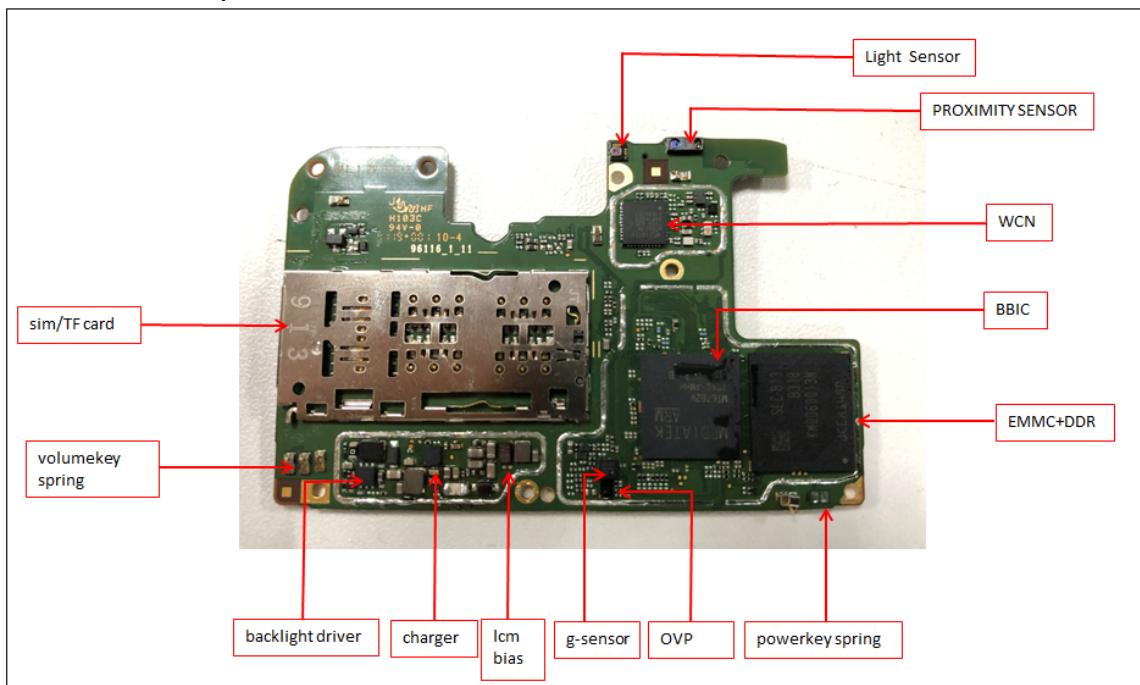


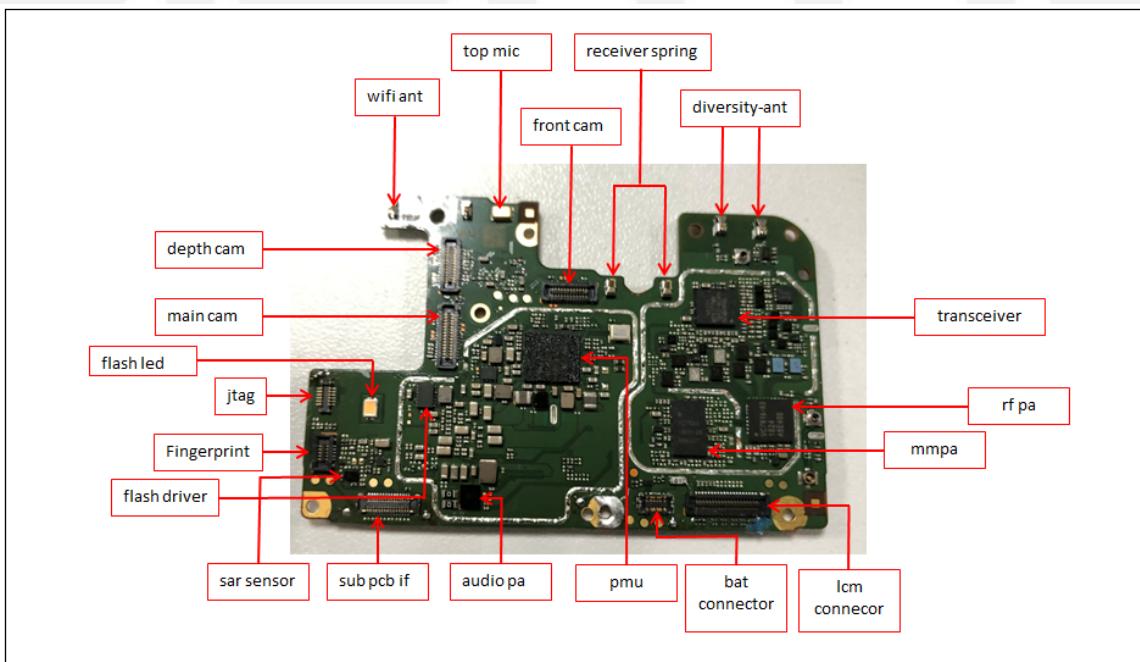
## 8. Level 3 Repair

### 8-1. Components Layout

Main board top view

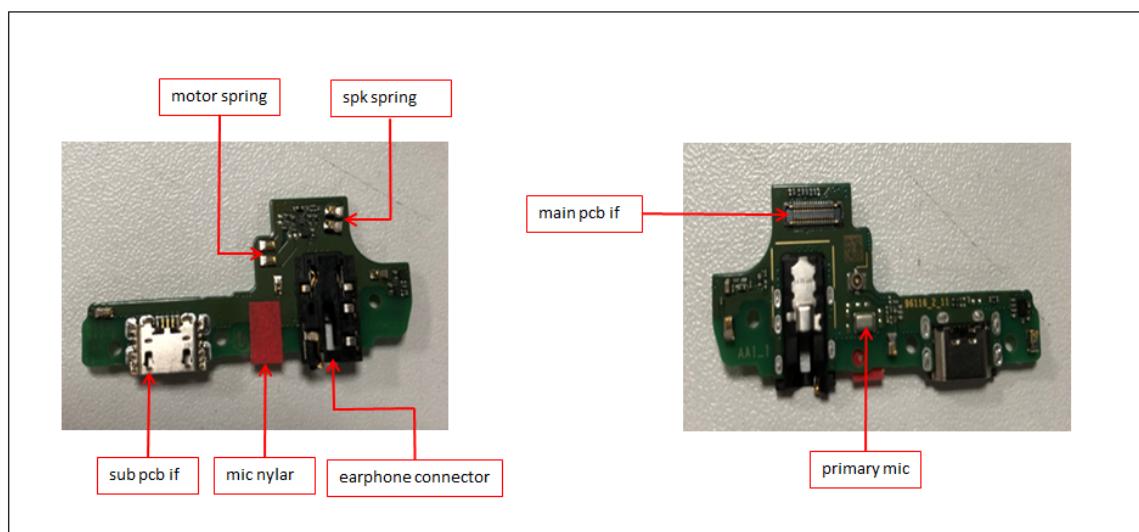


Main board bot view

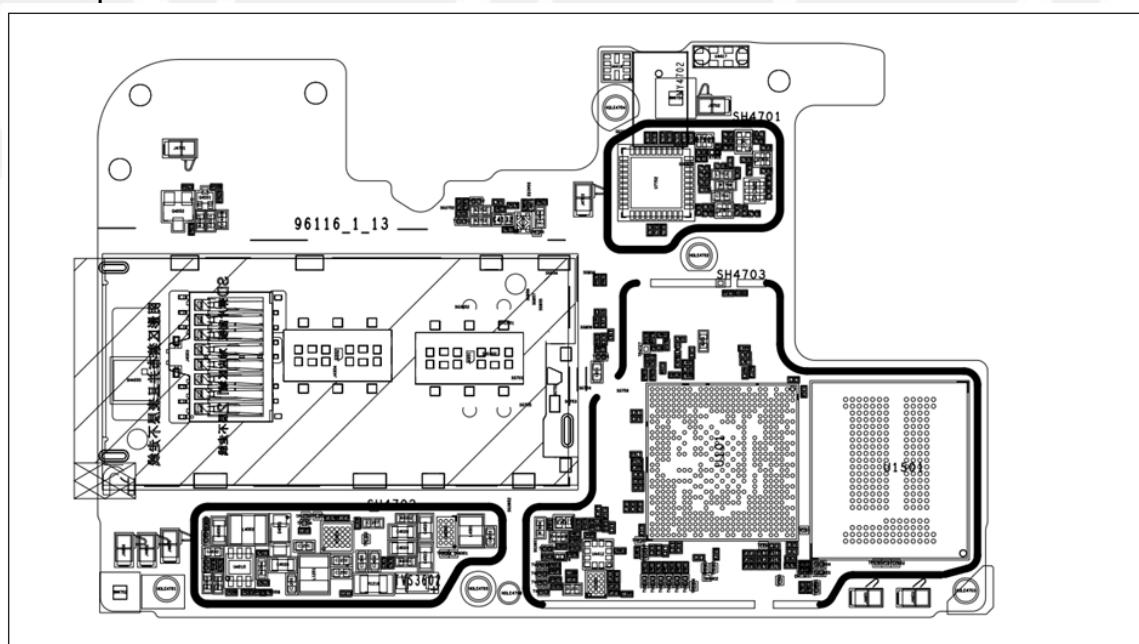


## 8. Level 3 Repair

### Sub board

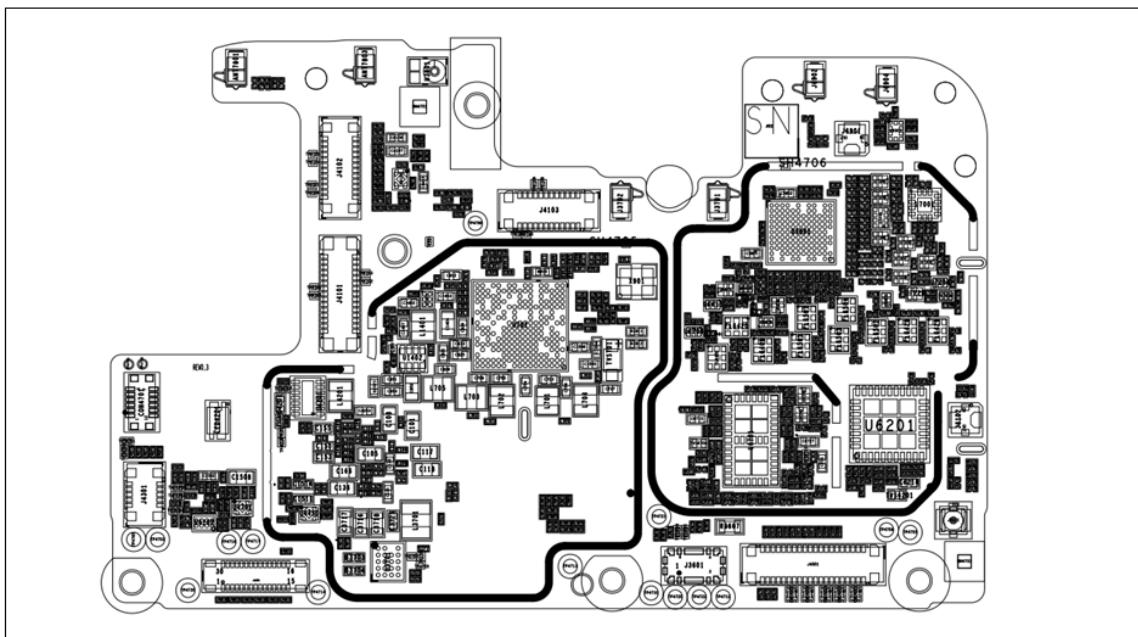


Reference map  
Mb top view

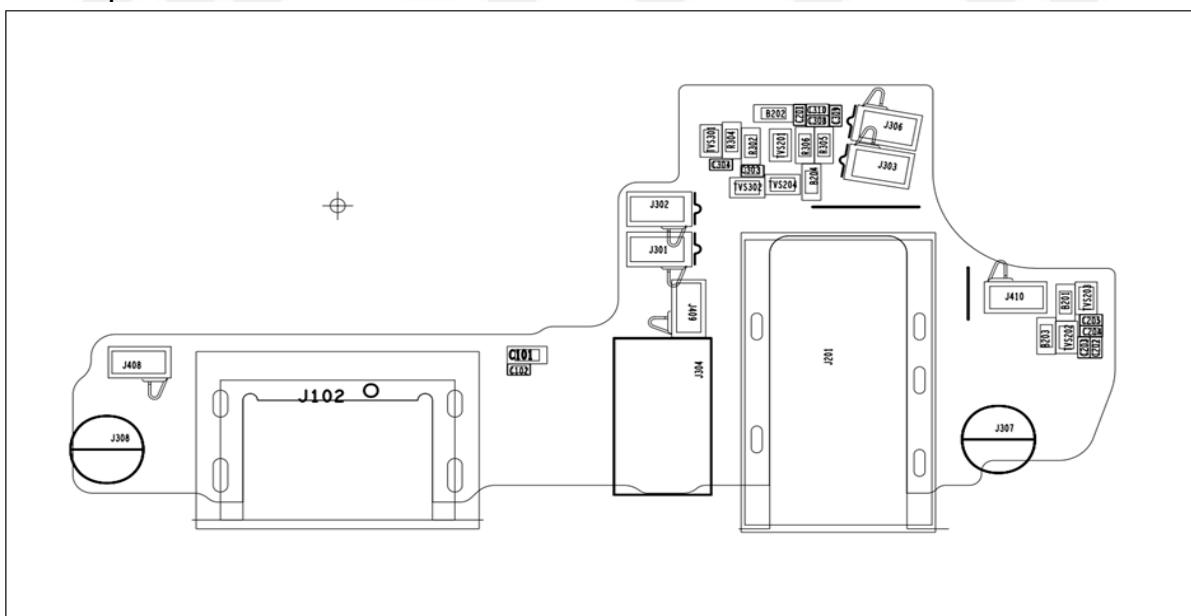


## 8. Level 3 Repair

Mb bot view

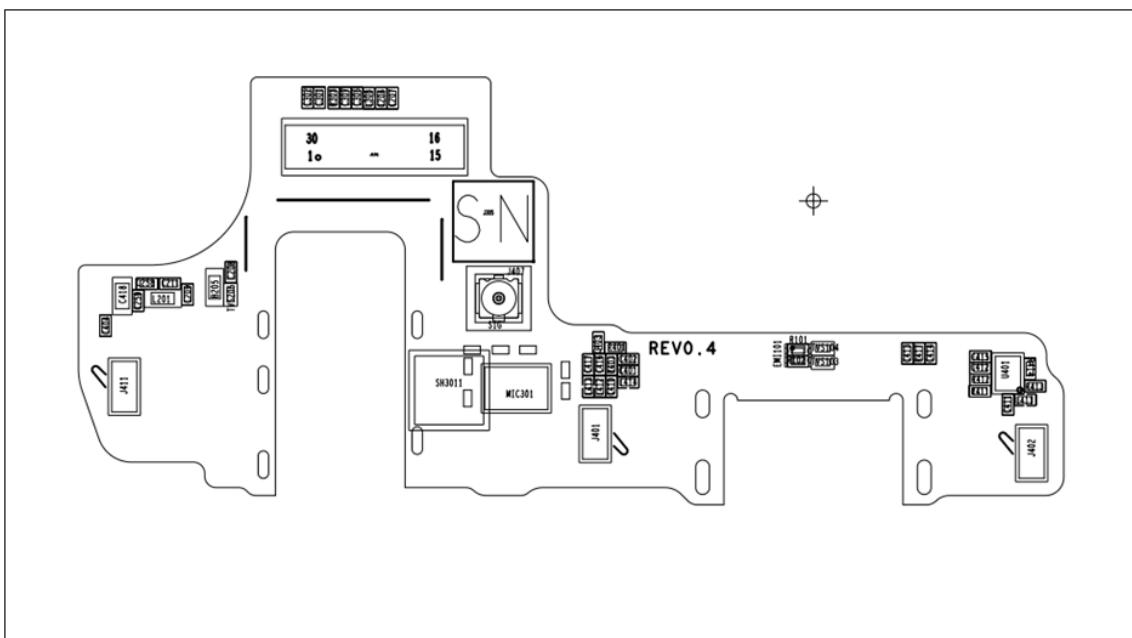


Sub top view



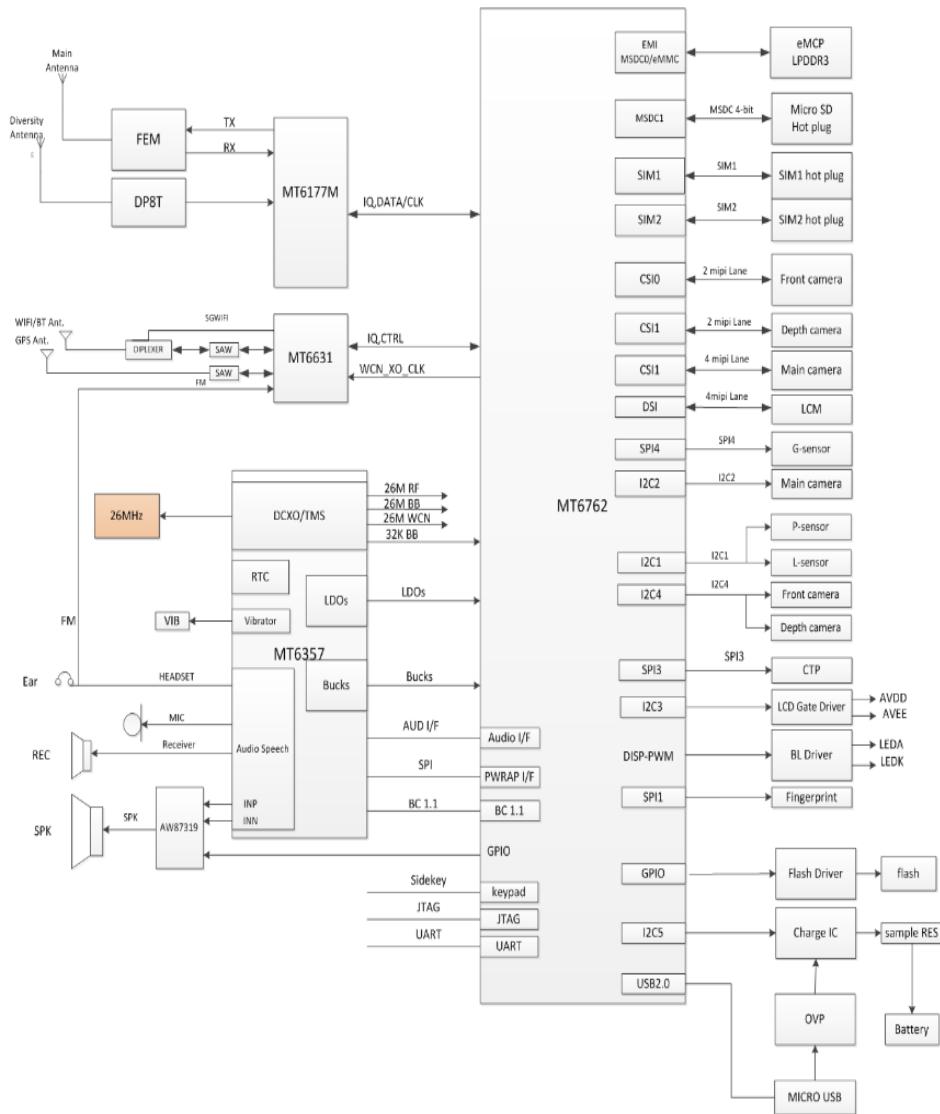
## 8. Level 3 Repair

Sub bot view

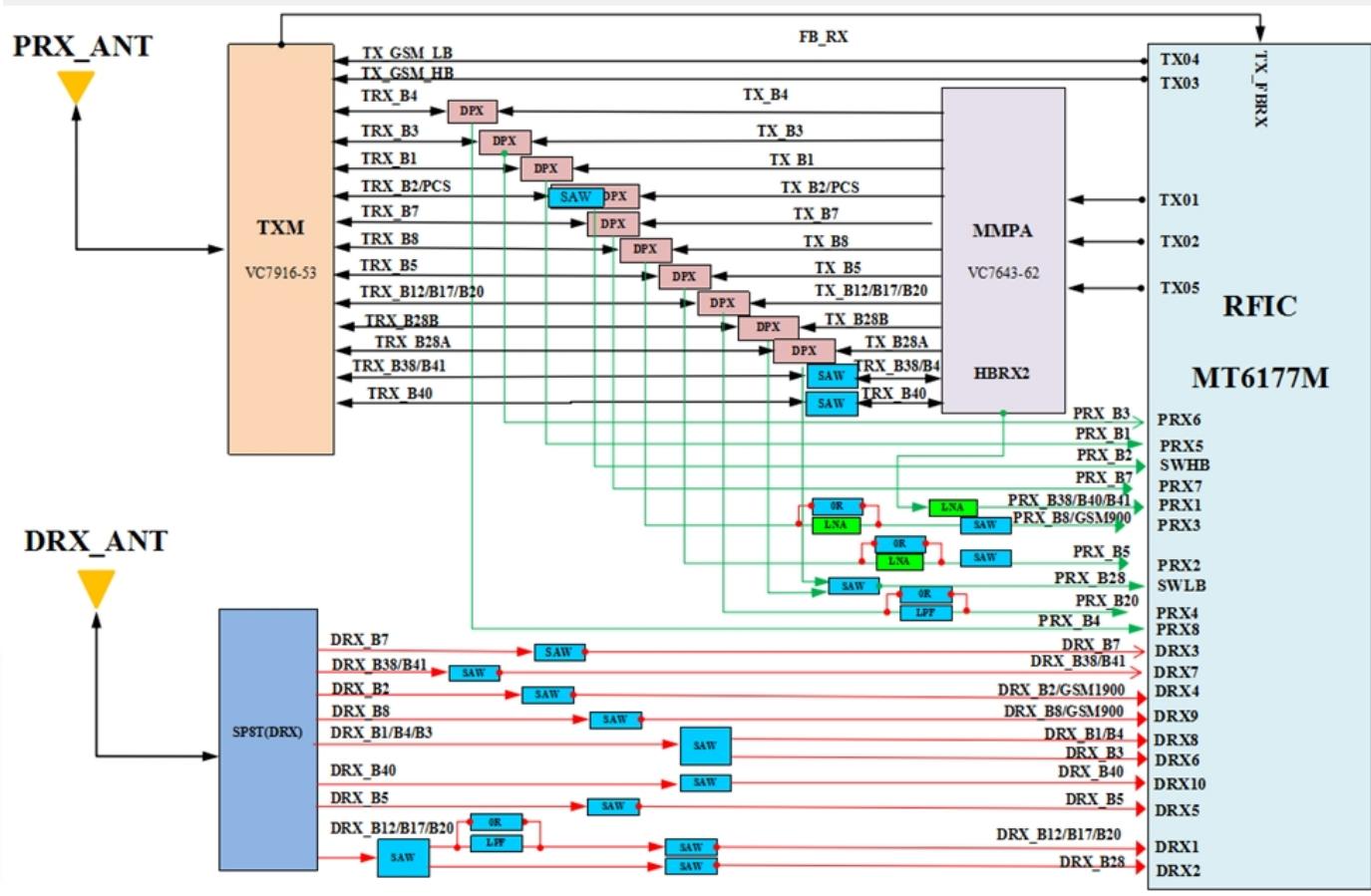


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## 8. Level 3 Repair



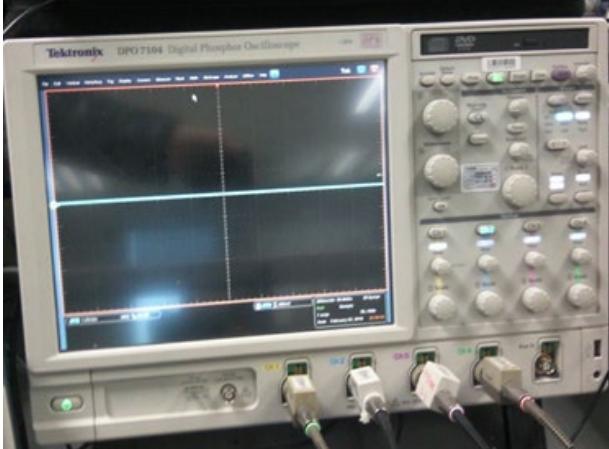
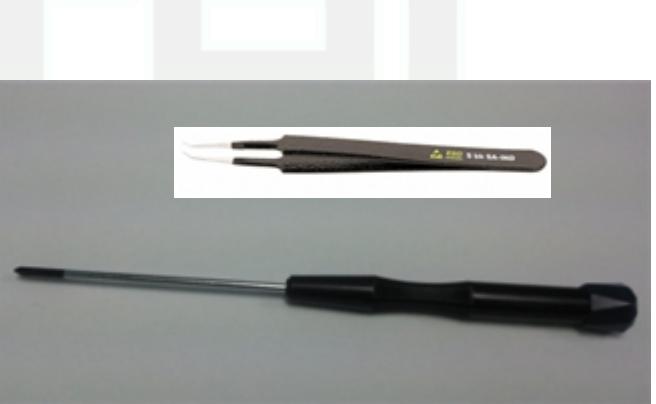
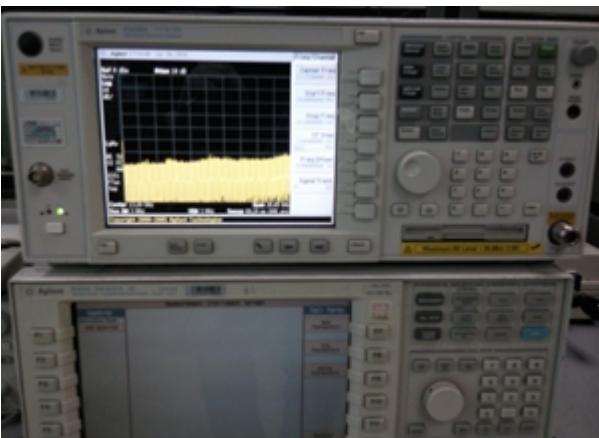
## 8. Level 3 Repair



**BOARD**  
ESQUEMAS DIGITALIZADOS

## 8. Level 3 Repair

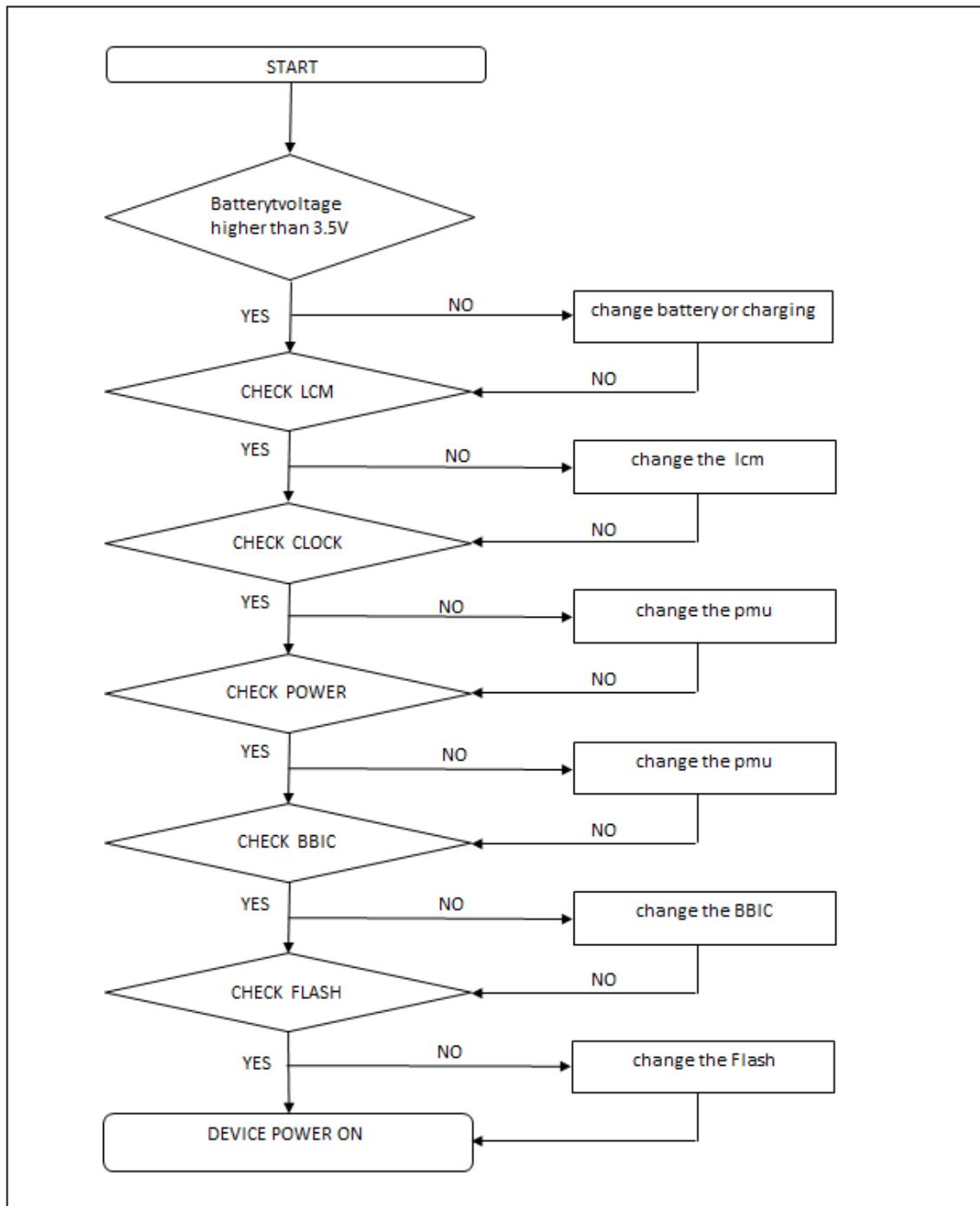
### 8-3. Flow chart of Troubleshooting.

|   |  |
|---|--|
|    |    |
| <b>Oscilloscope</b>   | <b>Digital multimeter</b>  |
|   |   |
| <b>Power Supply</b>   | <b>+ driver, ESD Safe Tweezer</b>  |
|  |  |
| <b>8960 &amp; Spectrum Analyzer</b>   | <b>Soldering iron</b>  |

## 8. Level 3 Repair

### 8-4-1. Power On

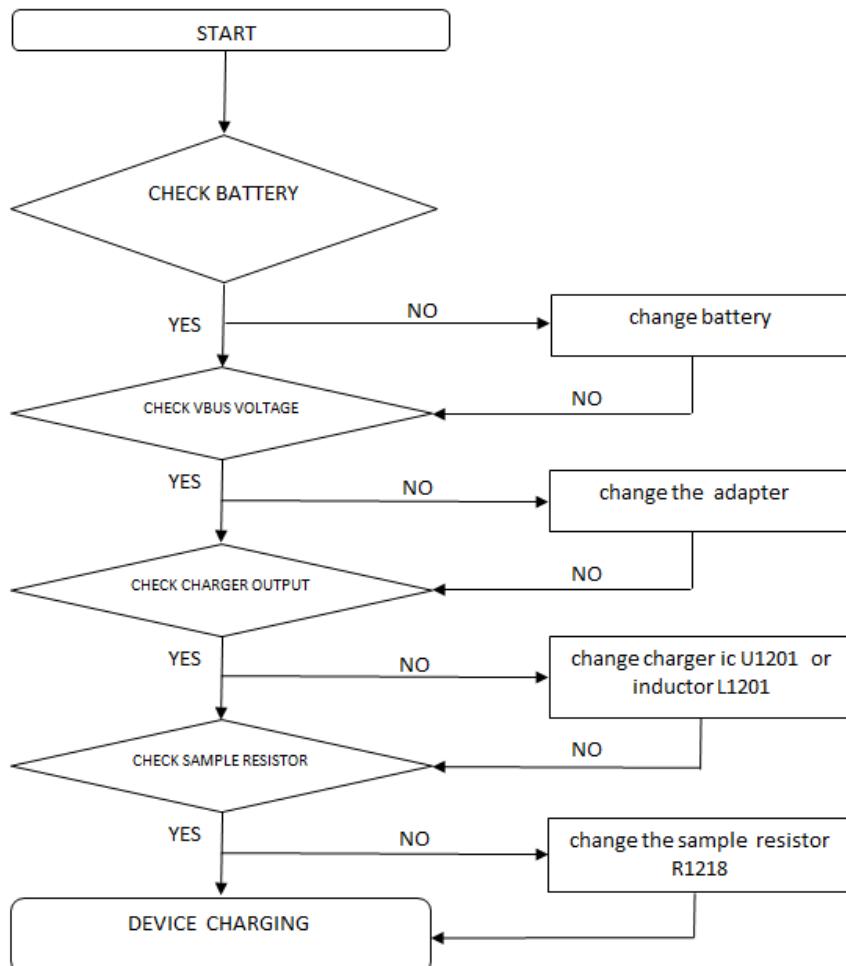
: Checking Power signal (LCM, PMU, Clock)



## 8. Level 3 Repair

### 8-4-2. Charging

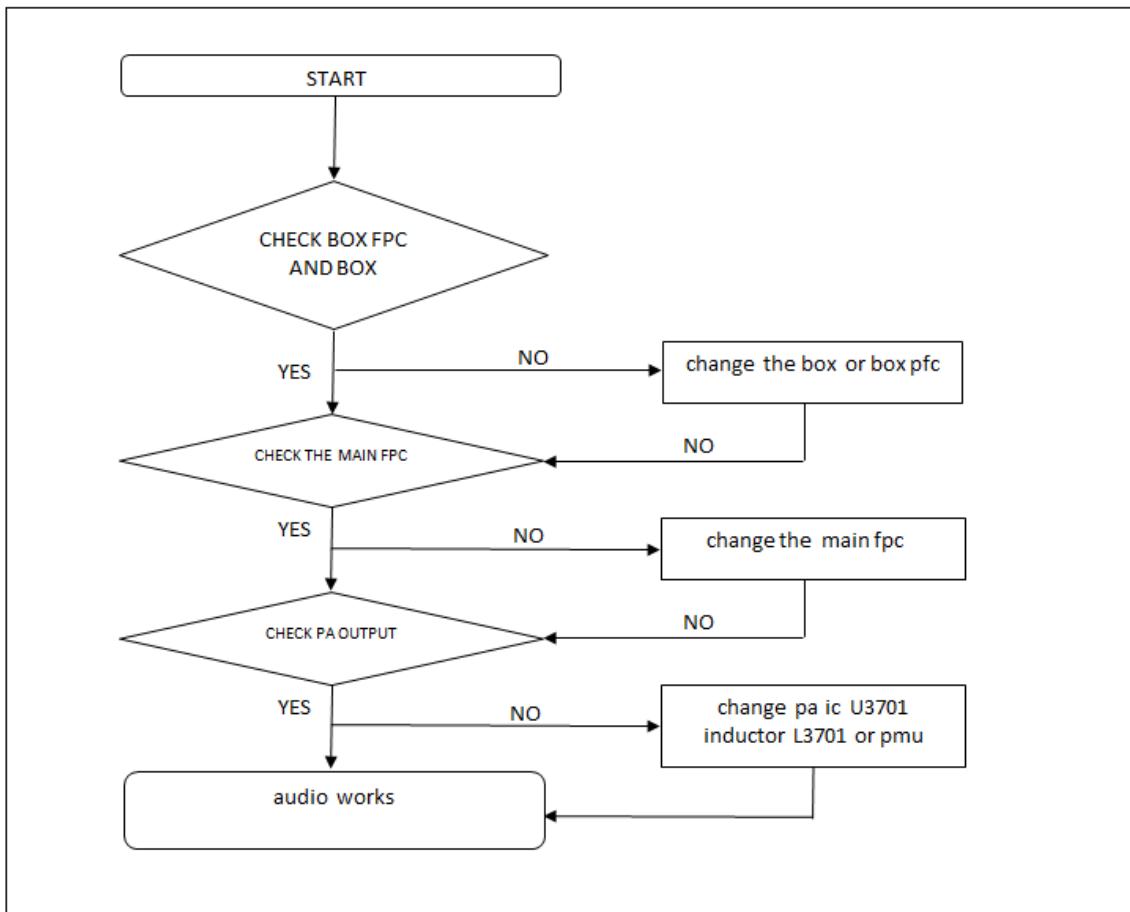
: The charging controlled by third charger chip



## 8. Level 3 Repair

### 8-4-3. Audio speaker

: The Speaker control signals are generated by MT6357 (U701) and PA AW87319 (U3701), the chip, PA and the speaker are to be checked out.

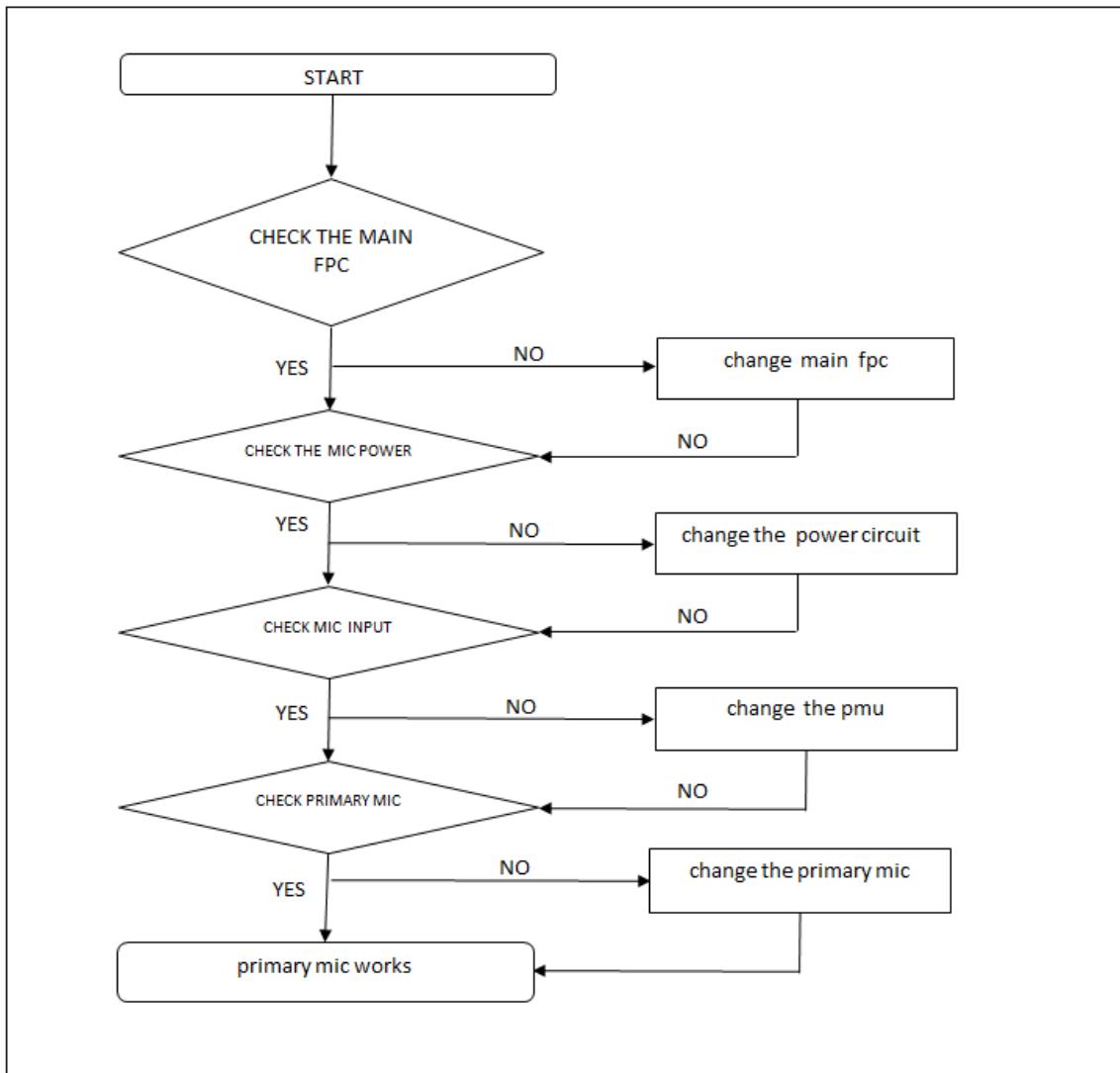


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## 8. Level 3 Repair

### 8-4-4. Audio Main MIC

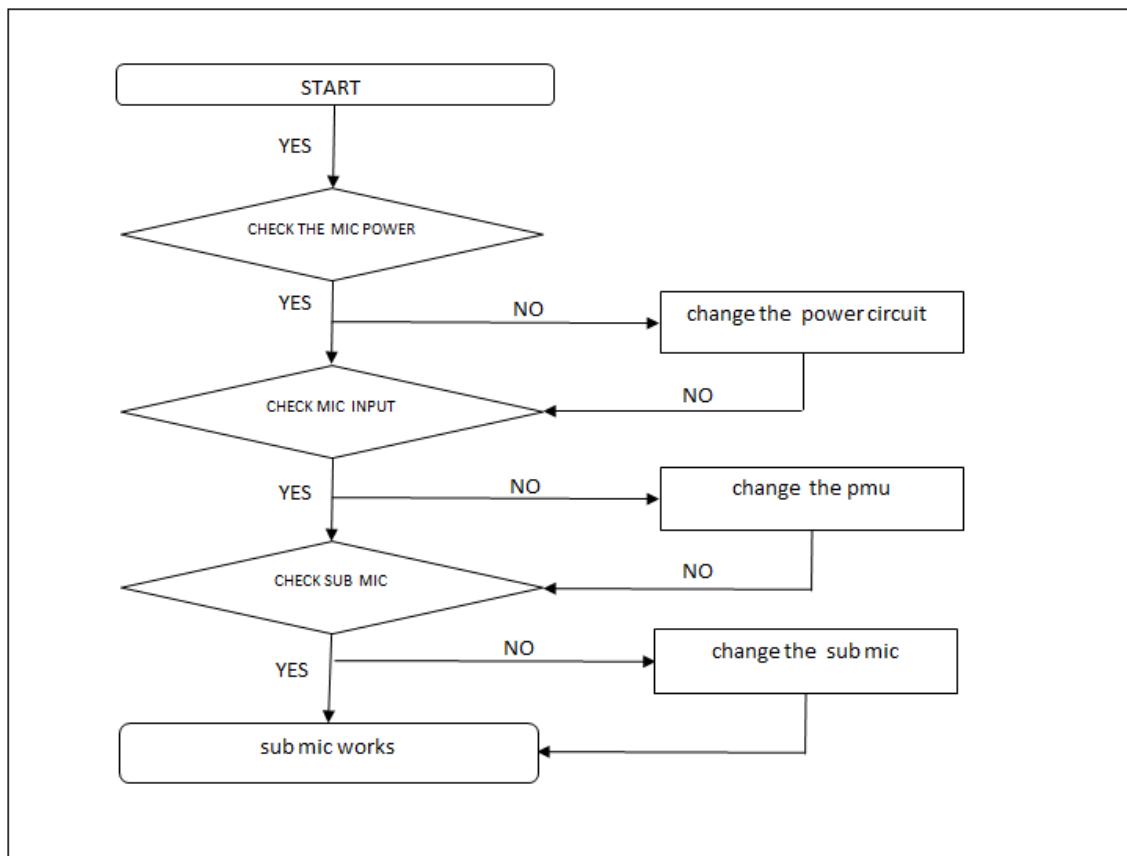
: The MIC control signals are generated by PMU chip MT6357 (U701), the PMU chip and the MIC are to be checked out.



## 8. Level 3 Repair

### 8-4-5. Sub MIC

The MIC control signals are generated by PMU chip MT6357 (U701), the PMU chip and the MIC are to be checked out.

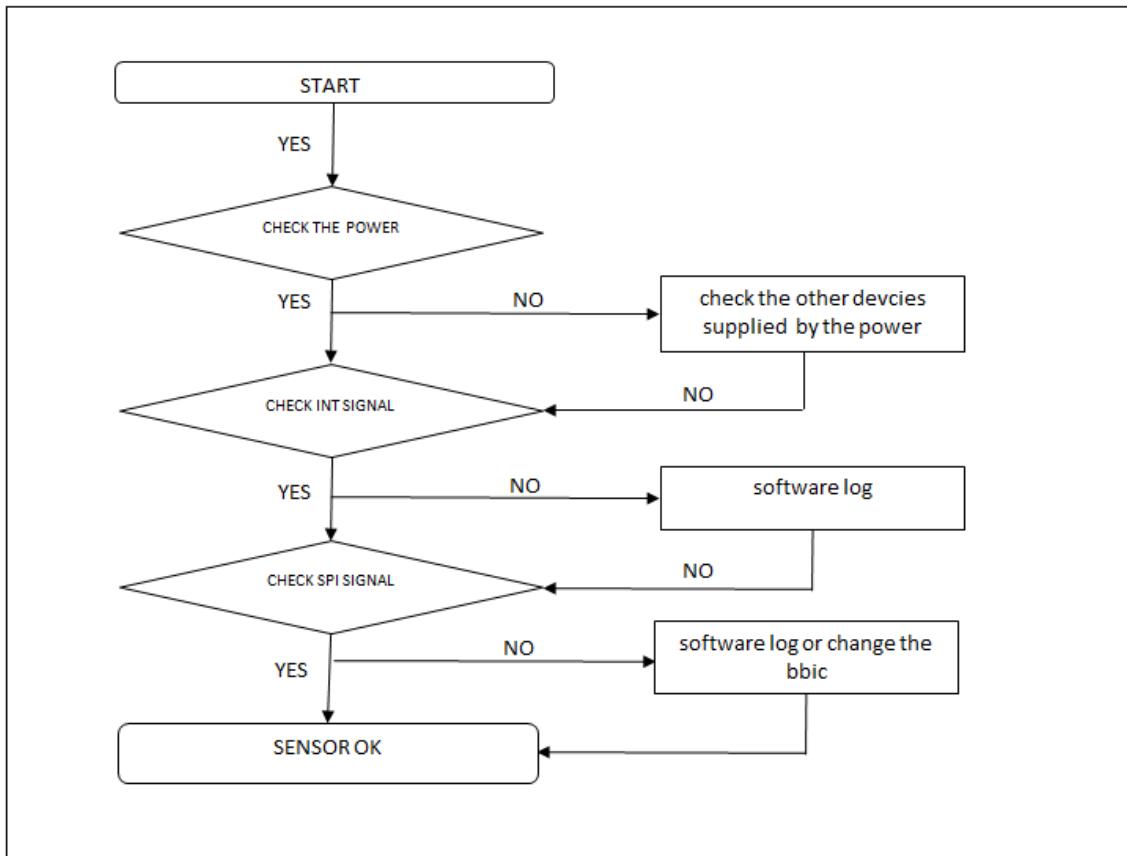


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## 8. Level 3 Repair

### 8-4-6. Accelerometer sensor

: The Accelerometer sensor is calibrated by using SW algorithm.

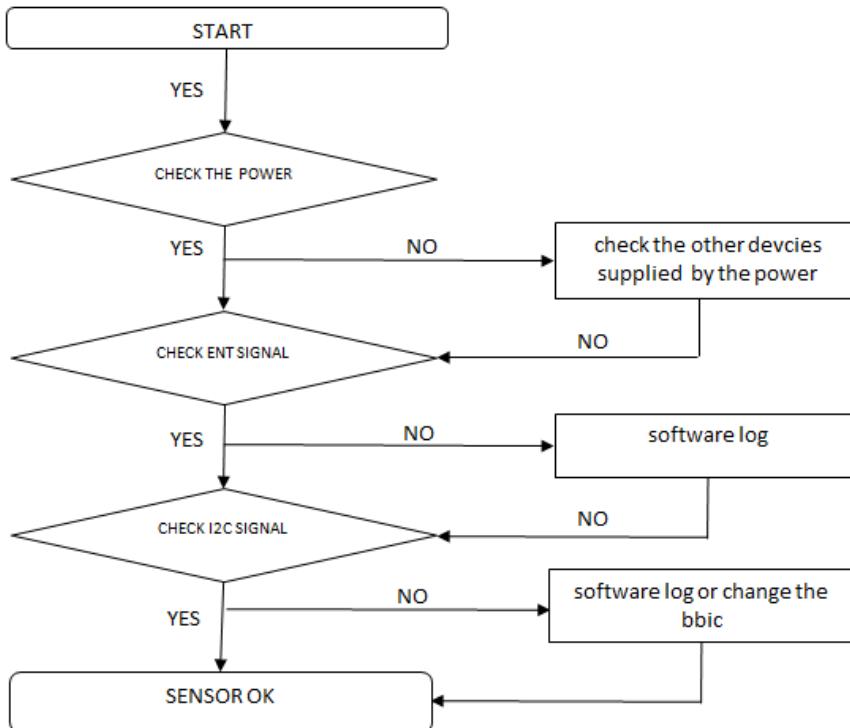


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## 8. Level 3 Repair

### 8-4-7. Proximity and light sensor

: Proximity (U4417) and Light Sensor (U4416) is worked as below: Control the screen's on/off operation automatically while making phone calls, and adjust the screen brightness according to ambient light.

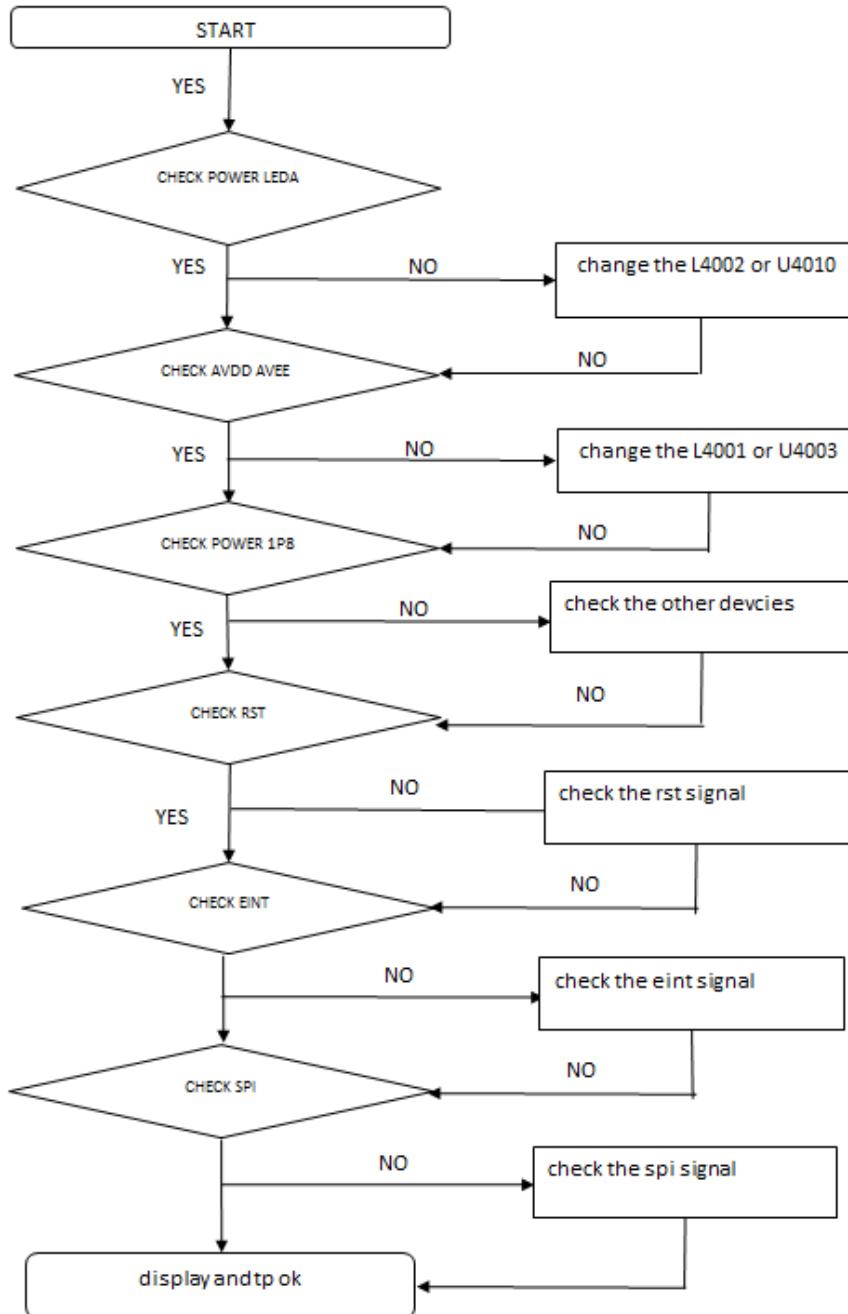


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## 8. Level 3 Repair

### 8-4-8. TOUCH SCREEN AND DISPLAY

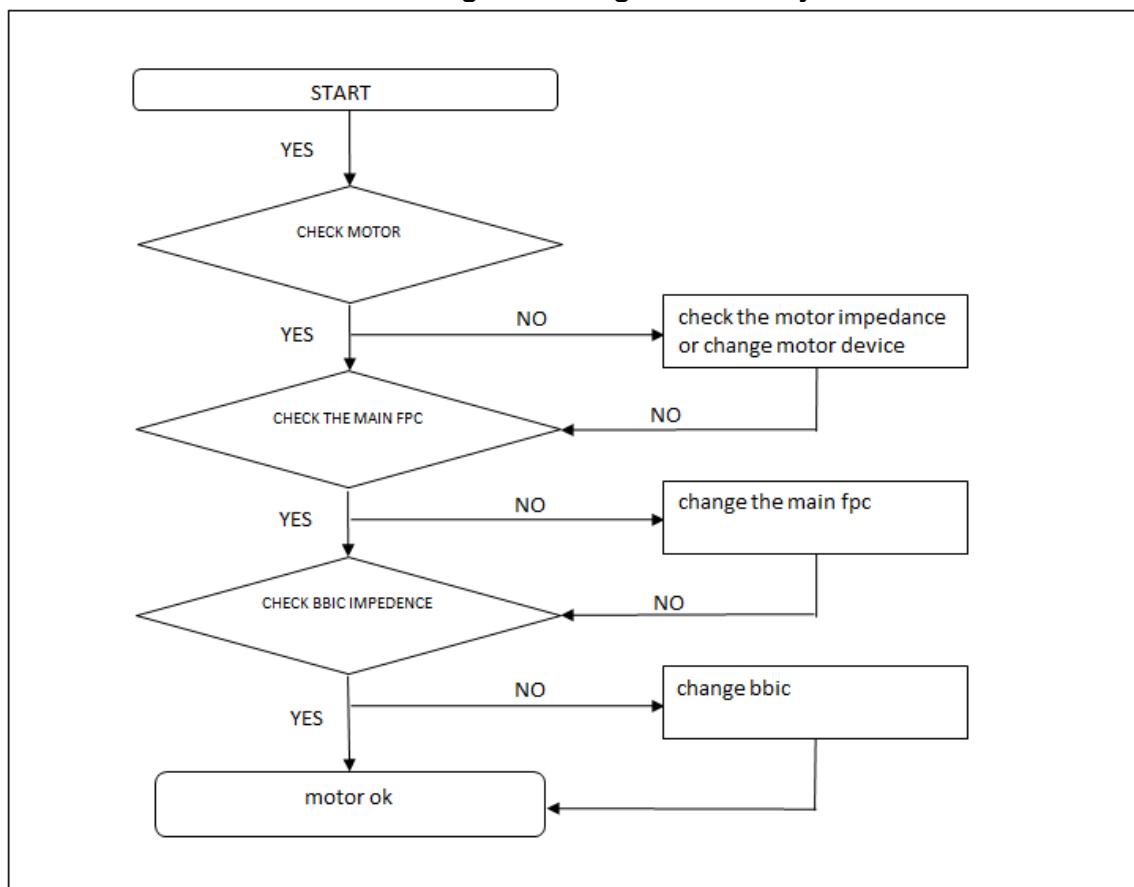
The Touch control signals are generated by MT6762. It is assembled with LCD.



## 8. Level 3 Repair

### 8-4-9. Vibrator

The Vibrator control signals are generated by MT6357.

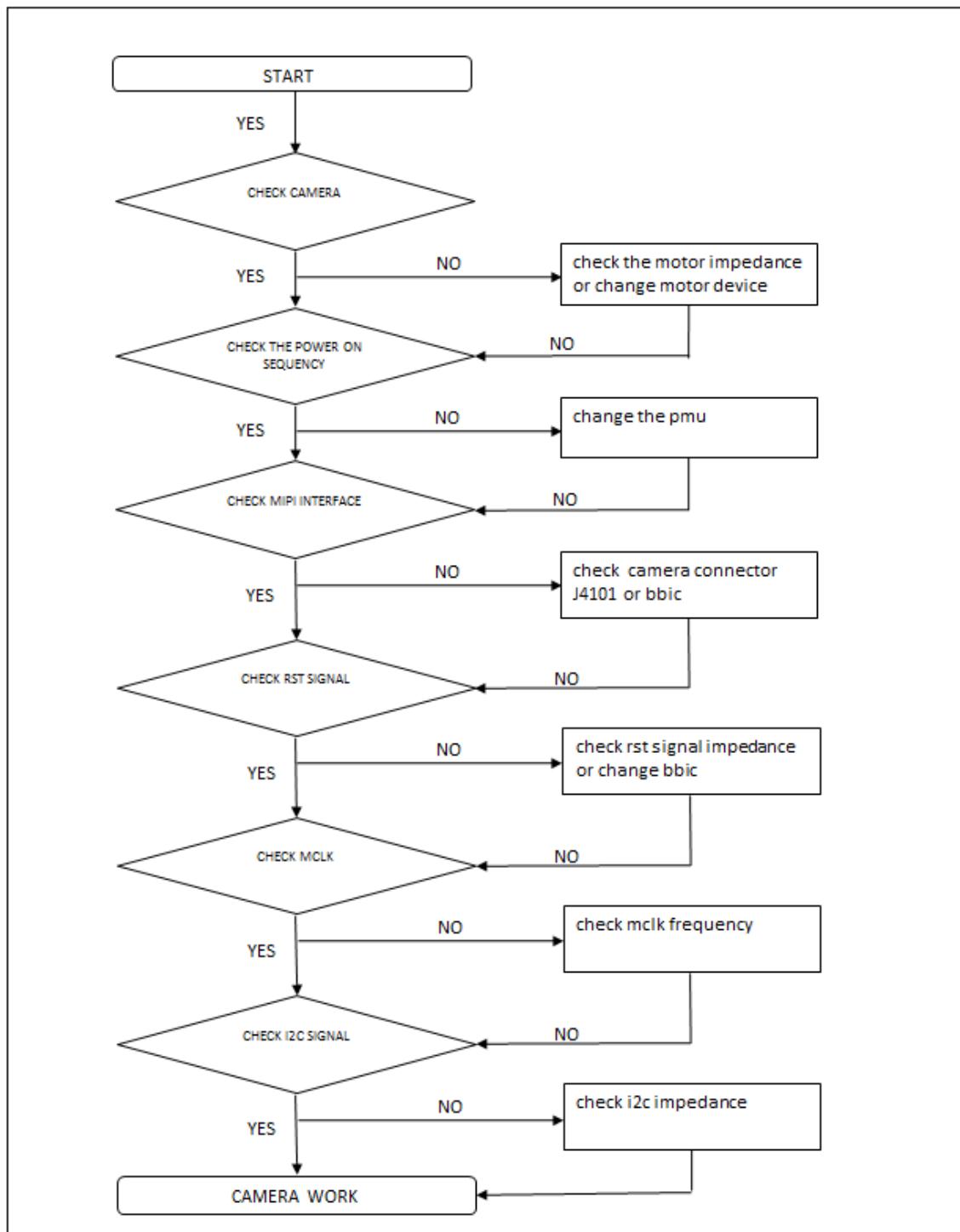


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## 8. Level 3 Repair

### 8-4-10. Rear Camera

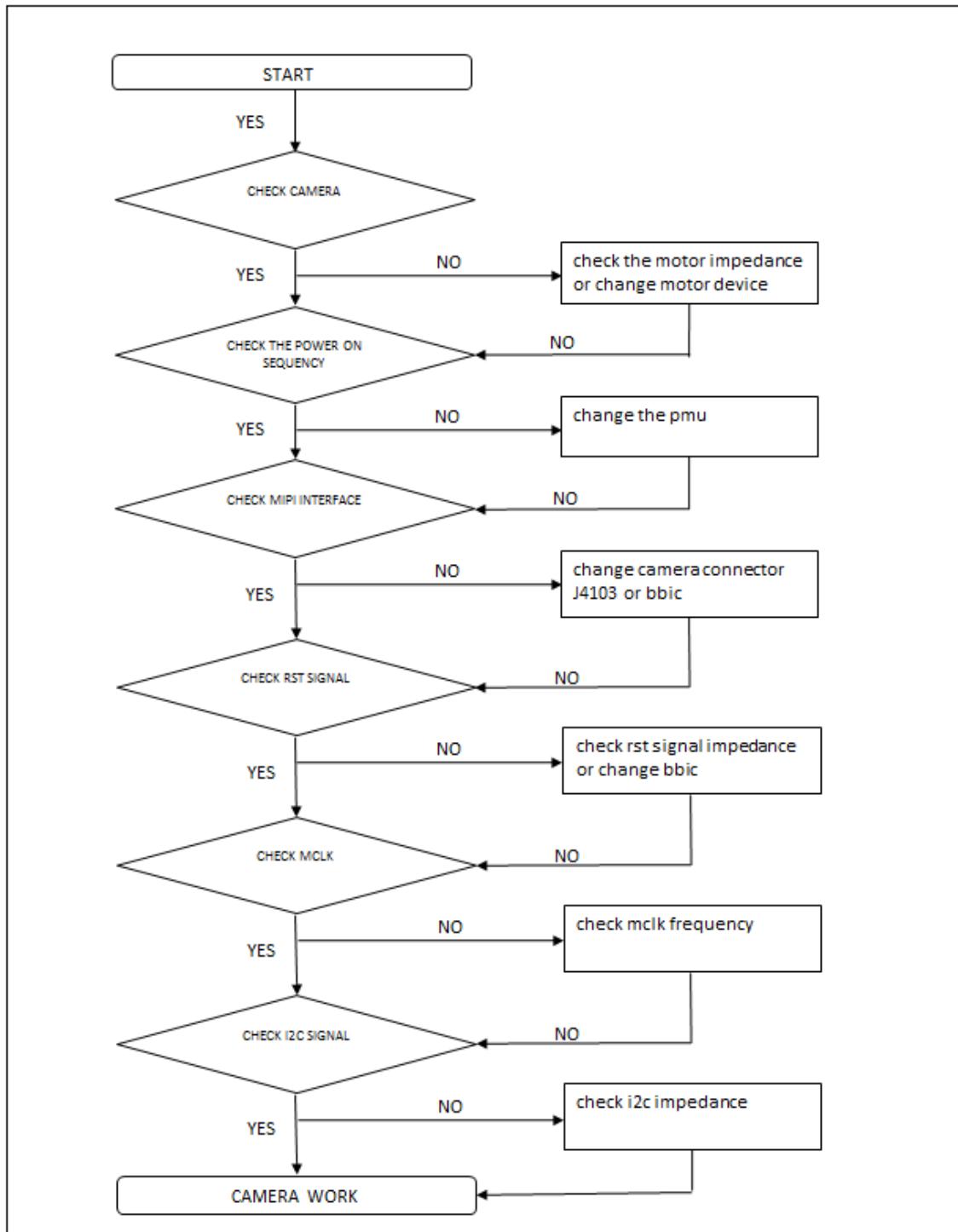
: The Camera control signals are generated by MT6762.



## 8. Level 3 Repair

### 8-4-11. Front Camera

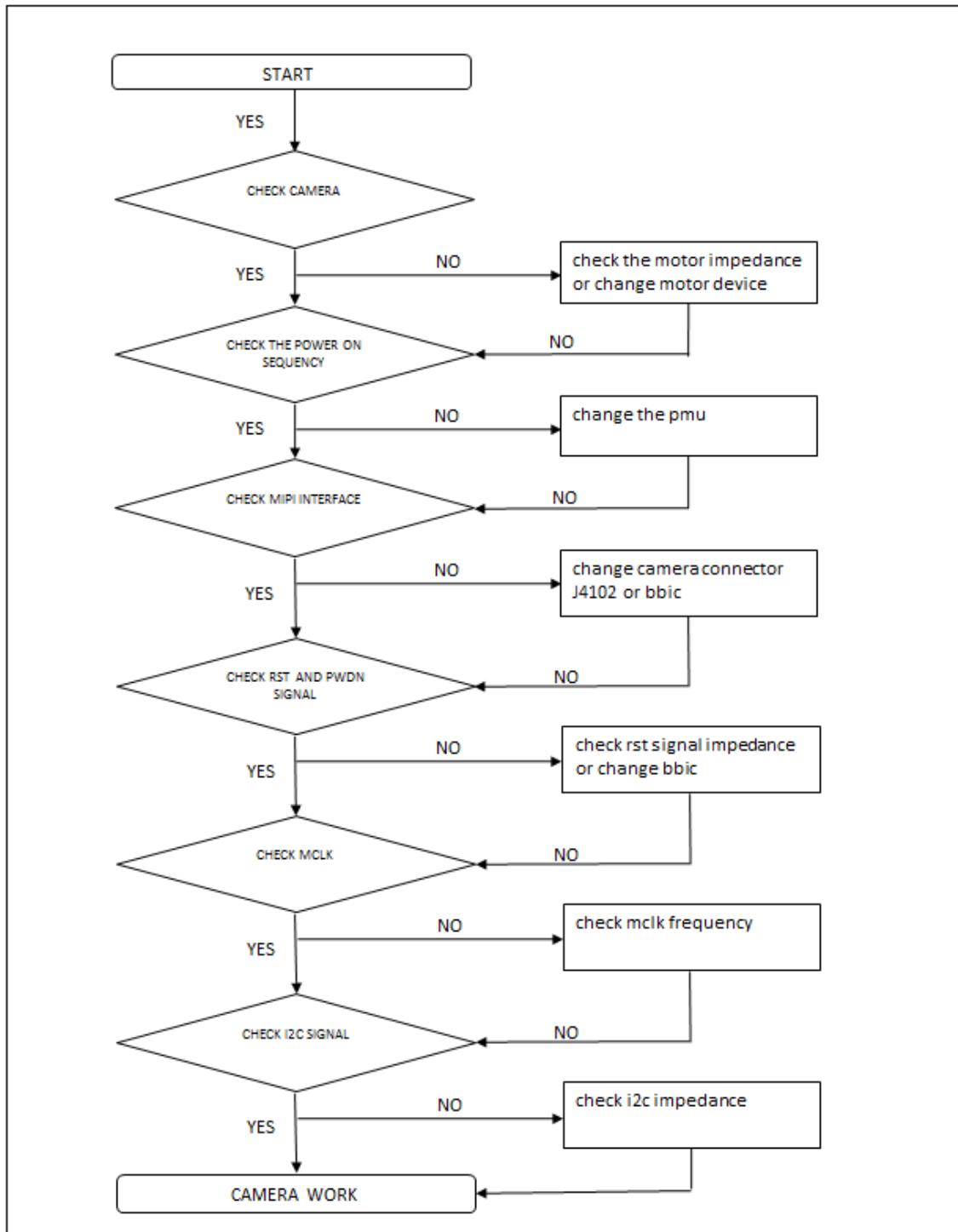
The Camera control signals are generated by MT6762.



## 8. Level 3 Repair

### 8-4-12. Depth Camera

: The depth Camera control signals are generated by MT6762.



## 8. Level 3 Repair

### 8-5. Service Schematics

#### - U101\_MT6762\_BB chip IC , Digital Baseband Processor(Top)

| 558 | 1         | 2         | 3         | 4         | 5         | 6         | 7          | 8            | 9            | 10           | 11           | 12            | 13            | 14            | 15            | 16            | 17            | 18            | 19             | 20             | 21            | 22            | 23            | 24            | 25            | 26            | 27            | 28          |         |         |   |
|-----|-----------|-----------|-----------|-----------|-----------|-----------|------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|---------|---------|---|
| A   | NC        | WF_IN     | WF_IP     |           | EMIO_CAB  | NC        | EMIO_CSJ_N |              | DVSS         | DVSS         | DVSS         |               | EMIO_DQ8      | EMIO_DQ15     | EMIO_DQ31     | MSDCO_DAT4    | MSDCO_DAT2    | MSDCO_DAT7    | MSDCO_B_MSD_CD | MSDCO_B_MSD_CD | DVDD1         | NC            | A             |               |               |               |               |             |         |         |   |
| B   | WF_OP     | WF_O_N    | DVSS      | EMI_EXTR  | EMI_CAA   | EMI_CAA   | CA1        | EMI_CAO      | NC           | EMI_DQ21     | EMI_DQ22     | EMI_DQ20      | EMI_DQ4       | EMI_DQ5       | EMI_DQ7       | EMI_DQ13      | EMI_DQ14      | EMI_DQ19      | EMI_DQ28       | EMI_DQ30       | MSDCO_DAT5    | MSDCO_DAT6    | MSDCO_CMD     | MSDCO_USB_M   | AVDD_D        | AVDD_B        | AVDD_B        | AVDD_B      | B       |         |   |
| C   |           | XIN_W     | F_WB0     | NC        | EMIO_CAB  | EMIO_CSJ  | CA2        |              | NC           | EMIO_DQ18    | EMIO_DQ17    | EMIO_DQ16     | EMIO_DQ9      | EMIO_DQ10     | EMIO_DQ11     | EMIO_DQ13     | EMIO_DQ14     | EMIO_DQ19     | EMIO_DQ28      | EMI_DQ30       | MSDCO_DAT3    | MSDCO_DAT4    | MSDCO_RSTB    | MSDCO_DATO    | MSDCO_USB_P   | MSDCO_USB_P   | MSDCO_USB_P   | MSDCO_USB_P | C       |         |   |
| D   | BT_IN     | BT_OP     | DVSS      | NC        | EMIO_CAS  | EMIO_CAA  | CE0        | EMI_DQ16     | NC           | EMIO_DQ19    | EMI_DQ15     | EMIO_DQ14     | EMIO_DQ5      | EMIO_DQ6      | EMIO_DQ7      | EMIO_DQ11     | EMIO_DQ12     | EMIO_DQ27     | EMIO_DQ28      | EMIO_DQ30      | MSDCO_DAT1    | MSDCO_CLK_P   | MSDCO_CHD_D   | MSDCO_CHD_D   | AVDD1         | AVDD1         | AVDD1         | AVDD1       | D       |         |   |
| E   |           | BT_OP     | DVSS      | EMIO_CAB  | EMIO_CSJ  | CA2       | CK_C       | EMI_DQ16     | EMI_DQ17     | EMI_DQ18     | EMI_DQ19     | EMI_DQ20      | EMI_DQ21      | EMI_DQ22      | EMI_DQ23      | EMI_DQ24      | EMI_DQ25      | EMI_DQ26      | EMI_DQ27       | EMI_DQ28       | EMI_DQ29      | EMI_DQ30      | EMI_DQ31      | EMI_DQ32      | EMI_DQ33      | NC            | DVSS          | DVSS        | SYRST_B | AVDD1_B | E |
| F   | GPS_I     | BT_OP     | DVSS      | DVSS      | DVSS      | DVSS      | DVSS       | DVSS         | DVSS         | DVSS         | DVSS         | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS           | DVSS           | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | TESTM       | F       |         |   |
| G   | GPS_Q     | CONN_WB   | CONN_WA   | CONN_WB   | CONN_WA   | CONN_WB   | CONN_WA    | CONN_WB      | XIN_W        | BG           |              | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | NC            |                |                |               |               |               |               |               |               |               |             | G       |         |   |
| H   | AVDD1     | WF_CT_B   | WF_CT_W   | WF_CT_B   | WF_CT_W   | WF_CT_B   | WF_CT_W    | WF_CT_B      | WF_CT_W      | AVDD02       | AVDD02       | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02         | AVDD02         | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02        | AVDD02      | H       |         |   |
| J   | DVDD01    | CAM_C_DN2 | SCL6      | SDA6      | CONN_BT_C | CONN_BT_C | CONN_BT_C  | CONN_BT_C    | CONN_BT_C    | EMI_DQ1      | EMI_DQ2      | EMI_DQ3       | EMI_DQ4       | EMI_DQ5       | EMI_DQ6       | EMI_DQ7       | EMI_DQ8       | EMI_DQ9       | EMI_DQ10       | EMI_DQ11       | EMI_DQ12      | EMI_DQ13      | EMI_DQ14      | EMI_DQ15      | EMI_DQ16      | EMI_DQ17      | EMI_DQ18      | EMI_DQ19    | J       |         |   |
| K   | CAM_P     | CAM_R     | ANT_S     | ANT_S     | ANT_S     | ANT_S     | ANT_S      | ANT_S        | ANT_S        | CONN_BT_D    | CONN_BT_D    | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D      | CONN_BT_D      | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D     | CONN_BT_D   | K       |         |   |
| L   | CSH1A_L1P | CSH1A_L1N | CSH1B_L1P | CSH1B_L1N | CSH1B_L1P | CSH1B_L1N | CSH1B_L1P  | CSH1B_L1N    | CSH1B_L1P    | DVSS         | DVSS         | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS           | DVSS           | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS        | L       |         |   |
| M   | CSH0A_L2P | CSH0A_L2N | CSH0B_L2P | CSH0B_L2N | CSH0B_L2P | CSH0B_L2N | CSH0B_L2P  | CSH0B_L2N    | CSH0B_L2P    | DVSS         | DVSS         | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS           | DVSS           | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | M           |         |         |   |
| N   | CSH0A_L1P | CSH0A_L1N | CSH0A_L2P | CSH0A_L2N | CSH0B_L1P | CSH0B_L1N | CSH0B_L2P  | CSH0B_L2N    | CSH0B_L2P    | DVSS         | DVSS         | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS           | DVSS           | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | N           |         |         |   |
| P   | CSH0A_L2P | CSH0A_L2N | CSH0B_L2P | CSH0B_L2N | CSH0B_L2P | CSH0B_L2N | CSH0B_L2P  | CSH0B_L2N    | CSH0B_L2P    | DVSS         |              | DVDD_TOP       | DVDD_TOP       | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | P           |         |         |   |
| R   | CSH2A_L0P | CSH2A_L0N | CSH2B_L1P | CSH2B_L1N | CSH2B_L1P | CSH2B_L1N | CSH2B_L1P  | CSH2B_L1N    | CSH2B_L1P    | DVSS         |              | DVDD_TOP       | DVDD_TOP       | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | DVDD_TOP      | R           |         |         |   |
| T   | CSH2A_L1P | CSH2A_L1N | CSH2B_L2P | CSH2B_L2N | CSH2B_L2P | CSH2B_L2N | CSH2B_L2P  | CSH2B_L2N    | CSH2B_L2P    | DVSS         |              | DVDD_VDD_MODE  | DVDD_VDD_MODE  | DVDD_VDD_MODE | DVDD_VDD_MODE | DVDD_VDD_MODE | DVDD_VDD_MODE | DVDD_VDD_MODE | DVDD_VDD_MODE | DVDD_VDD_MODE | T           |         |         |   |
| U   | DVDD01    | AVDD01    | EXTD1     | EXTD2     | EXTD3     | EXTD4     | SC4        |              | DVSS         | DVSS         | DVSS         | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS           | DVSS           | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS        | U       |         |   |
| V   | CAM_P     | CAM_R     | STA       | STD       | SDA2      | SCL2      |            | SDA4         |              | DVSS         | DVSS         | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS           | DVSS           | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS        | V       |         |   |
| W   | CAM_P     | LK1       | EINT1D    | EINT1T    | EINT2T    | EINT7     | EINT6      | EINT4        | EINT5        | VDD_VDD_MODE | VDD_VDD_MODE | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE   | VDD_VDD_MODE   | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | VDD_VDD_MODE  | W           |         |         |   |
| Y   | SRC1KE    | CAM_P     | DIN1      | EINT7     | EINT6     | EINT4     | EINT5      | VDD_VDD_MODE | VDD_VDD_MODE |              |              |               |               |               |               |               |               |               |                |                |               |               |               |               |               |               |               |             | Y       |         |   |
| AA  | KPRO_W0   | UTXDO     | URXDO     | EINT3     | EINT2     | EINT1B    | EINT1I     | DVSS         | DVSS         | DVSS         | DVSS         | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS           | DVSS           | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS          | DVSS        | AA      |         |   |
| AB  | KPRO_W1   | KPCOL_W1  | EINT0     | SCL0      | CDMSP     | SA        |            |              |              |              |              |               |               |               |               |               |               |               |                |                |               |               |               |               |               |               |               |             |         | AB      |   |
| AC  | SPD_M     | SPD_M_O   | FWMD      | SDA9      | CDM9      | SP1_BU    | S7         |              |              |              |              |               |               |               |               |               |               |               |                |                |               |               |               |               |               |               |               |             |         | AC      |   |
| AD  | SPD_M     | SPD_M_O   | BPL_PA    | M1C_L0    | ED_B0     | BS1_B0    | DVSS       |              |              |              |              |               |               |               |               |               |               |               |                |                |               |               |               |               |               |               |               |             |         | AD      |   |
| AE  | SCL1      | BPL_PA    | S1E_A     | S1C_A     | S1D_A     | S1L_A     | S1M_A      | DVSS         |              |              |              |               |               |               |               |               |               |               |                |                |               |               |               |               |               |               |               |             |         | AE      |   |
| AF  | SDA1      | BPL_BU    | BPL_BU    | BPL_BU    | BPL_BU    | BPL_BU    | BPL_BU     | 1            | MISC_B       | MISC_B       | MISC_B       | MISC_B        | MISC_B        | MISC_B        | MISC_B        | MISC_B        | MISC_B        | MISC_B        | MISC_B         | MISC_B         | MISC_B        | MISC_B        | MISC_B        | MISC_B        | MISC_B        | MISC_B        | MISC_B        | AF          |         |         |   |
| AG  | NC        | BPL_BU    | BPL_BU    | BPL_BU    | BPL_BU    | BPL_BU    | BPL_BU     | 54           | 55           | 56           | DET_IN       | DET_Q0         | DET_Q0         | DET_Q0        | DET_Q0        | DET_Q0        | DET_Q0        | DET_Q0        | DET_Q0        | DET_Q0        | DET_Q0      | AG      |         |   |

Figure 2-1. Ball map view