

Prestigio

GEOVISION  
PMP5597D\_DUO

TECHNICAL  
SERVICE MANUAL

# Prestigio

## Product Specification

Model:PMP5597D\_DUO



### Features:

1. CPU: RockChip 3066 Duo Core ARM Cortex-A9
2. Screen:9.7" 1024\*768 pixels
3. CTP: G+G
4. 1GB DDR3, 8GBFLASH; optional: 16 GB FLASH
5. WIFI: IEEE 802.11b/g/n
6. Dual camera:2M front camera and 2M rear camera
7. HDMI 1.4 TYPE-C
8. 3D G-Sensor
9. USB OTG
10. Battery: 7000mAh

### Specification:

| Hardware    |                 |                                                                                |
|-------------|-----------------|--------------------------------------------------------------------------------|
| CPU         |                 | RockChip 3066 Duo Core ARM Cortex-A9 + HD video codec + 3D graphic accelerator |
| Memory      | Flash           | 8GB MLC<br>Optional: 16GB MLC                                                  |
|             | RAM             | 1GB DDR3                                                                       |
|             | TF CARD         | Support 2/4/8/16/32GB TF Card                                                  |
| LCD         | Size (Diagonal) | 9.7' TFT                                                                       |
|             | Aspect Ratio    | 4:3                                                                            |
|             | Resolution      | 1024*768 pixels                                                                |
| Touch Panel |                 | Capacitive touch panel(G+G, Support 10 points touch)                           |
| Key         |                 | Power, Reset, Volume+/-, Home                                                  |

# Prestigio

|                            |                         |                                                                                                                                                                 |                      |
|----------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Camera                     |                         | Front: 2million pixels<br>Rear: 2 million pixels                                                                                                                |                      |
| Audio                      |                         | Recording                                                                                                                                                       |                      |
| USB                        | Earphone                | Via microphone                                                                                                                                                  |                      |
|                            | Speaker                 | 3.5mm stereo earphone                                                                                                                                           |                      |
|                            | USB 2.0   OTG           | 1W@8Ω x2                                                                                                                                                        |                      |
| WIFI                       |                         | Support IEEE 802.11b/g/n transport protocol                                                                                                                     |                      |
| G-Sensor                   |                         | Support 3D accelerometer game                                                                                                                                   |                      |
| Video Decoding             |                         | AVI (H.264, DIVX, DIVX, XVID, rm, rmvb, WMV, MOV, MP4 (H.264, MPEG, DIVX, XVID), DAT (VCD), VOB (DVD), MPEG, MPG, FLV (H.263, H.264), ASF, TS, TP, 3GP, MPG etc |                      |
| Audio Decoding             |                         | MP3,WMA,MP2,OGG,AAC,M4A,MA4,FLAC,APE,3GP,WAV                                                                                                                    |                      |
| Video Container            |                         | MKV, MP4, AVI, RV/RMVB, VOB, WMV, MPG, TS etc                                                                                                                   |                      |
| Picture Format             |                         | JPG, JPEG, GIF, BMP, PNG                                                                                                                                        |                      |
| HDMI                       |                         | Support HDMI 1.4 protocol, TYPE-C                                                                                                                               |                      |
| Battery                    |                         | 7000mAh                                                                                                                                                         |                      |
| System Update              |                         | Via TF card and OTA                                                                                                                                             |                      |
| Logo Update                |                         | Via TF card                                                                                                                                                     |                      |
| Certification & Regulation |                         | CE, FCC, and RoHS compliant                                                                                                                                     |                      |
| Physical Characteristics   |                         | Dimension                                                                                                                                                       |                      |
| Operating System           | Humidity                | Storage                                                                                                                                                         |                      |
| Package Contents           | Humidity<br>Android 4.0 | Operation                                                                                                                                                       | 0~50°C               |
|                            |                         | Storage                                                                                                                                                         | -10~60°C             |
|                            | Humidity<br>Android 4.0 |                                                                                                                                                                 | 0~90%, Non-Condensed |
|                            |                         |                                                                                                                                                                 | 0~90%, Non-Condensed |
| Micro USB cable * 1pcs     |                         |                                                                                                                                                                 |                      |
| OTG cable*1pcs             |                         |                                                                                                                                                                 |                      |
| AC/DC adapter * 1pcs       |                         |                                                                                                                                                                 |                      |
| User's manual * 1pcs       |                         |                                                                                                                                                                 |                      |
| Gift box * 1pc (Size: TBD) |                         |                                                                                                                                                                 |                      |

| Material No#                            | Desription                               | 数量 |
|-----------------------------------------|------------------------------------------|----|
| 13800122                                | TP_CAP_9.7寸_236.6*183.5mm                | 1  |
| 13800128(Substitute material :13800163) | TP_CAP_9.7寸_G+G_1024*768_创仕              | 1  |
| 13800158                                | TP_CAP_9.7寸_G+G_创仕_10点触摸_CT097GG017-00   | 1  |
| 13800163                                | TP_CAP_9.7寸_G+G_瑞视_5点触摸屏/支持10点           | 1  |
| 138M0179                                | LCM_9.7寸_1024*768_350Cd/m2_无TP_30pin_深超  | 1  |
| 16000068                                | 螺丝0068_自攻_PB1.7*2.9*3*0.5_电黑_0#槽无介子_平尾   | 9  |
| 16090007                                | 不锈钢压片0007_6*5.4*2.3mm_无表面处理_不锈钢原色        | 9  |
| 18000212                                | 缓冲垫_20*5mm                               | 6  |
| 18020106                                | 黄色高温胶纸_115*72mm                          | 1  |
| 16000075                                | 螺丝_自攻_KA1.4*4mm_银色_十字平头_2.5mm_尖尾         | 8  |
| 15910115                                | 喇叭框架素材_MW07-972_PC+ABS_黑色                | 1  |
| 13020019                                | PCB_FPC_MR07_LCD_FPC_V2-BI097XN02_1层单拼沉金 | 1  |
| 13830027                                | CAMERA_200万像素_GSK4-924MR07-K1_66度-SP2518 | 1  |
| 13740054                                | LI_BAT_7000mAh_3.8*120*140mm             | 1  |
| 13430040                                | SPK_8R_0.8W_20.0*14.0*3.4mm_单磁(TTK)      | 2  |
| 135M0019                                | ANT_ASSY_MW07_WIFI外购成品天线_130mm           | 1  |
| 18020106                                | 黄色高温胶纸_115*72mm                          | 1  |
| 18090035                                | 铜箔纸_30*11*0.1mm                          | 1  |
| 18000351                                | 后置摄像头垫_10*10*0.7mm                       | 1  |
| 13680071                                | CAB_OTH_按键板连接线_63mm_4PIN排线_MR07-9721     | 1  |
| 15910052                                | 摄像头垫片_MW07-9703_PC_黑色                    | 1  |
| 18020054                                | 黄色高温绝缘胶纸_50*21mm                         | 5  |
| 18020057                                | 高温绝缘胶纸0057_75*20mm                       | 1  |
| 18020045                                | 高温绝缘胶纸_10*20mm                           | 8  |
| 18010010                                | EMI_辅料_导电布_100*21mm                      | 1  |
| 18010020                                | EMI_辅料_导电泡棉0020_15*10*3mm                | 2  |
| 16000210                                | 螺丝_机牙_KAB1.4*3.5mm_碳钢加硬_红色_十字槽_2.7_尖脚    | 2  |
| 18000206                                | 喇叭泡棉垫_12*0.7MM+3M_PSR0.7+4972            | 2  |

|                  |                                         |   |
|------------------|-----------------------------------------|---|
| 15010018         | 密封圈_喇叭密封圈_21*15MM+3M                    | 2 |
| 18000212         | 缓冲垫_20*5mm                              | 4 |
| TESTPTVE910S1301 | TESTTVE910S_V1.3_01_1G-D_16G-F_WIFI德天方案 | 1 |
| TESTPTVE910RK131 | TESTTVE9010R-K1-V1.3_01德天方案             | 1 |
| 151M0306         | 面壳组件_MR07-9721_红色_橡胶漆                   | 1 |
| 153M0262         | 底壳组件_MR07-9721_黑色镭雕                     | 1 |
| 13440028         | MIC_Φ4.0*1.5_-42dB±3dB_带Φ4.8mm咪头套_128mm | 1 |
| 17002321         | 20092_防水贴纸_4*4mm_水损                     | 1 |
| 13700077         | CHARG_5V/2A_2.5mmDC头_1.2m_不带插头_带磁环-2    | 1 |
| 13180065         | JAC_OTH_电源插头_BI10-050200-I-欧规插脚         | 1 |
| 13180067         | JAC_OTH_电源插头_BI10-050200-I-英规插脚         | 1 |

# Maintenance Manual for Tablet MR07(TVE910S\_V1.3)

This manual describes common failures and troubleshooting from the angle of circuit principles. It is for your information. This manual introduces in general positions for circuit investigation. Please refer to maintenance schematic diagram for circuit details.

## I. Booting Failure

The phenomena of booting failure include no display of LCD (and no backlight), no speaker sounds, no response of touch screen when touching, no response of power-on/power-off key stroke and no response of reset. Reasons for these vary. Following the troubleshooting steps below for failures of different kinds.

### 1. Abnormal System Power Supply

Firstly perform tests of short circuit to earth on the power test points on the board to eliminate cause of short circuit to earth. Connect the board to DC power or battery, power on the device and investigate the problem as stated in the table below.

Table 1 System Power Supply

| Power Test Point | Normal Voltage Range | Reasons for Failures (Investigation Range)                                                              |
|------------------|----------------------|---------------------------------------------------------------------------------------------------------|
| DC 5V            | 5+/-0.5V             | Plug with DC power, this point shall have 5+/-0.5V                                                      |
| VSYS             | 3.5V-5V              | This point is system main power, if abnormality, check if PMU well welded or if short circuit to earth. |
| T27/VDD_LOG      | 1.2V+/-0.2V          | This is CPU core power supply, if abnormality, check if PMU well welded or if short circuit to earth.   |
| T30/VDD_ARM      | 1.2V+/-0.2V          | This is CPU core power supply, if abnormality, check if PMU well welded or if short circuit to earth.   |
| T28/VCC_DDR      | 1.56V+/-0.1V         | This is power supply of CPU and memory, if abnormality, check circuit of PMU part.                      |
| T29/VCC_IO       | 3.0V +/-0.1V         | This is IO power supply, check circuit of PMU part.                                                     |

Since RK platform apply PMU, power supply abnormality is usually caused by poor welding of PMU and related peripheral components

### 2. Poor Welding or Abnormity of CPU, Memory and Flash

After the above investigation, the system power supply should be normalized. The following circuits need to be checked.

- Check if the CPU and peripheral components are well welded.
- Check if Y2 crystal oscillates.

- c. Check if RAM, Flash and peripheral components are well welded, if Flash card data lost or if reprogram Flash.

### 3. No Display of LCD

Confirm the current is normal the equipment is started. If LCD has no display when connected, do investigation by following the steps below.

- a. Firstly check if voltage of VCC\_LCD (3.0V+/-0.1V) is normal, if abnormal, check U19 and surrounding circuits. If normal, the system startup is normal, please check backlight IC(U22) and surrounding circuits.
- b. Connect the LCD and then check backlight driving circuit.
- c. If the system cannot be started after confirming that relevant components of the CPU, memory and Flash are well welded, please consider replacing Flash, CPU and memory.

## II. Functional Fault Checking

### 1. Failure of Charging and Power Detection

**Abnormal charging:** For charging failure when DC is applied, check whether the welding of U85 2611 charging IC peripheral components are good, whether the battery is damaged, whether the surrounding circuit is normal.

**Abnormal DC insertion check (software shows battery power supply when DC power is inserted):** Confirm first DC 5V has a voltage of around 5V, and then check if **U85** is well welded.

**The equipment does not work with battery power supply (but work with external power supply):** Without external power supply, check if the voltage of VSYS is normal and if the circuit of PMU part is normal.

### 2. Abnormal Operation of USB and USB Peripheral

**Detection failure of USB insertion:** While connecting MID with PC via USB cable, USB insertion cannot be detected. Check mainly the circuits of USB-DET, R53 R56 Q7 are well welded.

**OTG dysfunction:** Confirm if VCC-OTG has a voltage of around 5V when OTG cable inserted. Confirm if OTG-ID voltage is at a low level. If the voltage is lower than 5V, check if U16 well welded.

### 3. Abnormal LCD Operation

**Abnormal LCD backlight:**

**LCD backlight does not work:** Check if the circuit of Part U22 in normal operation.

**Nonadjustable LCD backlight brightness:** Check if the circuit of Part U22 is normal.

**Abnormal LCD color display:**

Check if LCD extension cords are well welded, if circuits of U19 and surrounding parts are normal.

**Touch screen abnormality:**

Run touch screen calibration program and then check if it is normalized.

Replace the LCD screen.

Check if display base is well welded. Check if the connection of LCD extension cords and the CPU is normal. Check if the CPU is welded without tin.

#### **4.Abnormal Operation of TF card**

##### **Detection failure of card insertion:**

Check if the card connector is damaged and if it is well welded.

Check if power supply of VDD\_SD is normal as 3.0V+/-0.1V, if abnormal, please check PMU circuit.

Check if TF card peripheral components are well welded or if damaged.

#### **5.Abnormal sounds**

##### **No sounds of earphone and speaker:**

Check U17 related components.

Check if the earphone extension cord is damaged.

##### **Earphone with sounds and speaker no sounds**

Check earphone related components.

##### **Abnormal sounds of earphone and speaker**

Check U17 related components.

#### **6.WIFI abnormity**

##### **WIFI can not scan:**

Turn on WIFI, then check if the voltage of VCCIO-WL is normal as 3.3V+/-0.1V, if not, please check PMU circuit.

Check if welding of WIFI module is good.

##### **Can not detect signal:**

Check if antenna plate and feeder are well welded.

#### **7. Camera Abnormity**

Run the camera application and then check if related current is normal, if voltage of VCC28-CIF is 2.8V around. Check if voltage of VCC18-CIF is 1.8V around.

Check if exclusion and camera extension cords are well welded.

#### **8.G-sensor Failure**

Check if G-sensor IC is well welded.

#### **9. Button Failure**

Check if circuit of the button part is normal. Check if each voltage is normal when buttons pressed down.

#### **10.Other Failures**

**A. Large operation current of the system:** Check if the main board has heating components. Test if the power test points of relevant heating components are short circuited to earth or with small resistance to earth. If yes, replace relevant components.

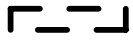
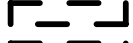
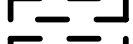
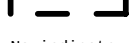
##### **B. Booting Failure:**

Firstly check if PMU related power is normal, if yes, then rewrite img file since the problem is maybe caused by img file loss. If the device can not boot after rewriting, probably there is something wrong with the memory.

CONTENT INDEXING

- 01. INDEX
- 02.Modify note
- 03.Block Diagram
- 04.SYSTEM POWER DIAGRAM
- 05.DC/CHARG
- 06.SYSTEM POWER
- 07.USB OTG/VIB
- 08.DDR3
- 09.FLASH/SD
- 10.GPIO
- 11.AUDIO
- 12.LCD PANEL
- 13.TOUCH PANEL
- 14.HDMI/ATSC
- 15.CAMERA/G\_SENSOR/KEY/COMP/IR
- 16.WIFI/3G
- 17.GPS

PCB POWER WIRE WIDTH INDICATE

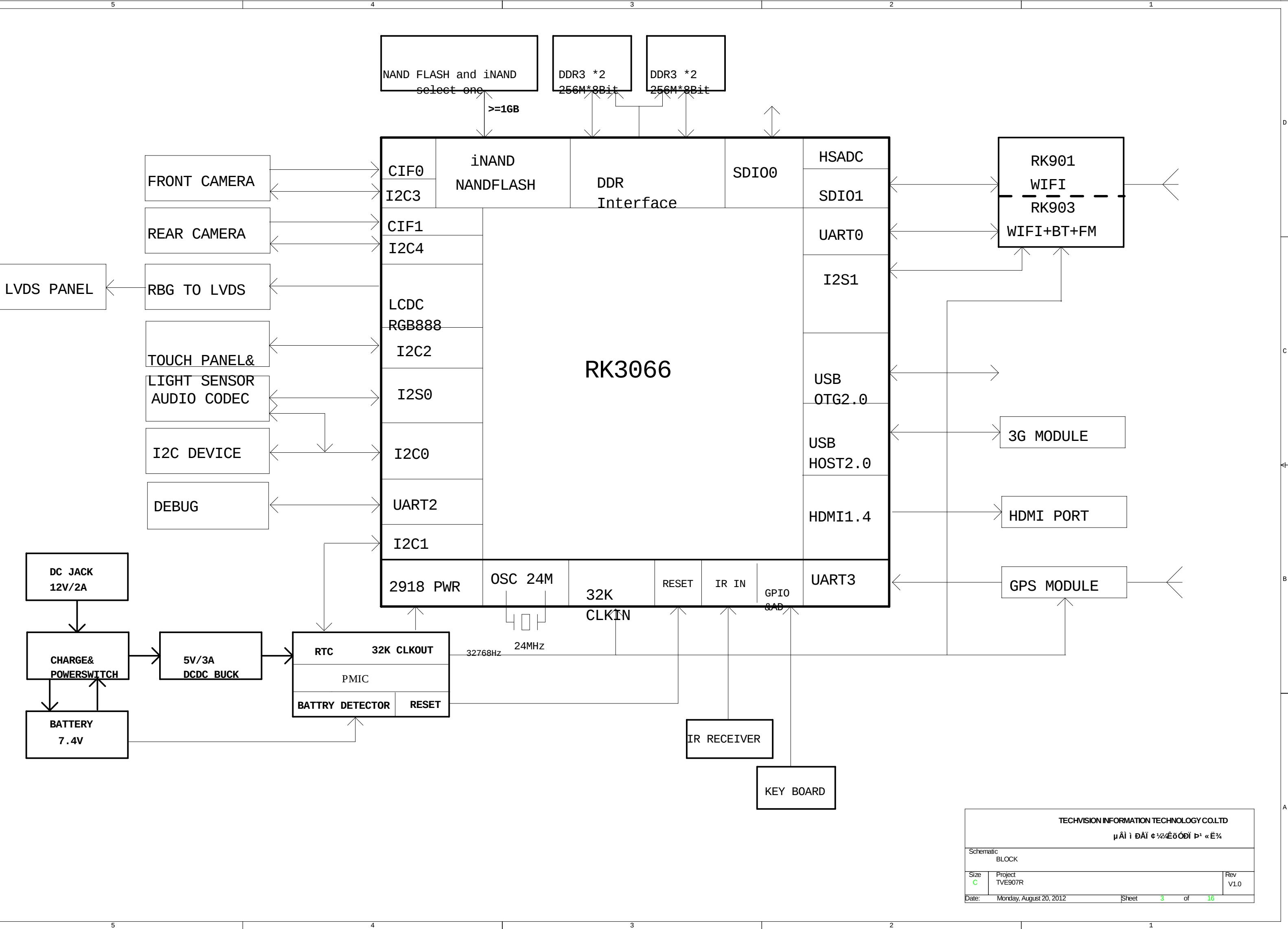
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|  | above 80 miles |
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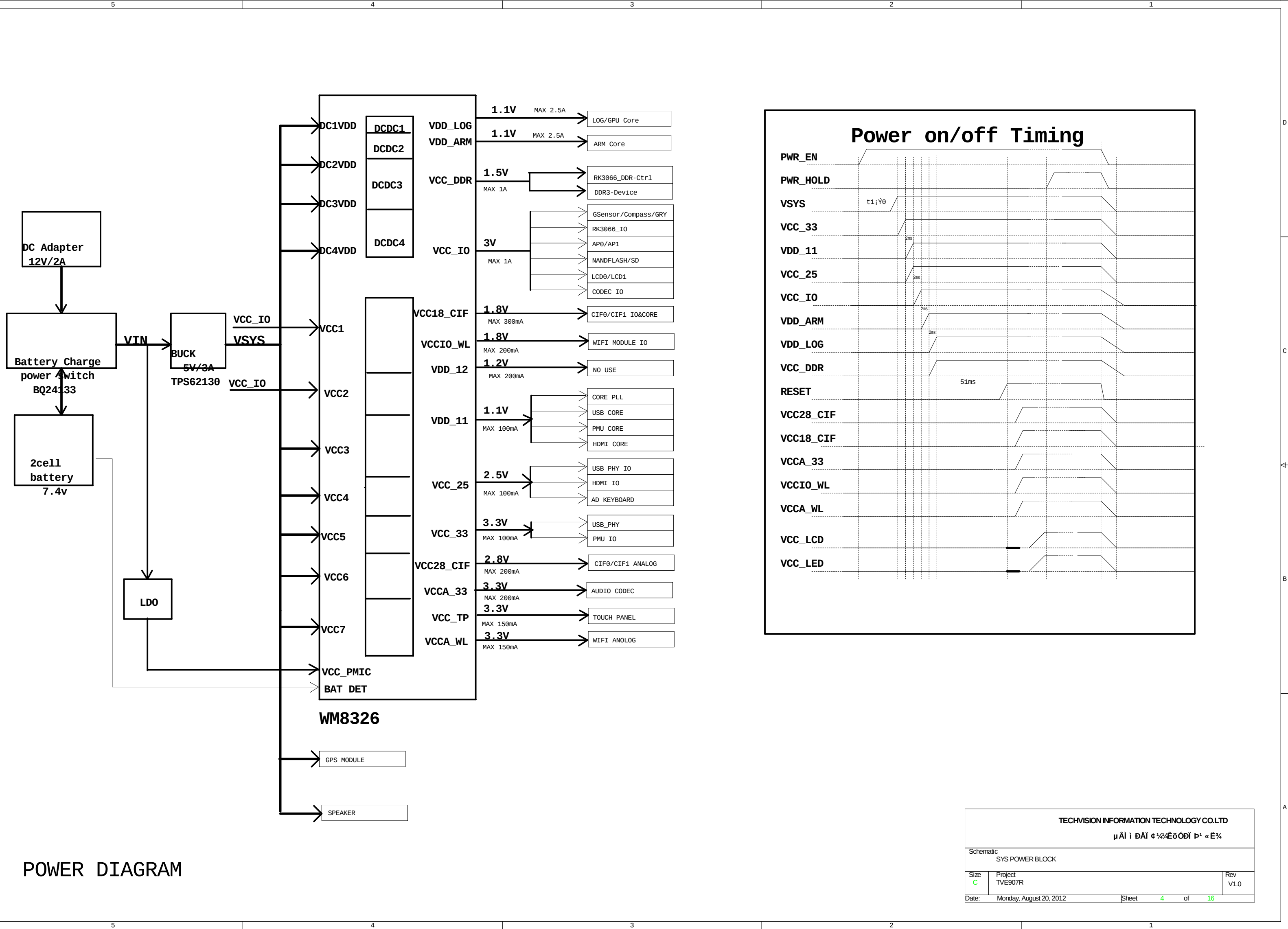
6 LAYERS PCB STACK

|            |         |                |                |                                  |
|------------|---------|----------------|----------------|----------------------------------|
| TOP        | Prepreg | 3313*1         | 4.0MIL(0.10mm) | Hoz(18um) + plating copper(18um) |
| GND        |         |                |                | 1oz(35um)                        |
| POWER(S1)  | Core    | 3.94MIL(0.1mm) |                | 1oz(35um)                        |
|            | Adjust  |                |                |                                  |
| S1(S2)     |         |                |                | 1oz(35um)                        |
| GND(POWER) | Core    | 3.94MIL(0.1mm) |                | 1oz(35um)                        |
| S2(BOTTOM) | Prepreg | 3313*1         | 4.0MIL(0.10mm) | Hoz(18um) + plating copper(18um) |

|                                          |                         |             |         |
|------------------------------------------|-------------------------|-------------|---------|
| TECHVISION INFORMATION TECHNOLOGY CO.LTD |                         |             |         |
| μ Ä ï ÐÄï º¼ÉðÓÐï Ð¹ «É¼                 |                         |             |         |
| Schematic Index                          |                         |             |         |
| Size<br>C                                | Project<br>TVE907R      | Rev<br>V1.0 |         |
| Date:                                    | Monday, August 20, 2012 | Sheet       | 1 of 16 |

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| Version |  |  |  |  | Date     |  |  |  |  | Author |  |  |  |  | Change Note   |  |  |  |  | Approved |  |  |  |  |
| V1.0    |  |  |  |  | 20120220 |  |  |  |  | HCH    |  |  |  |  | First edictor |  |  |  |  |          |  |  |  |  |
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|         |  |  |  |  | </       |  |  |  |  |        |  |  |  |  |               |  |  |  |  |          |  |  |  |  |





POWER DIAGRAM

TECHVISION INFORMATION TECHNOLOGY CO.LTD

μ Α ι Δ Α ι ε % Ε ς Ο Δ ι π ς « Ε %

Schematic

SYS POWER BLOCK

Size

C

Project

TVE907R

Rev

V1.0

Date:

Monday, August 20, 2012

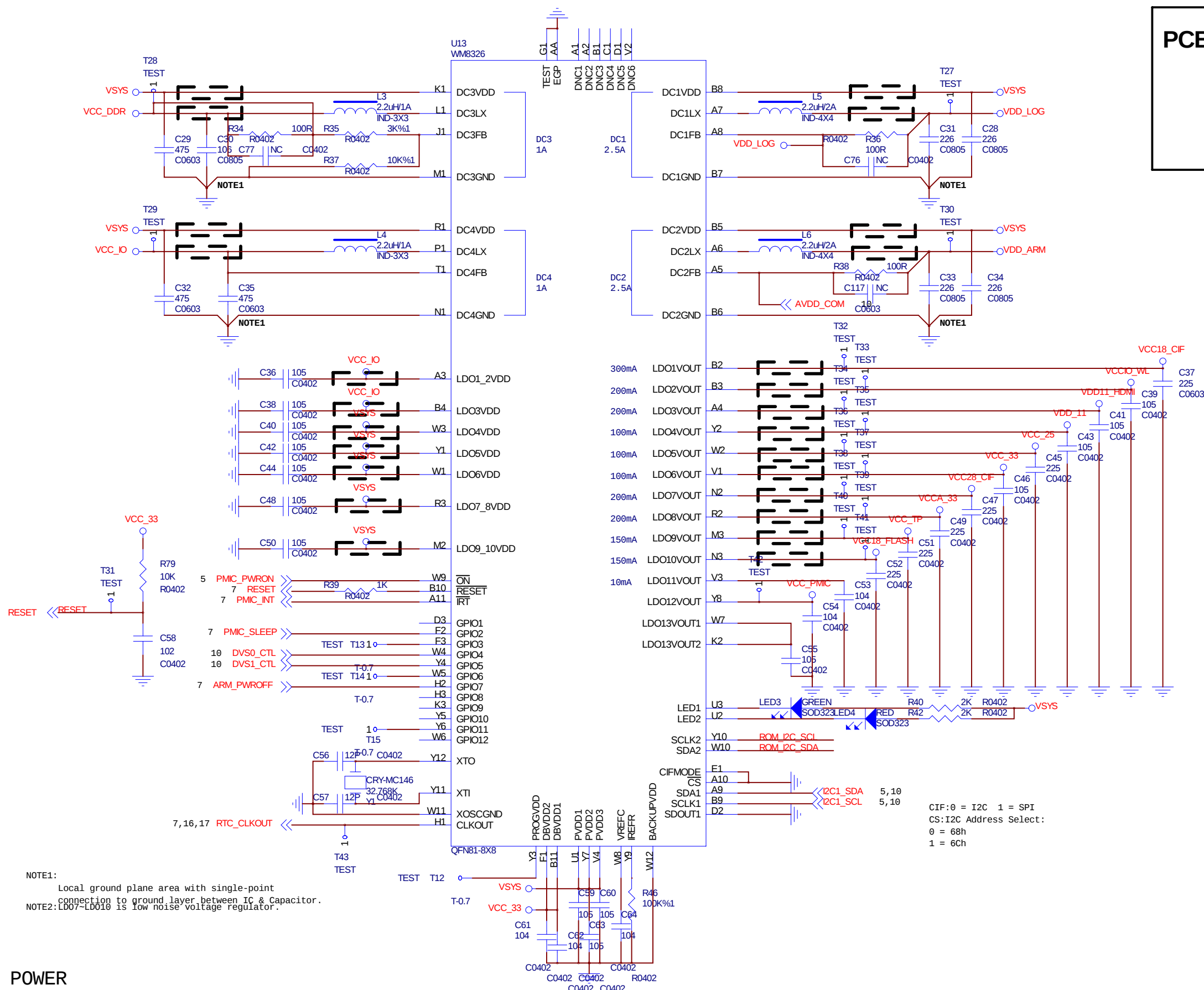
Sheet

4

of

16

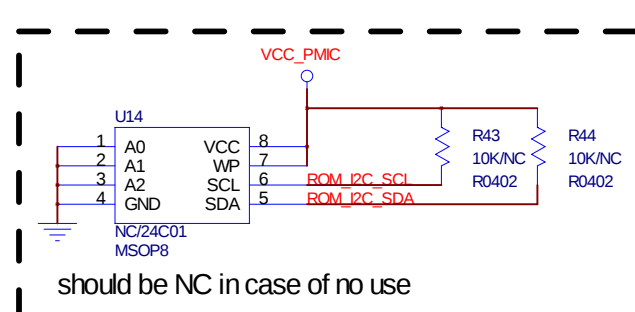
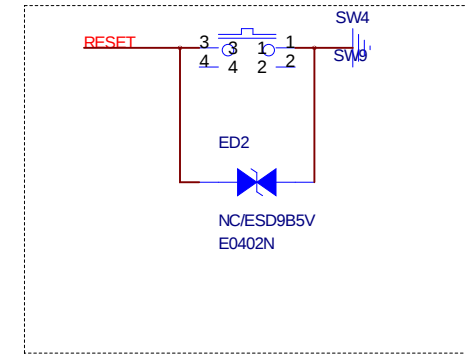




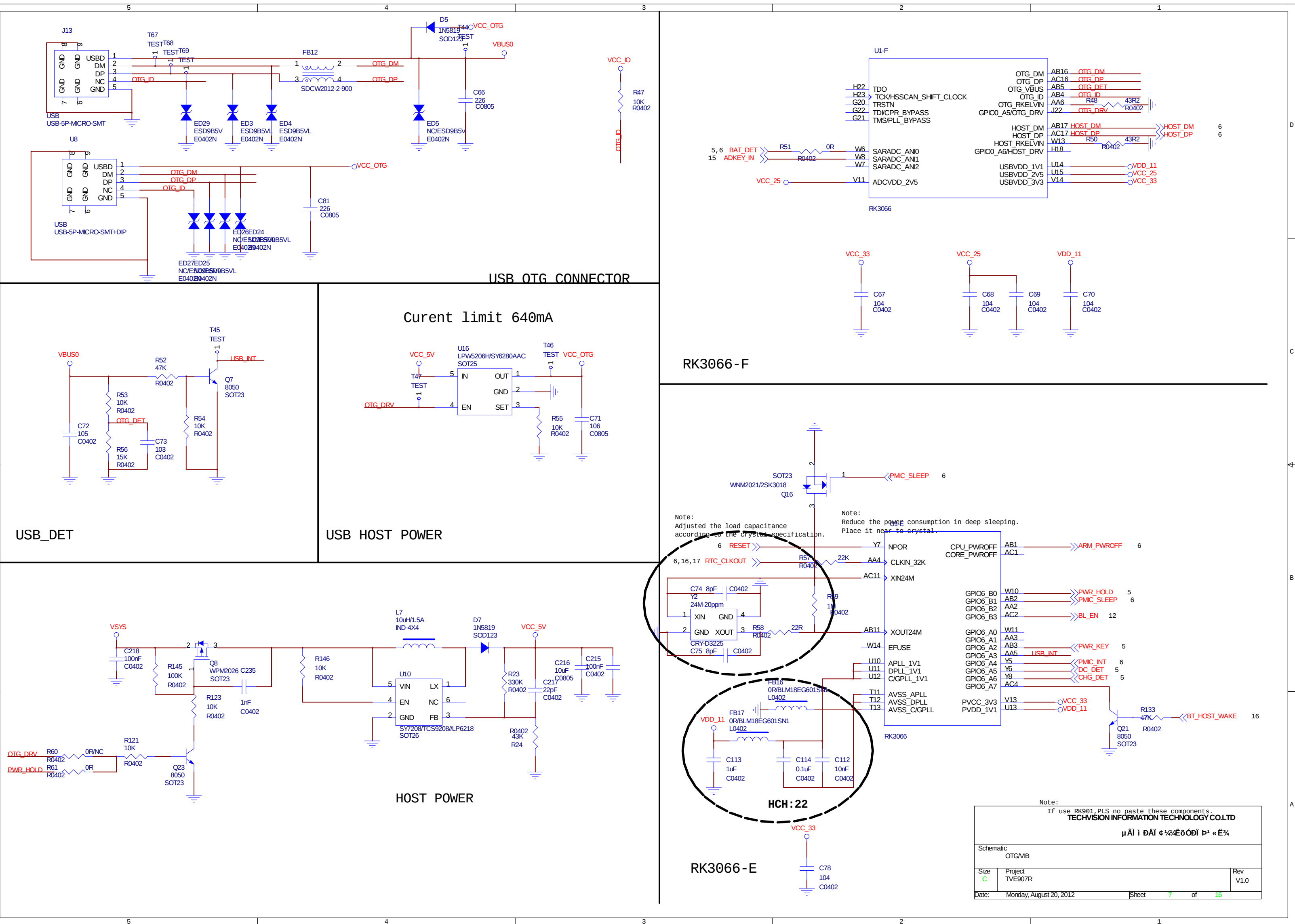
### PCB POWER WIRE WIDTH INDICATE

|  |                |
|--|----------------|
|  | above 80 miles |
|  | above 50 miles |
|  | above 30 miles |
|  | above 12 miles |
|  | Under needs    |

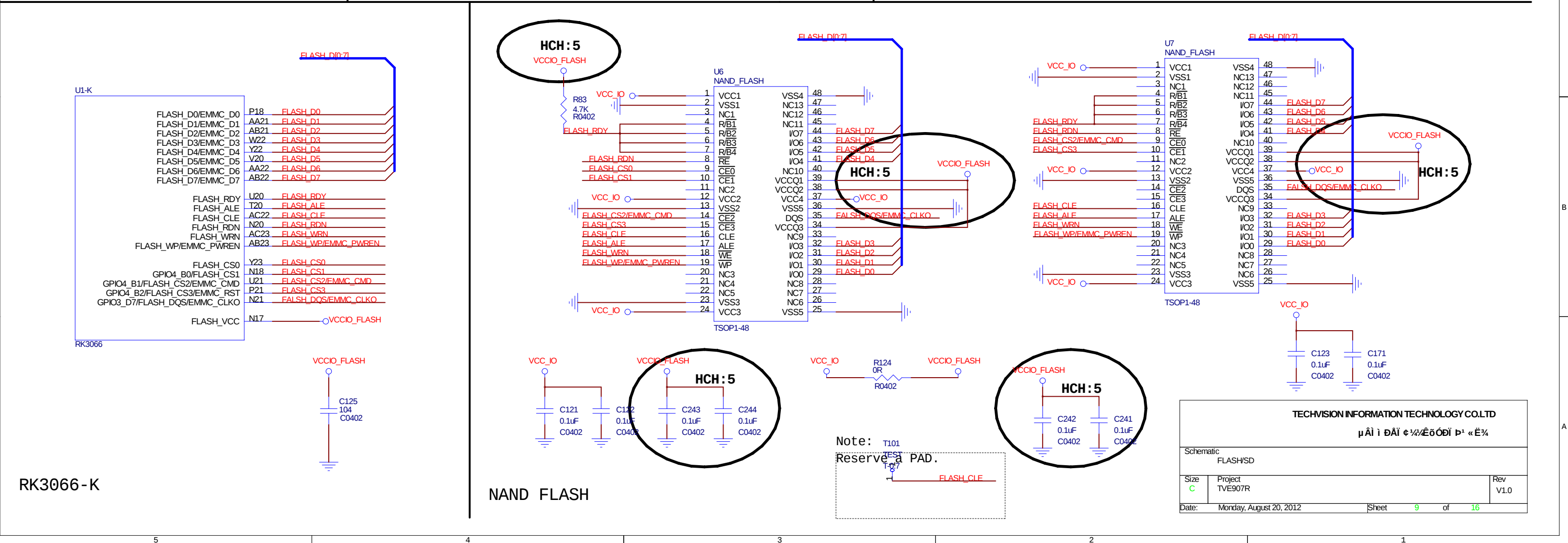
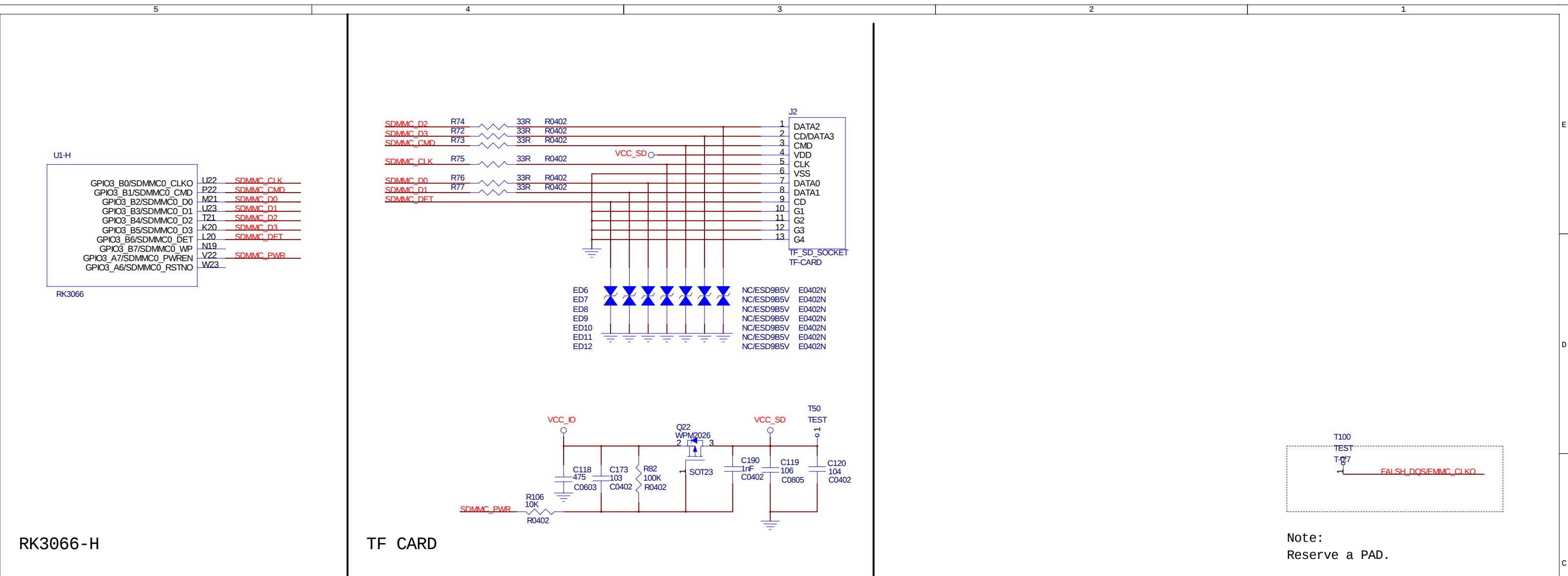
### Option



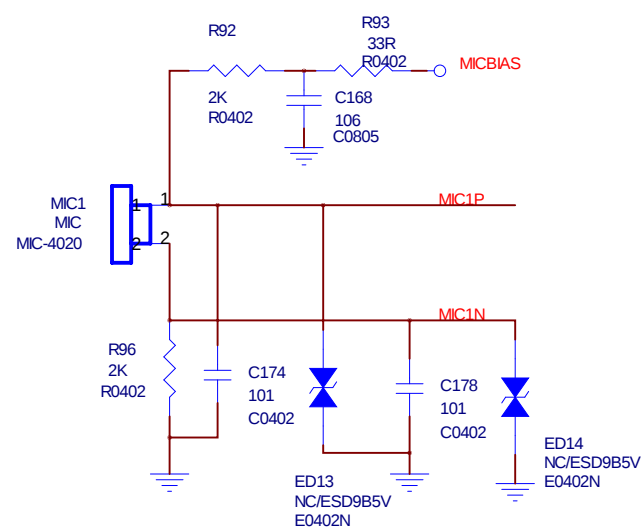
| TECHVISION INFORMATION TECHNOLOGY CO.LTD |                         |               |
|------------------------------------------|-------------------------|---------------|
| μ ΑΙ Ι ΒΑΙ ΕΛΛΕΟΘΙ Ρ' Ε%                 |                         |               |
| Schematic                                |                         |               |
| SYS POWER                                |                         |               |
| Size                                     | Project                 | Rev           |
| C                                        | TV907R                  | V1.0          |
| Date:                                    | Monday, August 20, 2012 | Sheet 6 of 16 |



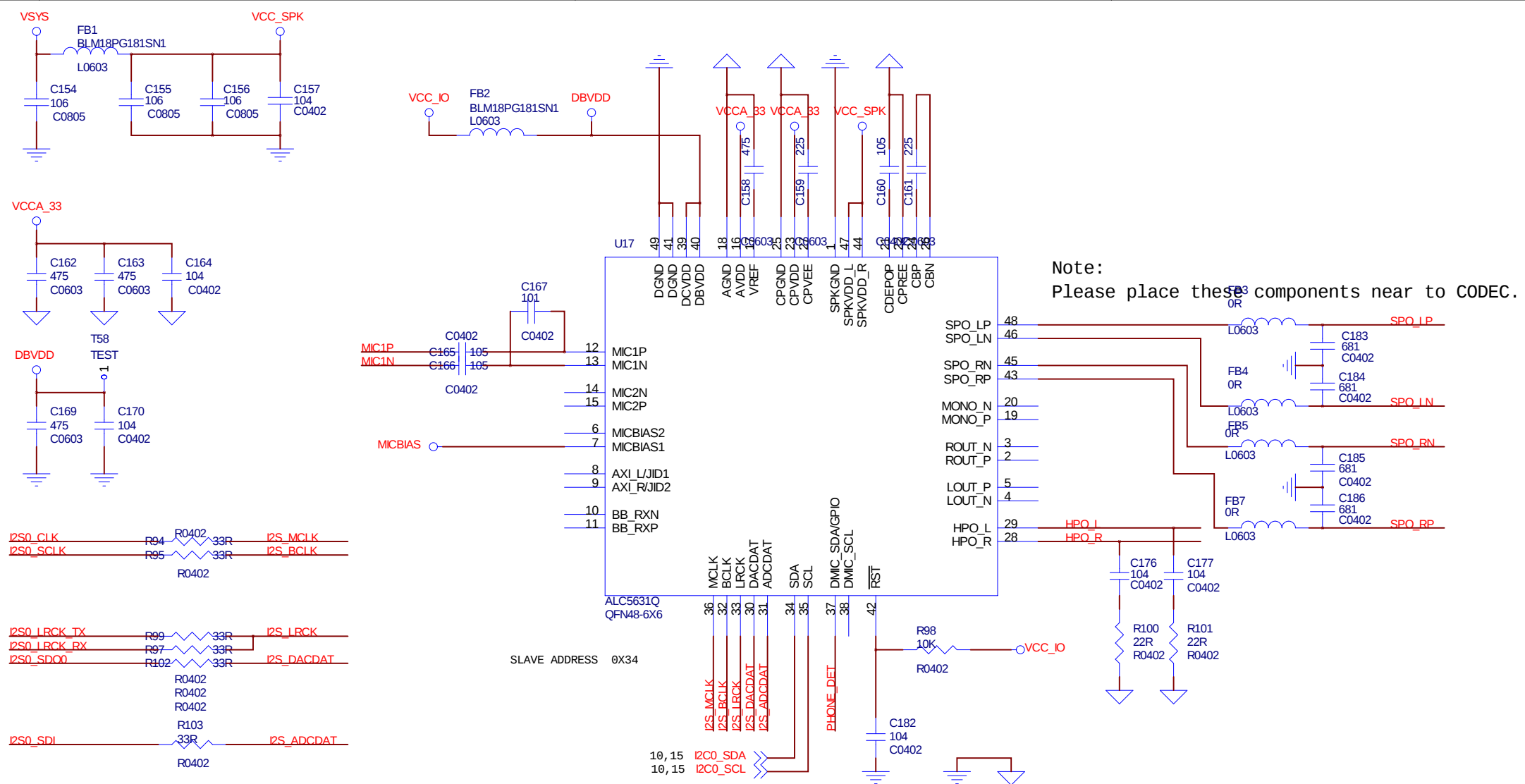




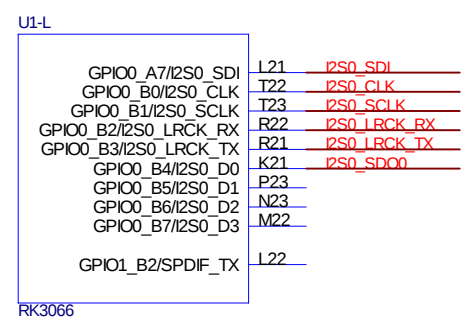




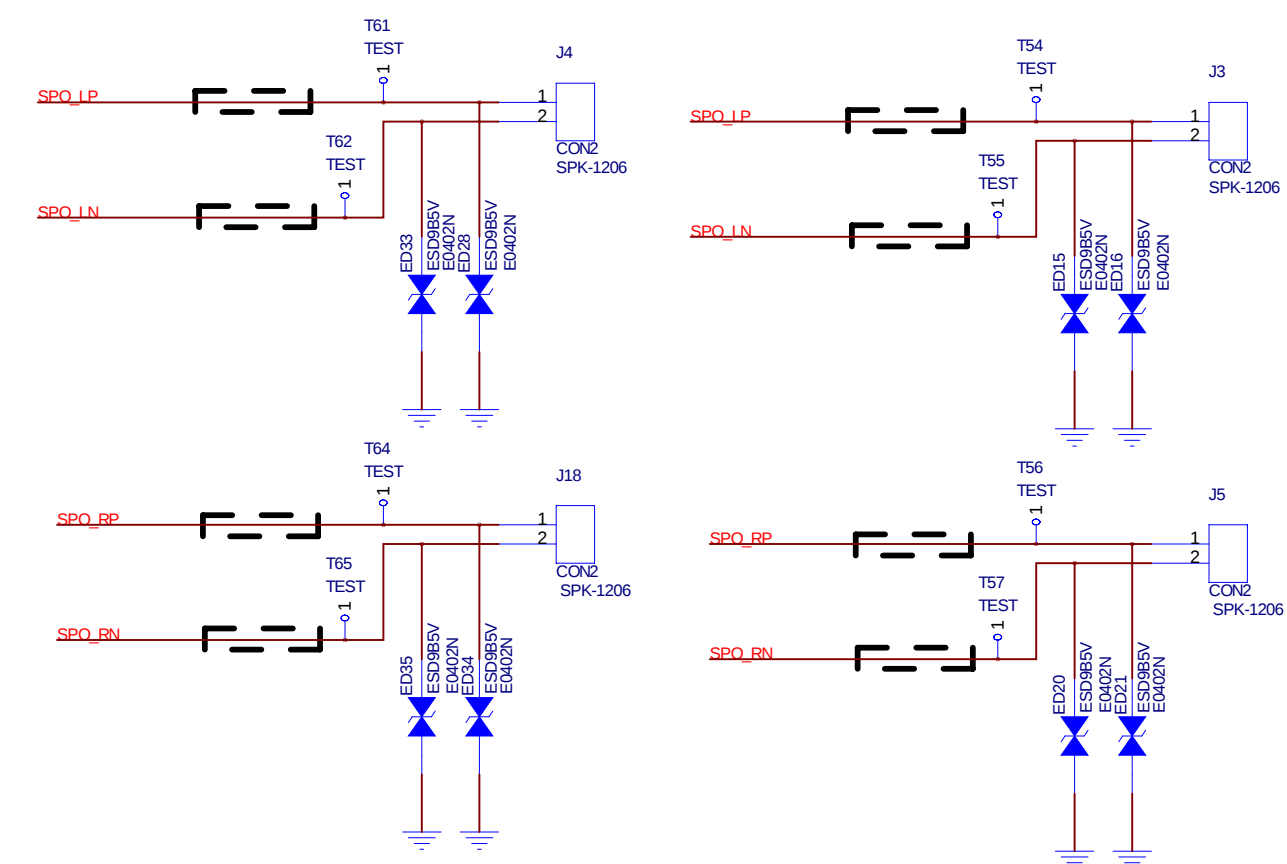
MIC



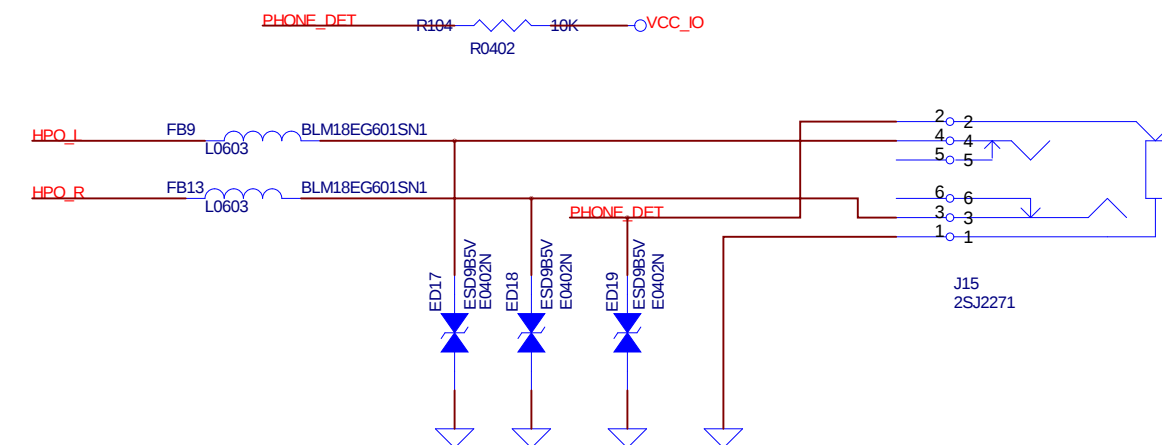
Note:  
Please place these <sup>53</sup> components near to CODEC.  
<sub>OR</sub>



RK3066-L

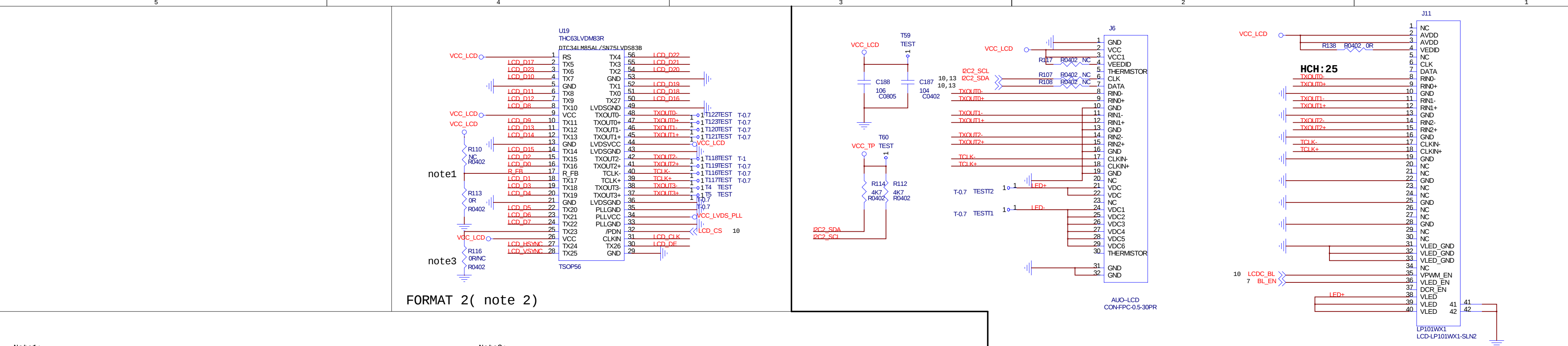


SPEAKER



EARPHONE PORT

|                                          |                        |       |             |
|------------------------------------------|------------------------|-------|-------------|
| TECHVISION INFORMATION TECHNOLOGY CO.LTD |                        |       |             |
| μ ΑΙ Ι ΔΑΙ €¼ÆðÖß Þ¹ «Æ¼                 |                        |       |             |
| Schematic                                |                        |       |             |
| AUDIO                                    |                        |       |             |
| Size<br>C                                | Project<br>TVE907R     |       | Rev<br>V1.0 |
| Date:                                    | Monday August 20, 2012 | Sheet | 11 of 16    |



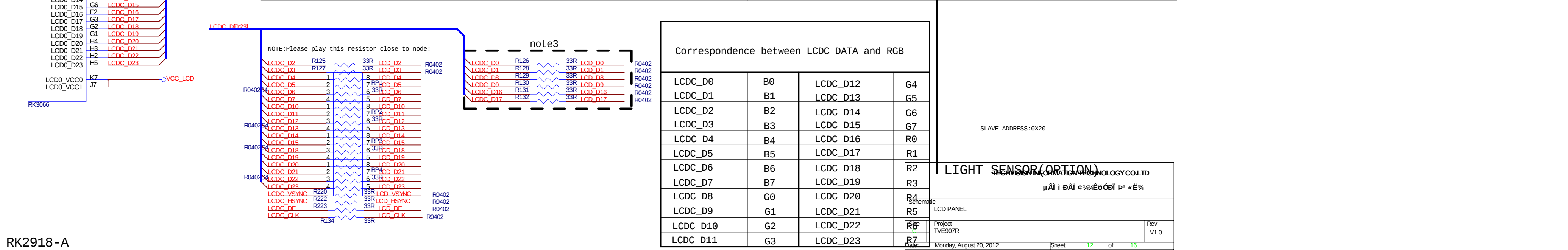
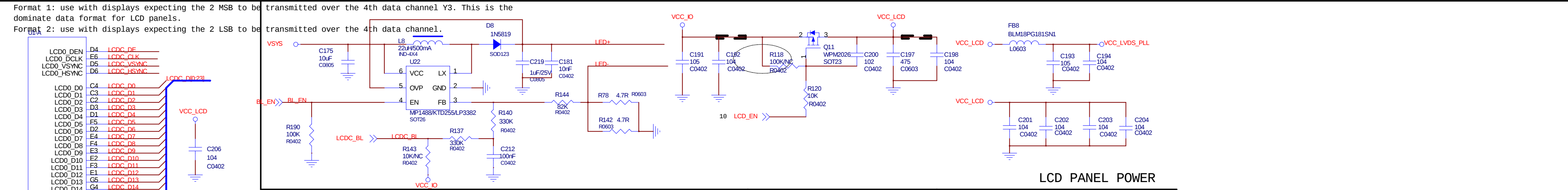
Note1:  
Rpullup: install only to use rising edge triggered clocking.  
Rpulldown: install only to use falling edge triggered clocking.

Note2:  
Format 1: use with displays expecting the 2 MSB to be transmitted over the 4th data channel Y3. This is the dominate data format for LCD panels.  
Format 2: use with displays expecting the 2 LSB to be transmitted over the 4th data channel.

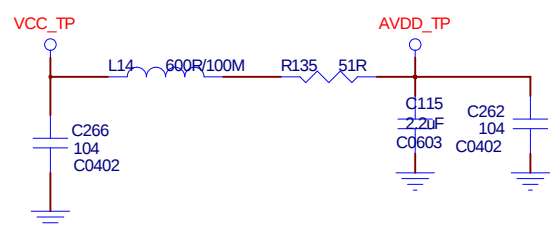
Note3:  
If use 18-bits LCD display, The resistor must be pased 0R. LCD datas must be conncted as Format 2; And the two LSBs of each color must be disconnected to MPU and connected to GND; leave output Y3 NC.

FORMAT 2 (note 2)

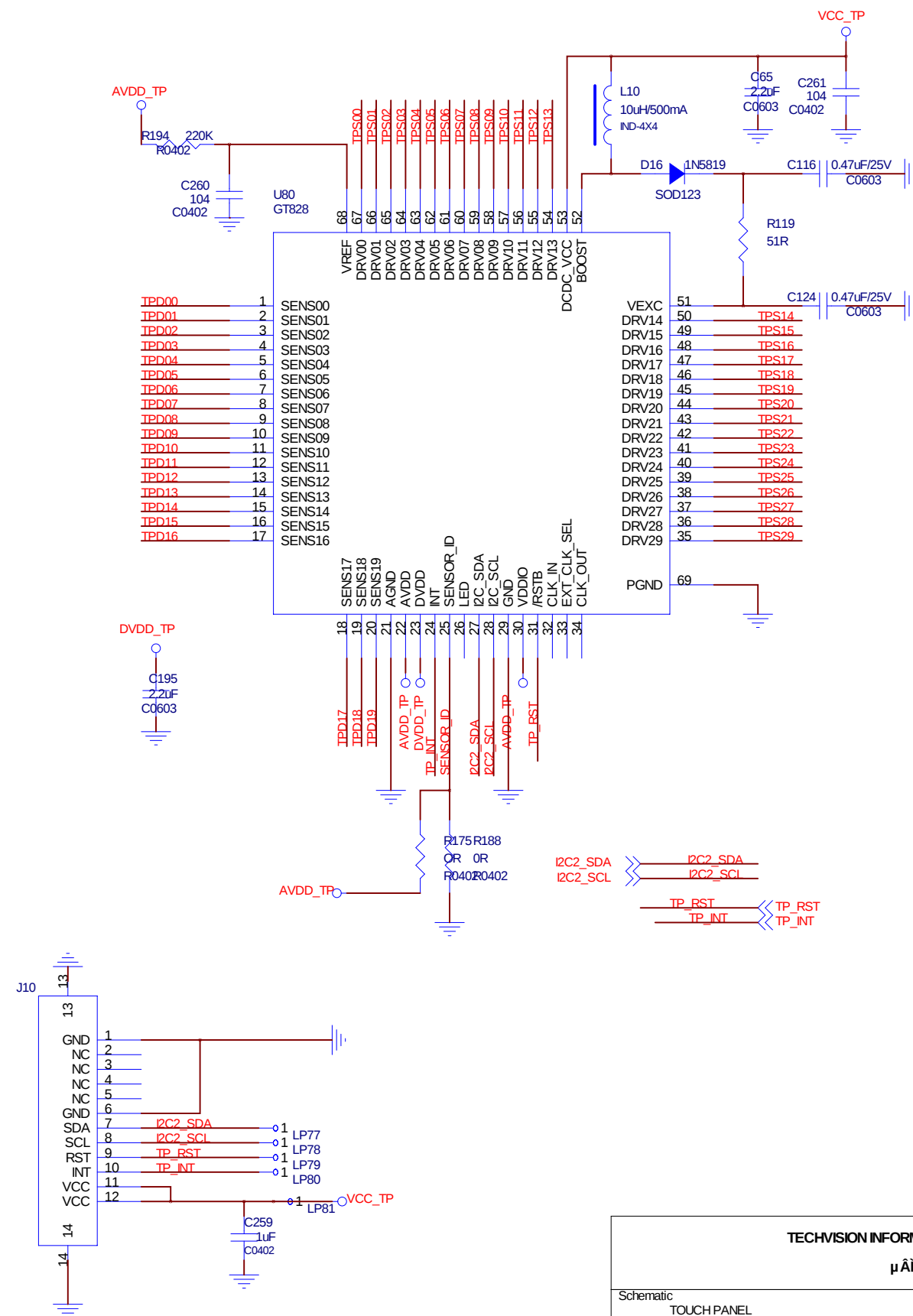
FORMAT 2  
LCD PANEL CONNECTOR



RK2918-A



## TOUCH PANEL CONNECTOR



TECHVISION INFORMATION TECHNOLOGY CO.LTD

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|           |
|-----------|
| Schematic |
|-----------|

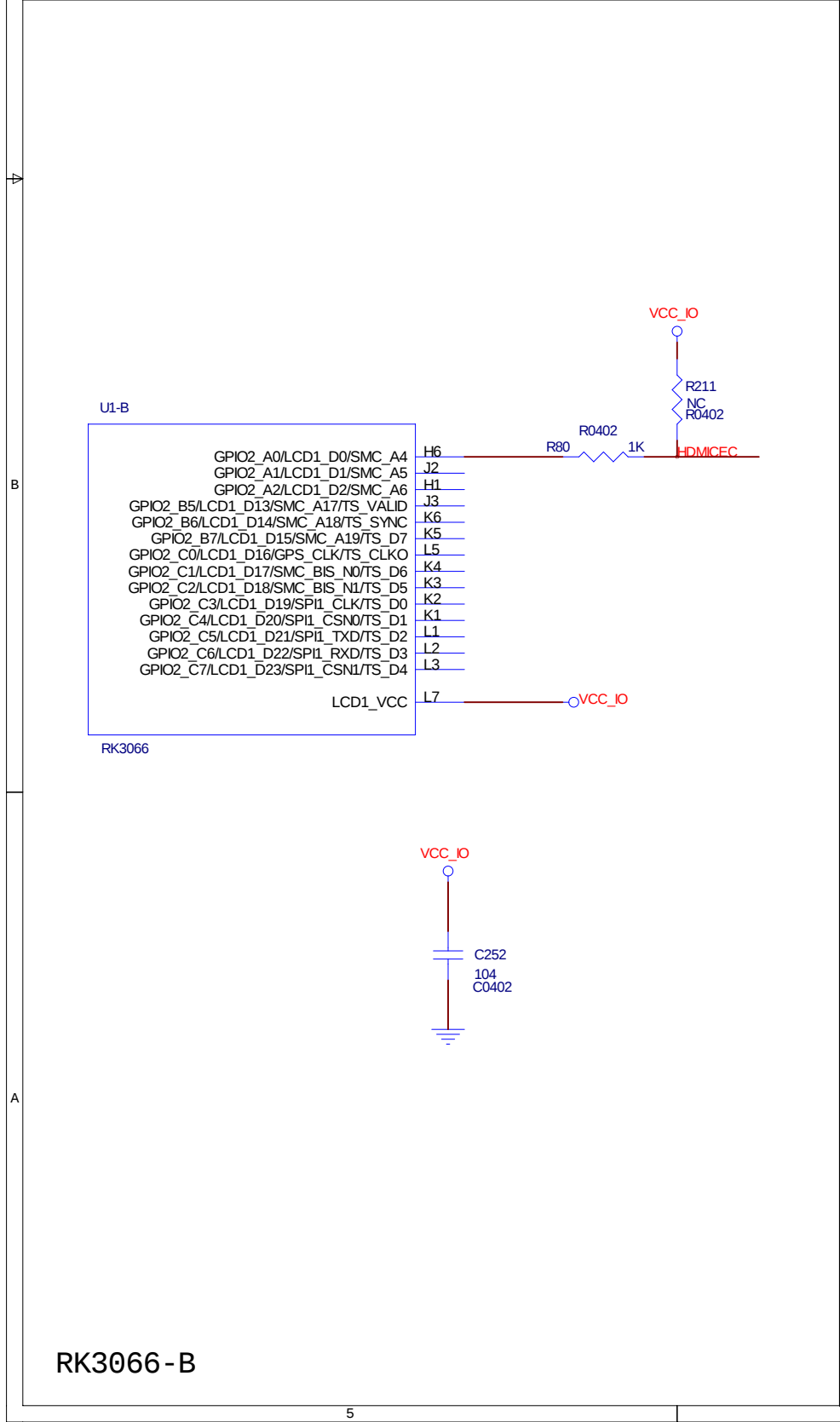
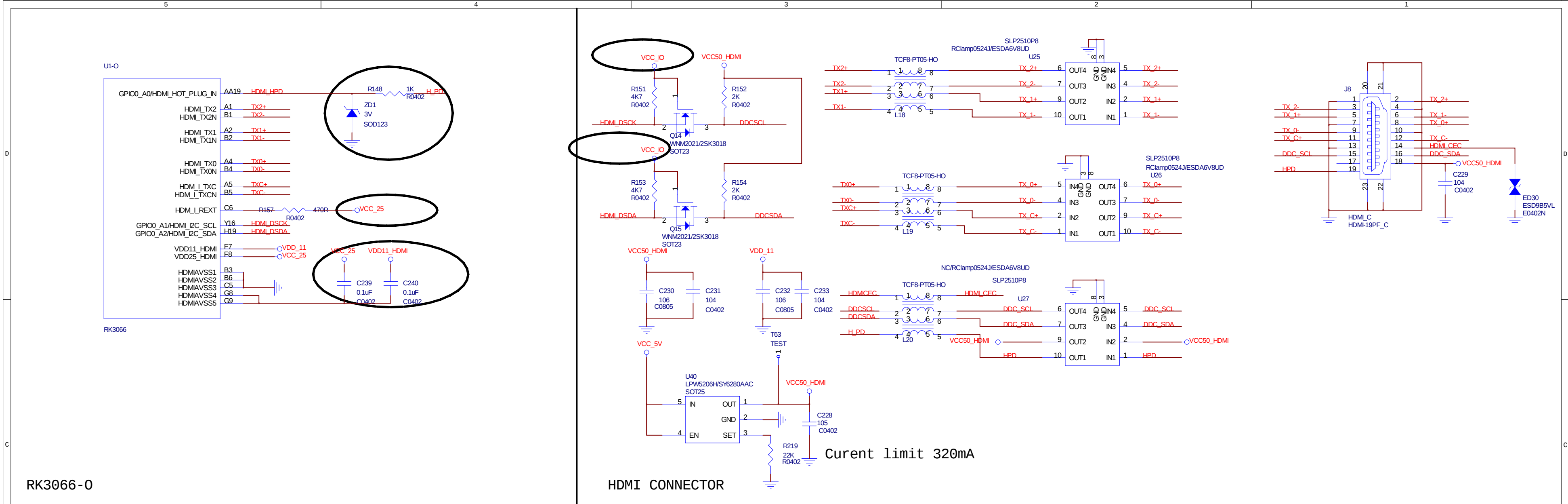
TOUCH PANE

|     |
|-----|
| Rev |
|-----|

| Size |
|------|
|------|

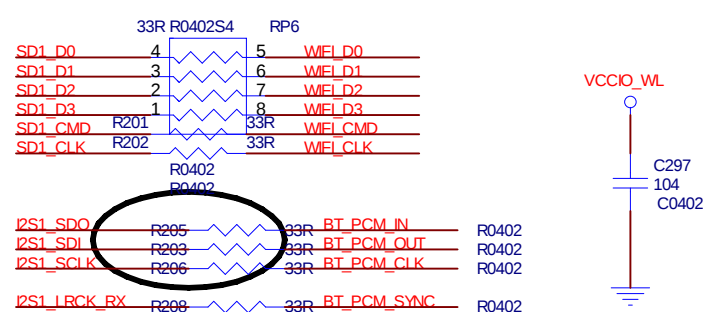
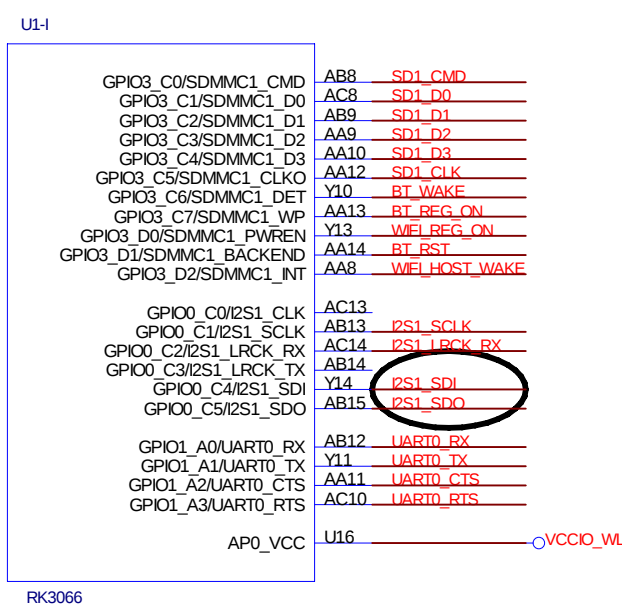
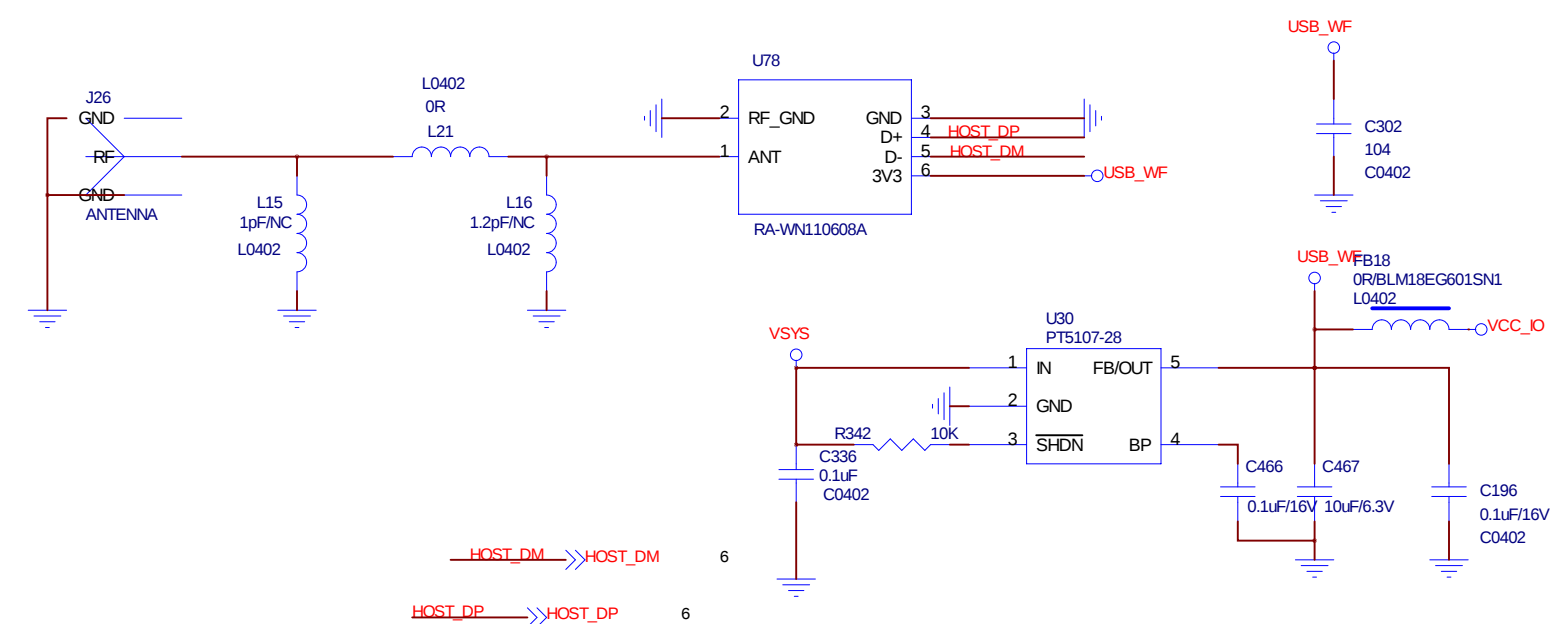
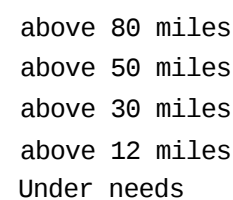
|   |         |
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| C | TVE907R |
|---|---------|

V1.0



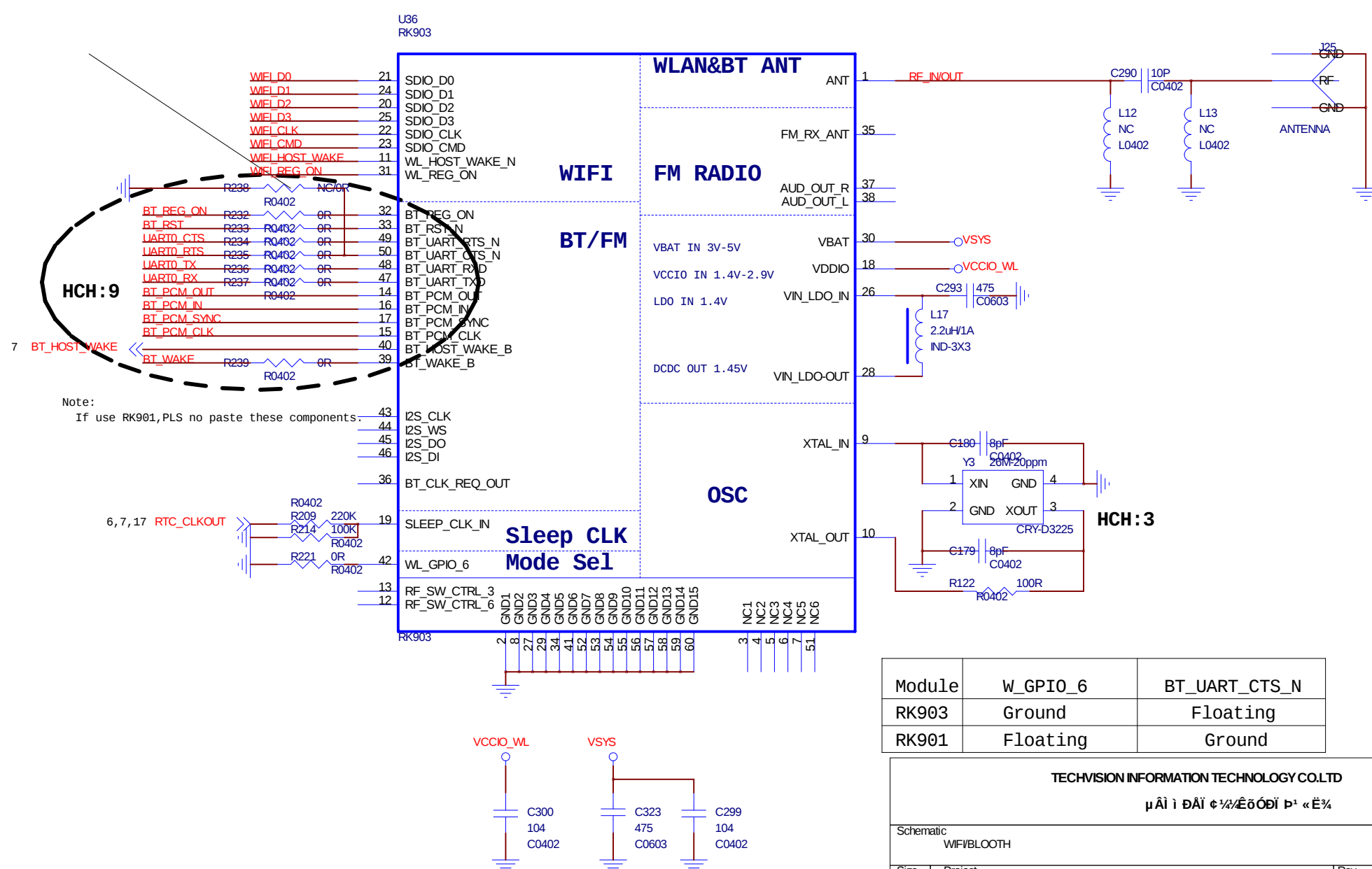
| TECHVISION INFORMATION TECHNOLOGY CO.LTD |         |       |          |
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| μΑϊ ι ΒΑΪ ς%ΔδΟΔί Β+ αΈ%                 |         |       |          |
| Schematic                                |         |       |          |
| HDMI                                     |         |       |          |
| Size                                     | Project | Rev   |          |
| C                                        | TVE907R | V1.0  |          |
| Date: Monday, August 20, 2012            |         | Sheet | 14 of 16 |





Note:  
If use RK901, PLS no paste these components.

Note :PLS design the RF under RK RF LAYOUT guide;  
For more suggestions, please refer to the SPEC  
of the wireless IC



|        |          |               |
|--------|----------|---------------|
| Module | W_GPIO_6 | BT_UART_CTS_N |
| RK903  | Ground   | Floating      |
| RK901  | Floating | Ground        |

|                                            |                         |             |          |
|--------------------------------------------|-------------------------|-------------|----------|
| TECHVISION INFORMATION TECHNOLOGY CO., LTD |                         |             |          |
| μ Αΐ ι ΔΑΐ ε % ΔΕ ΔΟΔι Δι « Ε%             |                         |             |          |
| Schematic                                  |                         |             |          |
| WIFI/BLOOTH                                |                         |             |          |
| Size<br>C                                  | Project<br>TVE907R      | Rev<br>V1.0 |          |
| Date:                                      | Monday, August 20, 2012 | Sheet       | 16 of 16 |

WIFI+BT+FM MODULE