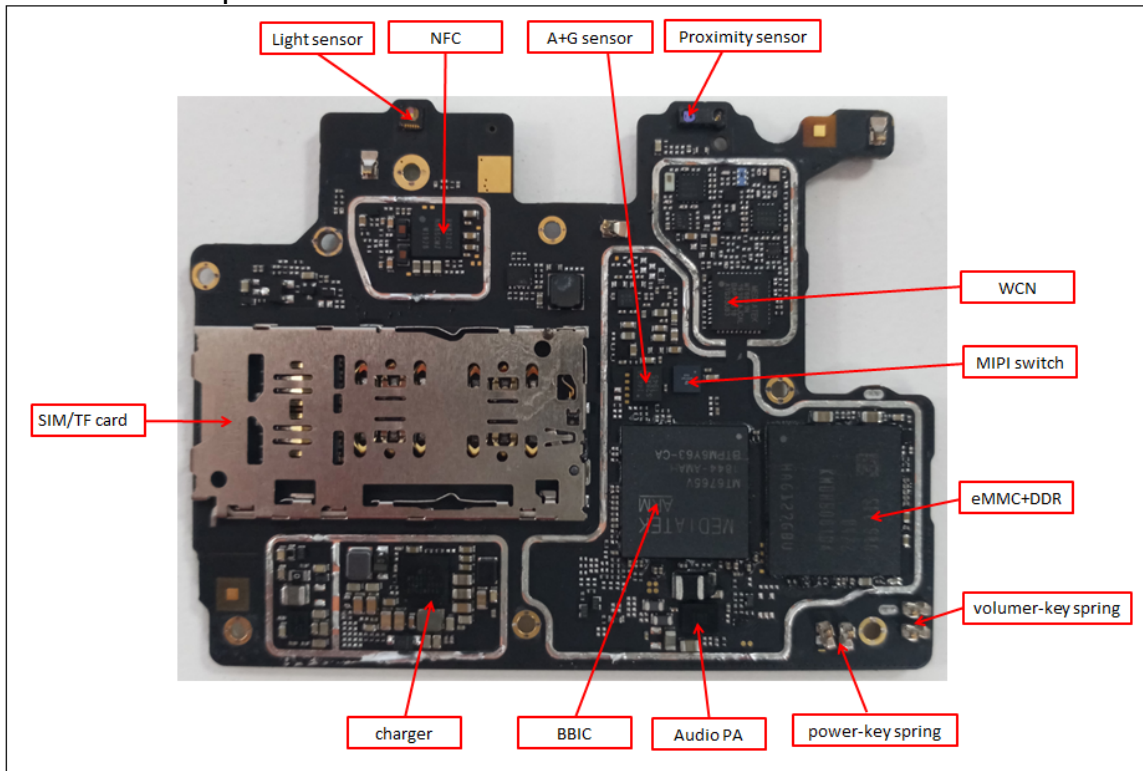


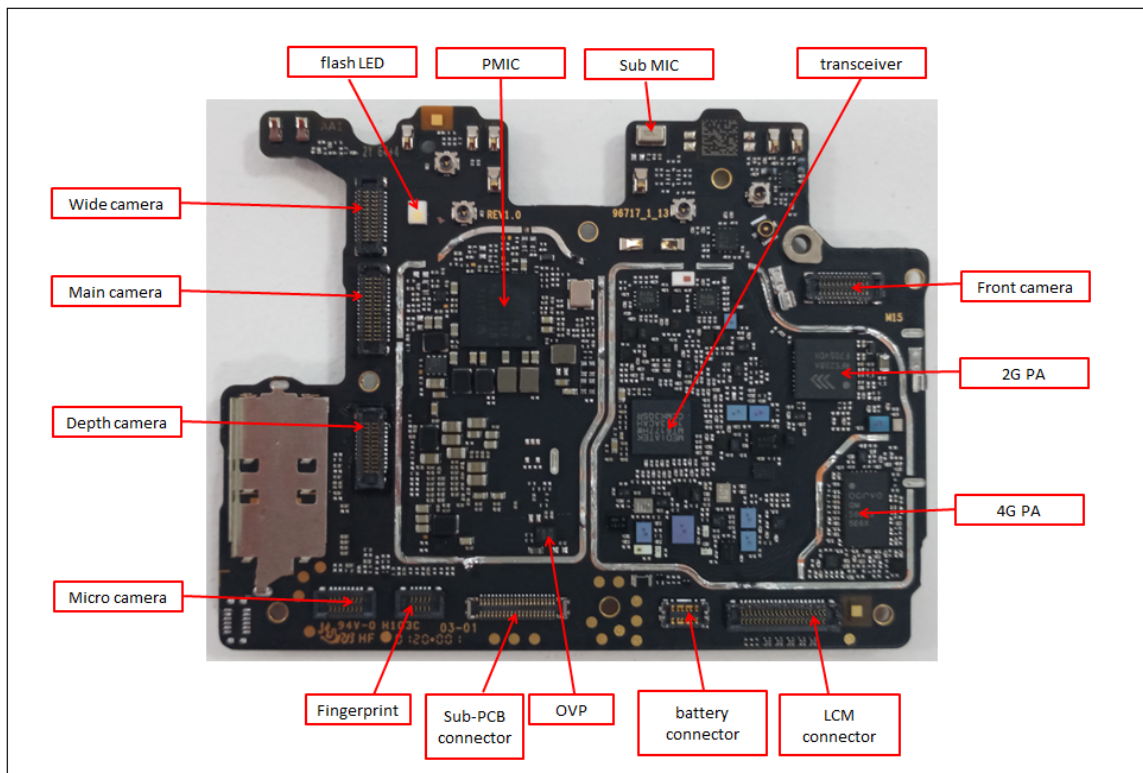
8. Level 3 Repair

8-1. Components Layout

Main board top view

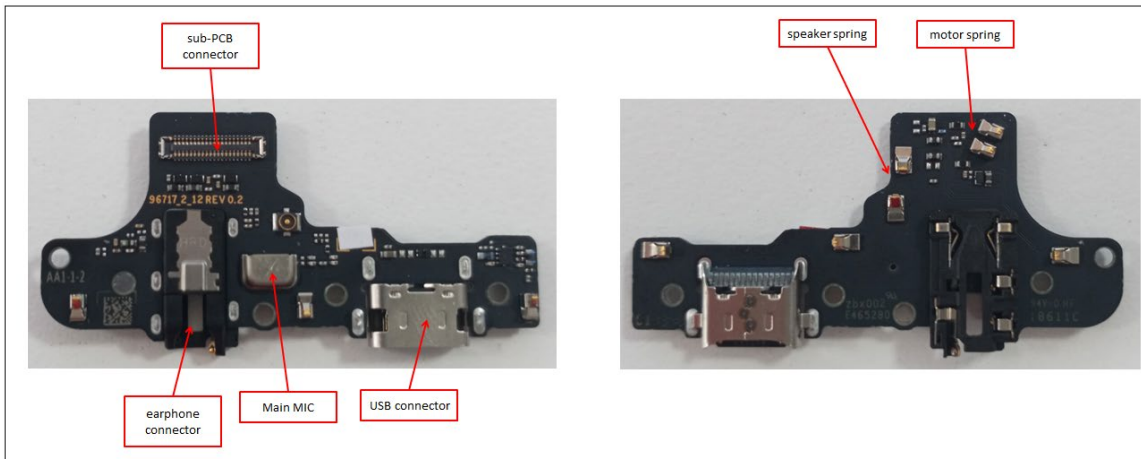


Main board bot view

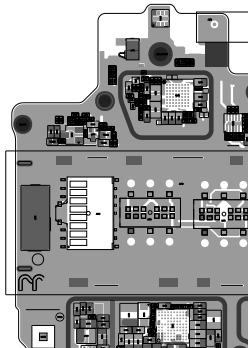


8. Level 3 Repair

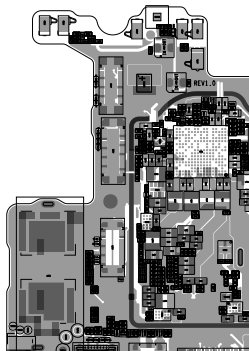
Sub board

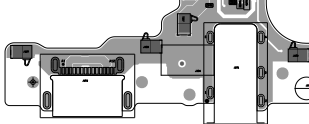


Reference map - Main PBA TOP VIEW



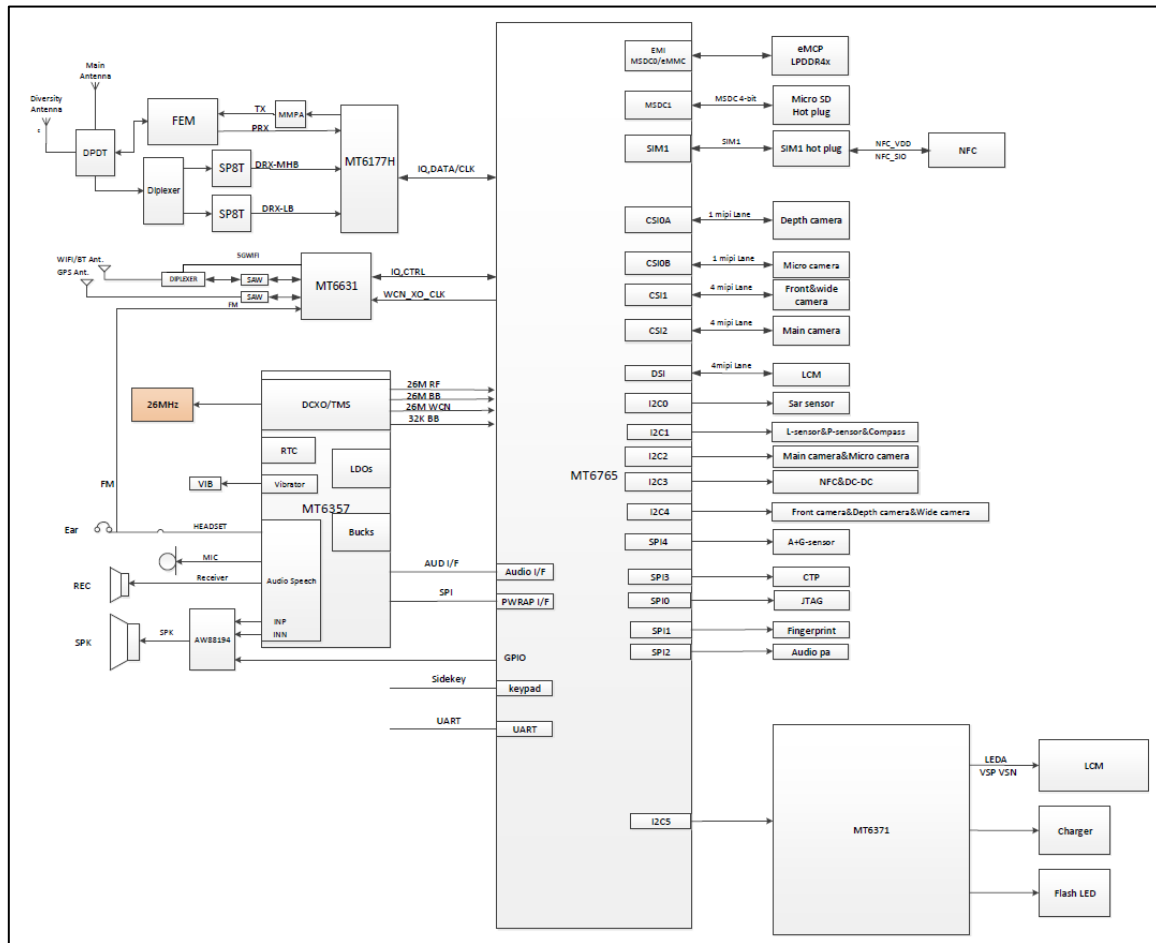
Reference map - Main PBA BTM VIEW



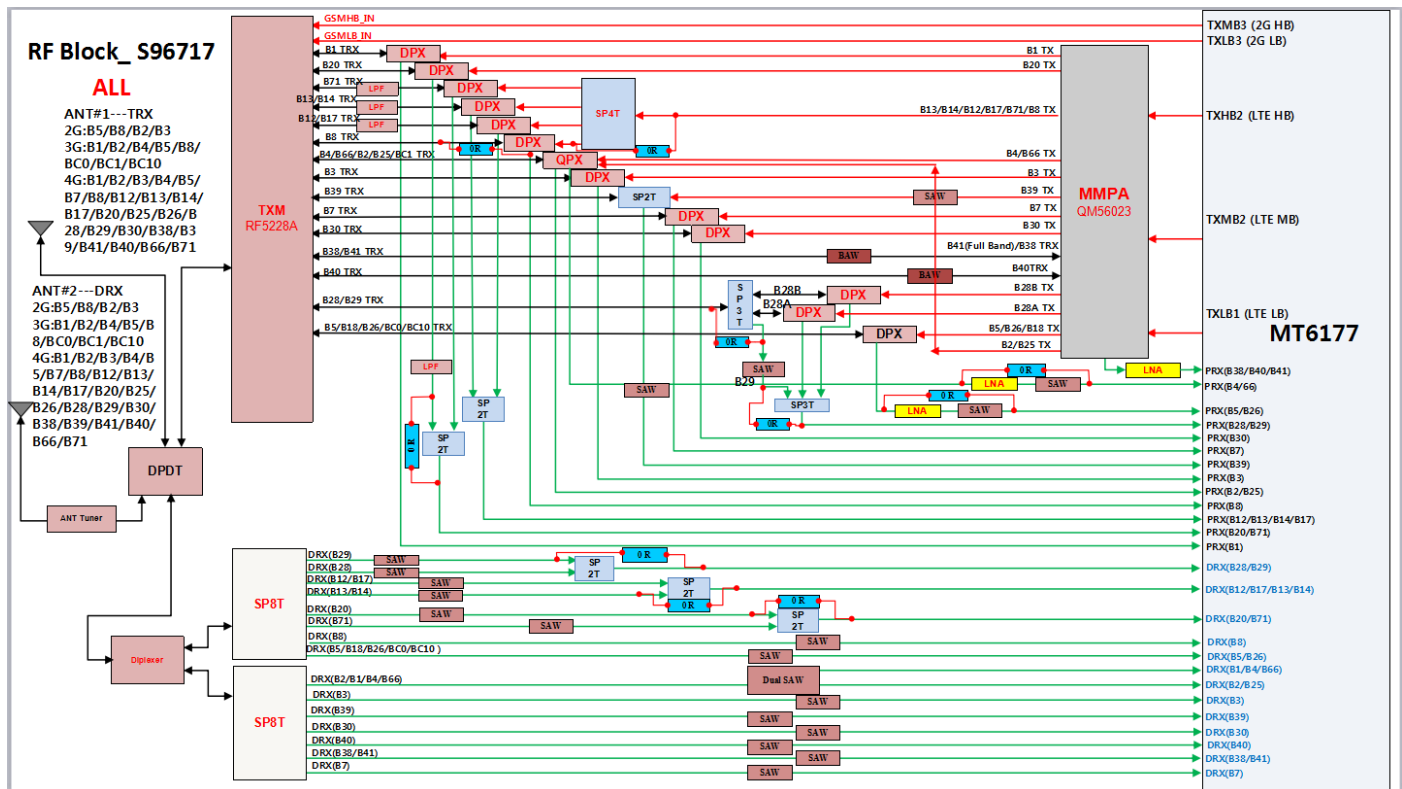




8. Level 3 Repair

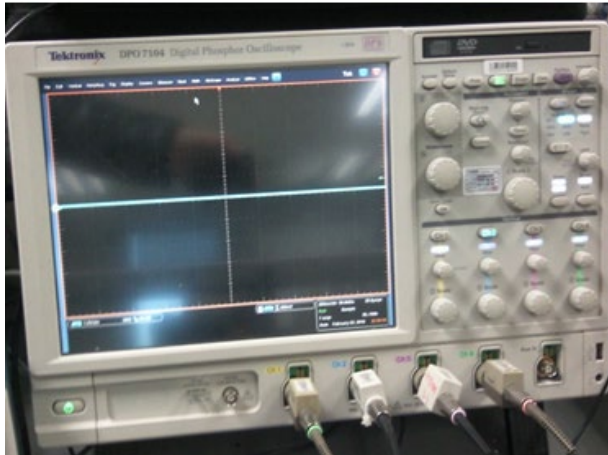


8. Level 3 Repair



8. Level 3 Repair

8-3. Flow chart of Troubleshooting.



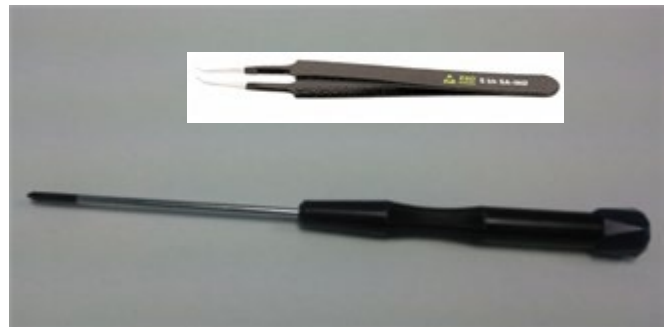
Oscilloscope



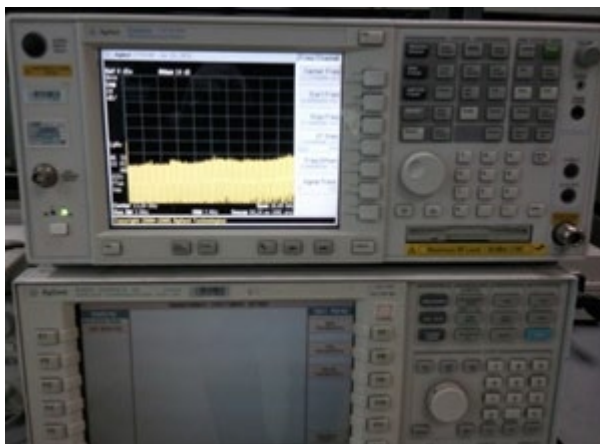
Digital multimeter



Power Supply



+ driver, ESD Safe Tweezer



8960 & Spectrum Analyzer

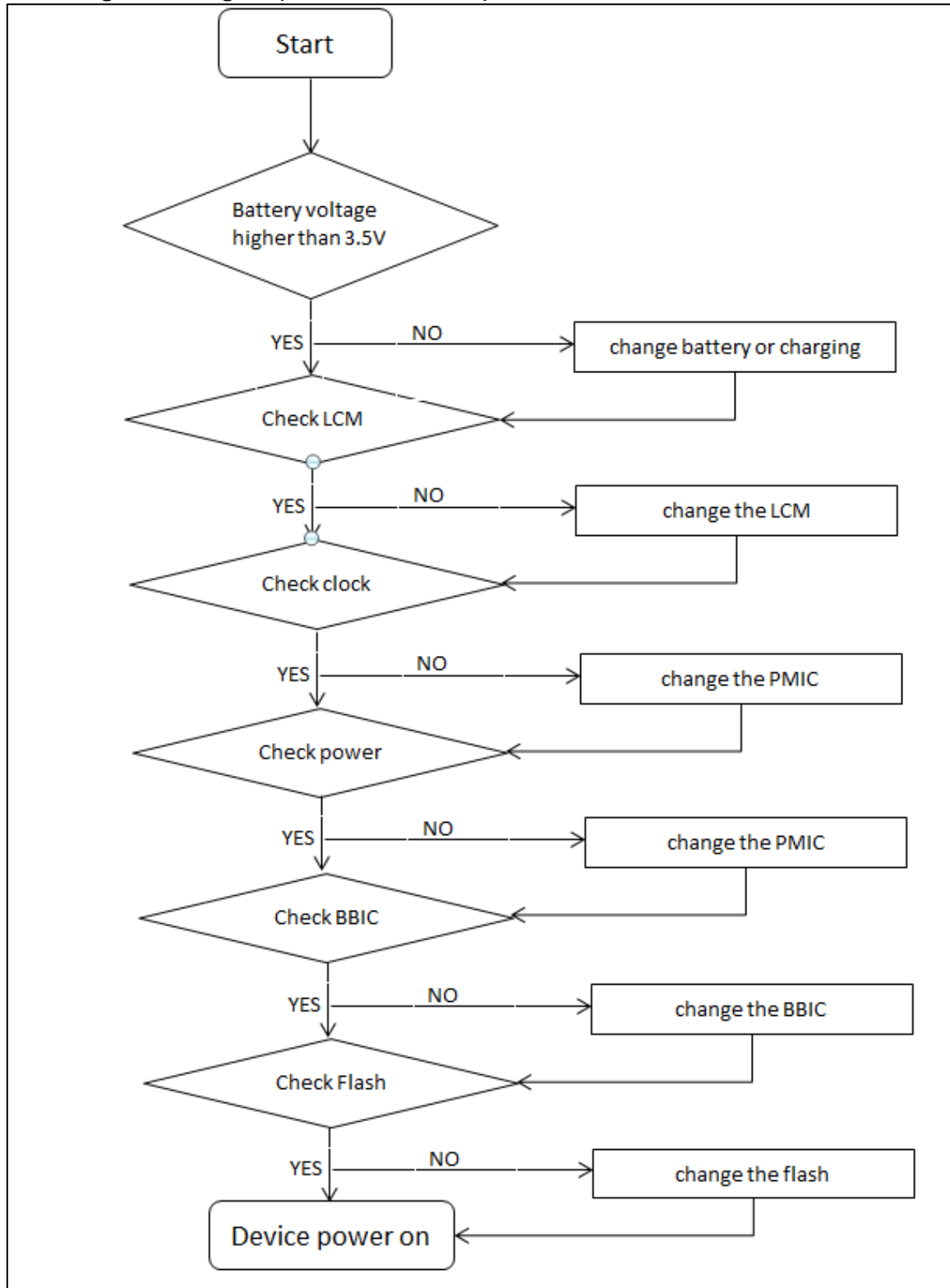


Soldering iron

8. Level 3 Repair

8-4-1. Power On

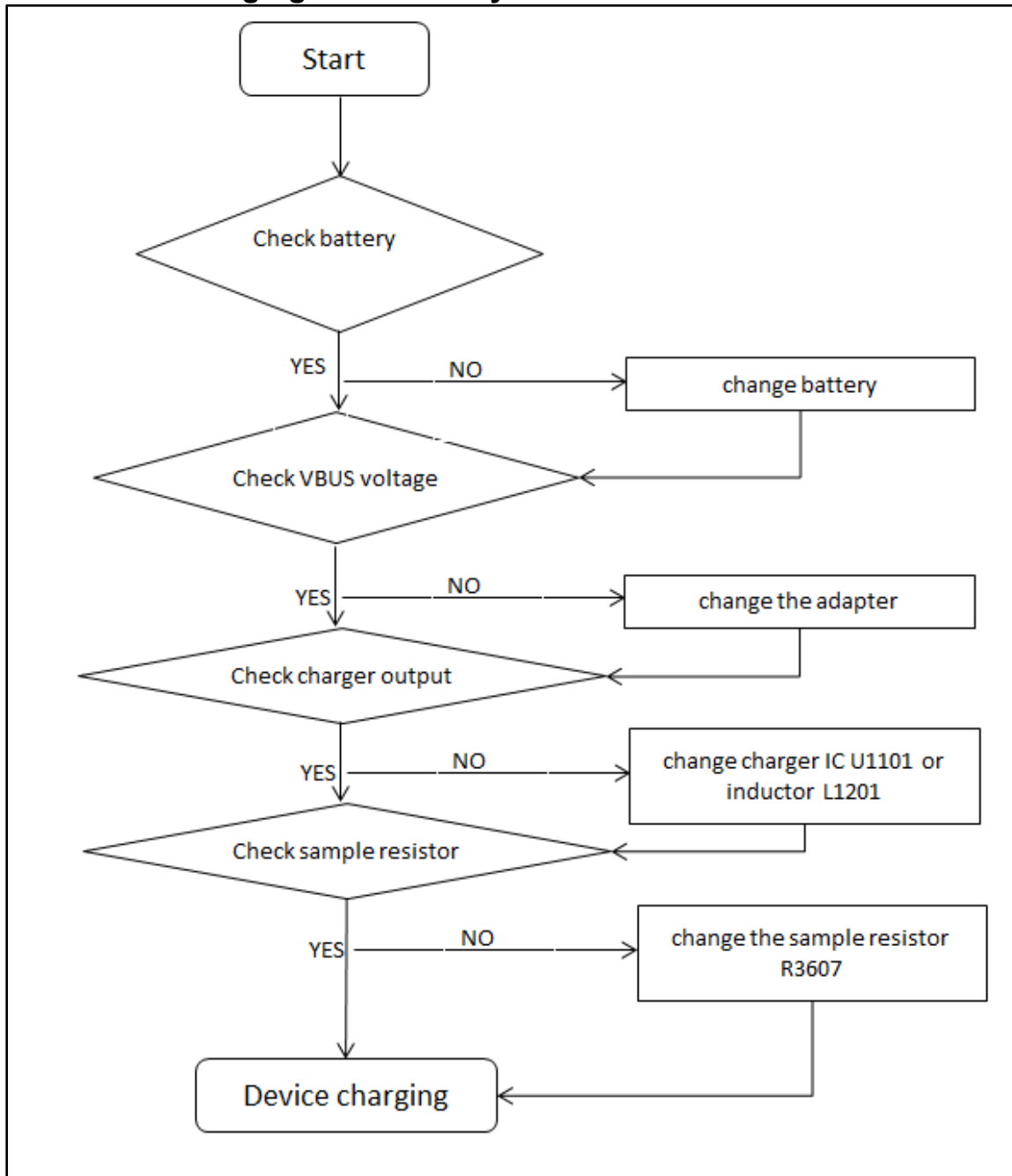
: Checking Power signal (LCM, PMU, Clock)



8. Level 3 Repair

8-4-2. Charging

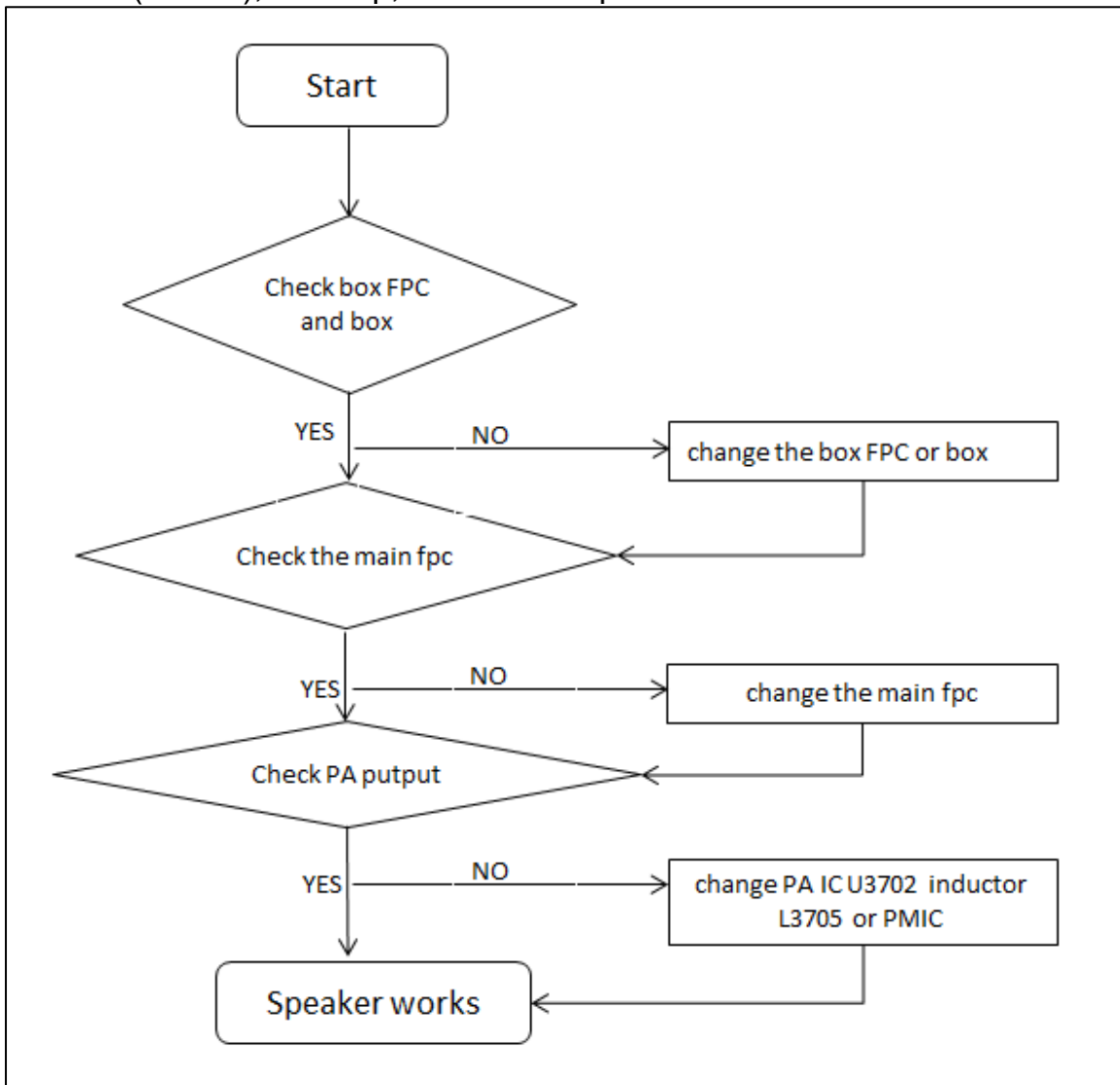
: The charging controlled by the MT6371



8. Level 3 Repair

8-4-3. Audio speaker

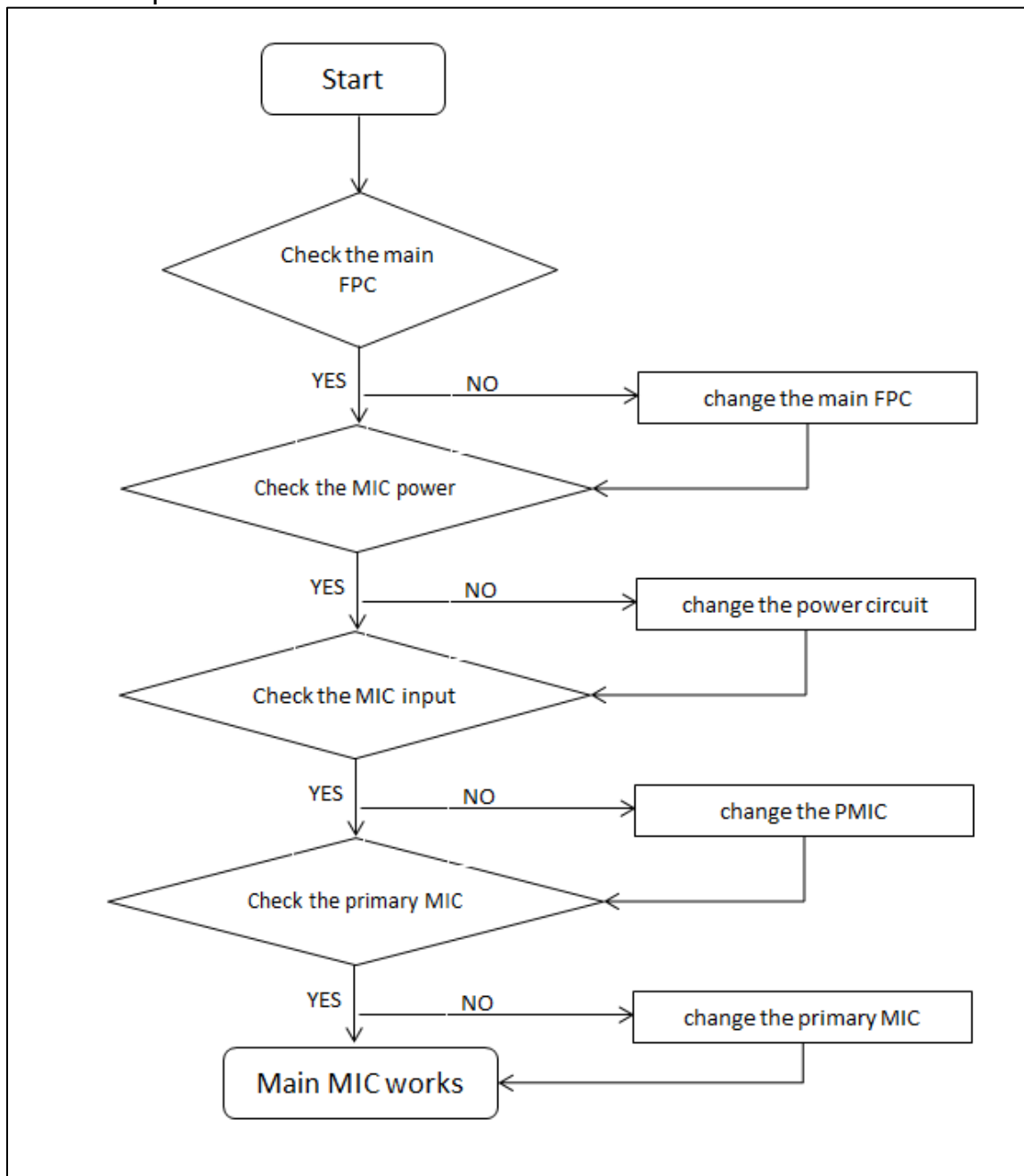
: The Speaker control signals are generated by MT6357 (U701) and PA AW88194 (U3702), the chip, PA and the speaker are to be checked out.



8. Level 3 Repair

8-4-4. Audio Main MIC

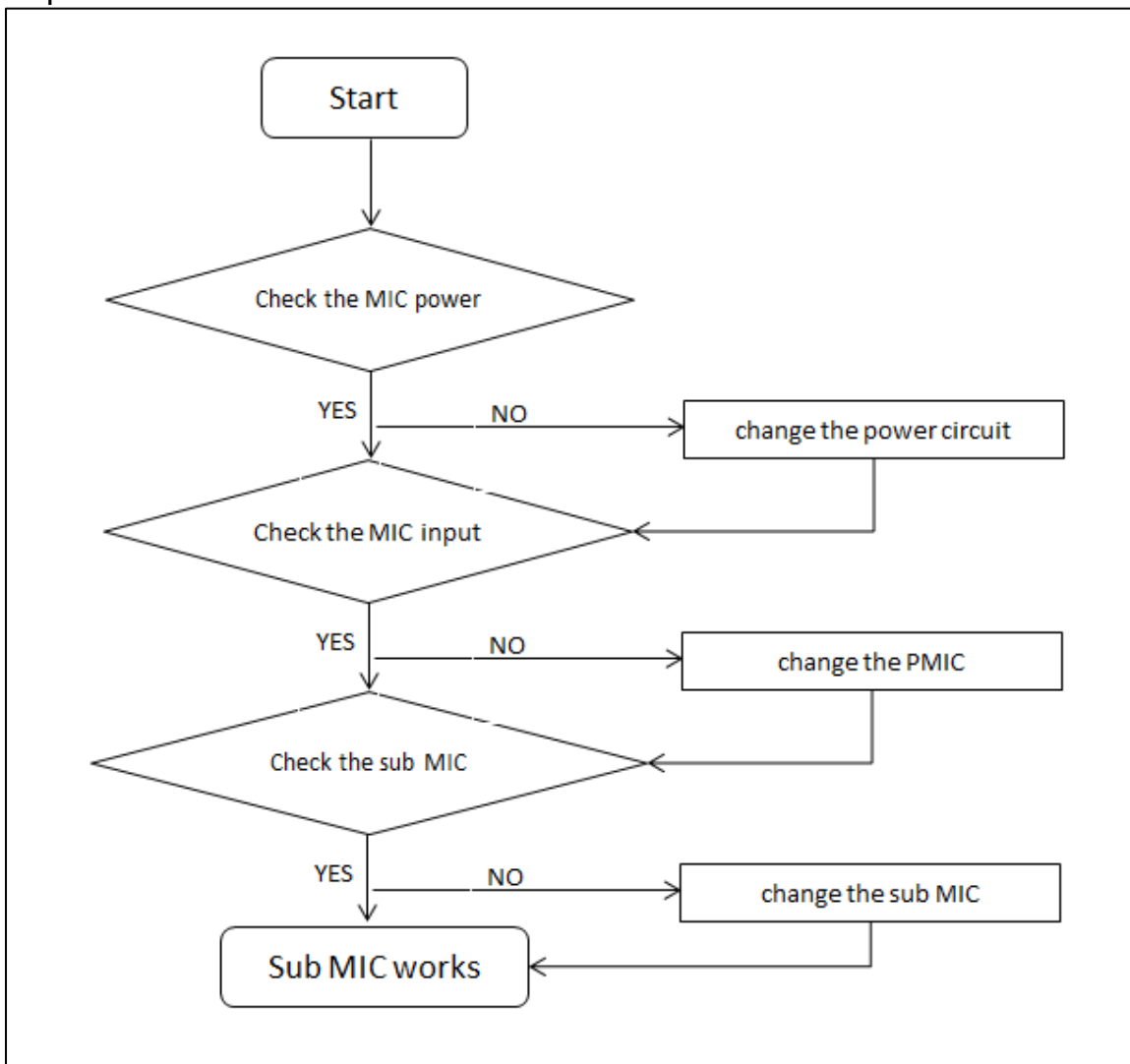
: The MIC control signals are generated by PMU chip MT6357 (U701), the PMU chip and the MIC are to be checked out.



8. Level 3 Repair

8-4-5. Sub MIC

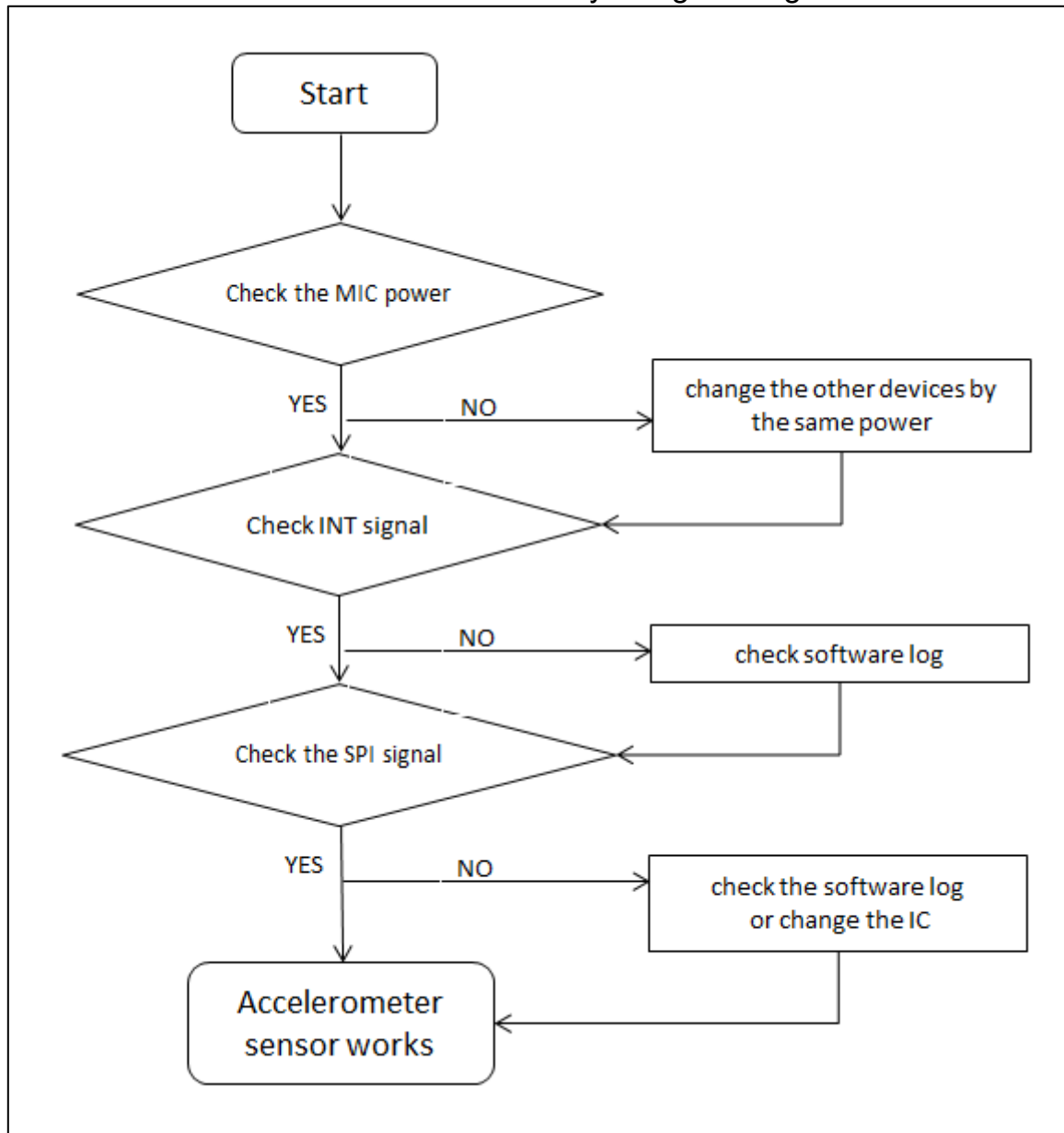
: The MIC control signals are generated by PMU chip MT6357 (U701), the PMU chip and the MIC are to be checked out.



8. Level 3 Repair

8-4-6. Accelerometer sensor

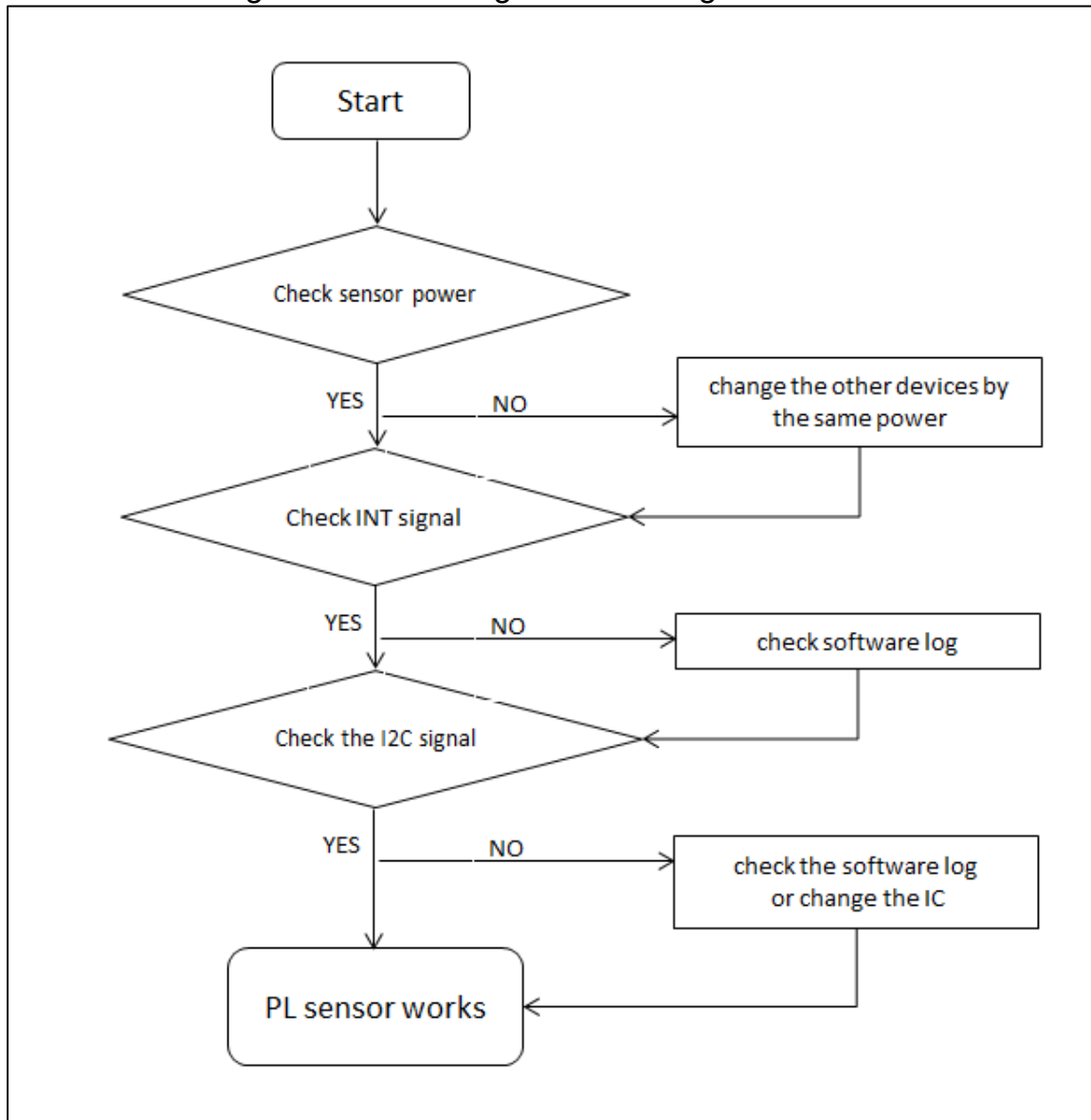
: The Accelerometer sensor is calibrated by using SW algorithm.



8. Level 3 Repair

8-4-7. Proximity and light sensor

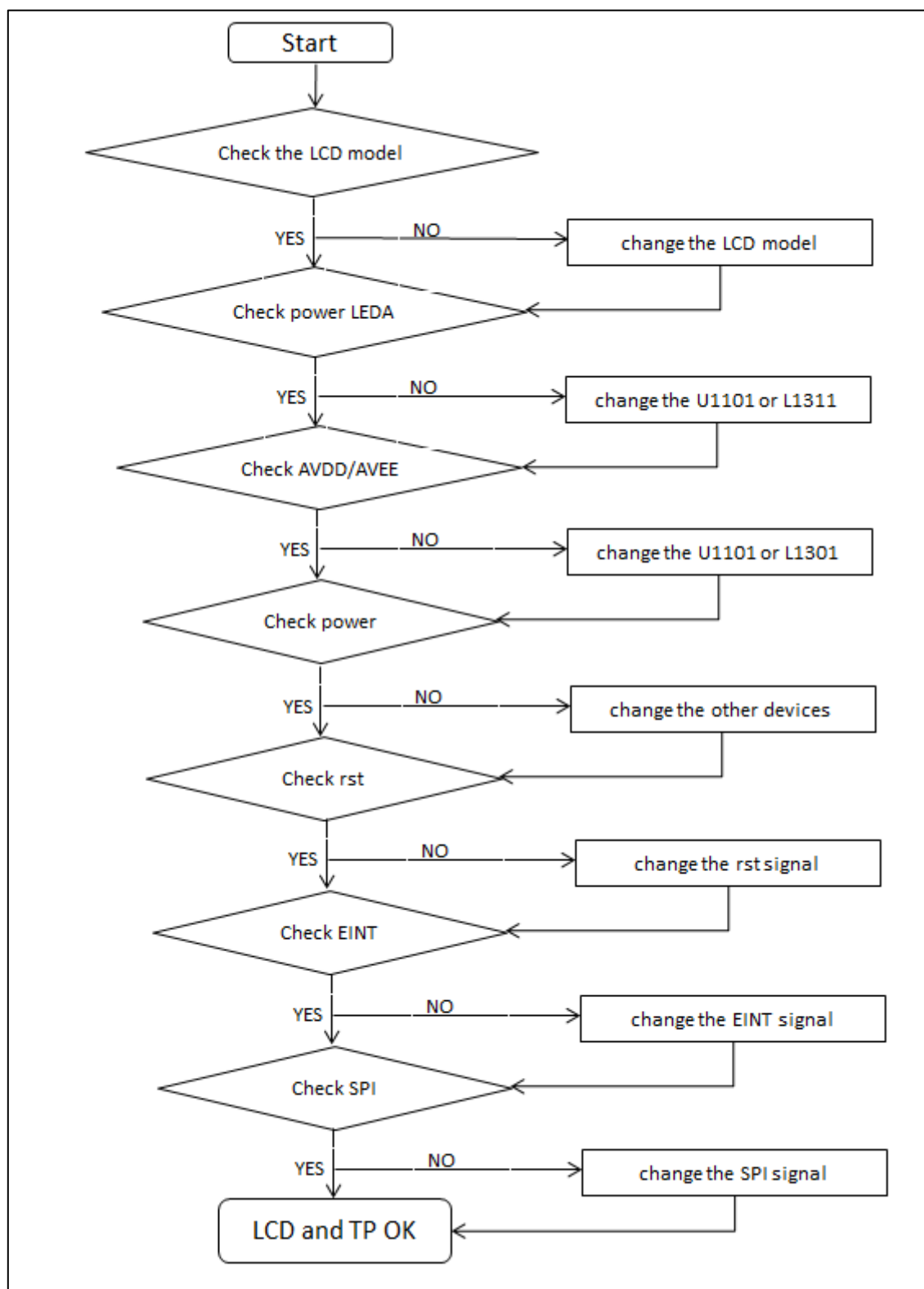
: Proximity (U4417) and Light Sensor (U4416) is worked as below: Control the screen's on/off operation automatically while making phone calls, and adjust the screen brightness according to ambient light.



8. Level 3 Repair

8-4-8. TOUCH SCREEN AND DISPLAY

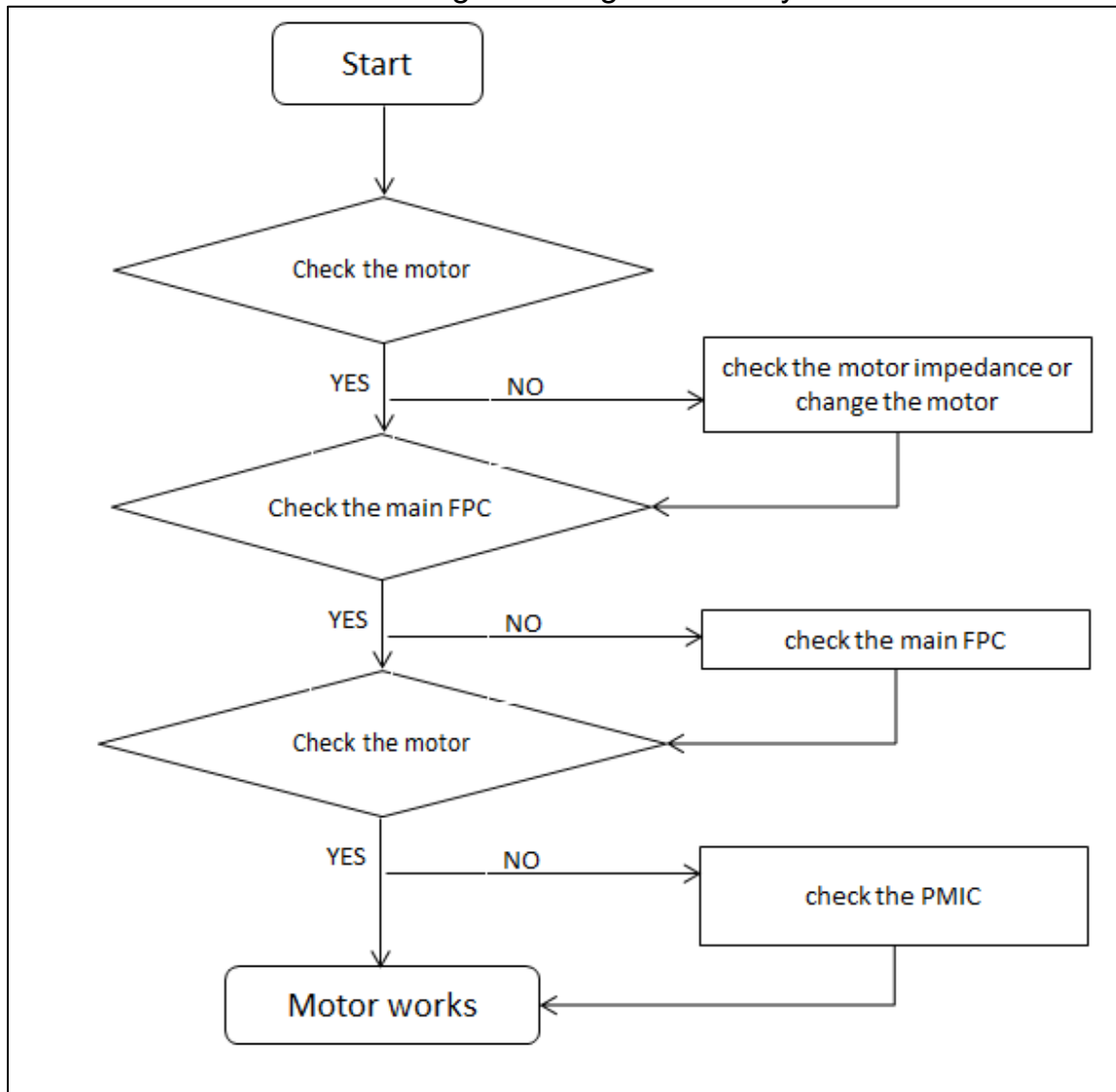
: The Touch control signals are generated by MT6765. It is assembled with LCD.



8. Level 3 Repair

8-4-9. Vibrator

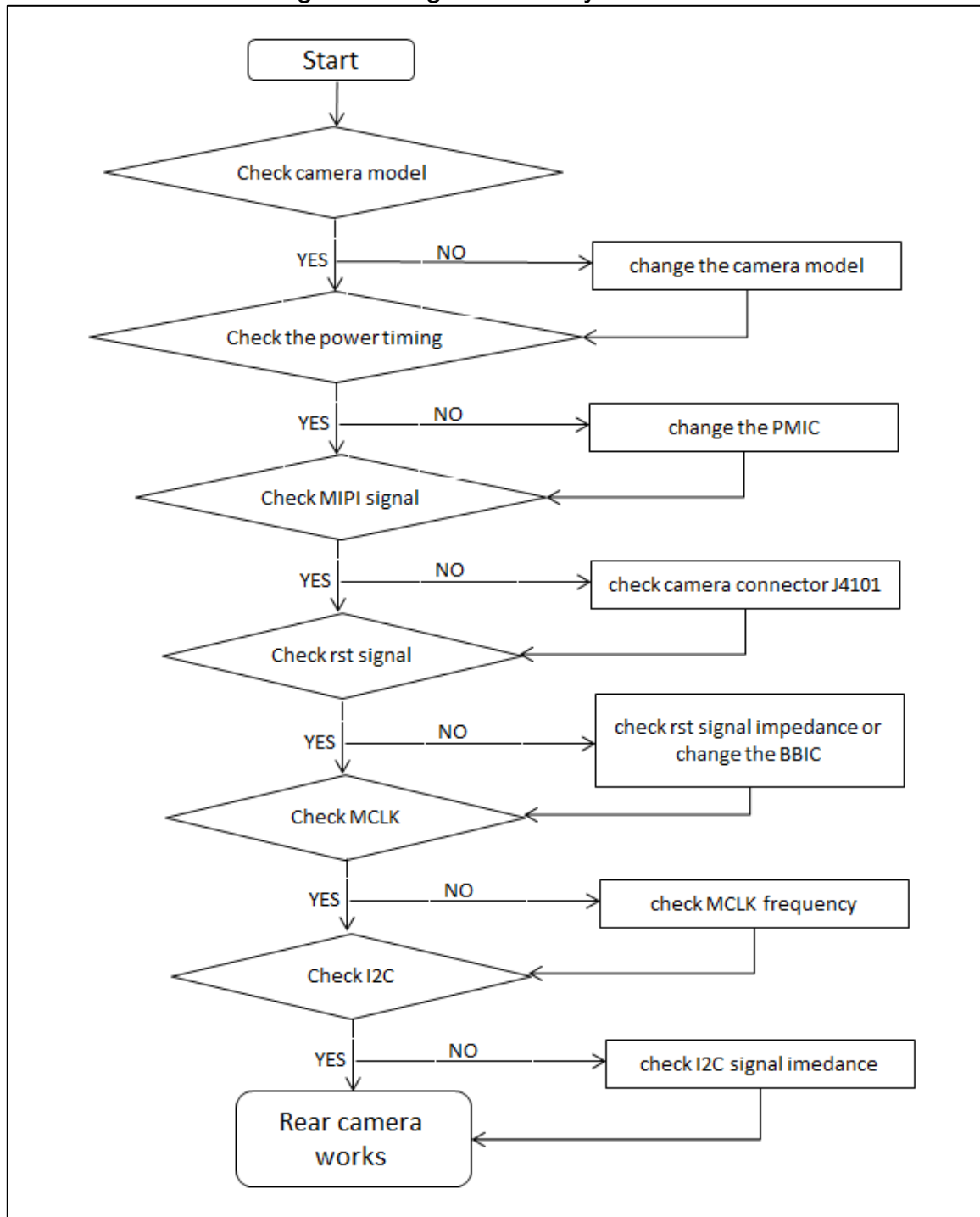
: The Vibrator control signals are generated by MT6357.



8. Level 3 Repair

8-4-10. Rear Camera

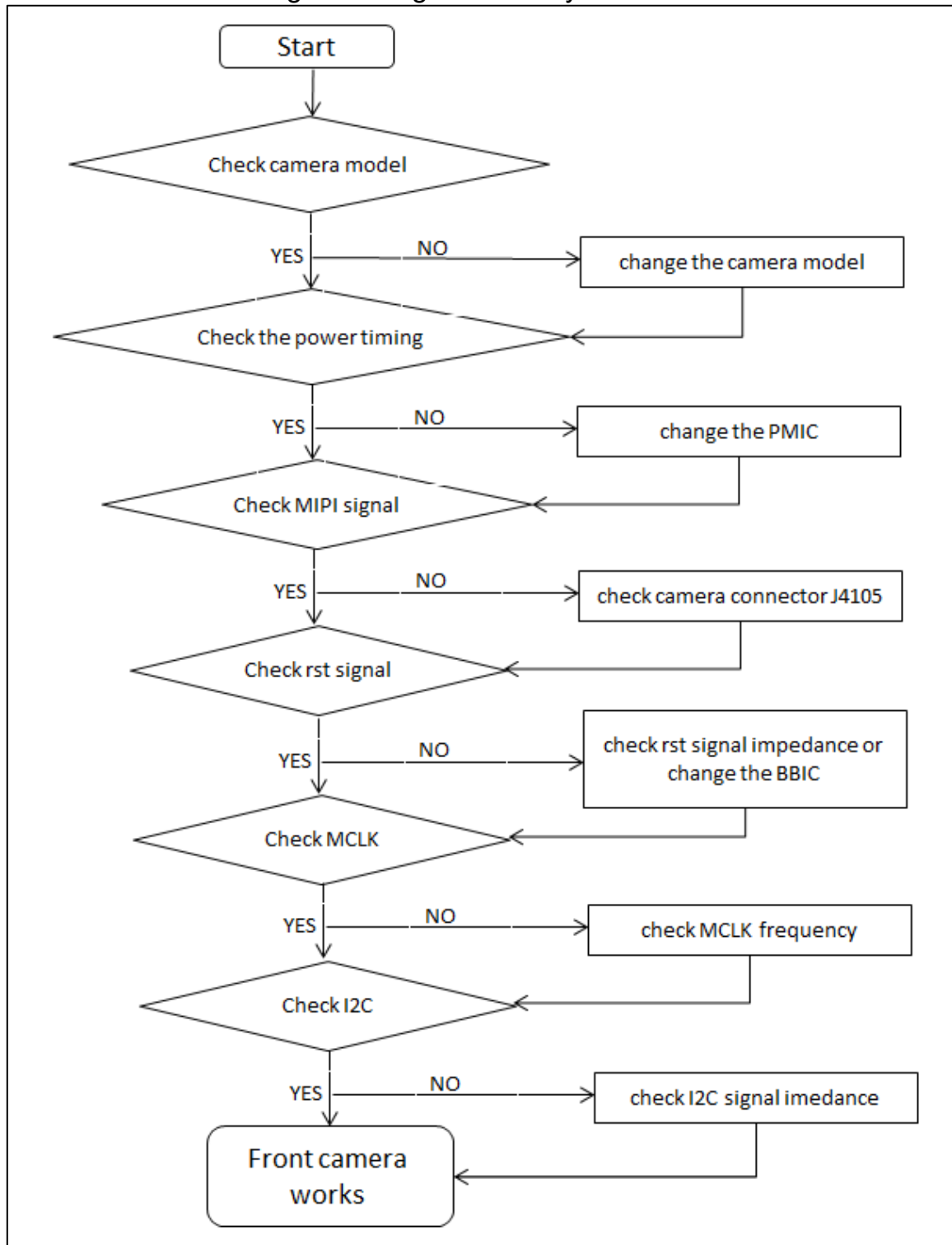
: The Camera control signals are generated by MT6762.



8. Level 3 Repair

8-4-11. Front Camera

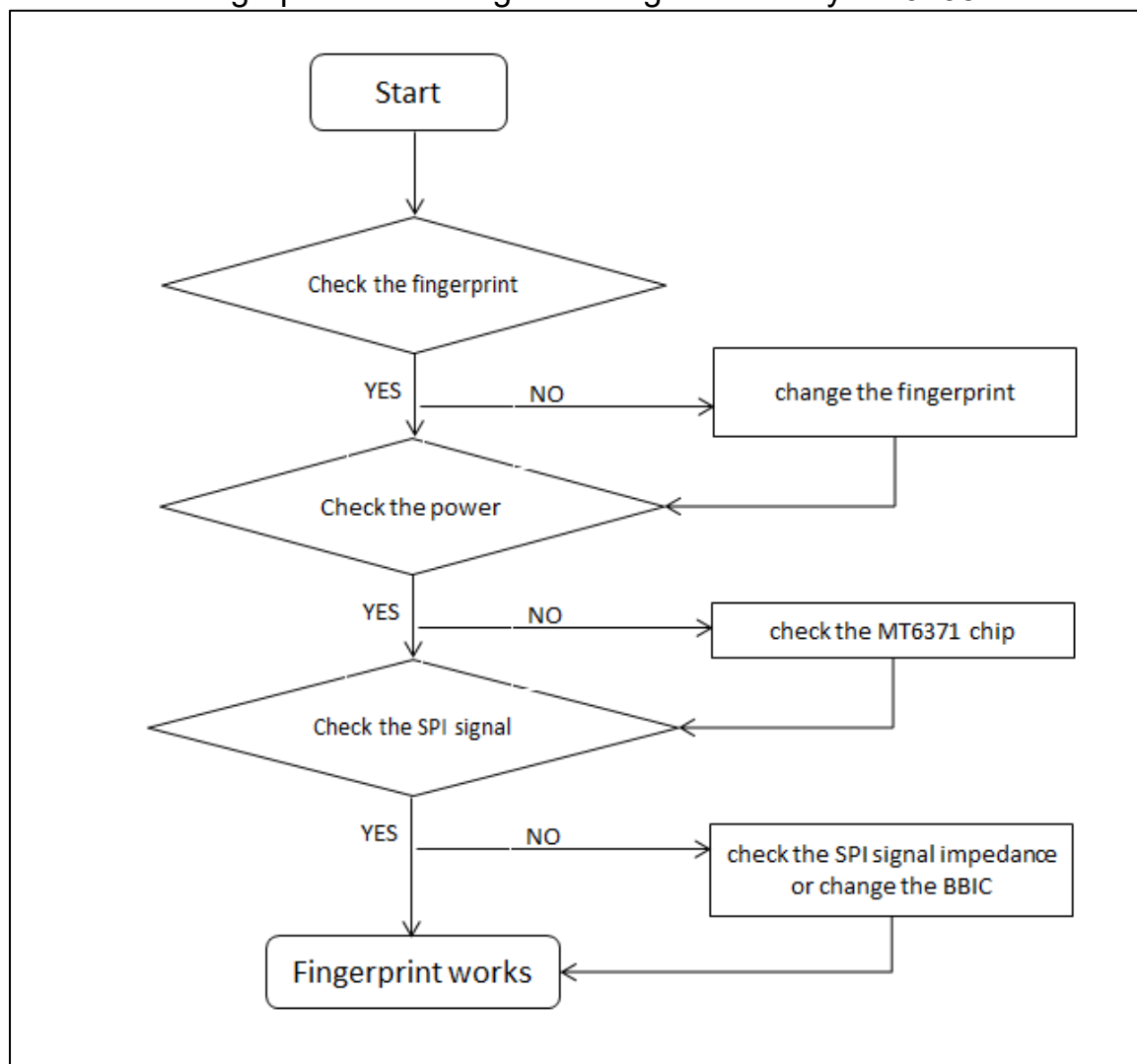
The Camera control signals are generated by MT6765.



8. Level 3 Repair

8-4-12. Fingerprint

The fingerprint control signals are generated by MT6765.



8. Level 3 Repair

8-5. Service Schematics

- U101_MT6765_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_CAB			EMIO_DQ00		EMIO_DQ01		EMIO_DQ02		EMIO_DQ03		EMIO_DQ04		EMIO_DQ05		MSDC0_DAT4	MSDC0_DAT2	MSDC0_DAT7	DVDD1_8_MSD	NC	A	
B	WF_OP	WF_QN	EMIO_CAB	EMIO_CAB		EMIO_CAB	EMIO_CAB	NC		EMIO_DQ01	EMIO_DQ02	EMIO_DQ03		EMIO_DQ04	EMIO_DQ05	EMIO_DQ06	EMIO_DQ07	EMIO_DQ08	EMIO_DQ09	EMIO_DQ10	EMIO_DQ11	MSDC0_DAT5	MSDC0_DAT6	MSDC0_CMD	MSDC0_DSI	USB_D_M	AVDD1_2_USB	B	
C		DVSS	AVDD1_2_VDD	NC	EMIO_CAB	DVSS	EMIO_CAB	NC		EMIO_DQ01	EMIO_DQ02	DVSS	EMIO_DQ03	EMIO_DQ04	DVSS	EMIO_DQ05	EMIO_DQ06	EMIO_DQ07	EMIO_DQ08	EMIO_DQ09	EMIO_DQ10	EMIO_DQ11	MSDC0_DAT3	MSDC0_RSTB	MSDC0_D_P			C	
D	BT_IN	BT_IP	DVSS	NC	EMIO_CAB	EMIO_CAB	NC	EMIO_CAB	DVSS	EMIO_DQ01	EMIO_DQ02	DVSS	EMIO_DQ03	EMIO_DQ04	DVSS	EMIO_DQ05	EMIO_DQ06	EMIO_DQ07	EMIO_DQ08	EMIO_DQ09	EMIO_DQ10	EMIO_DQ11	MSDC0_DAT1	MSDC0_CLK	CHD_P	AVDD1_2_USB	D		
E		BT_OP	DVSS	EMIO_CAB	EMIO_CAB	EMIO_CAB	EMIO_CAB	EMIO_CAB	DVSS	EMIO_DQ01	EMIO_DQ02	EMIO_DQ03	EMIO_DQ04	EMIO_DQ05	EMIO_DQ06	EMIO_DQ07	EMIO_DQ08	EMIO_DQ09	EMIO_DQ10	EMIO_DQ11	EMIO_DQ12	EMIO_DQ13	NC	DVSS	DVSS	CHD_M	SYSTEST_B	AVDD1_2_USB	E
F	GPS_I	CONN_HRST	DVSS	DVSS	DVSS	DVSS	DVSS	EMIO_CAB		DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	F	
G	GPS_O	CONN_HRST	DVSS				XIN_W	BG			DVSS	DVSS	DVSS	DVSS	DVSS	NC						DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	G	
H		AVDD1_8_WB	CONN_HRST	CONN_WF_CT	CONN_WF_CT	CONN_WF_CT				AVDD1_8_WB	AVDD1_8_WB	AVDD1_8_WB	AVDD1_8_WB	DVSS	DVSS		AVDD1_8_WB	AVDD1_8_WB	AVDD1_8_WB	AVDD1_8_WB	AVDD1_8_WB	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	H	
J	DVDD1_8_WB	CAM_C	SC16	SDA6	CONN_WF_CT	CONN_WF_CT																DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	J	
K		CAM_P	DN2	ANT_S	ANT_S	ANT_S	CONN_TOP_D	CONN_TOP_D	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	K	
L	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	L	
M	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	M	
N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	N	
P	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	CS1A_L2P	CS1A_L2N	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	P	
R	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	CS2A_L1P	CS2A_L1N	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	R	
T	CS2A_L2P	CS2A_L2N	CS2A_L2P	CS2A_L2N	CS2A_L2P	CS2A_L2N	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	T	
U	DVDD1_8_WB	AVDD1_2_VDD	CS1A_L1P	CS1A_L1N	CS1A_L1P	CS1A_L1N	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	U	
V	CAM_R	CAM_R	SDA2	SC12	SDA4		DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	V	
W		CAM_C	ENT10	ENT9	CAM_C	CAM_C	ENT11	ENT11	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	W	
Y	SRCLK	CAM_P	DN1	ENT7	ENT6	ENT4	ENT5	ENT5	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	Y	
AA	KPRO_W0	UTXD0	URXD0	ENT3	ENT2	ENT1	ENT1	ENT1	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	AA	
AB	KPRO_W1	KPCOL_1	KPCOL_0	ENT0	ENT0	ENT0	ENT0	ENT0	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	AB	
AC	SPI0_C	SPI0_M	PWM0	SDA0	CDM0	SPI0_M	SPI0_M	SPI0_M	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	AC	
AD	SPI0_M	SPI0_C	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	AD	
AE	SCL1	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	AE	
AF	SDA1	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	AF	
AG	NC	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	SPI0_M	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	DVSS	AG	
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		

Figure 2-1. Ball map view