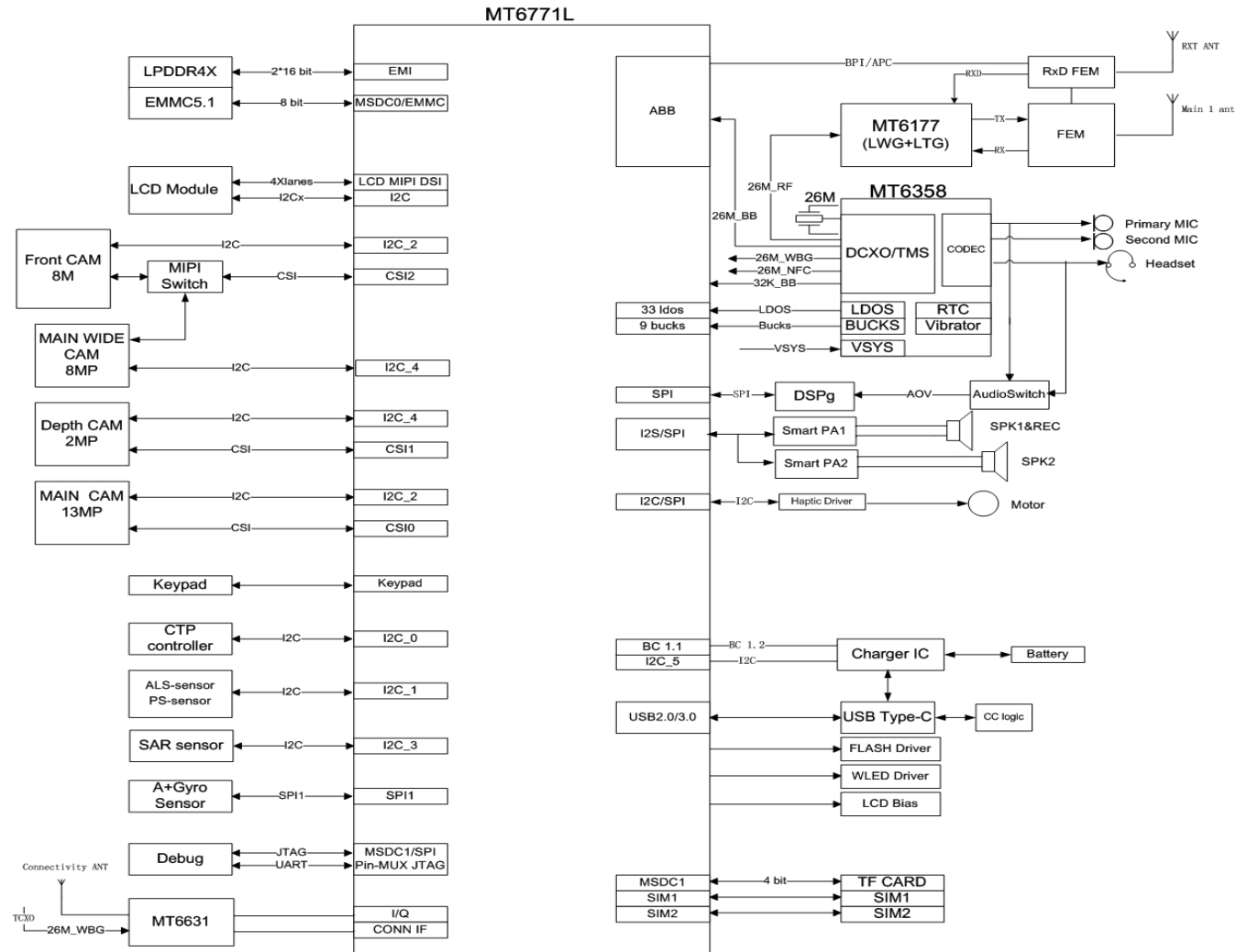


# Riga L System Function Block Diagram



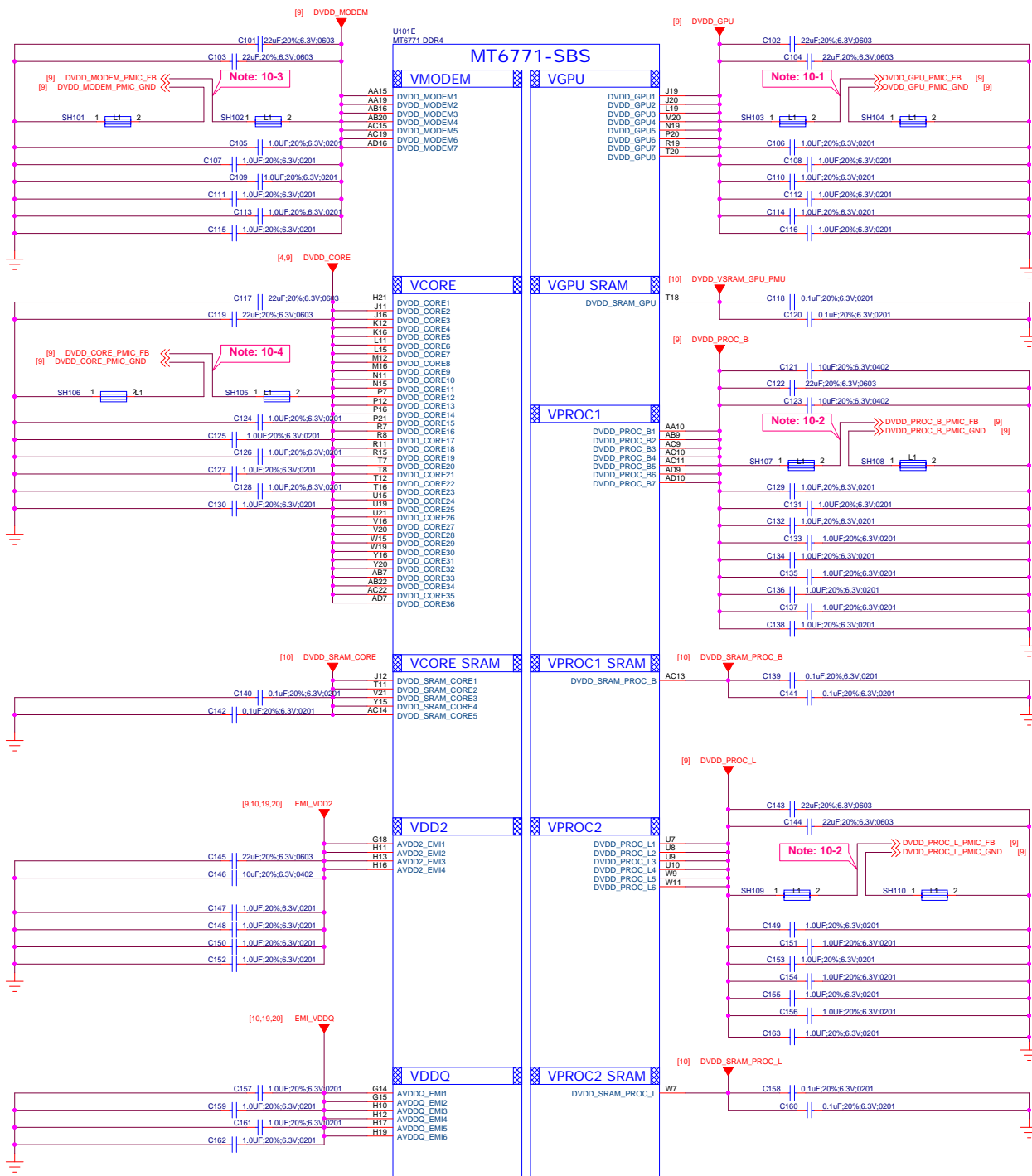
| I2C         | AP, SCP, SSPM | Function             | I2C Spec. | Budget Timing | I2C Address   |
|-------------|---------------|----------------------|-----------|---------------|---|
| I2C-0       | AP            | CTP                  | 400 Kbps  | Yes.          | ILI9881H I2C address: Write:0xAA, Read:0xAB   |
| I2C-1(I3C)  | AP ,SCP       | ALS and P Sensor     | 400 Kbps  | Yes.          | TMD27504 I2C Address : Write: 0x92, Read: 0x93<br>MNS8406DKDN I2C Address : Write: 0x82, Read: 0x83 |
|             |               | Ambient Light Sensor | 400 Kbps  | Yes.          | TSL2560 I2C address: (Write:0x72, Read:0x73<br>MN26005UKDN I2C address: Write:0x92, Read:0x93       |
|             |               |                      |           |               |   |
| I2C-2 (I3C) | AP            | Front Camera - 8M    | 400 Kbps  | Yes.          | S5K4H7YX03-FGX9 I2C address: Write:0x20, Read:0x21  |
|             |               | Main Camera - 13M    | 400 Kbps  | Yes.          | S5K3L6XX03-FGX9 I2C address: Write:0x5A, Read:0x5B  |
| I2C-3       | AP            | HAPTIC DRIVER        | 400K bps  | Yes.          | DRV2624 I2C address: Write:0xB4, Read:0xB5<br>AW8624 I2C address: Write:0xB4, Read:0xB5             |
|             |               | Sar Sensor           | 400K bps  | Yes.          | A96T346DFP I2C address: Write:0x40, Read:0x41   |
|             |               | Smart PA1            | 400K bps  | Yes.          | TAS2563 I2C address: Write:0x9A, Read:0x9B  |
|             |               | Smart PA2            | 400K bps  | Yes.          | TAS2563 I2C address: Write:0x9C, Read:0x9D  |
| I2C-4 (I3C) | AP            | Wide Camera - 8M     | 400 Kbps  | Yes.          | S5K4H7YX03-FGX9 I2C address: Write:0x20, Read:0x21  |
|             |               | Depth Camera - 2M    | 400 Kbps  | Yes.          | OV02A10-GA4A I2C address: Write:0x7A, Read:0x7B   |
| I2C-5       | SSPM          | Charger              | 400 Kbps  | Yes.          | RT9471D I2C address: Write:0xA6, Read:0xA7  |
|             |               | CC Logic             | 400 Kbps  | Yes.          | TUSB320 I2C address: Write:0x8E, Read:0x8F<br>RT1711 address: Write:0x9C, Read:0x9D                 |
|             |               | LCD Bias             | 400 Kbps  | Yes.          | SMS109 I2C address: Write:0x7C, Read:0x7D<br>OCP2131 I2C address: Write:0x7C, Read:0x7D             |

Note : I2C Spec. : Standard mode (100 kbps) and Fast mode (400 kbps), Fast mode Plus (1 Mbps) and High-speed mode (3.4 Mbps)

SPI

SPI List

|      | GPIO                  | Device      | Device IC | IC供应商      |
|------|-----------------------|-------------|-----------|------------|
| SPI0 | GPIO[85;86;87;88]     | Fingerprint | FPC1510A  |            |
|      |                       |             | /         | /          |
| SPI1 | GPIO[161;162;163;164] | A+G         | ICM-40607 | INVENSENSE |
|      |                       |             | BMI160    | BOSCH      |
| SPI2 | GPIO[0;1;2;94]        | LCM         | ILI9881H  | ILITEC     |
| SPI3 | GPIO[21;22;23;24]     | CODEC(DSP)  | DBMD4     | DSPG       |
| SPI4 | GPIO[4;5;6;7]         |             |           |            |

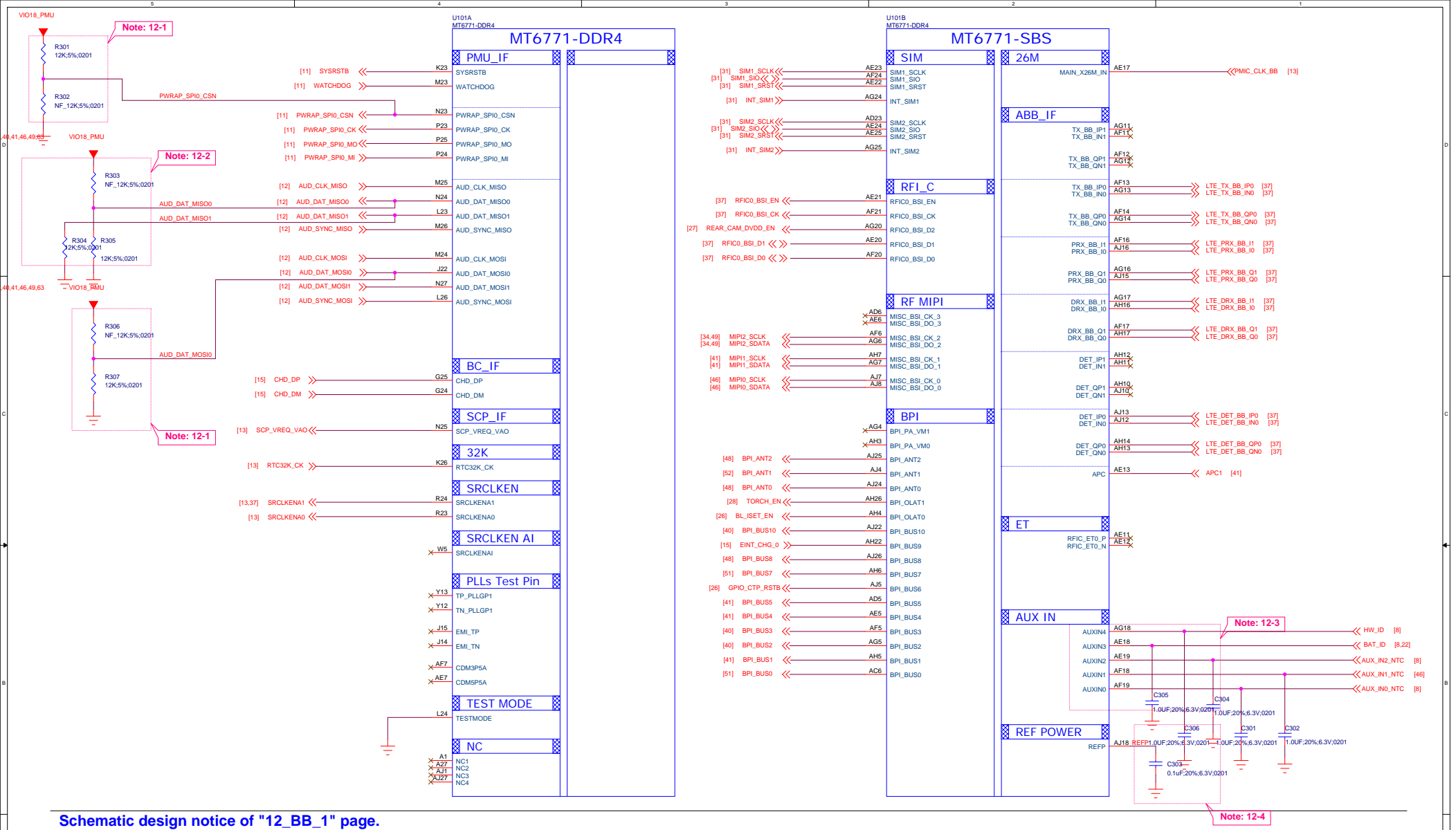


## Schematic design notice of "10\_BB\_POWER\_PDN" page.

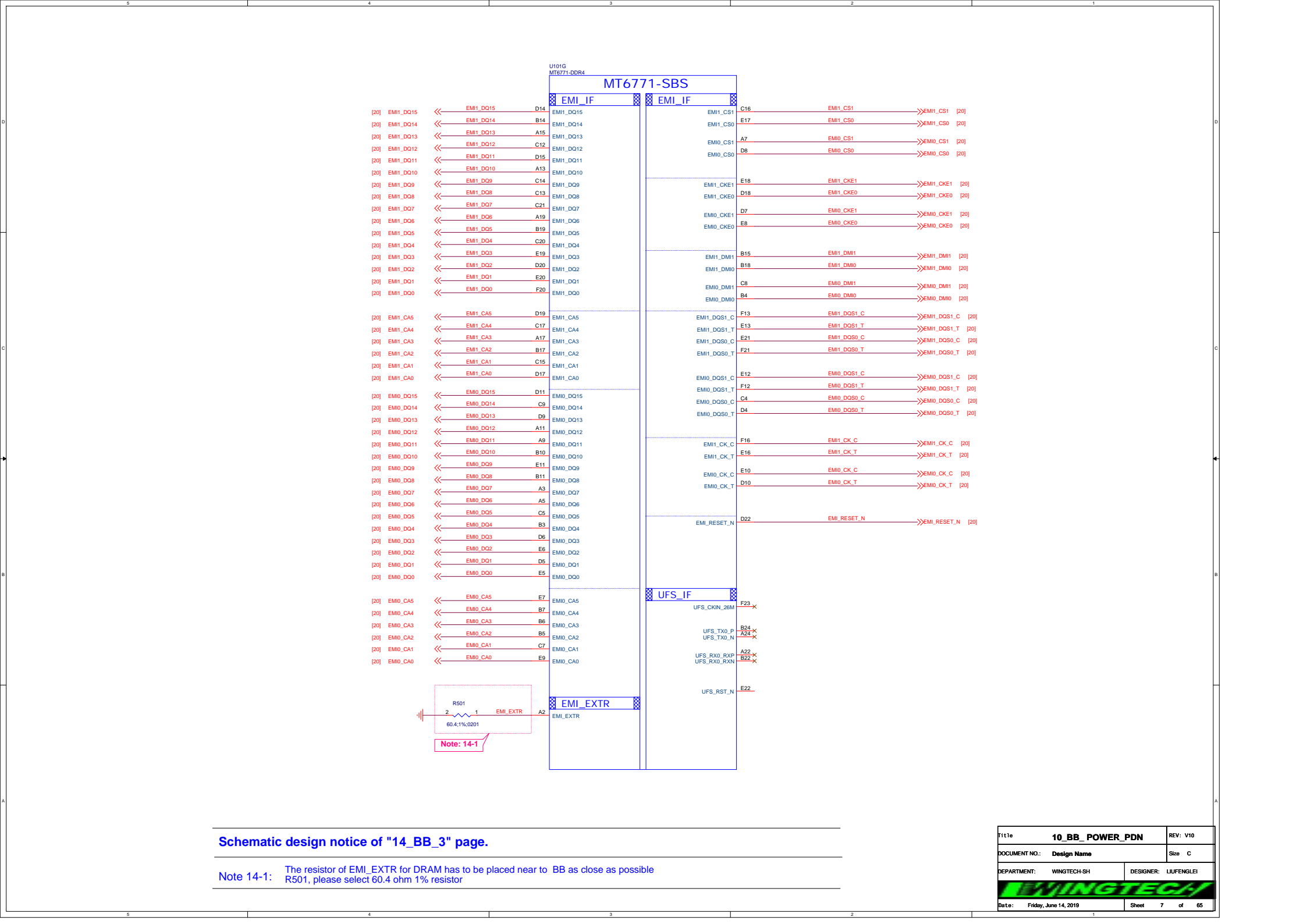
- Note 10-1:** Differential pair of DVDD\_GPU remote sense must be close to BB's ball.  
Remote sense trace with GND shielding to PMIC (Differential)
- Note 10-2:** Differential pair of DVDD\_PROC remote sense must be close to BB's ball.  
Remote sense trace with GND shielding to PMIC (Differential)
- Note 10-3:** Differential pair of DVDD\_MODEM remote sense must be close to BB's ball.  
Remote sense trace with GND shielding to PMIC (Differential)
- Note 10-4:** Differential pair of DVDD\_CORE remote sense must be close to BB's ball.  
Remote sense trace with GND shielding to PMIC (Differential)

|   |                        |                      |
|---|------------------------|----------------------|
| Title   | <b>01_BB_POWER_PDN</b> | REV: V10             |
| DOCUMENT NO.:   | Design Name            | Size C               |
| DEPARTMENT:   | WINGTECH-SH            | DESIGNER: LIUFENGLEI |
|  |                        |                      |
| Date:   | Friday, June 14, 2019  | Sheet 3 of 65        |









[4,5,6,10,12,15,17,19,21,23,25,26,28,29,30,31,33,34,37,40,41,46,49,63]

VIO18\_PMU

BOADR ID 1

[5] HW\_ID

[5] AUX\_IN2\_NTC

[5] AUX\_IN0\_NTC

R603  
NF\_10K;5%;0201

RT603  
0.0.5A;0201

AUX\_IN2\_NTC

AUX\_IN0\_NTC

Thermistor to sense charger  
temperature

R601  
390K;1%;0201

RT601  
100K;1%;0402

R602  
390K;1%;0201

RT602  
100K;1%;0402

Thermistor to sense AP  
temperature

1. RT602 must keep a distance about 6~8 mm away from AP and far from other heat sources 10 mm at least.
2. The distance is the shortest distance from package edge to edge.


FOR BOADR ID 2

R605  
NF\_390K;1%;0201

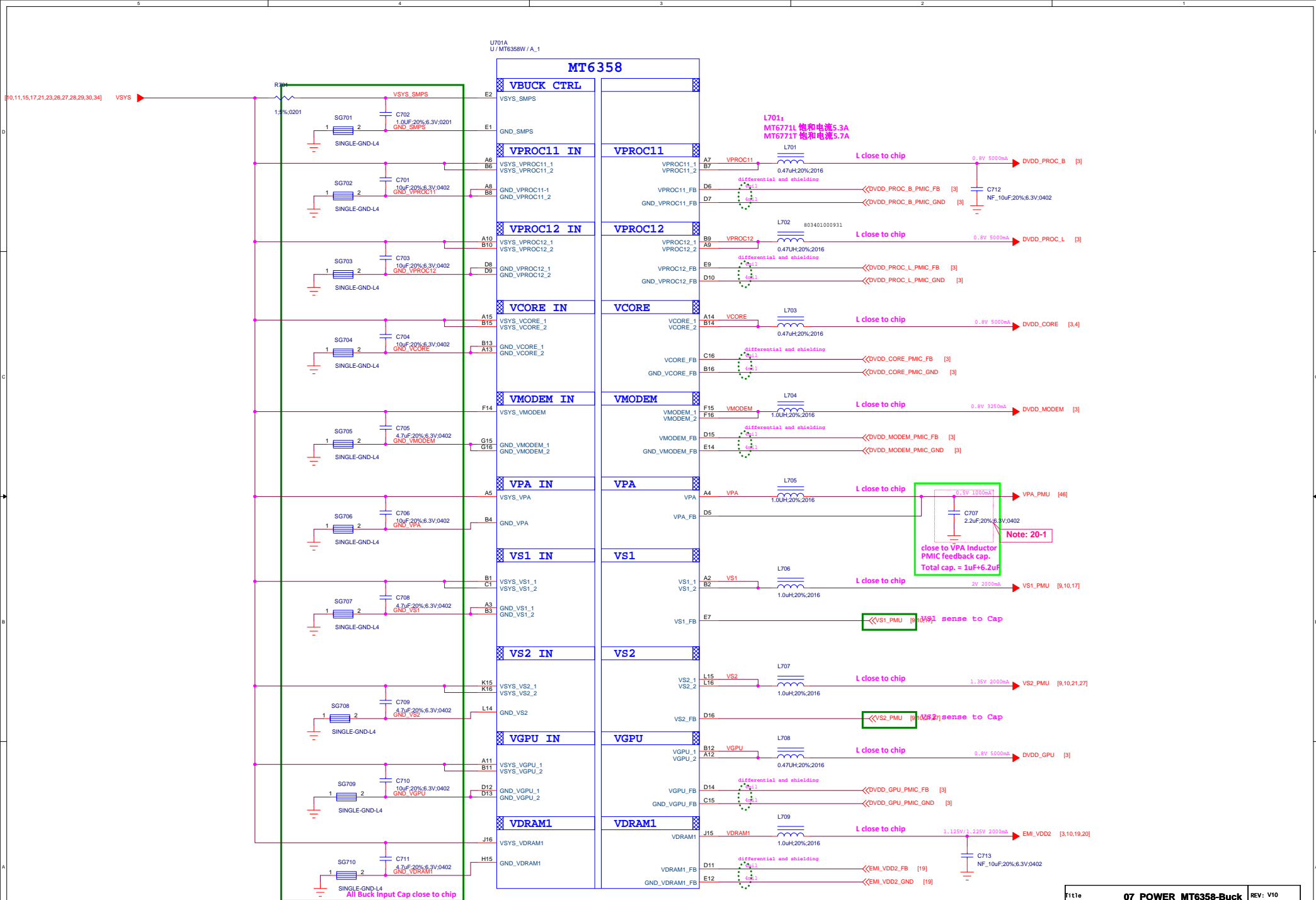
R604  
0.0.5A;0201

1. IF used for battery ID, R604 NC, R605=390K
2. IF unused, R604=0 R, R605 NC

BAT\_ID [5,22]


|   |                       |                      |
|---|-----------------------|----------------------|
| Title   | 06_BB_AUXADC_Thermal  | REV: V10             |
| DOCUMENT NO.:   | Design Name           | Size C               |
| DEPARTMENT:   | WINGTECH-SH           | DESIGNER: LIUFENGLEI |
|  |                       |                      |
| Date:   | Friday, June 14, 2019 | Sheet 8 of 65        |

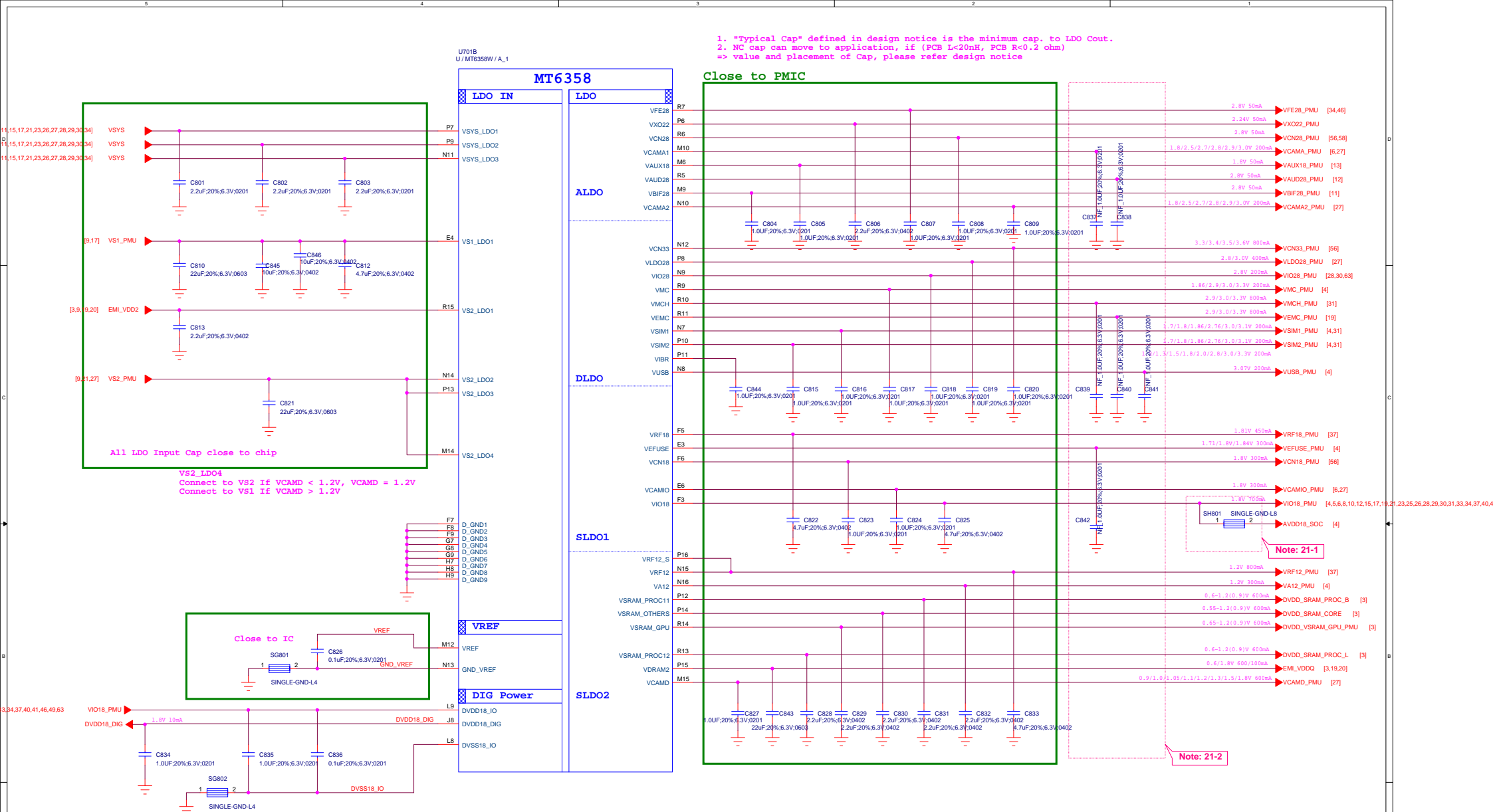




Schematic design notice of "20\_POWER\_MT6358-Buck" page.

Note 20-1: Please select C707 with 0402 size


|   |         |                      |
|---|---------|----------------------|
| File <b>07_POWER_MT6358-Buck</b>  |         | REV: V10             |
| DOCUMENT NO.: <b>Design Name</b>  |         | Size C               |
| DEPARTMENT: WINGTECH-SH   |         | DESIGNER: LIUFENGLEI |
|  |         |                      |
| Date: Friday, June 14, 2019   | Sheet 9 | of 65                |

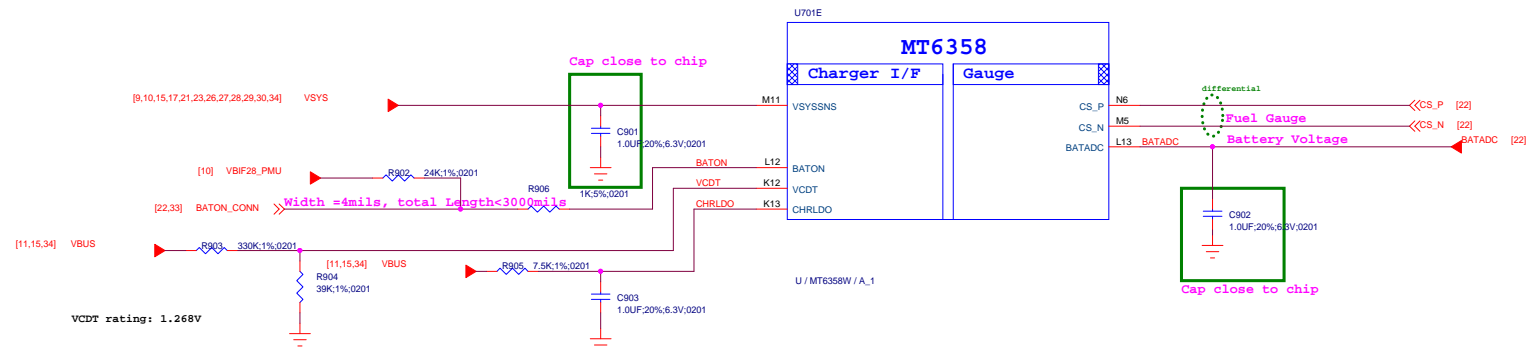
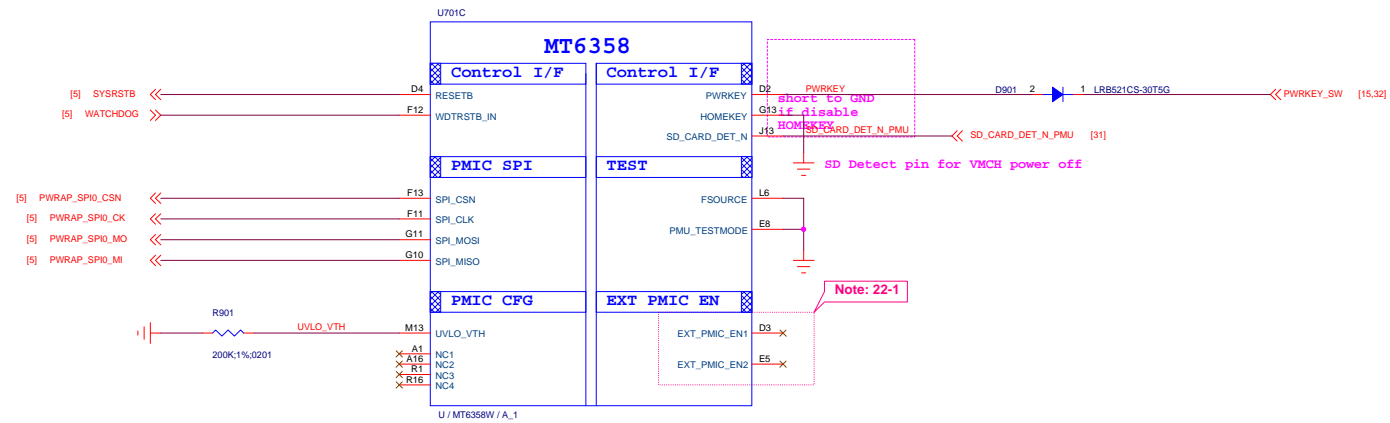


## Schematic design notice of "21\_POWER\_MT6358-LDO" page.

Note 21-1: Please set SH801 close to C825, making star connection between VIO18\_PMU and AVDD18\_SOC near to LDO cap. C825  
 Please also refer to MT6358 design notice for further detail design information

Note 21-2: If these power trace can meet LDO layout constraint, these CAP can be NC or removed.  
 Please refer to MT6358 design notice.

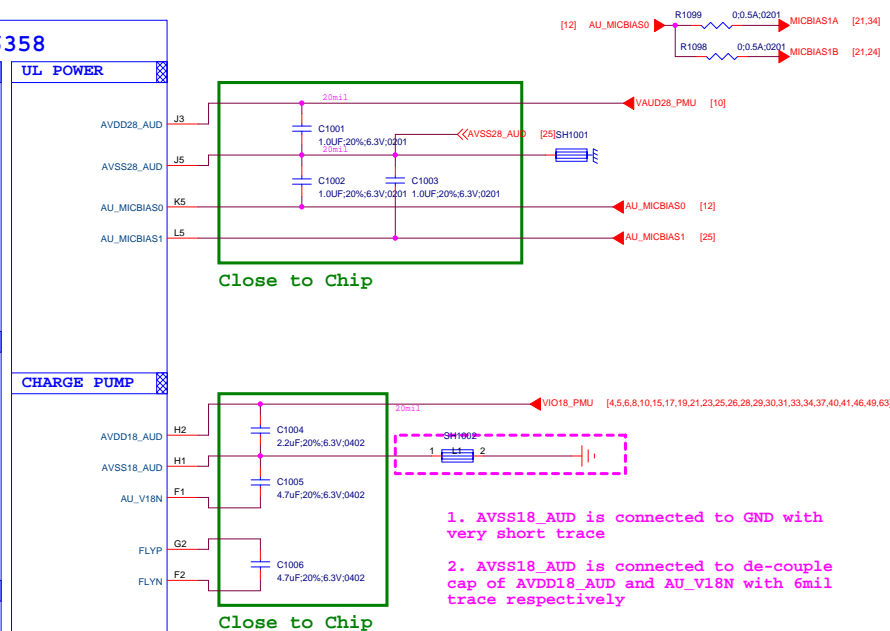
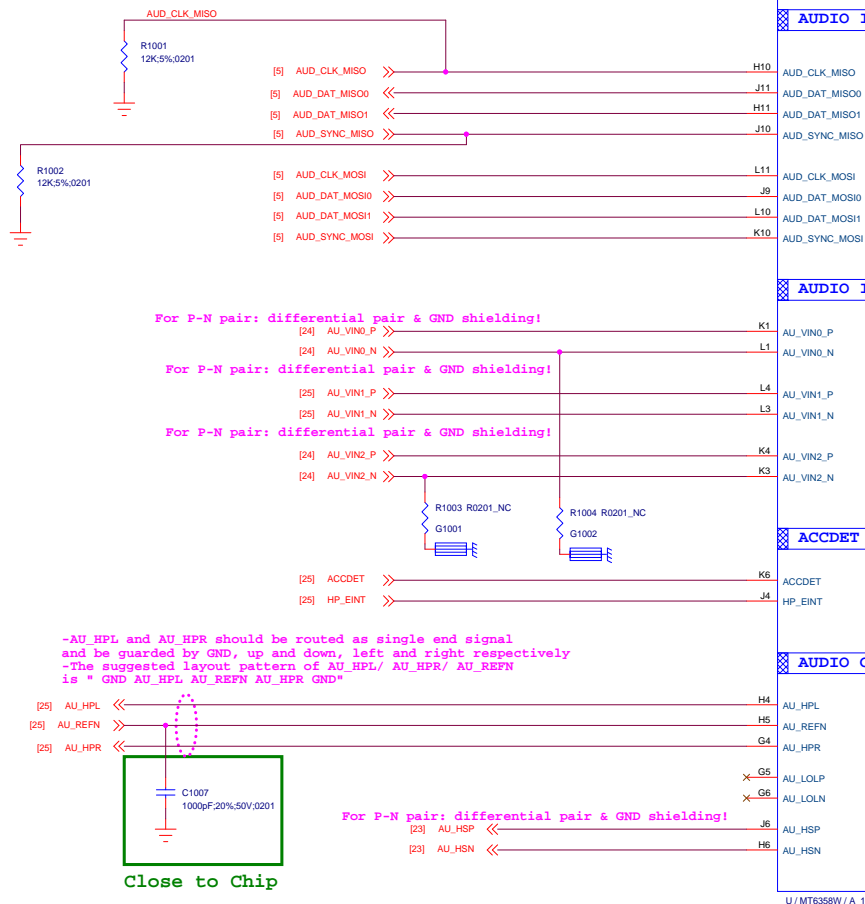
|   |  |                     |                      |          |
|---|--|---------------------|----------------------|----------|
| Title   |  | 08_POWER_MT6358-LDO | REV: V10             |          |
| DOCUMENT NO.: Design Name   |  |                     | Size C               |          |
| DEPARTMENT: WINGTECH-SH   |  |                     | DESIGNER: LIUFENGLEI |          |
|  |  |                     |                      |          |
| Date: Friday, June 14, 2019   |  |                     | Sheet                | 10 of 65 |



## Schematic design notice of "22\_POWER\_MT6358-General"

Note 22-1: EXT\_PMIC\_EN1 : For UFS\_1V8, and keep floating if it is not used  
EXT\_PMIC\_EN2 : For VA09 of SSUSB/UFS, and keep floating if it is not used


|               |                         |                      |
|---------------|-------------------------|----------------------|
| Title         | 09_POWER_MT6358-General | REV: V10             |
| DOCUMENT NO.: | Design Name             | Size C               |
| DEPARTMENT:   | WINGTECH-SH             | DESIGNER: LIUFENGLEI |
| Date:         | Friday, June 14, 2019   | Sheet 11 of 65       |

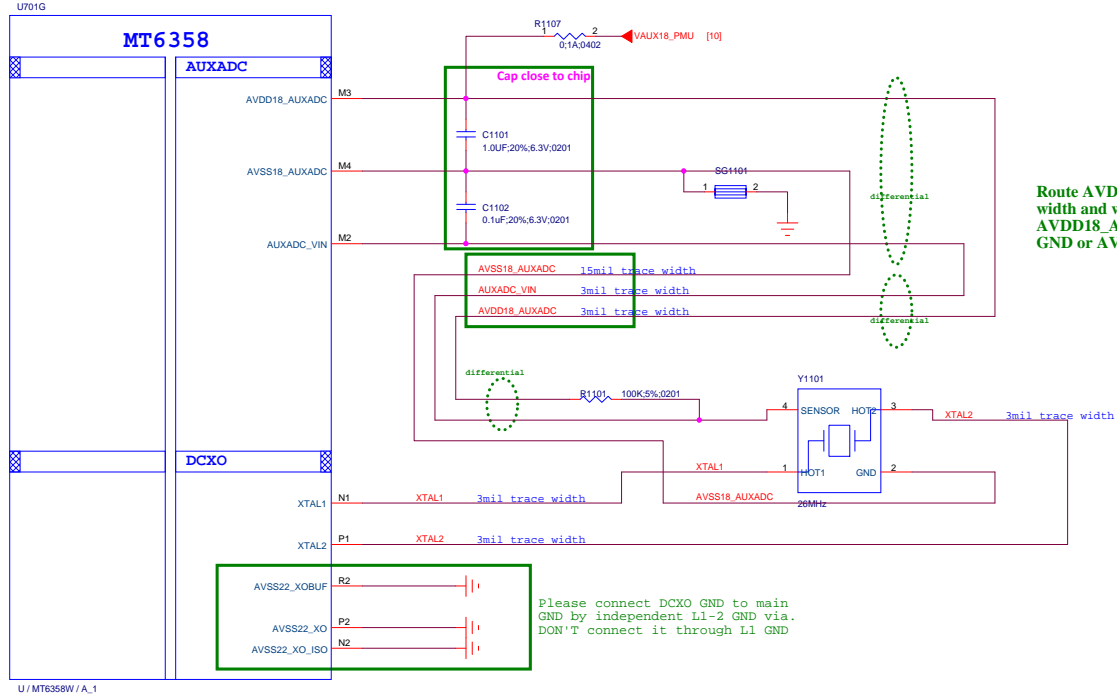


**Schematic design notice of "23\_POWER\_MT6358-Audio"**

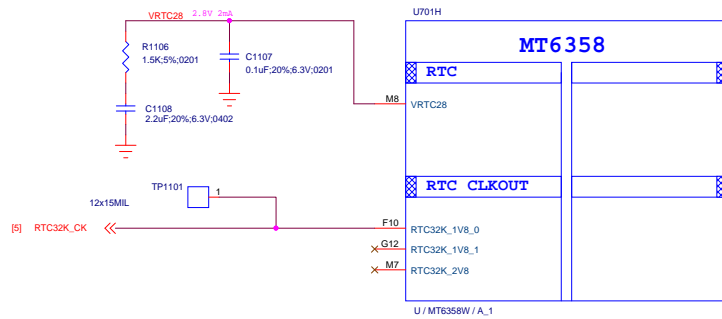
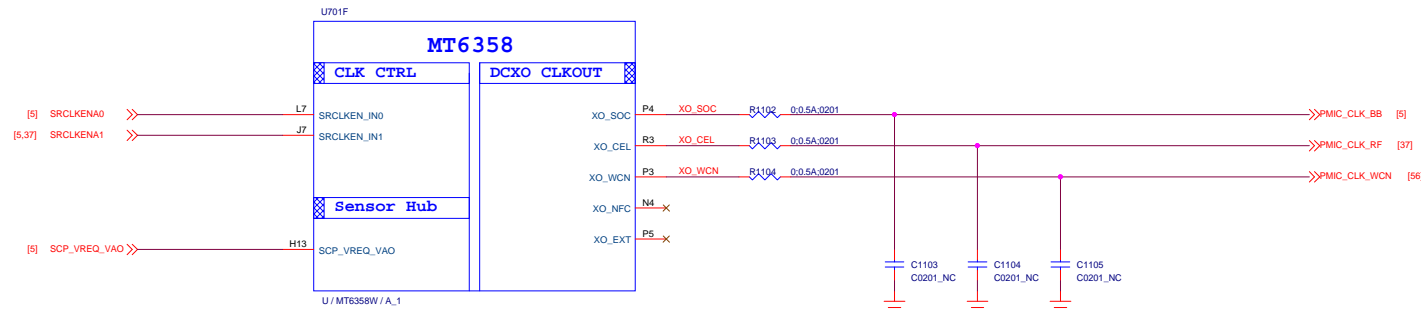
Note 23-1: VDRAM 2 / VDRAM1 output voltage vs. trap pin.


| HW GPIO configuration |              | Trapping Option |        | DRAM type         | VDRAM2 Power source (VS2_LDO1_ball) |
|-----------------------|--------------|-----------------|--------|-------------------|-------------------------------------|
| AUD_SYNC_MISO         | AUD_CLK_MISO | VDRAM1          | VDRAM2 |                   |                                     |
| 0                     | 0            | 1.125V          | 0.6V   | LP4X              | VDRAM1                              |
| 0                     | 1            | OFF             | 1.8V   | LP4X (Ext x 2 EN) | VS1                                 |
| 1                     | 0            | 1.225V          | OFF    | LP3               | VDRAM1                              |
| 1                     | 1            | 1.125V          | 1.8V   | LP4X (Ext x 1 EN) | VS1                                 |

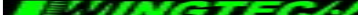
|   |  |                              |                       |                      |
|---|--|------------------------------|-----------------------|----------------------|
| Title   |  | <b>10_POWER_MT6358-Audio</b> |                       | REV: V10             |
| DOCUMENT NO.:   |  |                              | <b>Design Name</b>    | Size C               |
| DEPARTMENT:   |  |                              | WINGTECH-SH           | DESIGNER: LIUFENGLEI |
|  |  |                              |                       |                      |
| Date:   |  |                              | Friday, June 14, 2019 | Sheet 12 of 65       |

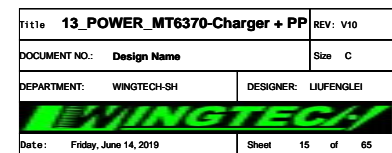


Route AVDD18\_AUXADC/AUXADC\_VIN with 3mil trace width and with well GND shielding. AVDD18\_AUXADC/AUXADC\_VIN need to be shielded with GND or AVSS18\_AUXADC.



|   |  |                       |  |                      |  |
|---|--|-----------------------|--|----------------------|--|
| Title   |  | 11_POWER_MT6358_Clock |  | REV: V10             |  |
| DOCUMENT NO.:   |  | Design Name           |  | Size C               |  |
| DEPARTMENT:   |  | WINGTECH-SH           |  | DESIGNER: LIUFENGLEI |  |
|  |  |                       |  |                      |  |
| Date:   |  | Friday, June 14, 2019 |  | Sheet 13 of 65       |  |


|   |                              |          |
|---|------------------------------|----------|
| Title <b>12_POWER_MT6370-General</b>  |                              | REV: V10 |
| DOCUMENT NO.: <b>Design Name</b>  |                              | Size C   |
| DEPARTMENT: <b>WINGTECH-SH</b>  | DESIGNER: <b>LIJUFENGLEI</b> |          |
|  |                              |          |
| Date: <b>Friday, June 14, 2019</b>  | Sheet <b>14</b> of <b>65</b> |          |



Schematic design notice of "27\_POWER\_SubPMIC-HV powers" page.

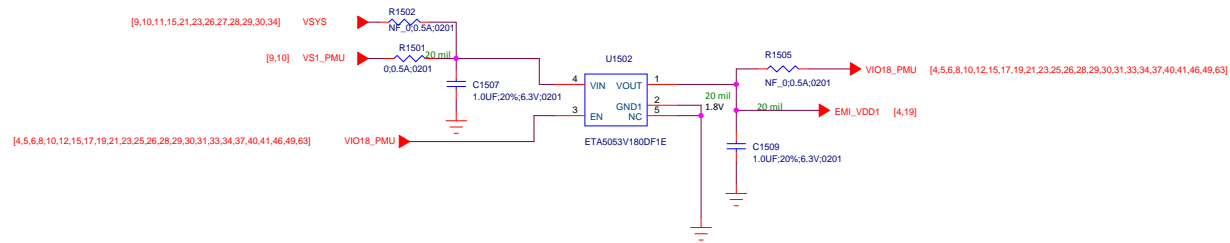
Note 27-1: It is recommended to reserve 0-ohm and cap. for BOM fine tune to minimize RF de-sense.

Note 27-2: It is recommended to reserve 0-ohm for BOM fine tune to minimize RF de-sense.


|   |                      |          |
|---|----------------------|----------|
| Title 14_POWER_MT6370-HV powers   |                      | REV: V10 |
| DOCUMENT NO.: Design Name   |                      | Size C   |
| DEPARTMENT: WINGTECH-SH   | DESIGNER: LIUFENGLEI |          |
|  |                      |          |
| Date: Friday, June 14, 2019   | Sheet                | 16 of 65 |

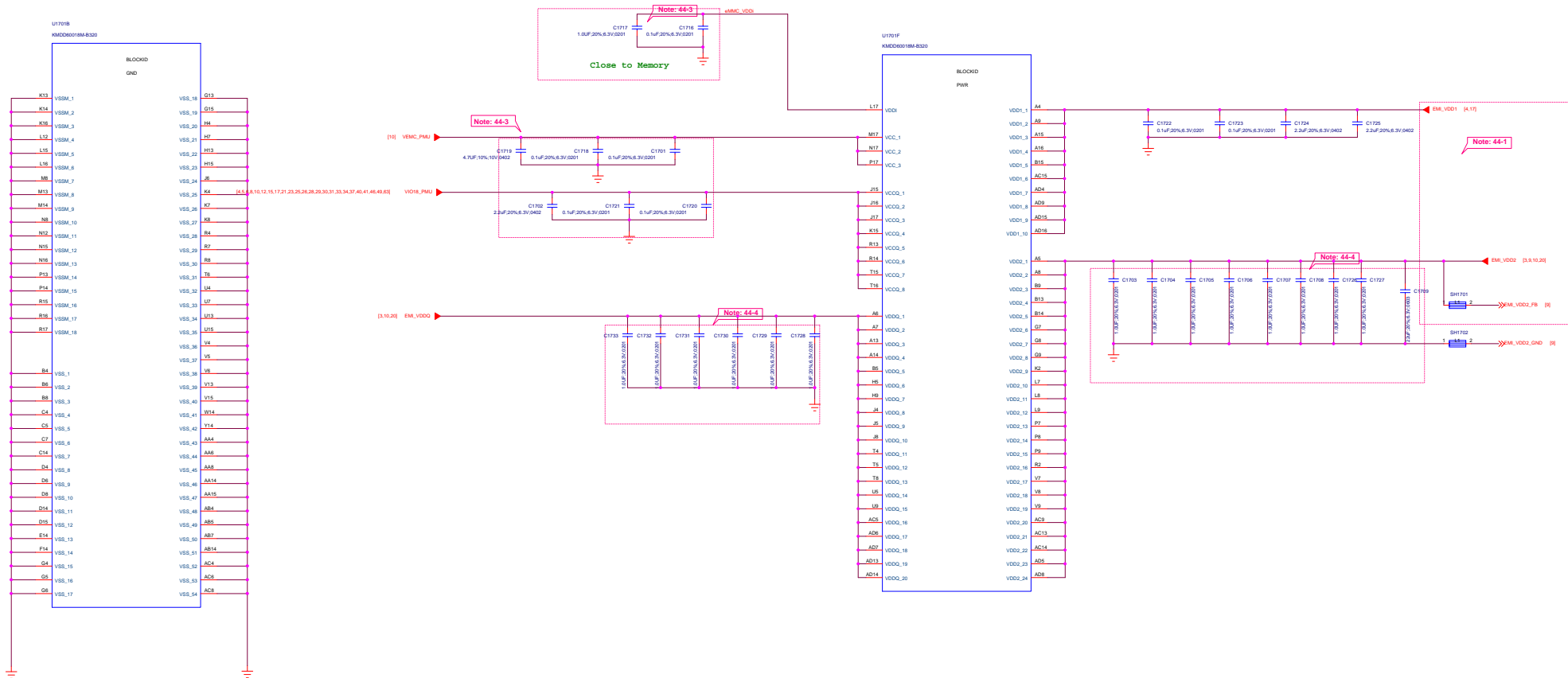


## LDO for EMI\_VDD1 of LPDDR4 VDD1



|   |                      |          |
|---|----------------------|----------|
| Title 15_POWER_ThirdParty_Powers  |                      | REV: V10 |
| DOCUMENT NO.: Design Name   |                      | Size C   |
| DEPARTMENT: WINGTECH-SH   | DESIGNER: LIUFENGLEI |          |
|  |                      |          |
| Date: Friday, June 14, 2019   | Sheet 17             | of 65    |

|   |                       |                        |                      |          |
|---|-----------------------|------------------------|----------------------|----------|
| File  |                       | <b>16_BB_POWER_PDN</b> |                      | REV: V10 |
| DOCUMENT NO.:   |                       | <b>Design Name</b>     |                      | Size C   |
| DEPARTMENT:   |                       | WINGTECH-SH            | DESIGNER: LIUFENGLEI |          |
|  |                       |                        |                      |          |
| Date:   | Friday, June 14, 2019 |                        | Sheet                | 18 of 65 |



#### Schematic design notice of "44\_Memory\_eMMC\_LPDDR4X"

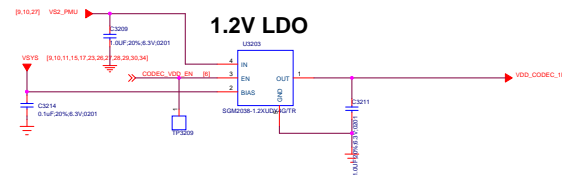
Note 44-1: Please refer to power supply related page select VDRAM 2 / VDRAM1 output voltage properly for LPDDR4X

Note 44-2: DRAM ZQx resistor = 240ohm (1%) that must be connected to VDDQ,

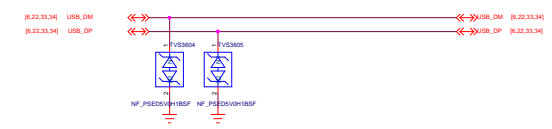
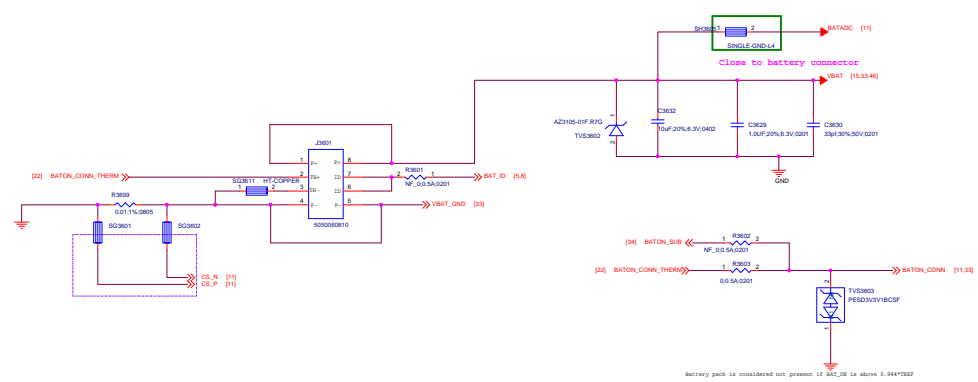
Note 44-3: Please refer to eMCP vendor's datasheet or MTK common design notice to get the recommendation bypass cap. value for VCC/VCCQ/VDDI power domains of eMMC.

Note 44-4: VDD2 VDDQ decoupling cap: closed to DRAM ball.  
For other cap for PMIC (>10uF, at PMIC page);  
please also refer to MMD and layout guide for placement.

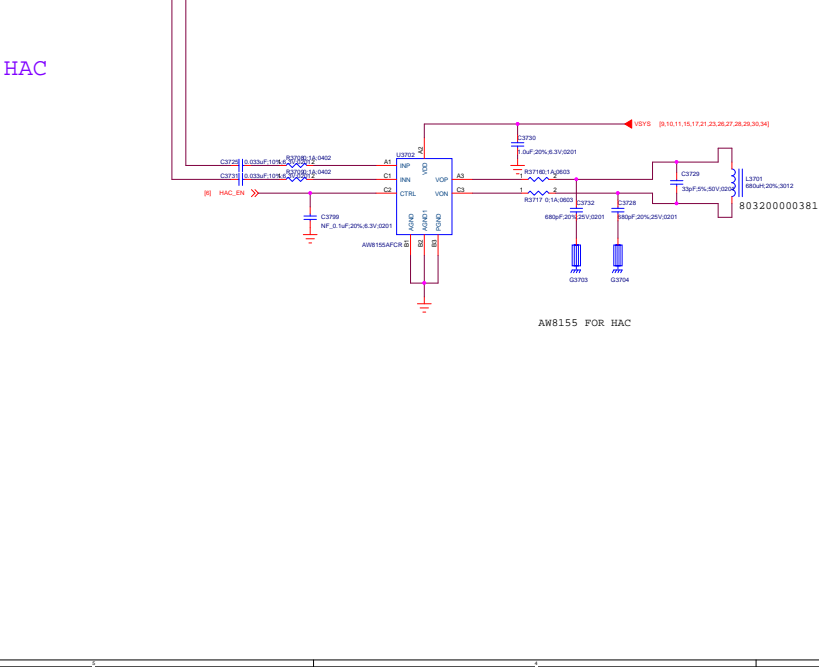




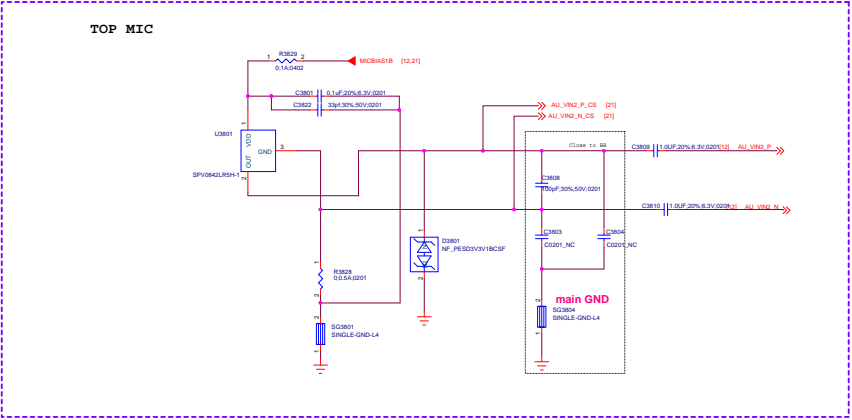
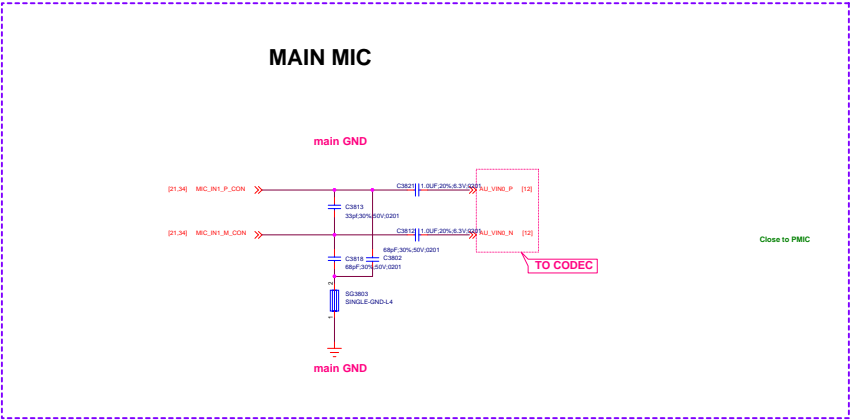
# BATTERY CONNECTOR



# Receiver

[illegible]

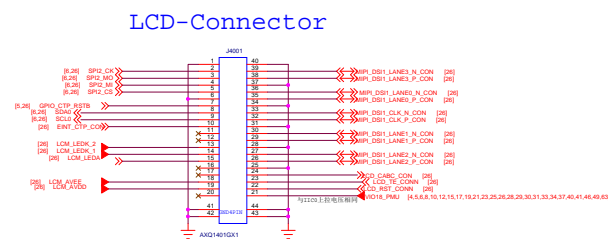
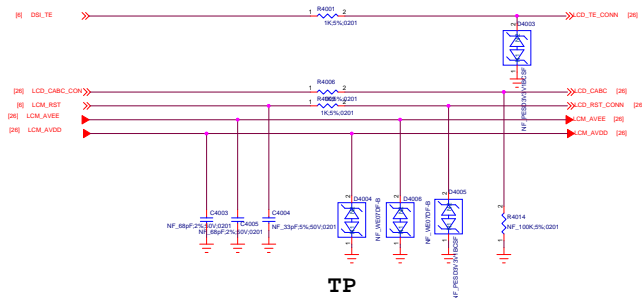
|                                       |                              |                             |
|---------------------------------------|------------------------------|-----------------------------|
| File: <b>37_SPK/Receiver/Vibrator</b> |                              | REV: V10                    |
| DOCUMENT NO.: <b>Design Name</b>      |                              | Size: <b>D</b>              |
| DEPARTMENT: <b>WINGTECH-SH</b>        |                              | DESIGNER: <b>LIUFENGLEI</b> |
| <b>WINGTECH</b>                       |                              |                             |
| Date: <b>Friday, June 14, 2019</b>    | Sheet <b>23</b> of <b>65</b> |                             |

[illegible]

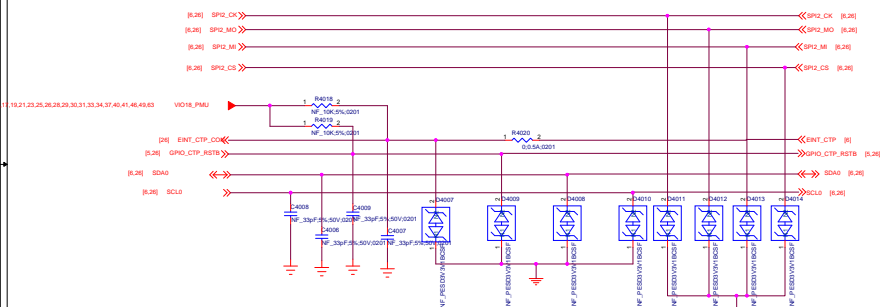
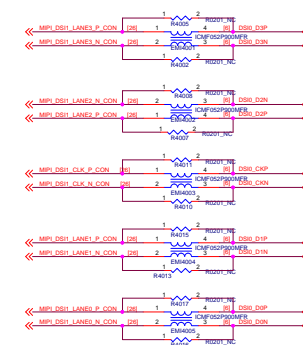
|                                    |  |                              |
|------------------------------------|--|------------------------------|
| Title: <b>38_MIC</b>               |  | REV: V10                     |
| DOCUMENT NO.: <b>Design Name</b>   |  | Size: D                      |
| DEPARTMENT: <b>WINGTECH-SH</b>     |  | DESIGNER: <b>LIJUFENGLEI</b> |
| <b>WINGTECH</b>                    |  |                              |
| Date: <b>Friday, June 14, 2019</b> |  | Sheet <b>24</b> of <b>65</b> |





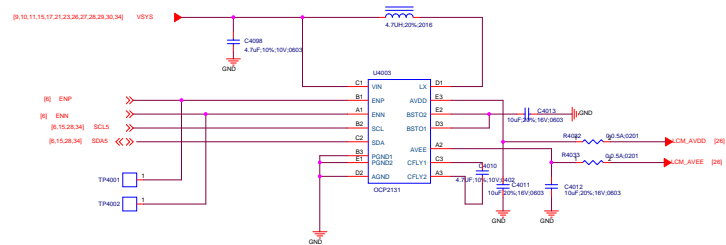


## Common Mode Filter

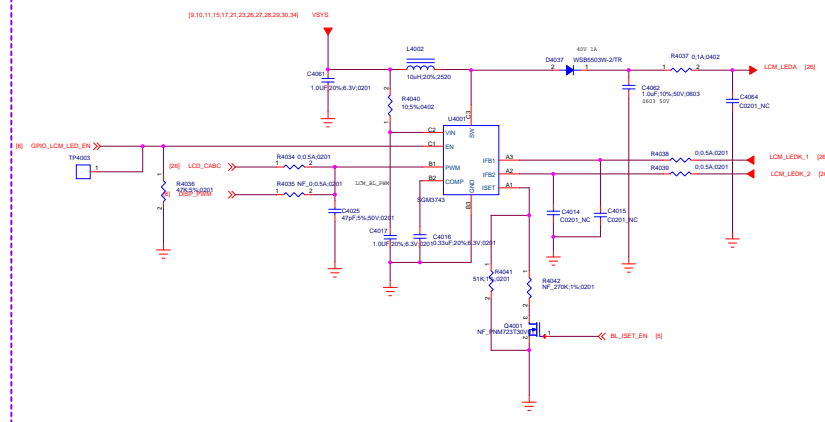


## LCD Gate Drive

LCD Gate Driver I2C address: 0X3E (Write:0x7C, Read:0x7D)

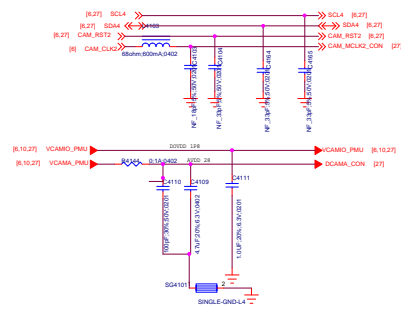
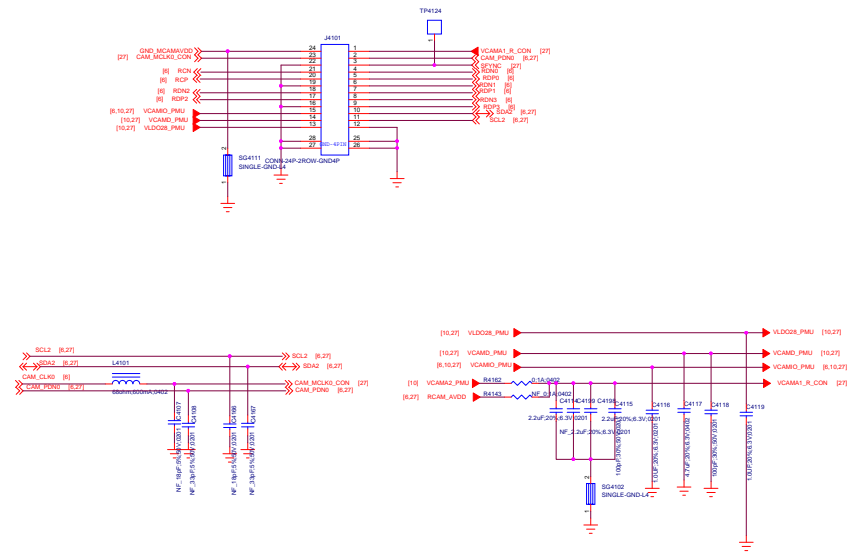


## LCD-BACKLIGHT

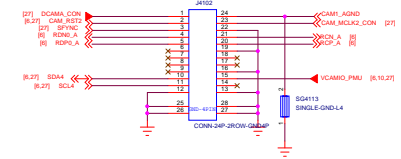


|              |                       |                     |
|--------------|-----------------------|---------------------|
| File         | 40_LCD/CTP IF         | REV: V10            |
| DOCUMENT NO: | Design Name           | Size: D             |
| DEPARTMENT:  | WINGTECH-SH           | DESIGNER: LAUFENGLE |
| Date:        | Friday, June 14, 2019 | Sheet: 25 of 65     |

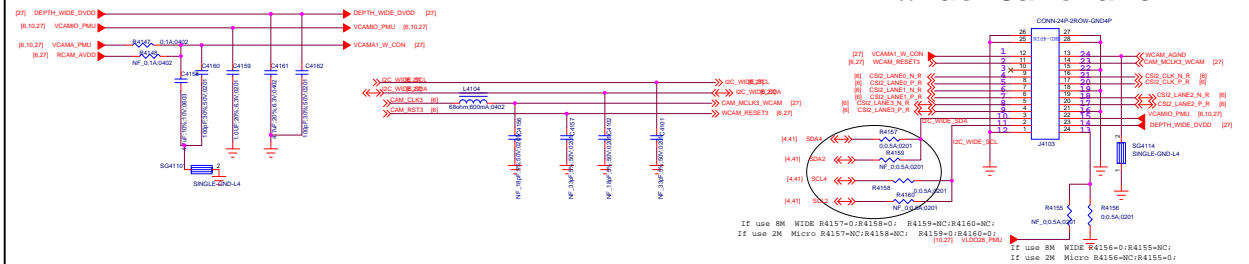
# Main Camera 13M



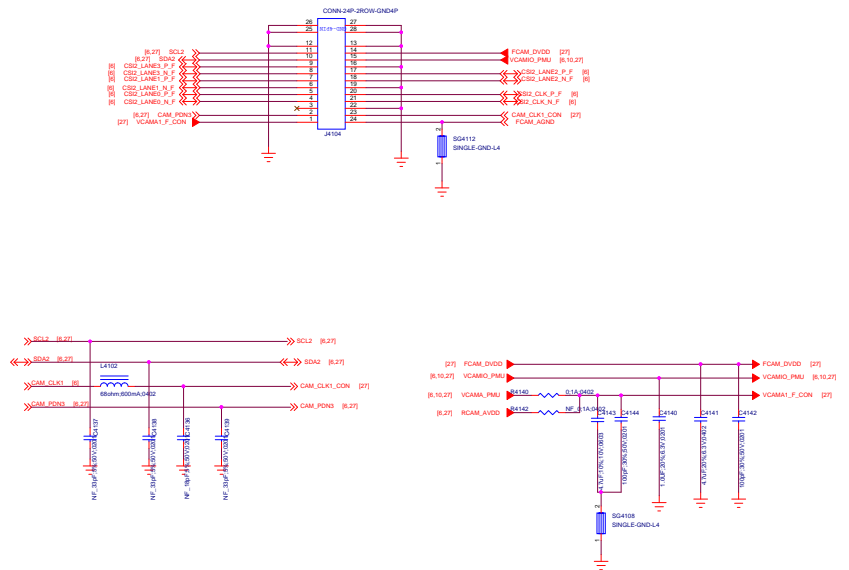
# Depth Camera 2M



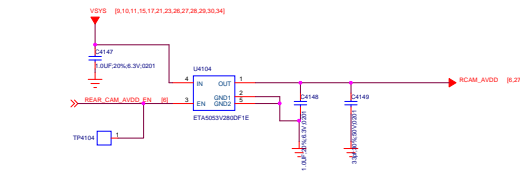
# Wide Camera 8M



# Front Camera 8M



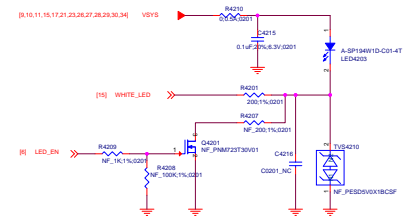
# Rear CAM and other Camera AVDD 2P8



# 5M 8M CAM DVDD

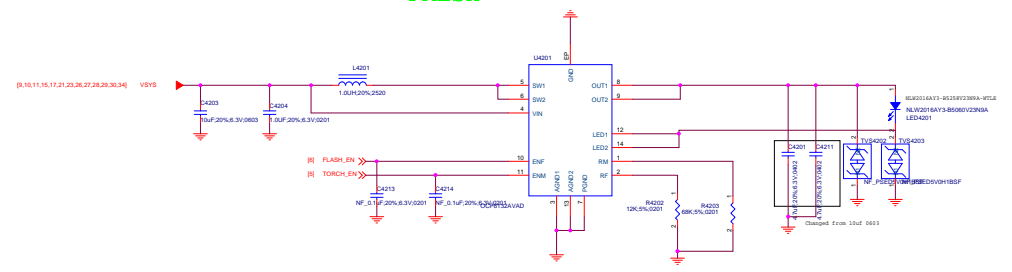


|              |                          |                |
|--------------|--------------------------|----------------|
| File         | 41.Camera IF             | REV: V10       |
| DOCUMENT NO: | 00070_1_11_2019000411193 | Rev D          |
| DEPARTMENT:  | DESIGNER:                | DESIGNER       |
| Date:        | Friday, June 14, 2019    | Sheet 27 of 65 |

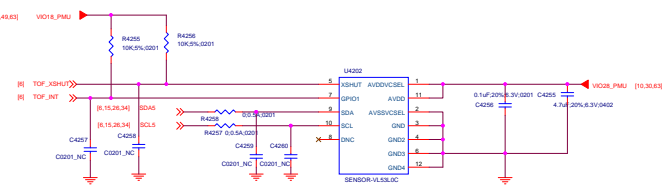


LED

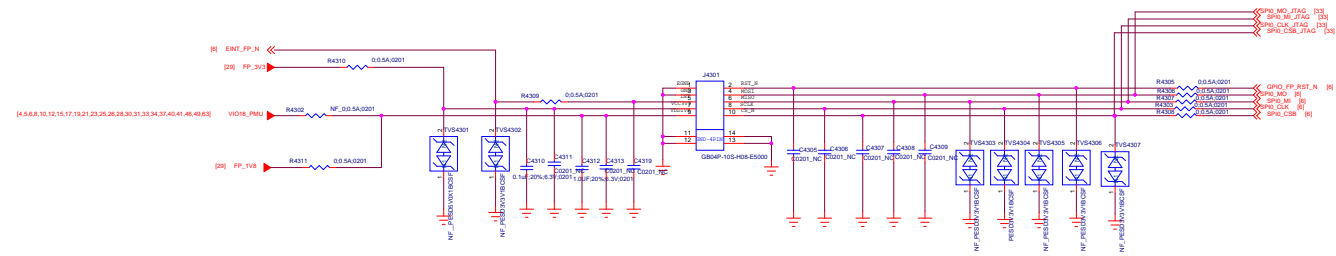
FALSH



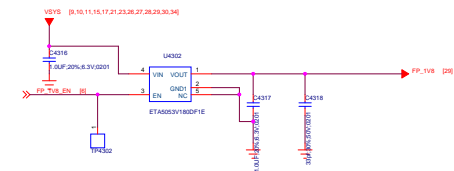
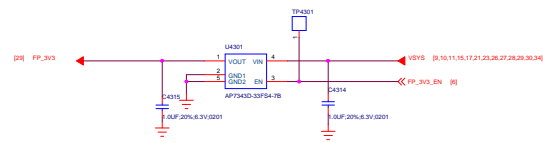
TOF



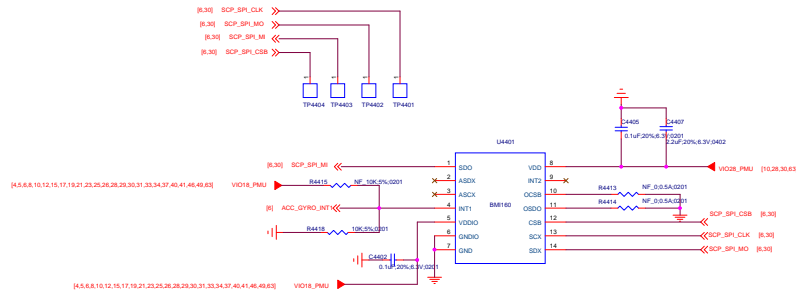
## Fingerprint



Fingerprint

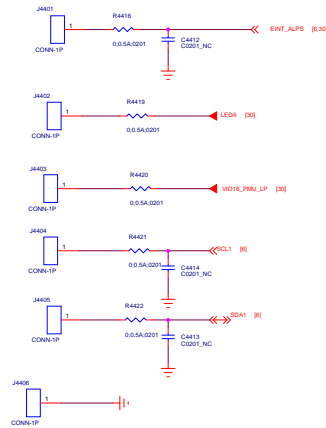
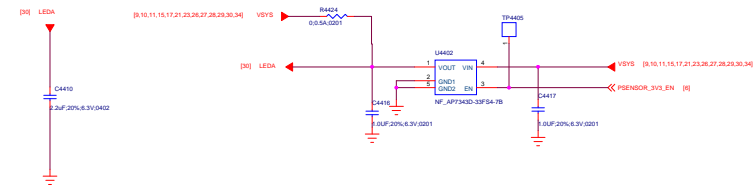


## ACCELEROMETER+GYRO

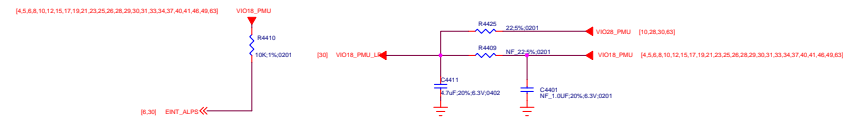


## ALP-Sensor

## Proximity Sensor



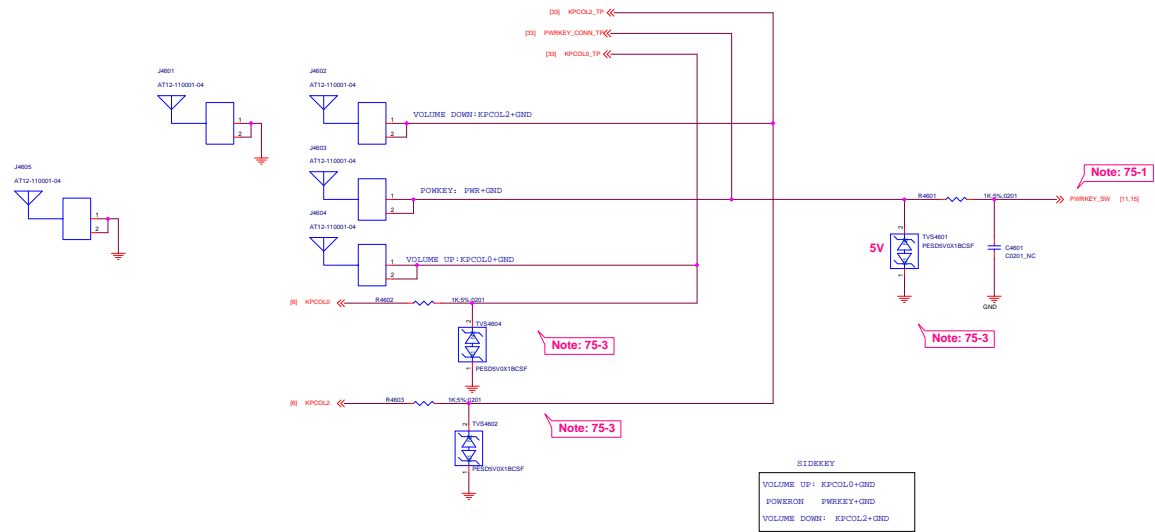
## Ambient Light Sensor





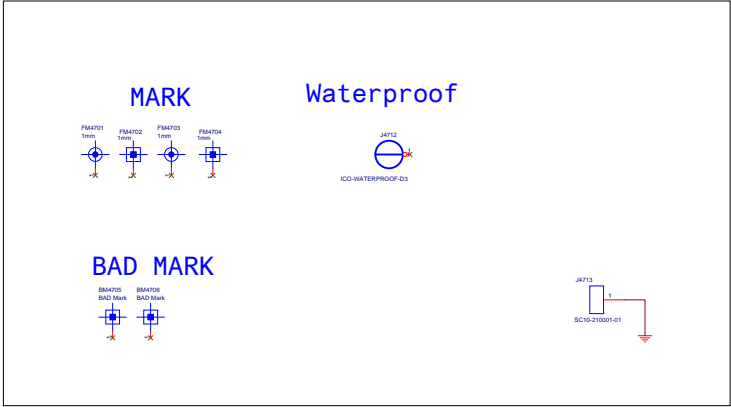
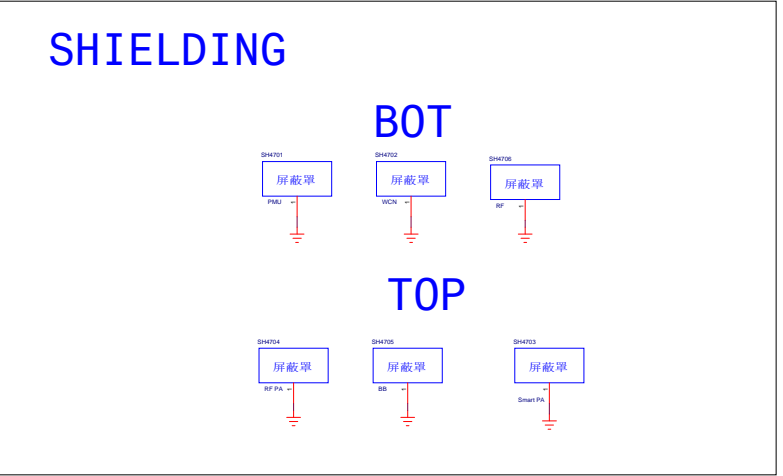
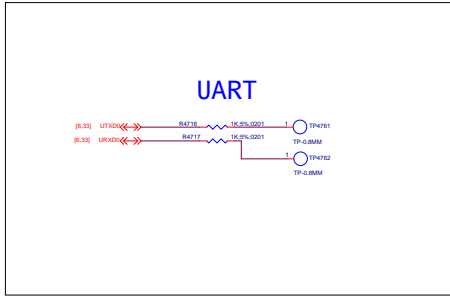
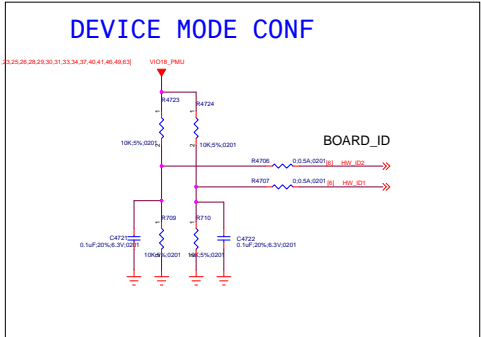
# Power Key / Key Pad

DO NOT put pull-up resistor on PWRKEY

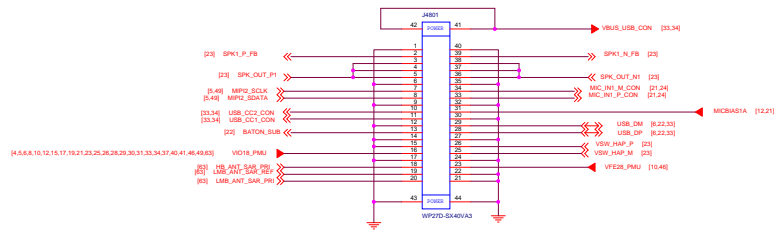


Note 75-1:DO NOT put pull-up resistor on PWRKEY  
Note 75-2: Volume Up:KPCOL0+GND  
Volume Down:KPCOL2+GND

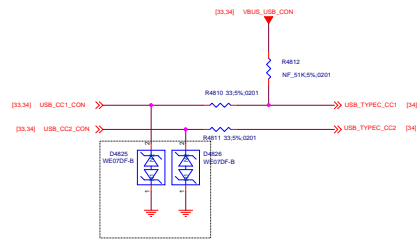




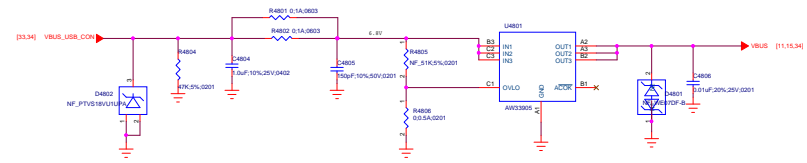
## SUB CONN.



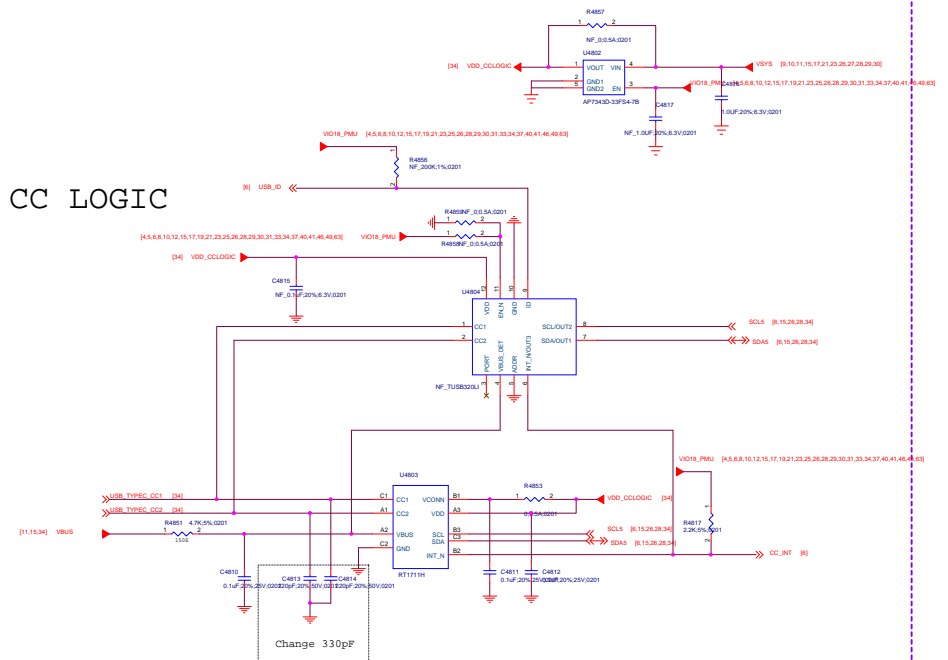
MAIN SIG CONTIN.



## OVP



## CC LOGIC



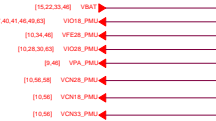
## GPIO Interface



## MIPI Interface

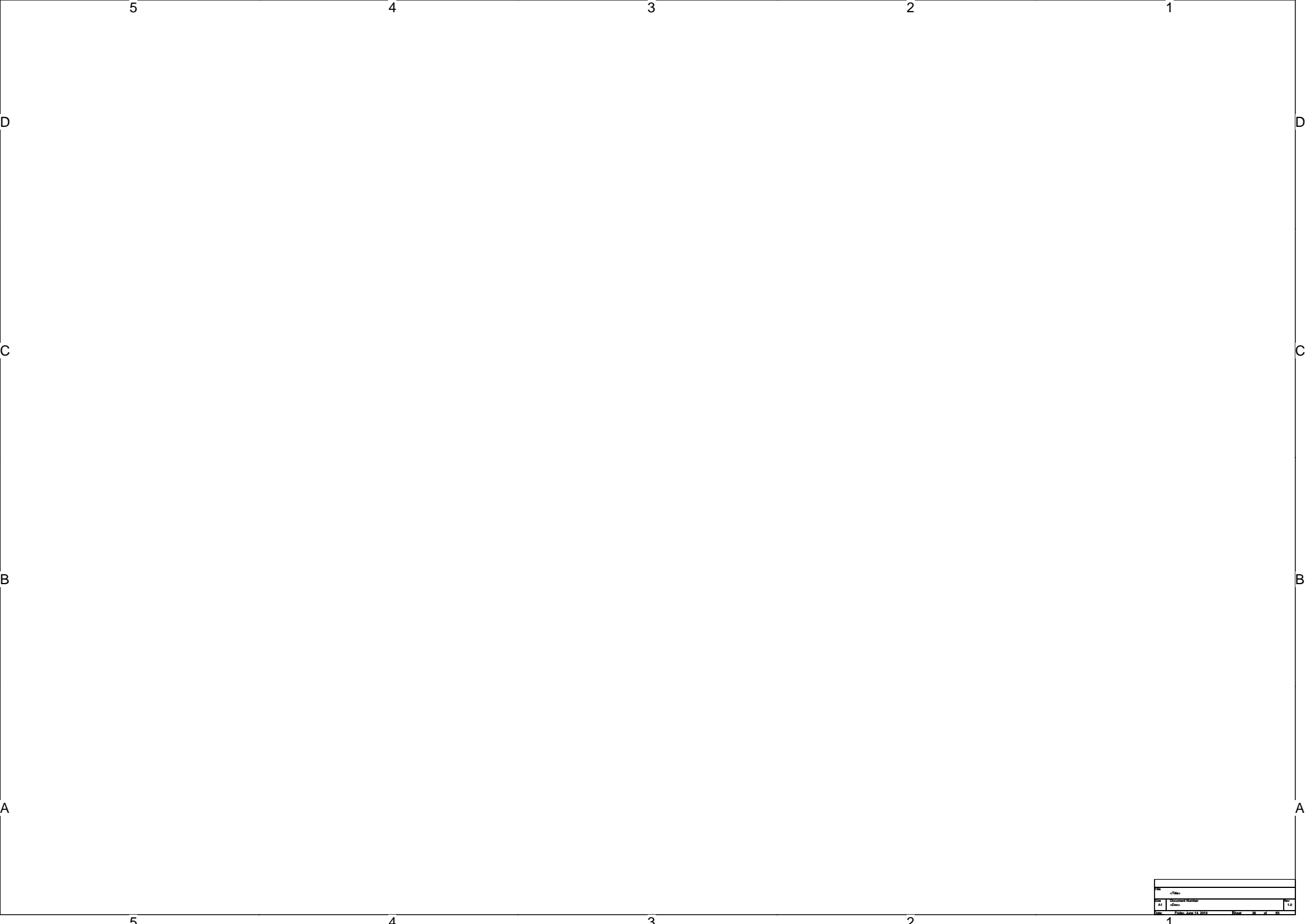


## POWER Interface

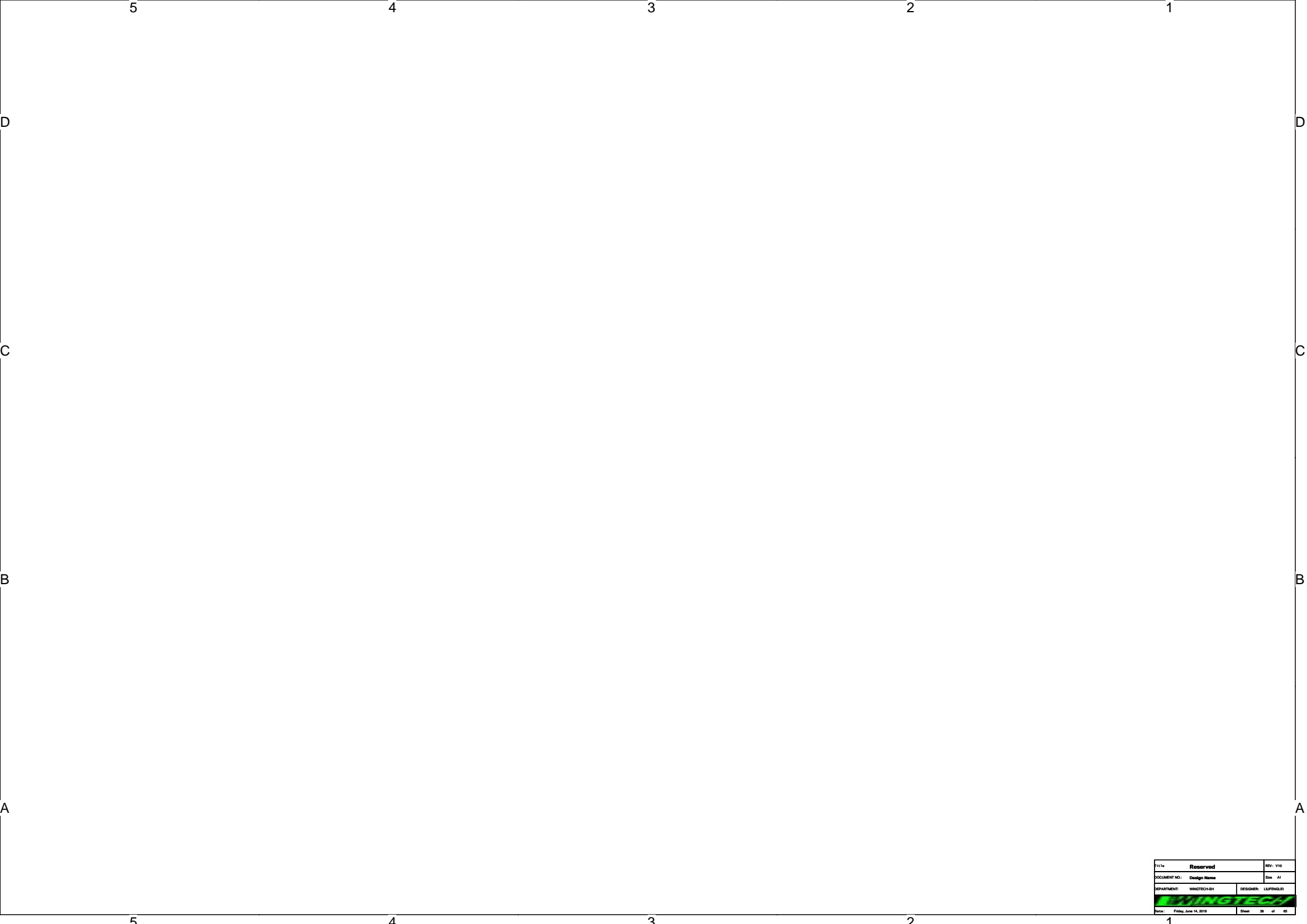


## I2C Interface









D

D

C

C

B

B

A

A

5

4

3

2

1

5

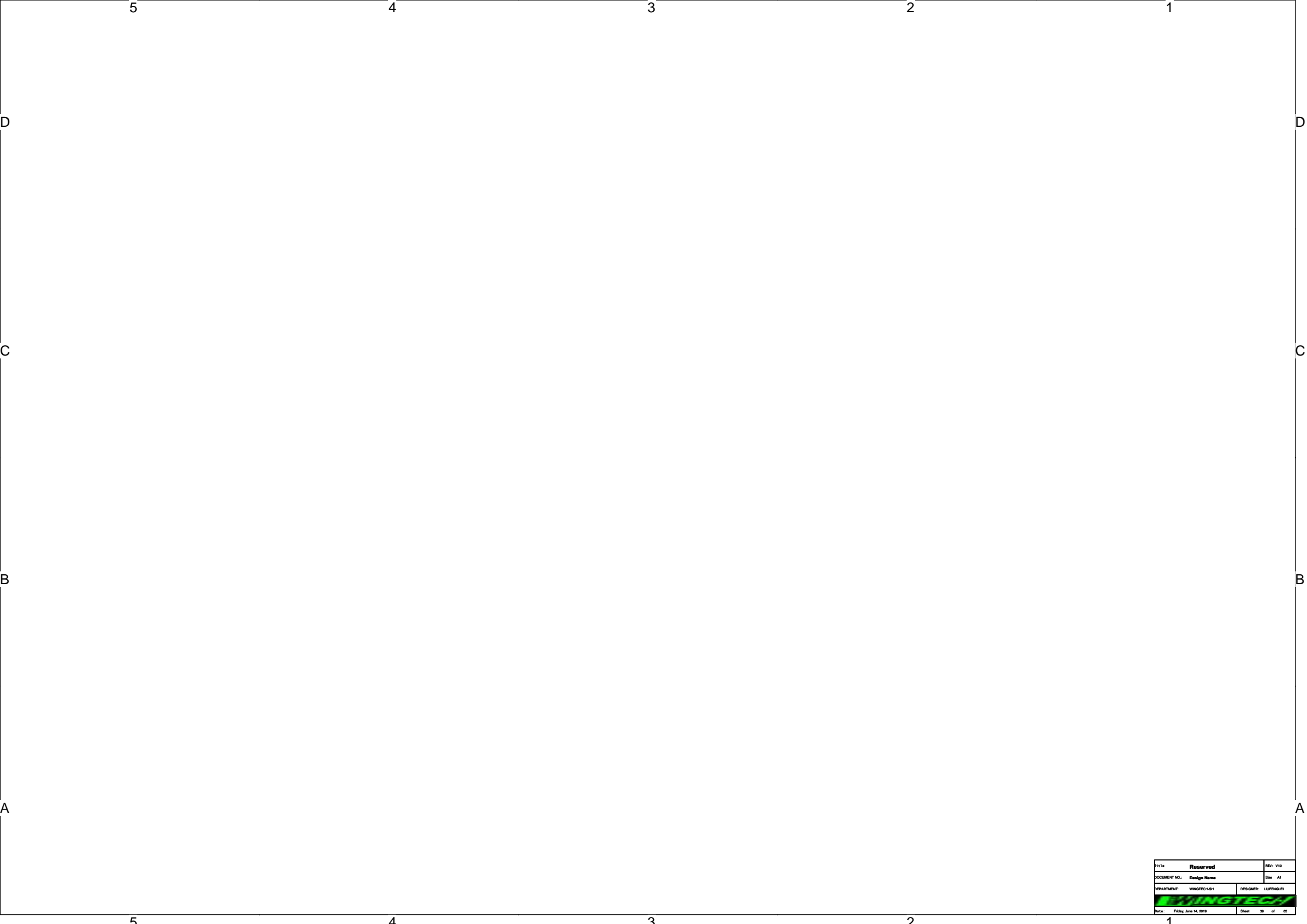
4

3

2

1

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| Title: <b>Reserved</b>  |  | REV: V10                     |
| DOCUMENT NO.: <b>Design Name</b>  |  | Size: A1                     |
| DEPARTMENT: <b>WINGTECH-SH</b>  |  | DESIGNER: <b>LUPENGLEI</b>   |
|  |  |                              |
| Date: <b>Friday, June 14, 2019</b>  |  | Sheet <b>38</b> of <b>65</b> |



D

D

C

C

B

B

A

A

5

4

3

2

1


5

4

3

2

1

|   |                              |                            |
|---|------------------------------|----------------------------|
| Title <b>Reserved</b>   |                              | REV: V10                   |
| DOCUMENT NO.: <b>Design Name</b>  |                              | Size <b>A1</b>             |
| DEPARTMENT: <b>WINGTECH-SH</b>  |                              | DESIGNER: <b>LUPENGLEI</b> |
|  |                              |                            |
| Date: <b>Friday, June 14, 2019</b>  | Sheet <b>39</b> of <b>65</b> |                            |

The schematic diagram illustrates the RF front end of the AN7620, showing the connection between the RF front end IC and the RF front end module. The diagram includes components like capacitors, inductors, and a switch, with labels for various pins and components.

**IC101: RF Front End IC**

- Pin 1:** RF\_A+M+B\_TX, RF\_SWITCH\_IN
- Pin 2:** RF\_A+M+B\_TX, RF\_SWITCH\_OUT
- Pin 3:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 4:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 5:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 6:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 7:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 8:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 9:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 10:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 11:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 12:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 13:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 14:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 15:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 16:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 17:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 18:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 19:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 20:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 21:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 22:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 23:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 24:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 25:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 26:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 27:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 28:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 29:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 30:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 31:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 32:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 33:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 34:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 35:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 36:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 37:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 38:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 39:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 40:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 41:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 42:** RF\_A+M+B\_TX, DPOT\_IN2
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- Pin 44:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 45:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 46:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 47:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 48:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 49:** RF\_A+M+B\_TX, DPOT\_OUT1
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- Pin 66:** RF\_A+M+B\_TX, DPOT\_IN2
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- Pin 69:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 70:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 71:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 72:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 73:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 74:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 75:** RF\_A+M+B\_TX, DPOT\_OUT2
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- Pin 77:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 78:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 79:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 80:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 81:** RF\_A+M+B\_TX, DPOT\_OUT1
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- Pin 94:** RF\_A+M+B\_TX, DPOT\_IN2
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- Pin 105:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 106:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 107:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 108:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 109:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 110:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 111:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 112:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 113:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 114:** RF\_A+M+B\_TX, DPOT\_IN2
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- Pin 116:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 117:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 118:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 119:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 120:** RF\_A+M+B\_TX, DPOT\_IN1
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- Pin 125:** RF\_A+M+B\_TX, DPOT\_OUT1
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- Pin 130:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 131:** RF\_A+M+B\_TX, DPOT\_OUT2
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- Pin 133:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 134:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 135:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 136:** RF\_A+M+B\_TX, DPOT\_IN1
- Pin 137:** RF\_A+M+B\_TX, DPOT\_OUT1
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- Pin 140:** RF\_A+M+B\_TX, DPOT\_IN1
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- Pin 145:** RF\_A+M+B\_TX, DPOT\_OUT1
- Pin 146:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 147:** RF\_A+M+B\_TX, DPOT\_OUT2
- Pin 148:** RF\_A+M+B\_TX, DPOT\_IN1
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- Pin 150:** RF\_A+M+B\_TX, DPOT\_IN2
- Pin 151:** RF


[illegible]

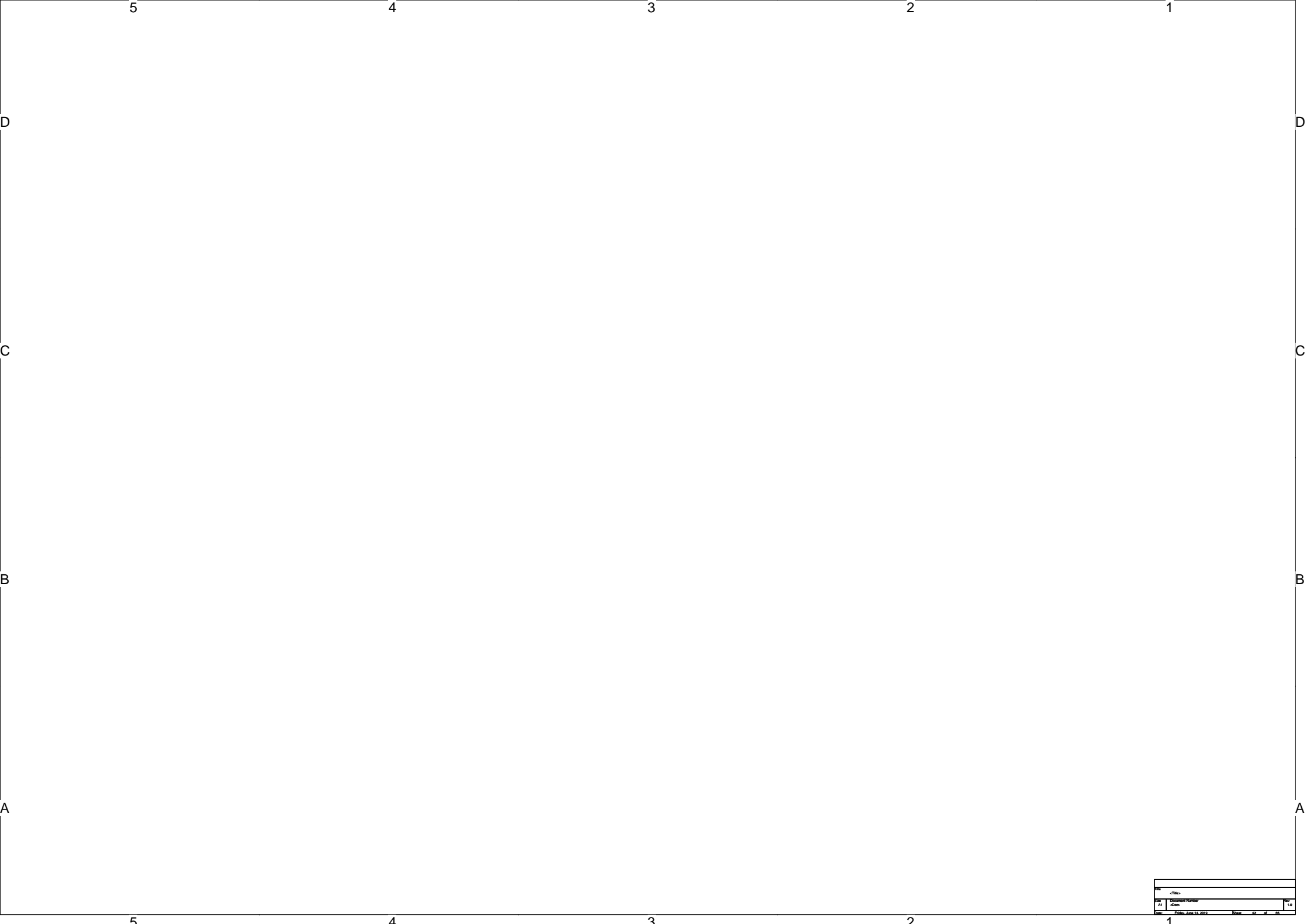
**Note2:** MUST BE IND FOR RF SWITCH DETECT

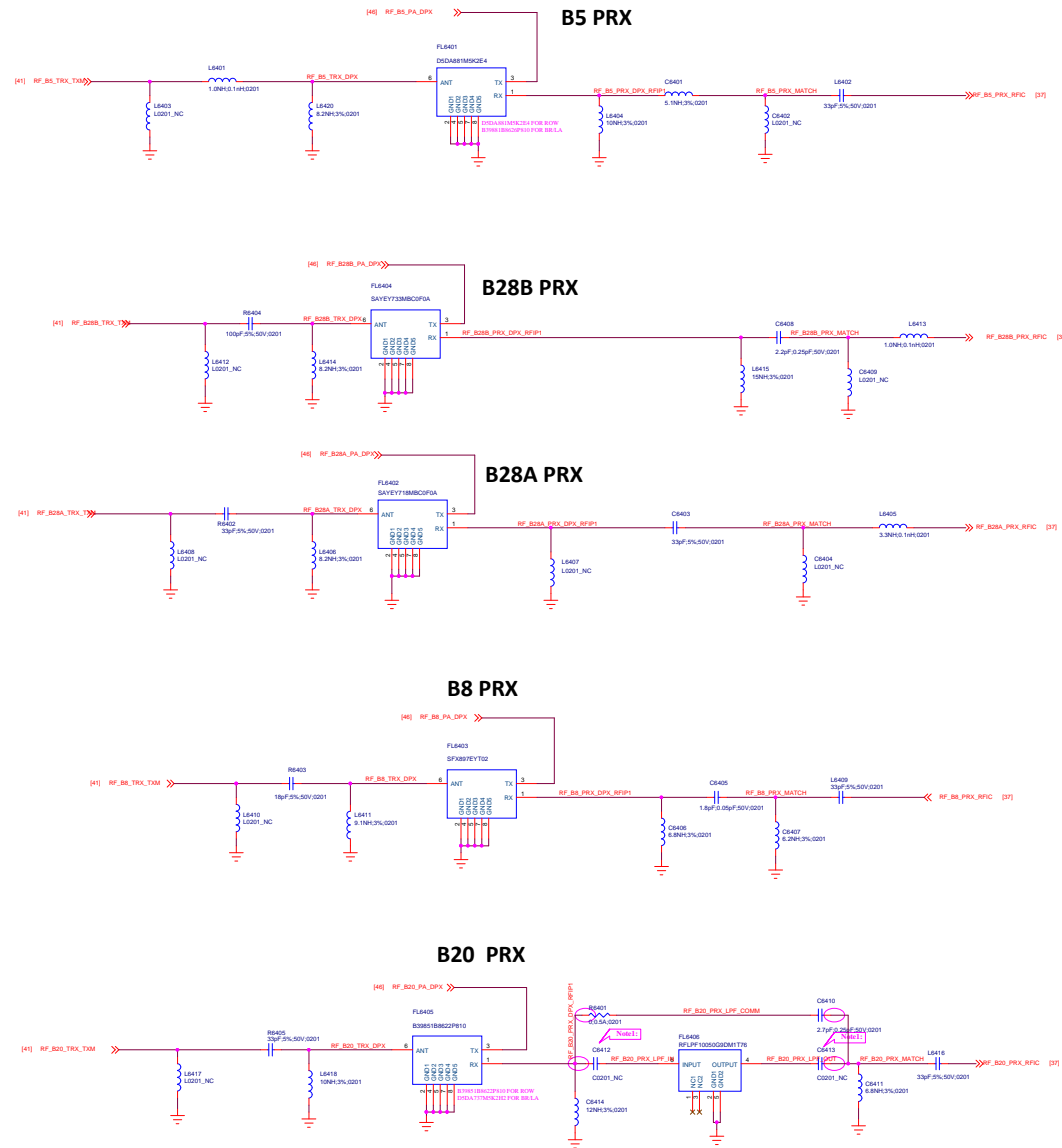


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# ASM\_CPL\_SPDT

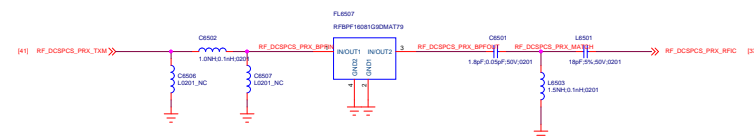
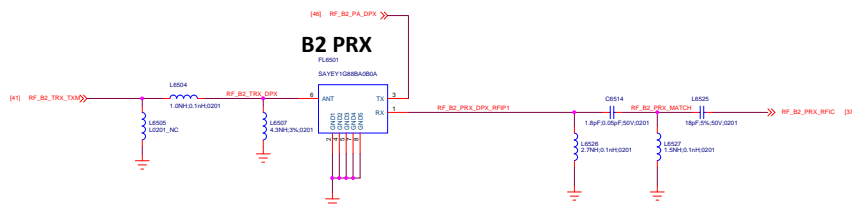
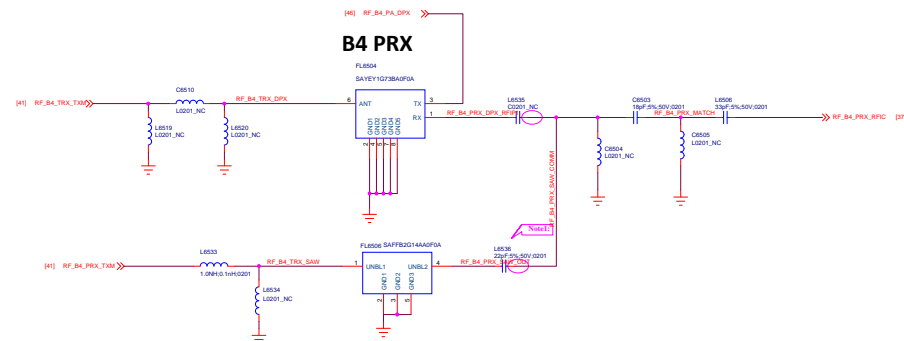
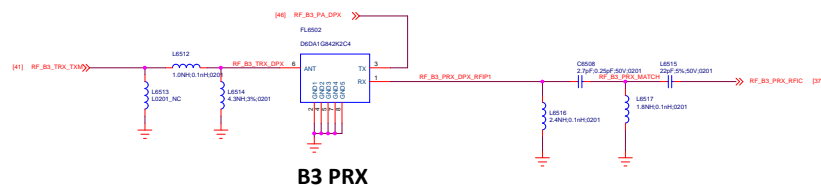
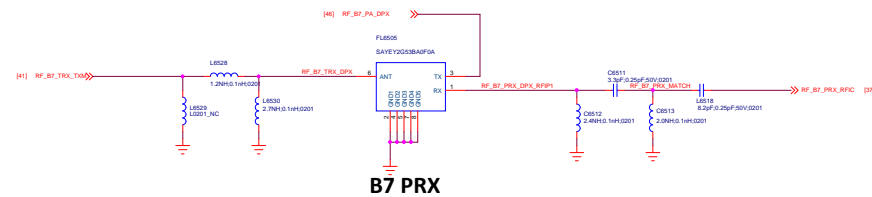
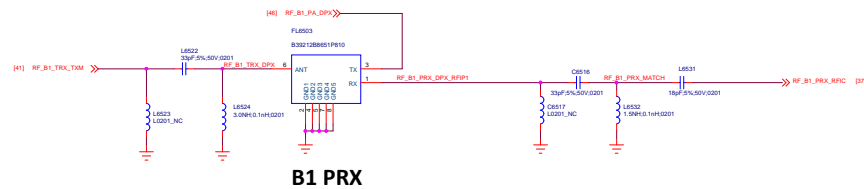
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| DOCUMENT NO:  |  | Design Name = 90870_1_11_20100614        |  | D                   |  |
| DEPARTMENT:   |  | DEPARTMENT = WINGTECH                    |  | DESIGNER = LUJUNGLI |  |
|  |  |  |  |                     |  |
| Date:   |  | Page Modify Date = Friday, June 14, 2010 |  | Sheet 41 of 85      |  |





Note: COMPATIBLE DESIGN FOR LFP AND SHARE PAD IN PCB

|              |  |                               |
|--------------|--|-------------------------------|
| File:        | Page Name = 64_TRX_LB                    | REV: V10                      |
| DOCUMENT NO: | Design Name = B06TR_1_11_20190814        | REV: D                        |
| DEPARTMENT:  | DEPARTMENT = WINTECH                     | DESIGNER: DESIGNER = LAUFHOLZ |
| Date:        | Page Modify Date = Friday, June 14, 2019 | Sheet 43 of 65                |

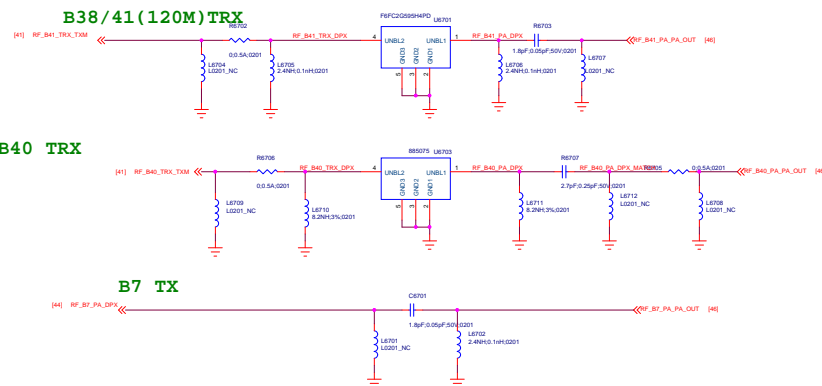
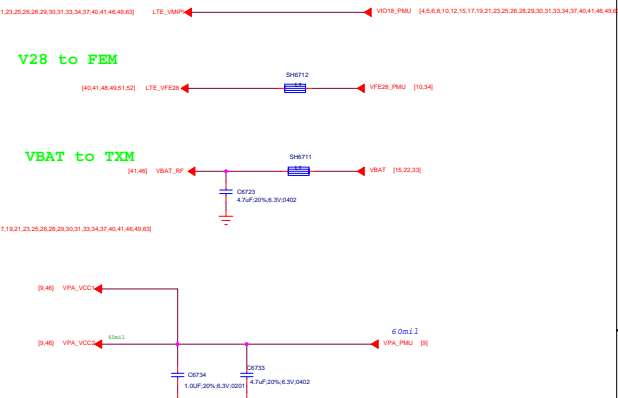
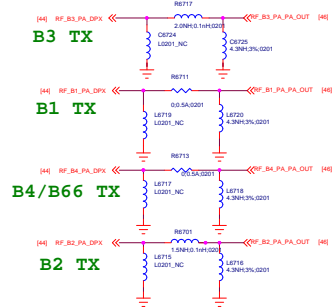


Note: COMPATIBLE DESIGN FOR B4 PRX SAW AND DUPLEXER, AND SHARE PAD IN PCB

## Band Note:

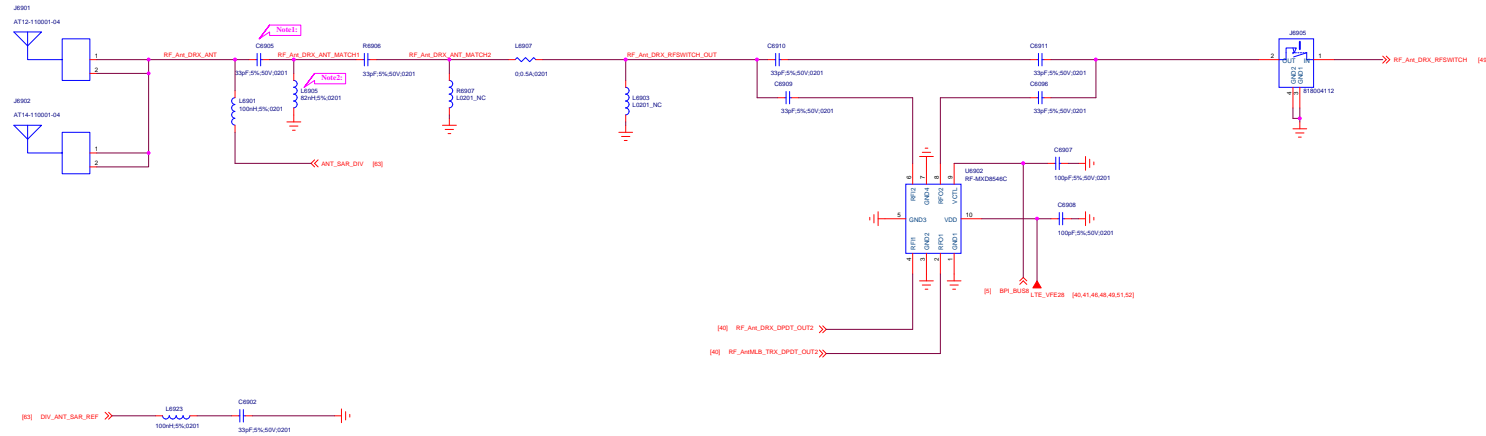
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|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|---------|
| China               | B1     | ↗      | B3     | ↗      | G1900  | ↗      | B34/39 | B5     | B8     | ↗      | ↗      | B40   | B38/B41 |
| CMCC                | B1     | B2     | B3     | ↗      | G1900  | B7     | B34/39 | B5     | B8     | ↗      | ↗      | B40   | B38/B41 |
| Asia Pacific Simple | B1     | ↗      | B3     | ↗      | G1900  | ↗      | ↗      | B5     | B8     | ↗      | ↗      | B40   | B38/B41 |
| Asia Pacific        | B1     | ↗      | B3     | ↗      | G1900  | B7     | ↗      | B5     | B8     | ↗      | ↗      | B40   | B38/B41 |
| Overseas Full Band  | B1     | ↗      | B3     | B20    | G1900  | B7     | ↗      | B5     | B8     | B28A   | B28B   | B40   | B38/B41 |
|                     |        |        |        |        |        |        |        |        |        |        |        |       |         |
|                     |        |        |        |        |        |        |        |        |        |        |        |       |         |



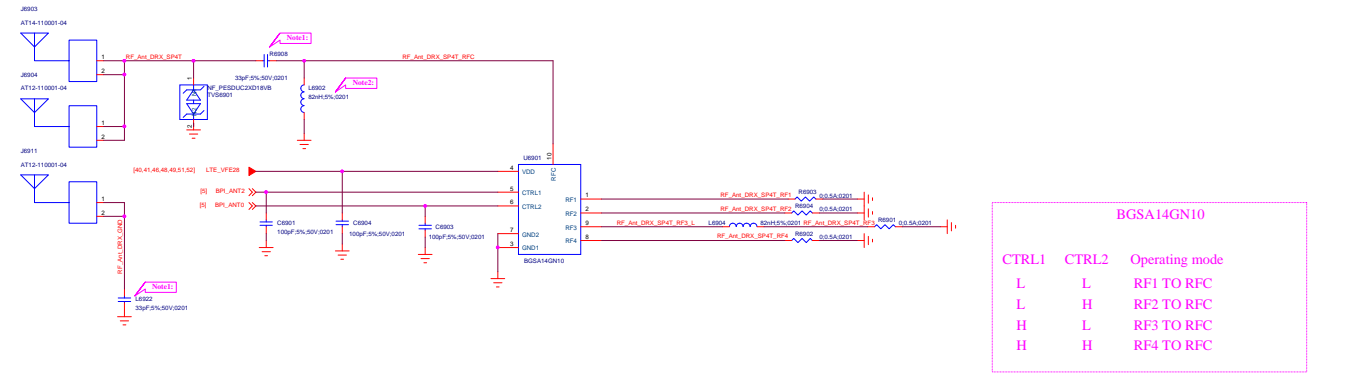




## ANT\_DIV\_FEED



## ANT\_DIV\_TUNER



| BGA14GN10 |       |                |
|-----------|-------|----------------|
| CTRL1     | CTRL2 | Operating mode |
| L         | L     | RF1 TO RFC     |
| L         | H     | RF2 TO RFC     |
| H         | L     | RF3 TO RFC     |
| H         | H     | RF4 TO RFC     |

Note1: MUST BE CAP FOR SAR DETECT DESIGN

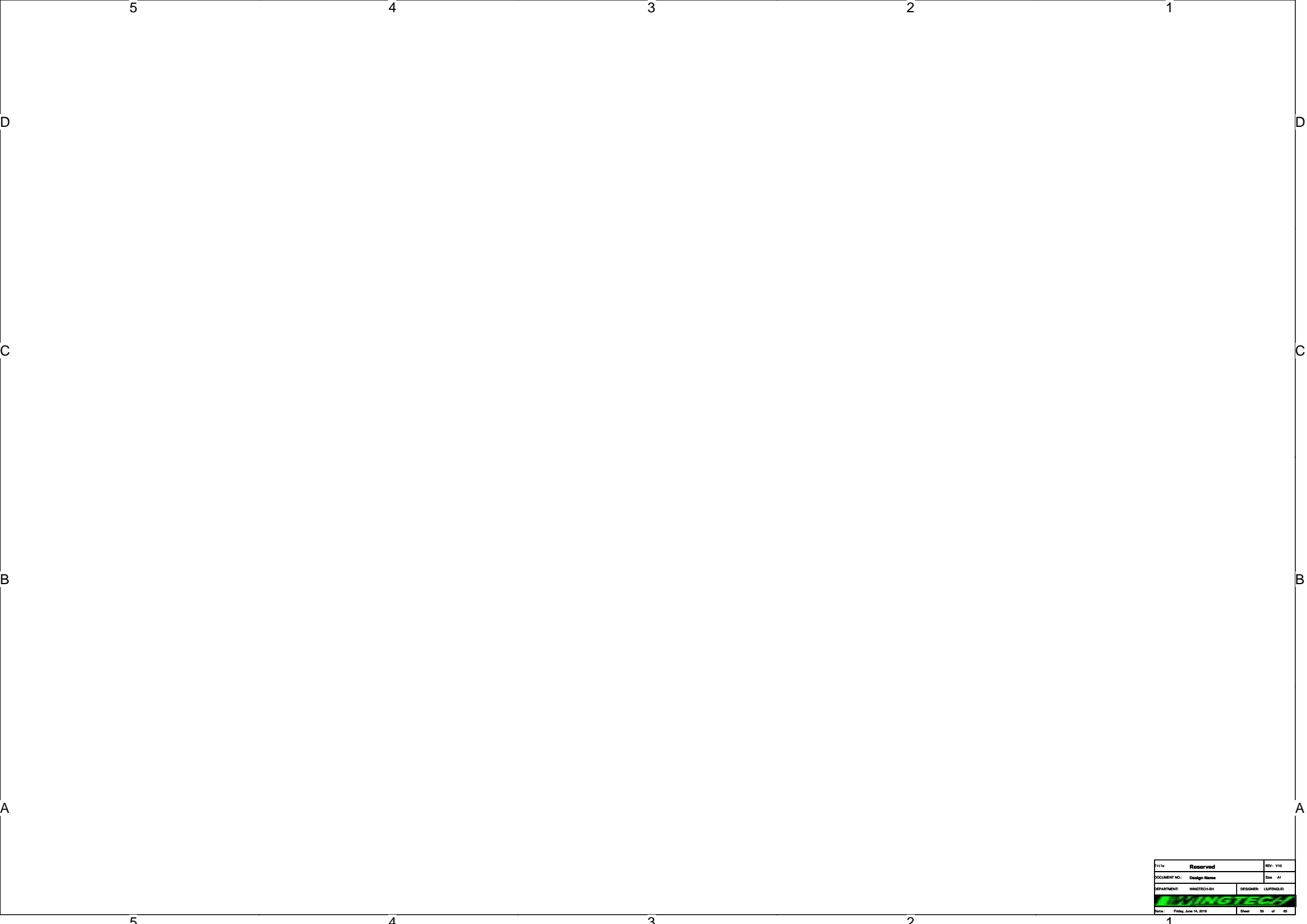
Note2: MUST BE IND FOR SAR DETECT DESIGN

Note3: OR RES IS RESERVED FOR SAR SENSOR DESENSE, PLACE CLOSE TO ANTENNA

Note4: show pad in PCB







D

D

C

C

B

B

A

A

5

4

3

2

1

5

4

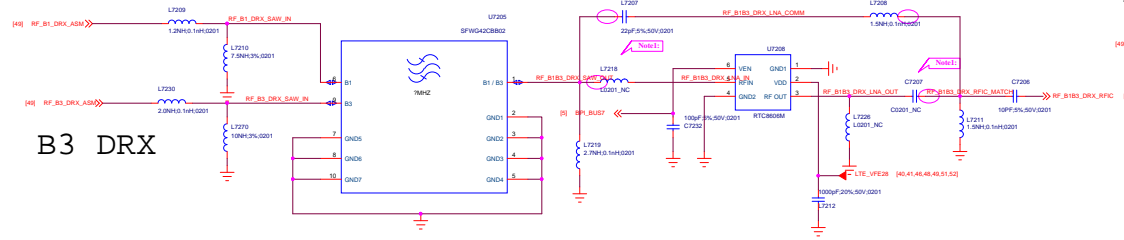
3

2

1

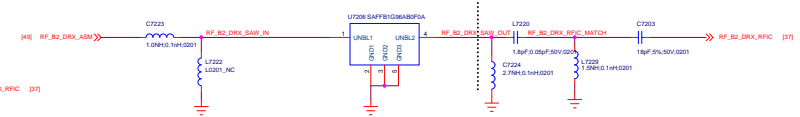
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| Title   |  | Reserved              | REV: V10            |          |
| DOCUMENT NO.:   |  | Design Name           | Size A1             |          |
| DEPARTMENT:   |  | WINGTECH-SH           | DESIGNER: LUPENGLEI |          |
|  |  |                       |                     |          |
| Date:   |  | Friday, June 14, 2019 | Sheet               | 50 of 65 |

## B1/4/66 DRX

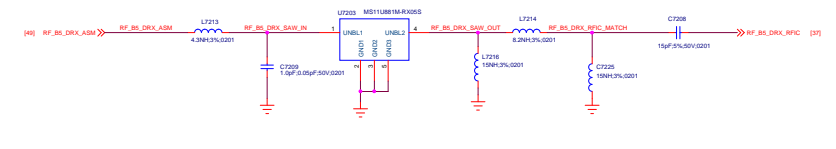


## B3 DRX

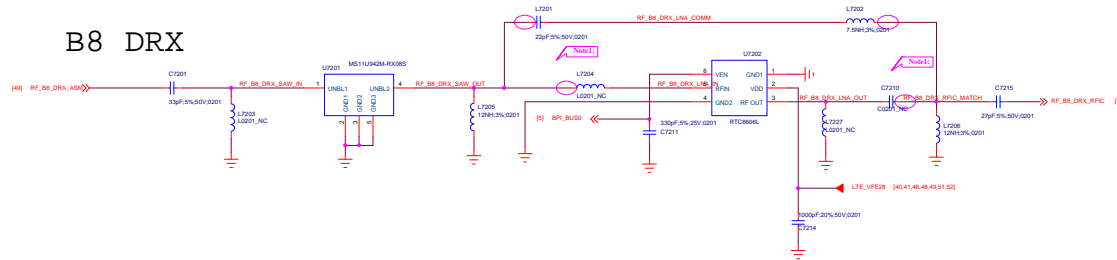
## B2 DRX



## B5 DRX

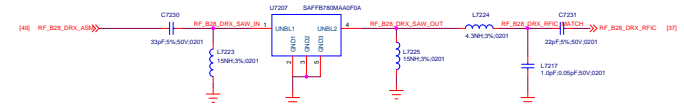
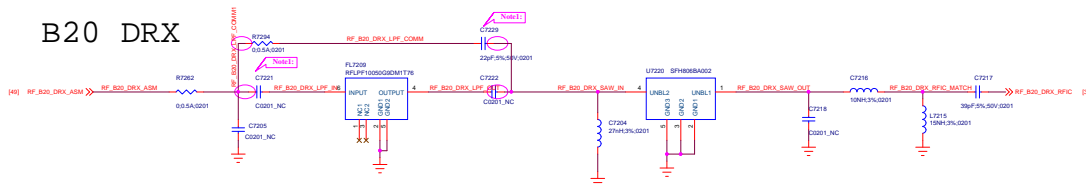


## B8 DRX



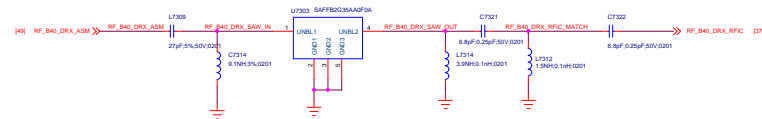
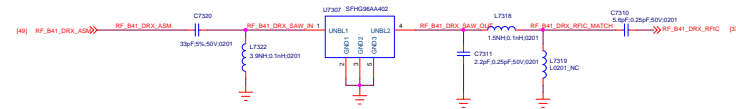
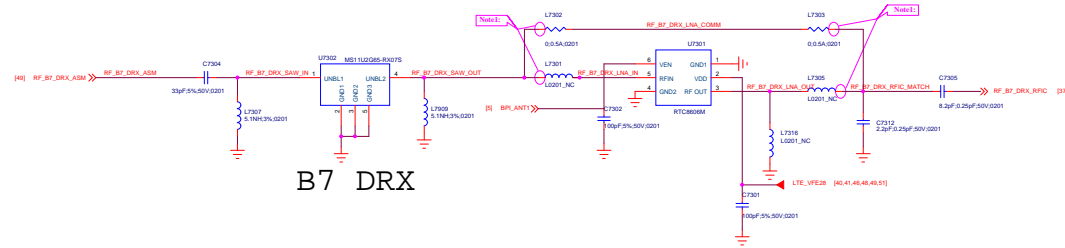
## B20 DRX

## B28 DRX



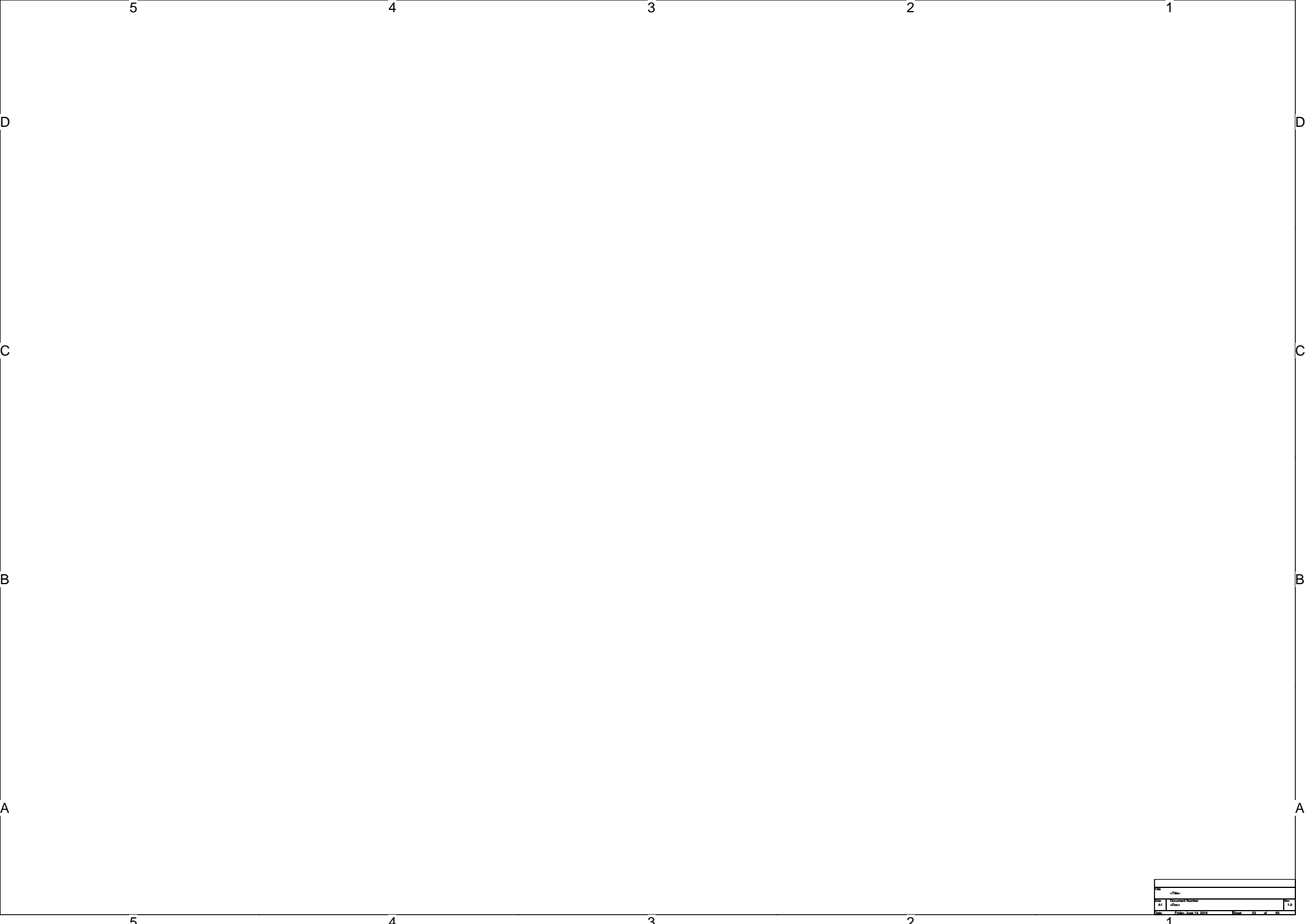
Note1: COMPATIBLE DESIGN AND SHARE PAD IN PCB

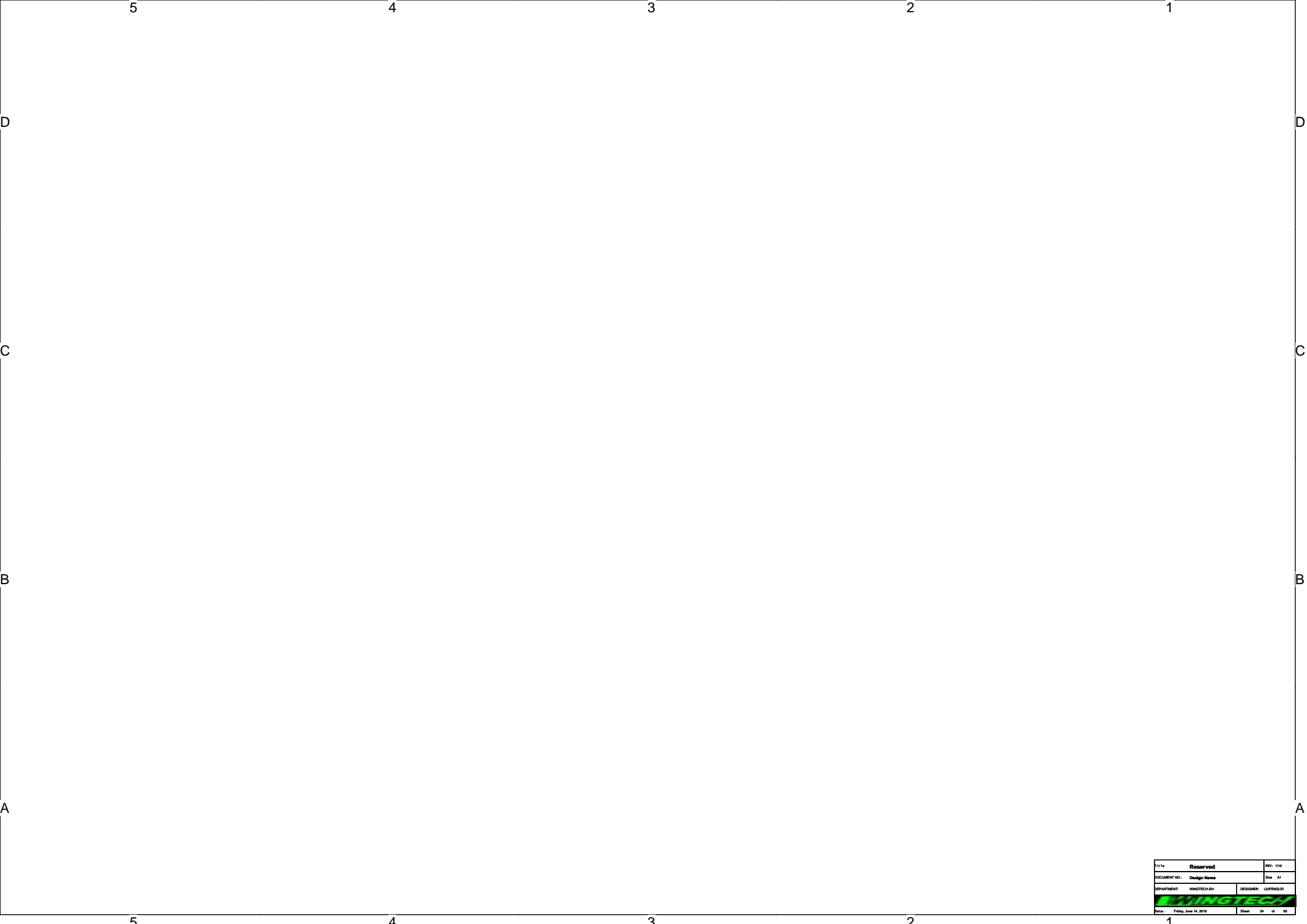
|              |  |                |
|--------------|--|----------------|
| File         | Page Name = 72_DRX_LMB                   | REV: V10       |
| DOCUMENT NO: | Design Name = 98070_1_11_20190614        | Rev: D         |
| DEPARTMENT:  | WINDTECH                                 | DESIGNER: LAMP |
| Date:        | Page Modify Date = Friday, June 14, 2020 | Sheet 51 of 65 |



Note1: COMPATIBLE DESIGN AND SHARE PAD IN PCB

|              |  |                                 |
|--------------|--|---------------------------------|
| Title        | Page Name = 73_DRX_HB                    | REV: V10                        |
| DOCUMENT NO: | Design Name = 98576_1_11_2019061410      | ID                              |
| DEPARTMENT:  | DEPARTMENT = WINGTECH-02                 | DESIGNER: DESIGNER = LAUFINGLES |
| Date:        | Page Modify Date = Friday, June 14, 2019 | Sheet 52 of 65                  |





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| Title   |  | Reserved              | REV: V10            |  |
| DOCUMENT NO.:   |  | Design Name           | Size A1             |  |
| DEPARTMENT:   |  | WINGTECH-SH           | DESIGNER: LUPENGLEI |  |
|  |  |                       |                     |  |
| Date:   |  | Friday, June 14, 2019 | Sheet 54 of 65      |  |



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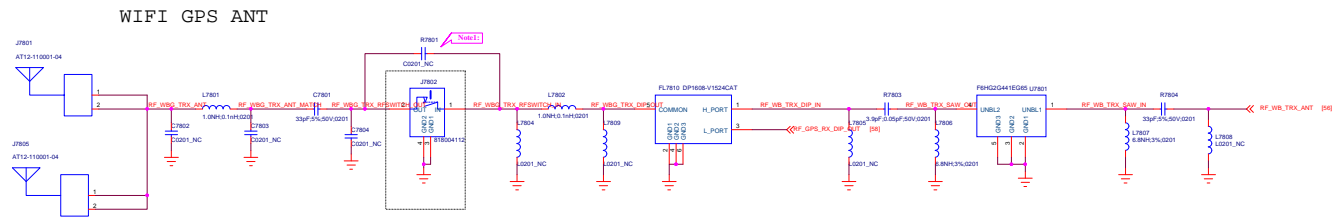
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| DEPARTMENT:   |  | WINGTECH-SH           | DESIGNER: LUPENGLEI |  |
|  |  |                       |                     |  |
| Date:   |  | Friday, June 14, 2019 | Sheet 05 of 05      |  |



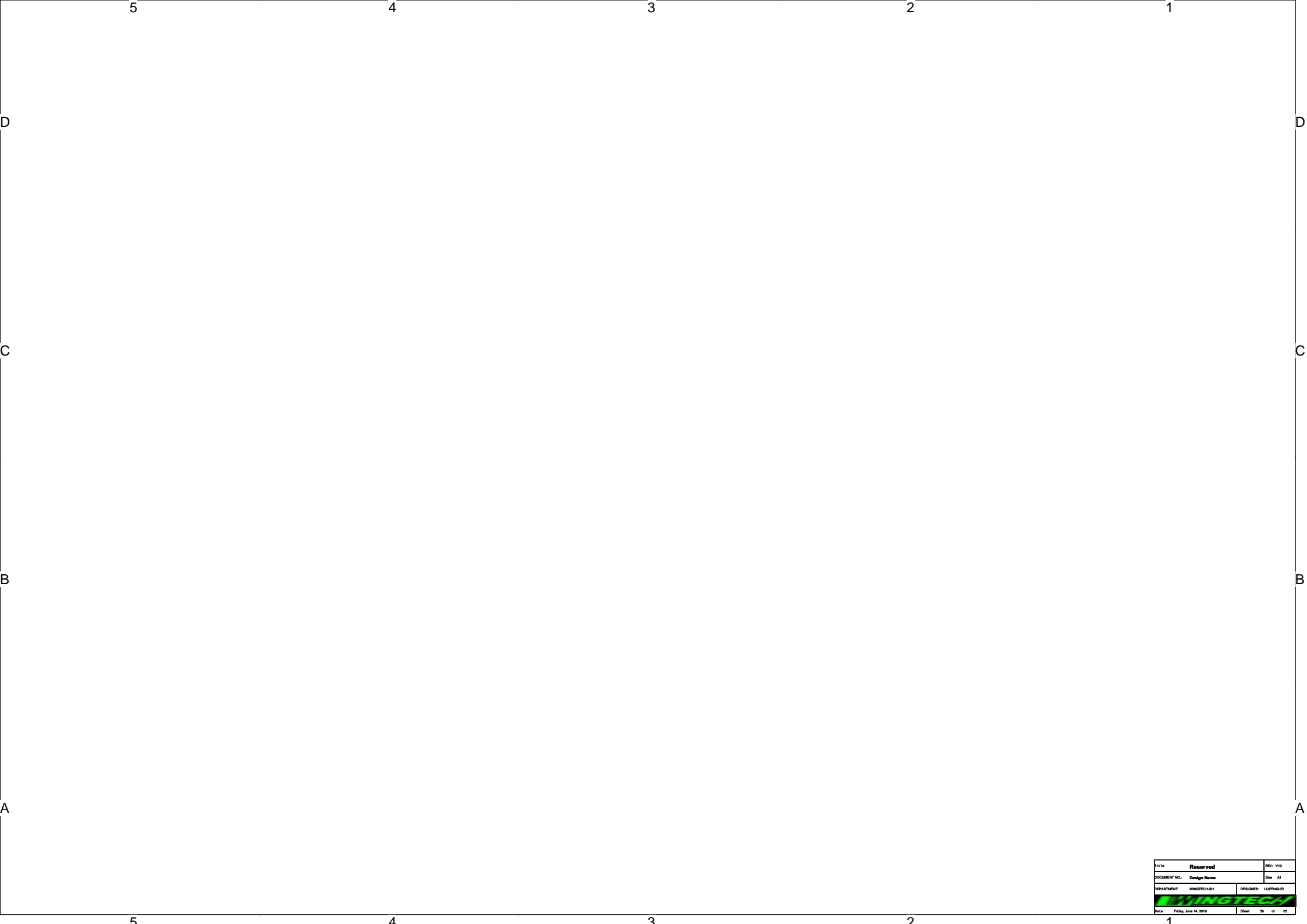




Note: COMPATIBLE DESIGN FOR WBO RF SWITCH, USE OR AFTER MP

|                             |  |                     |
|-----------------------------|--|---------------------|
| Title: Reserved             |  | REV: V10            |
| DOCUMENT NO: Design Name    |  | Rev: 0              |
| DEPARTMENT: WHOTEC-SH       |  | DESIGNER: LUPENGLEI |
| Date: Friday, June 14, 2019 |  | Sheet 57 of 65      |





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| Title: <b>Reserved</b>  |  | REV: V10                     |
| DOCUMENT NO.: <b>Design Name</b>  |  | Size: A1                     |
| DEPARTMENT: <b>WINGTECH-SH</b>  |  | DESIGNER: <b>LUFENGLEI</b>   |
|  |  |                              |
| Date: <b>Friday, June 14, 2019</b>  |  | Sheet <b>09</b> of <b>05</b> |



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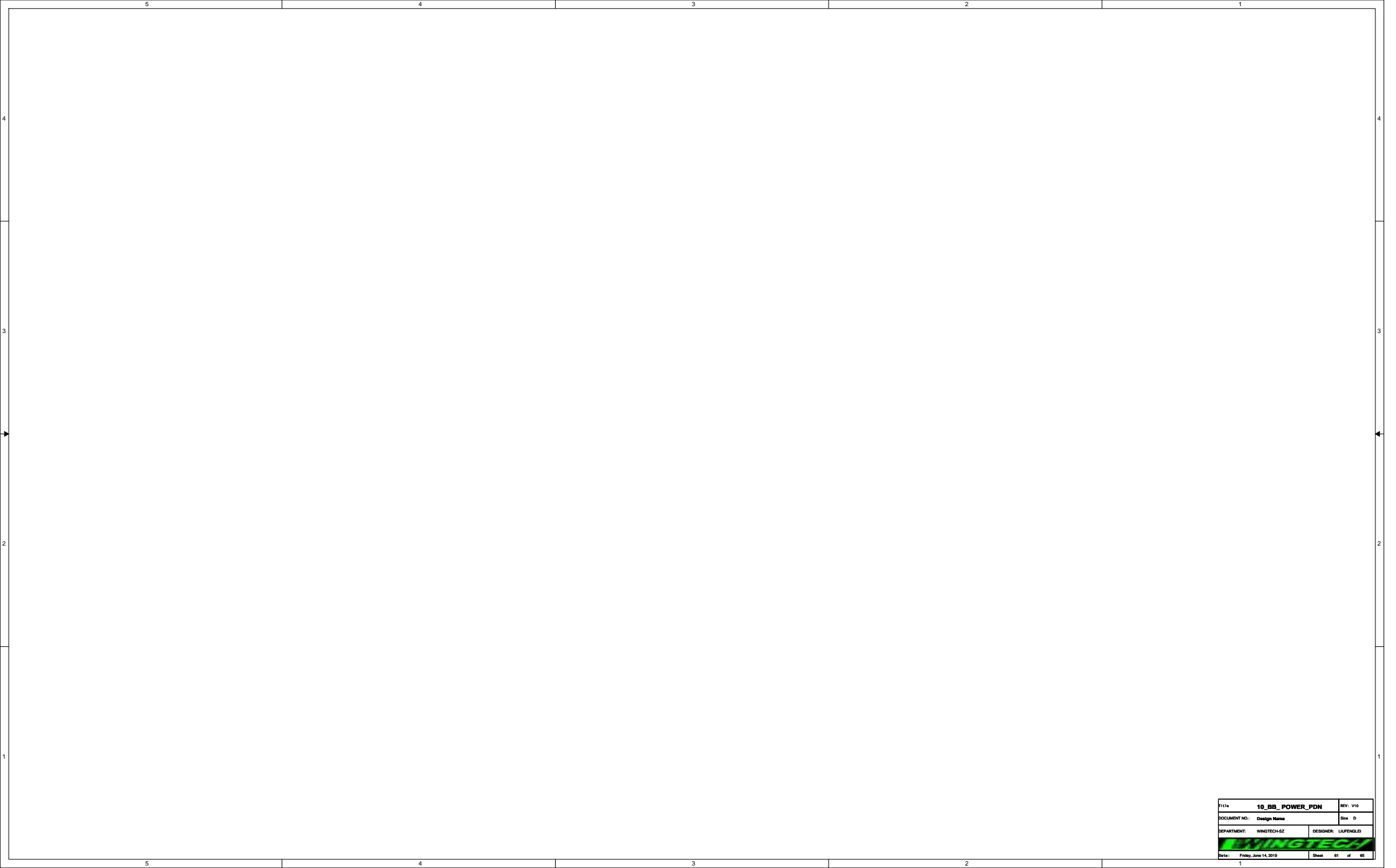
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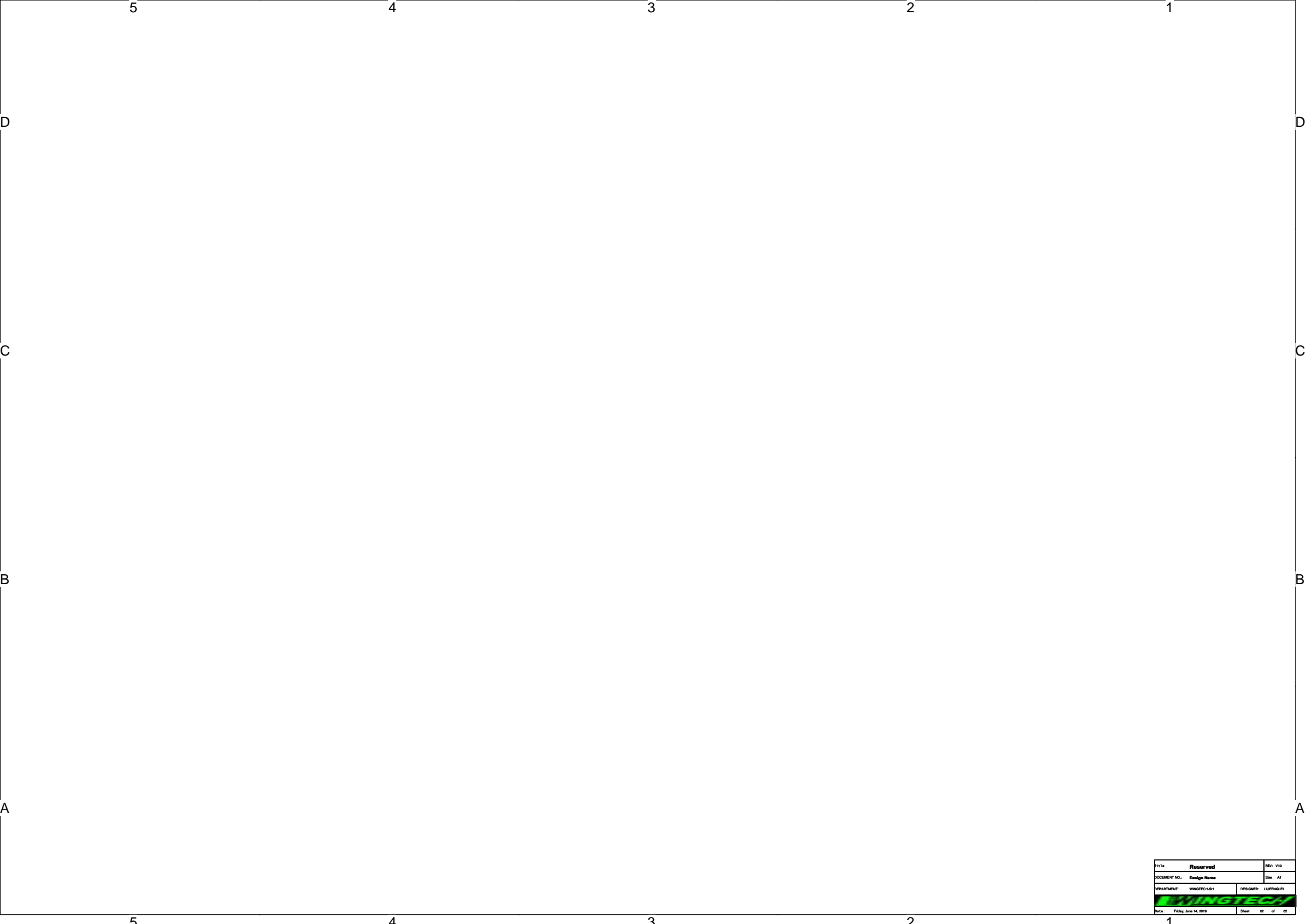
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| DOCUMENT NO.: <b>Design Name</b>  |  | Size: A1                     |
| DEPARTMENT: <b>WINGTECH-SH</b>  |  | DESIGNER: <b>LUFENGLEI</b>   |
|  |  |                              |
| Date: <b>Friday, June 14, 2019</b>  |  | Sheet <b>00</b> of <b>05</b> |



|                             |             |                 |            |
|-----------------------------|-------------|-----------------|------------|
| Title                       |             | 10_BB_POWER_PDN | REV: V10   |
| DOCUMENT NO.: Design Name   |             | Rev: D          |            |
| DEPARTMENT:                 | WINOTECH-SZ | DESIGNER:       | LIUFENGLES |
| Date: Friday, June 14, 2019 |             | Sheet           | 01 of 05   |

If SYS\_CLK is used, the SYS\_CLK\_REQ signal needs to be connected to the host GPIO pin that configures as SRCLKENAI mode and this pin must be default low

NOTE6: CR218/CR219 place close to XIN/XOUT Balls (less than 5mm)



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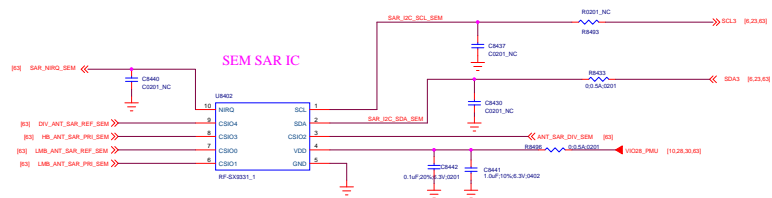
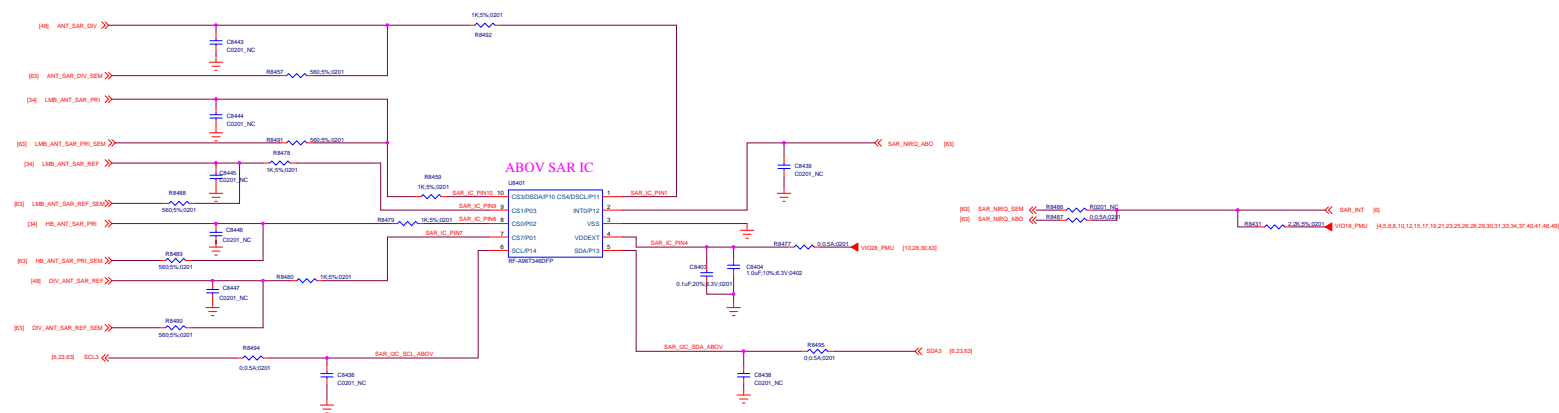
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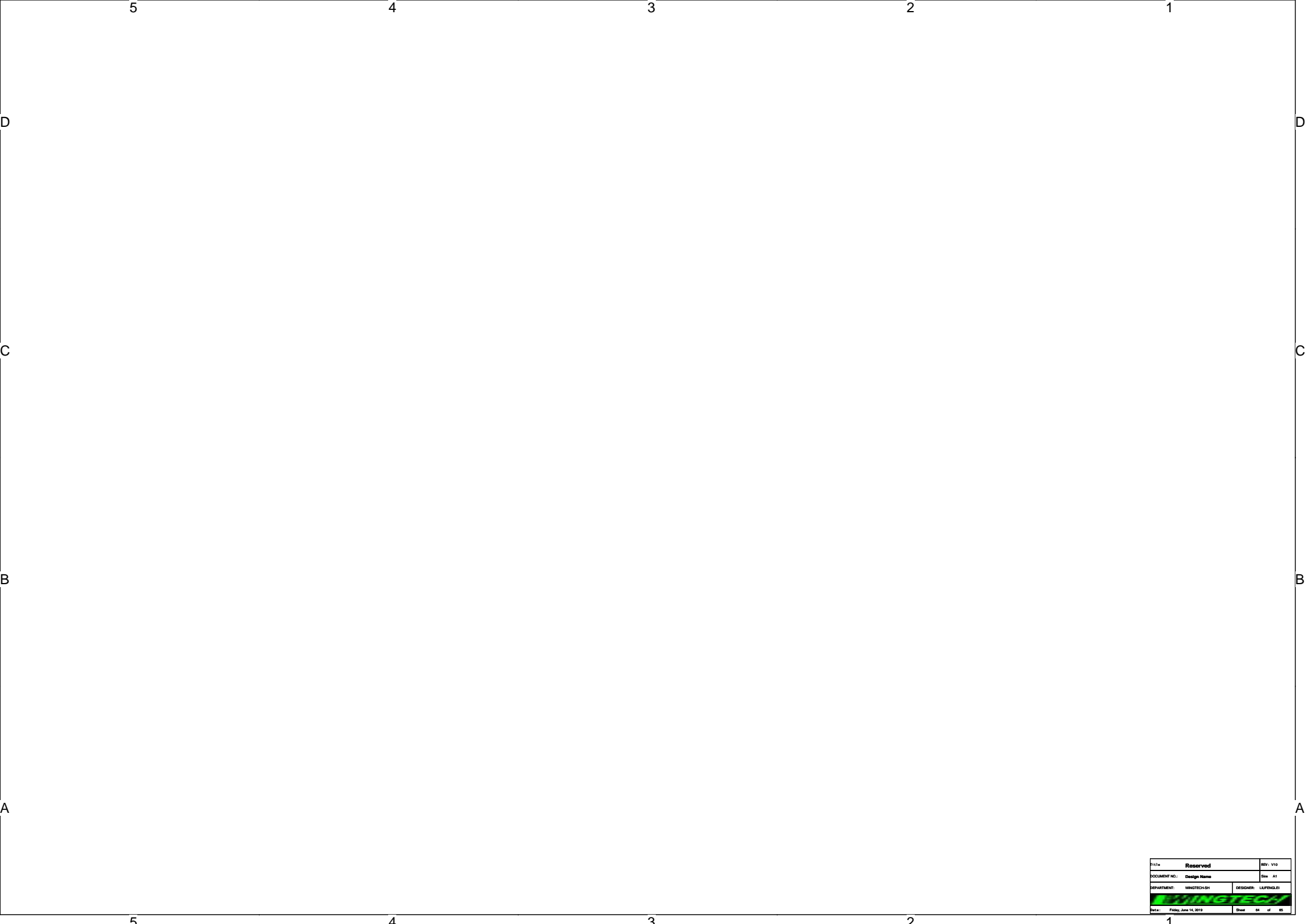
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| Title <b>Reserved</b>   |  | REV: V10                      |
| DOCUMENT NO.: <b>Design Name</b>  |  | Size A1                       |
| DEPARTMENT:      WINGTECH-SH  |  | DESIGNER:      LUIFENGLEI     |
|  |  |                               |
| Date:      Friday, June 14, 2019  |  | Sheet      02      of      05 |

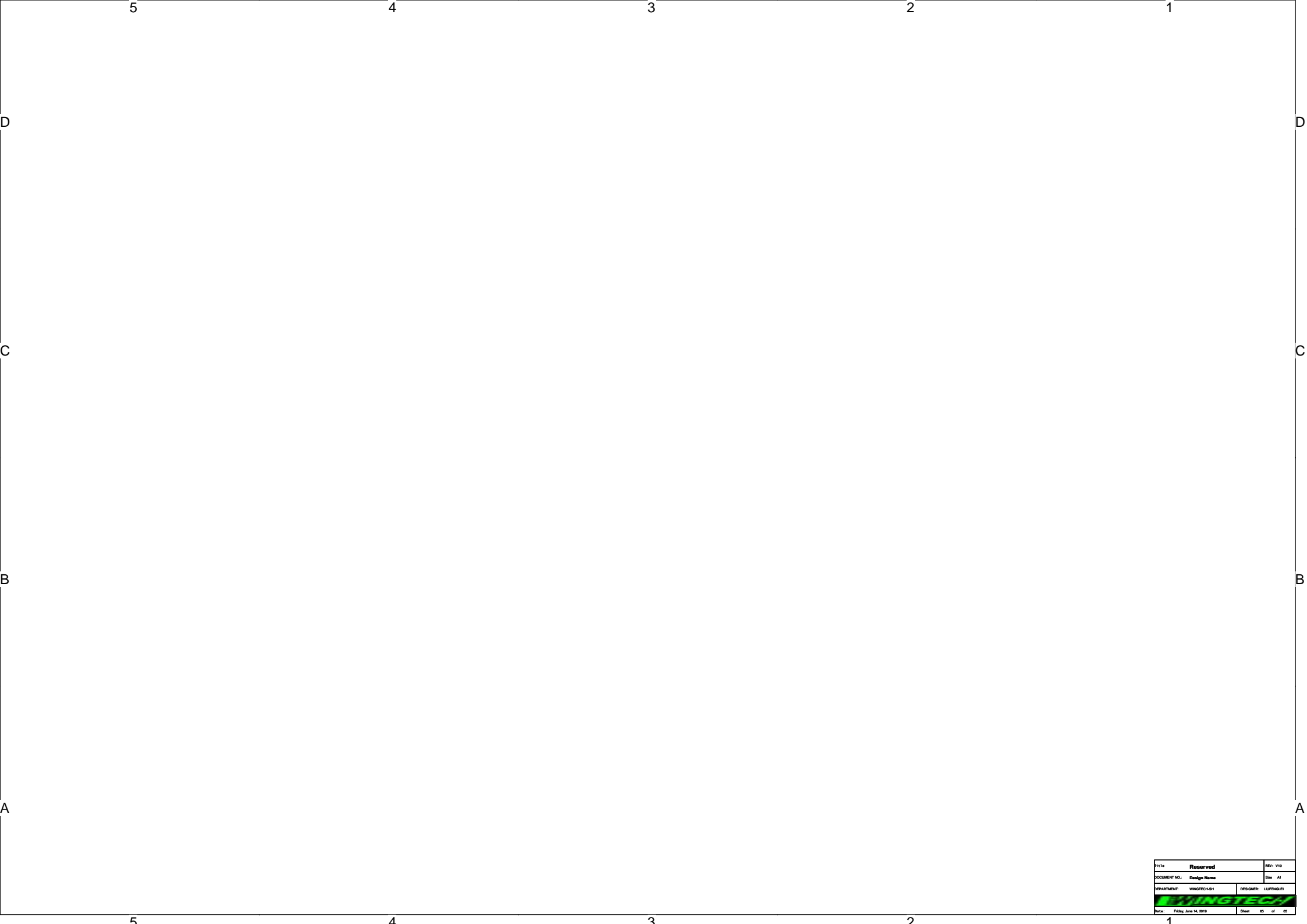




|                             |  |                      |
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| Title: Reserved             |  | REV: V10             |
| DOCUMENT NO.: Design Name   |  | Size: A1             |
| DEPARTMENT: HWGTECH-SH      |  | DESIGNER: LUPINGOLEI |
| Date: Friday, June 14, 2019 |  | Sheet 04 of 05       |







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| Title: <b>Reserved</b>  |                            | REV: V10        |
| DOCUMENT NO.: <b>Design Memo</b>  |                            | Size: <b>A1</b> |
| DEPARTMENT: <b>WINGTECH-SH</b>  | DESIGNER: <b>LUPENGLES</b> |                 |
|  |                            |                 |
| Date: <b>Friday, June 14, 2019</b>  | Sheet: <b>05</b>           | of <b>05</b>    |