P1\_7 = "HIGH"  
 P0\_0~P0\_7 = "HI-Z"

| TYPE1            | TYPE2 |
|------------------|-------|
| RECYCLE MATERIAL |       |
| 0                | 1     |



P1\_0 ~ P1\_4 = LED driver  
 P1\_5~P1\_7, P0\_7 = GPIO control

1. 满足SONY GP要求 (SONY机型适用)
- 设计阶段: 2022年中完成设计物料管理数据
  - 设计阶段: 物料清单时必须满足物料清单, 物料清单必须包含物料清单
2. 符合索尼《公司环境管理指南》的要求, 如下所示:
- 满足RoHS2.0
  - 满足REACH要求
  - 满足CMMS要求
  - 满足无卤要求
  - 不含有害第三类物质



Model No: <MB SPEAKER>  
 Title: IO EXPANDER

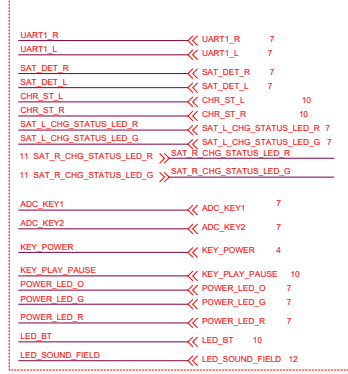
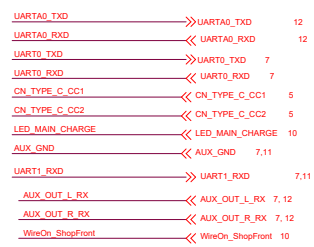
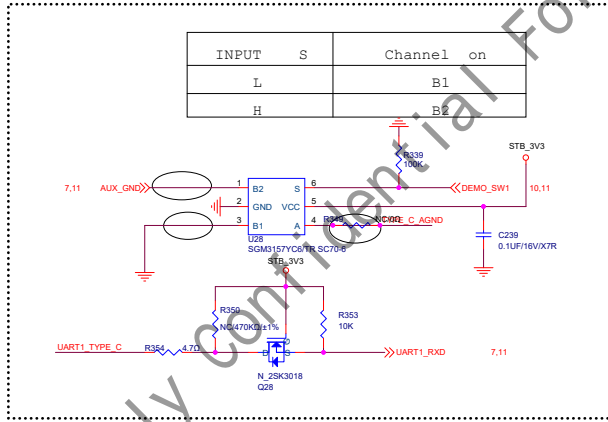
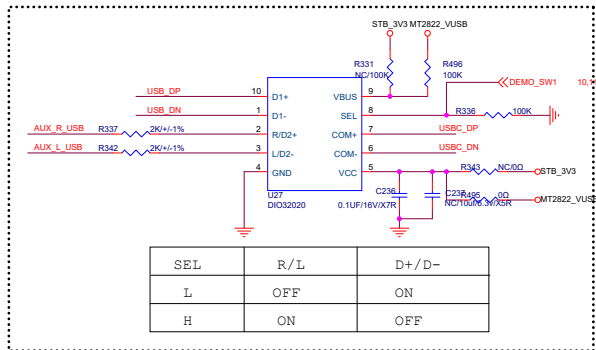
|                               |                  |
|-------------------------------|------------------|
| Design: 田瑛                    | Date: 2022-03-02 |
| Check: 梅福雄                    | Date: 2022-03-02 |
| Approve:                      | Date: 2022-03-02 |
| Sch Ver: 01G5N0MB-MA300U12    | Site: A2         |
| PCB Ver: <<40-XXXXXX-XXXXXX>> | Page: 10         |
| Count: 14                     |                  |

10P 1.5mm Connect to TYPE C USB PWB sleep type

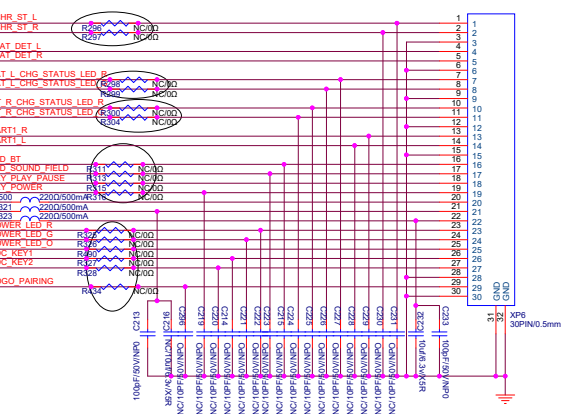
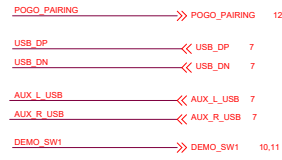
20P FFC 0.5mm Connect to TYPE C USB PWB sleep type

10P 1.5mm Connect to KEY PWB sleep type

30P FFC 0.5mm Connect to KEY BOARD sleep type



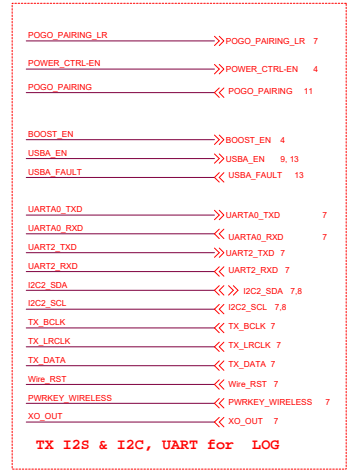
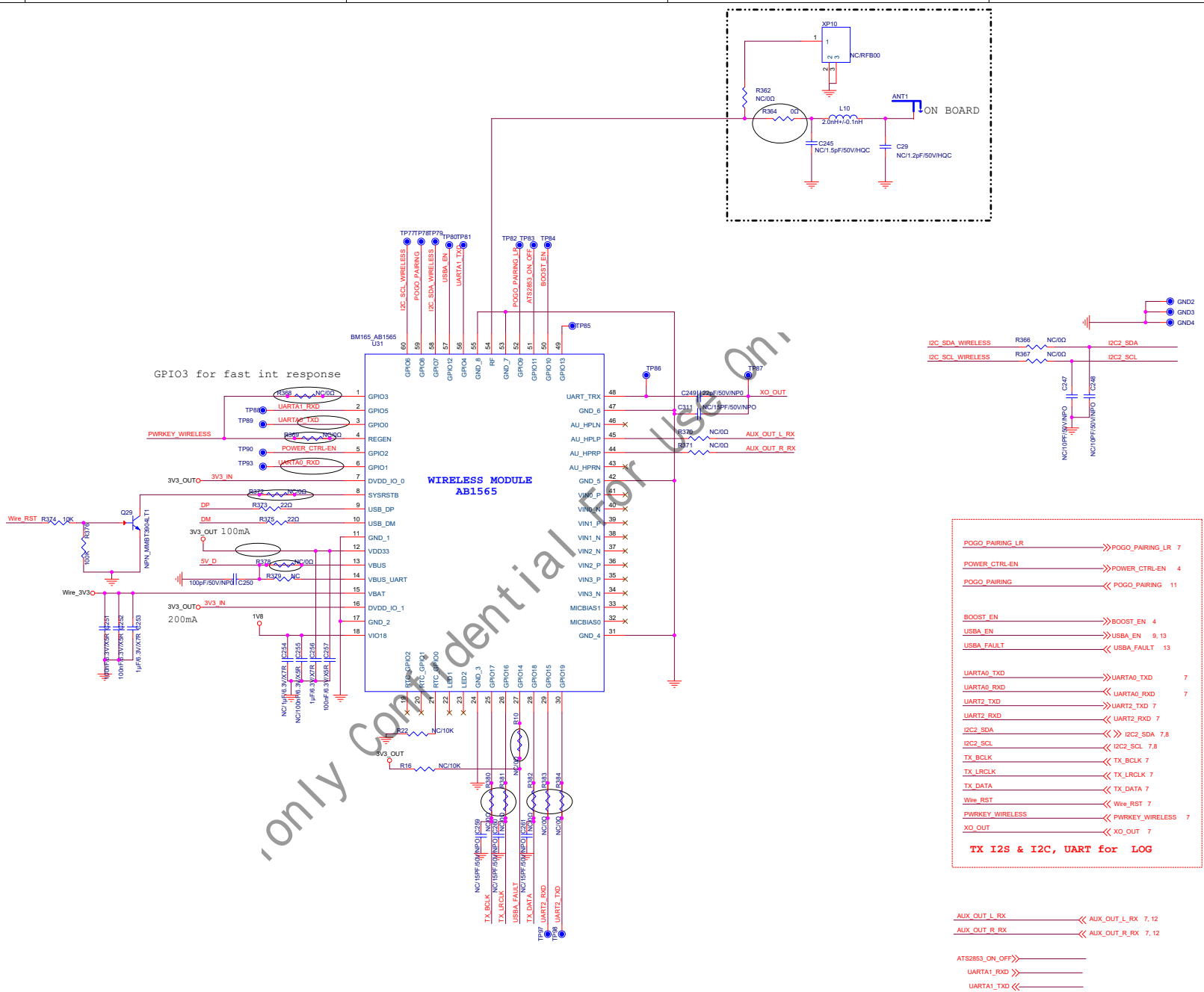
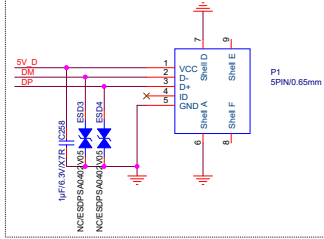
TO 40 PIN FFC CONNECTOR



|                               |  |            |                  |
|-------------------------------|--|------------|------------------|
|                               |  | Design: 田瑛 | Date: 2022-03-02 |
| Model No: <MB SPEAKER>        |  | Check: 梅梅梅 | Date: 2023-03-02 |
| Title: 11.KEY AND CONNECT     |  | Approve:   | Date: 2023-03-02 |
| Sch Ver: 01GSNIMB-MA3001UE    |  | Page: 11   | Count: 14        |
| PCB Ver: <<40-XXXXXX-XXXXXX>> |  |            |                  |

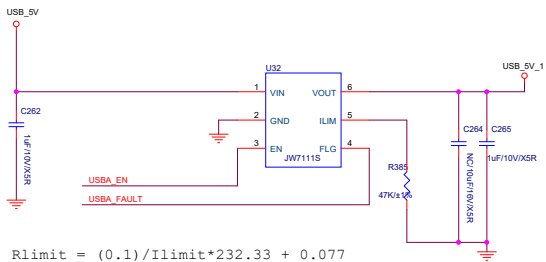
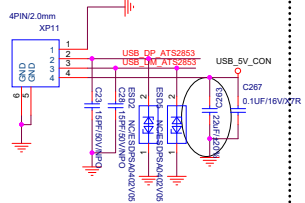


**AB1565 DEBUG&UPDATE**



|   |                            |            |                  |
|---|----------------------------|------------|------------------|
| <input type="checkbox"/> 满足SONY GP相关要求(SONY机型适用)<br><input type="checkbox"/> 4层板(即:2025年中规划定制板材料管理物料)<br><input type="checkbox"/> 1.0mm厚铜箔-铜覆层时必须满足足厚铜箔, 特殊表面处理要求<br>2.符合华为《全球环境有害物质标准》的要求, 即不满足: |                            | Design: 田琦 | Date: 2022-03-02 |
| <input type="checkbox"/> 满足RoHS2.0<br><input type="checkbox"/> 满足REACH要求<br><input type="checkbox"/> 满足CMR6要求<br><input type="checkbox"/> 满足无卤要求<br><input type="checkbox"/> 不含有害第二级物质            |                            | Check: 谢振雄 | Date: 2023-03-02 |
| Model No: <4MB SPEAKER>   | Sch Ver: 01G5SN0MB-MA300认证 | Approve:   | Date: 2023-03-02 |
| Title: 12.WIRELESS  | PCB Ver: <40-XXXXXX-XXXXX> | Sheet: A2  | Page: 12         |
|   |                            | Count: 14  |                  |

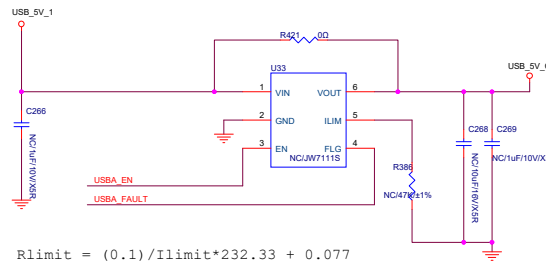
To USB\_A PWB



$$R_{limit} = (0.1) / I_{limit} * 232.33 + 0.077$$

$$I_{limit} : 0.571A \text{ (temporary)}$$

**USB CURRENT LIMIT  
FOR IEC-62368-3rd**

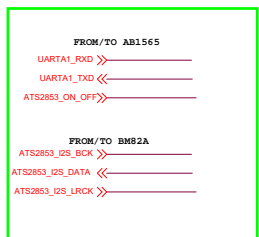


$$R_{limit} = (0.1) / I_{limit} * 232.33 + 0.077$$

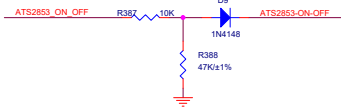
$$I_{limit} : 0.571A \text{ (temporary)}$$

**USB CURRENT LIMIT  
FOR IEC-62368-3rd**

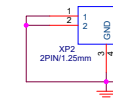
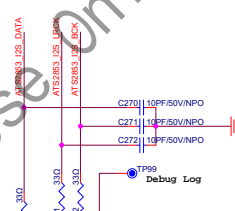
USB\_A\_EN << USB\_A\_EN 13  
USB\_A\_FAULT << USB\_A\_FAULT 13



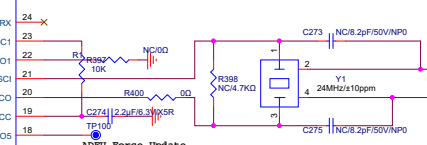
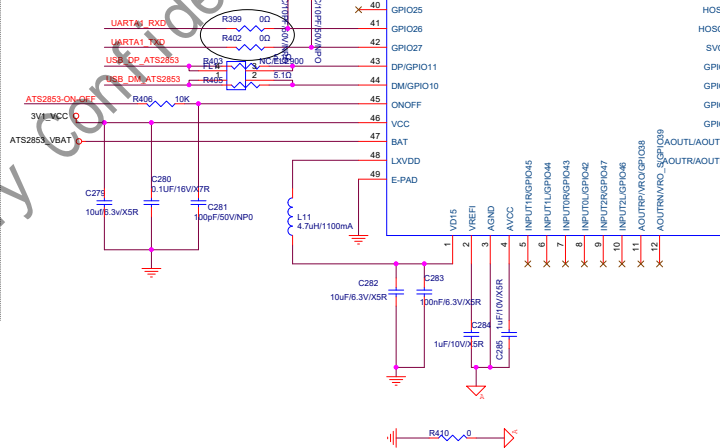
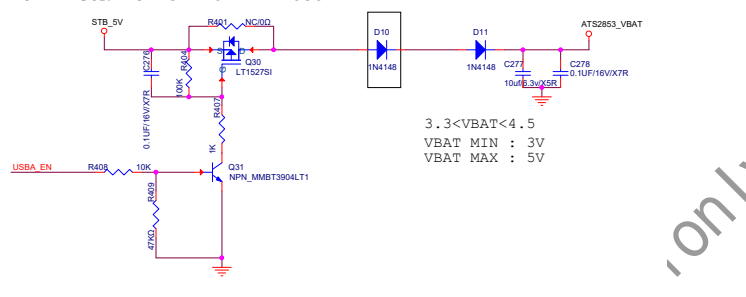
**USB DECODER ATS2853**



To BM82A



**POWER CONTROL 5V for ATS2853**



|   |                                   |   |   |
|---|-----------------------------------|---|---|
| <p>1. 满足SONY GP要求 (SONY机型适用)</p> <p><input type="checkbox"/> 增加防静电ESD-30259中规定的防静电措施</p> <p><input type="checkbox"/> 防静电措施-静电释放时必须满足防静电措施</p> <p>2. 符合IEC62368-3rd (IEC62368-3rd) 的要求，即不满足：</p> <ul style="list-style-type: none"> <li>满足R4H42.0</li> <li>满足R4H42.1</li> <li>满足R4H42.2</li> <li>满足R4H42.3</li> <li>满足R4H42.4</li> <li>满足R4H42.5</li> <li>满足R4H42.6</li> <li>满足R4H42.7</li> <li>满足R4H42.8</li> <li>满足R4H42.9</li> <li>满足R4H42.10</li> <li>满足R4H42.11</li> <li>满足R4H42.12</li> <li>满足R4H42.13</li> <li>满足R4H42.14</li> <li>满足R4H42.15</li> <li>满足R4H42.16</li> <li>满足R4H42.17</li> <li>满足R4H42.18</li> <li>满足R4H42.19</li> <li>满足R4H42.20</li> <li>满足R4H42.21</li> <li>满足R4H42.22</li> <li>满足R4H42.23</li> <li>满足R4H42.24</li> <li>满足R4H42.25</li> <li>满足R4H42.26</li> <li>满足R4H42.27</li> <li>满足R4H42.28</li> <li>满足R4H42.29</li> <li>满足R4H42.30</li> <li>满足R4H42.31</li> <li>满足R4H42.32</li> <li>满足R4H42.33</li> <li>满足R4H42.34</li> <li>满足R4H42.35</li> <li>满足R4H42.36</li> <li>满足R4H42.37</li> <li>满足R4H42.38</li> <li>满足R4H42.39</li> <li>满足R4H42.40</li> <li>满足R4H42.41</li> <li>满足R4H42.42</li> <li>满足R4H42.43</li> <li>满足R4H42.44</li> <li>满足R4H42.45</li> <li>满足R4H42.46</li> <li>满足R4H42.47</li> <li>满足R4H42.48</li> <li>满足R4H42.49</li> <li>满足R4H42.50</li> <li>满足R4H42.51</li> <li>满足R4H42.52</li> <li>满足R4H42.53</li> <li>满足R4H42.54</li> <li>满足R4H42.55</li> <li>满足R4H42.56</li> <li>满足R4H42.57</li> <li>满足R4H42.58</li> <li>满足R4H42.59</li> <li>满足R4H42.60</li> <li>满足R4H42.61</li> <li>满足R4H42.62</li> <li>满足R4H42.63</li> <li>满足R4H42.64</li> <li>满足R4H42.65</li> <li>满足R4H42.66</li> <li>满足R4H42.67</li> <li>满足R4H42.68</li> <li>满足R4H42.69</li> <li>满足R4H42.70</li> <li>满足R4H42.71</li> <li>满足R4H42.72</li> <li>满足R4H42.73</li> <li>满足R4H42.74</li> <li>满足R4H42.75</li> <li>满足R4H42.76</li> <li>满足R4H42.77</li> <li>满足R4H42.78</li> <li>满足R4H42.79</li> <li>满足R4H42.80</li> <li>满足R4H42.81</li> <li>满足R4H42.82</li> <li>满足R4H42.83</li> <li>满足R4H42.84</li> <li>满足R4H42.85</li> <li>满足R4H42.86</li> <li>满足R4H42.87</li> <li>满足R4H42.88</li> <li>满足R4H42.89</li> <li>满足R4H42.90</li> <li>满足R4H42.91</li> <li>满足R4H42.92</li> <li>满足R4H42.93</li> <li>满足R4H42.94</li> <li>满足R4H42.95</li> <li>满足R4H42.96</li> <li>满足R4H42.97</li> <li>满足R4H42.98</li> <li>满足R4H42.99</li> <li>满足R4H42.100</li> </ul> |                                   | <p>Design: 田琦</p> <p>Check: 谢维维</p> <p>Approve:</p> | <p>Date: 2022-03-02</p> <p>Date: 2022-03-02</p> <p>Date: 2022-03-02</p> |
| <p>Model No: &lt;MB SPEAKER&gt;</p> <p>Title: 13_USB_DECODER_ATS2853 Ver: &lt;&lt;40-XXXXXX-XXXXXX&gt;&gt;</p>  | <p>Sch Ver: 01G5N0MB-MA3001.0</p> | <p>Site: A2</p> <p>Page: 13</p> <p>Count: 14</p>    |   |