Operational Description

The transceiver is a complete RF front end for multi-band GSM , GPRS and WCDMA wireless communications. The receive section interfaces between the RF band-select SAW filters and the baseband subsystem. The receiver leverages a proven digital low-IF architecture and enables a universal baseband interface without the need for complex dc offset compensation. The transmit

section   provides a complete upconversion path from the baseband subsystem to the power amplifier (PA) using an offset phase-locked loop (OPLL) integrated with synthesizer technology. All sensitive components, such as TX/RF VCOs, loop filters, tuning inductors, and varactors are completely integrated into a single integrated circuit. The transceiver includes a digitally-controlled crystal oscillator (DCXO) and completely integrates the reference oscillator and varactor functionality.

First   power on the   cell phone , (Power supply's voltage is set to 3.6 v-4.2 v, power is supplied to RF PA, audio PA circuit firstly.The pmu LDO will be opened once the power key is pressed.The LDO regulator power will be supplied to RF,FM,ATV,MCP,camera ect devices. Then the handset will detected if the sim card is existed or not.If existed ,the handset will attempt to register on the network

The second SIM card's function will be same as first SIM card. but only one of the dual SIM Card can be transmitting when the two SIM Cards are inserting the phone together.

This 3G Mobile phone have Bluetooth function.

Bluetooth 2.1+EDR

Operation Frequency:	2402~2480 MHz
Modulation Type:	BT(1Mbps): GFSK BT EDR(2Mbps):∏/4-DQPSK BT EDR(3Mbps): 8-DPSK
Bit Rate of Transmitter	1Mbps/2Mbps/3Mbps
Number Of Channel	79 CH
Antenna Designation:	0 dbi
Output Power(Conducted):	BT(1Mbps): 0.532dBm BT EDR(2Mbps): -0.064dBm BT EDR(3Mbps): -0.200dBm

Frequency:	☒GSM 850 ☒PCS 1900 (U.S. Bands) ☒GSM 900 ☒DCS 1800 (Non-U.S. Bands) U.S. Bands: ☒WCDMA FDD Band II ☒WCDMA FDD Band V Non-U.S. Bands: ☒WCDMA FDD Band I ☒WCDMA FDD Band VIII
Output Power:	GSM850(Class 4) : 1.909 W (32.81dBm) GPRS850(Multislot Class 12) : 1.678 W (32.25 dBm) GSM1900 (Class 1) : 0.946 W (29.76dBm) GPRS1900 (Multislot Class 12) : 0.905W (29.57 dBm) WCDMA/HSDPA Band II: 0.214 W (23.32dBm) WCDMA/HSDPA BandV: 0.217W (23.37dBm)
Type of Modulation	GPRS/GSM Mode with GMSK Modulation WCDMA Mode with QPSK Modulation HSPA Mode with QPSK Modulation

CIRCUIT DESCRIPTION

1、 Transmitter/Receiver Circuit
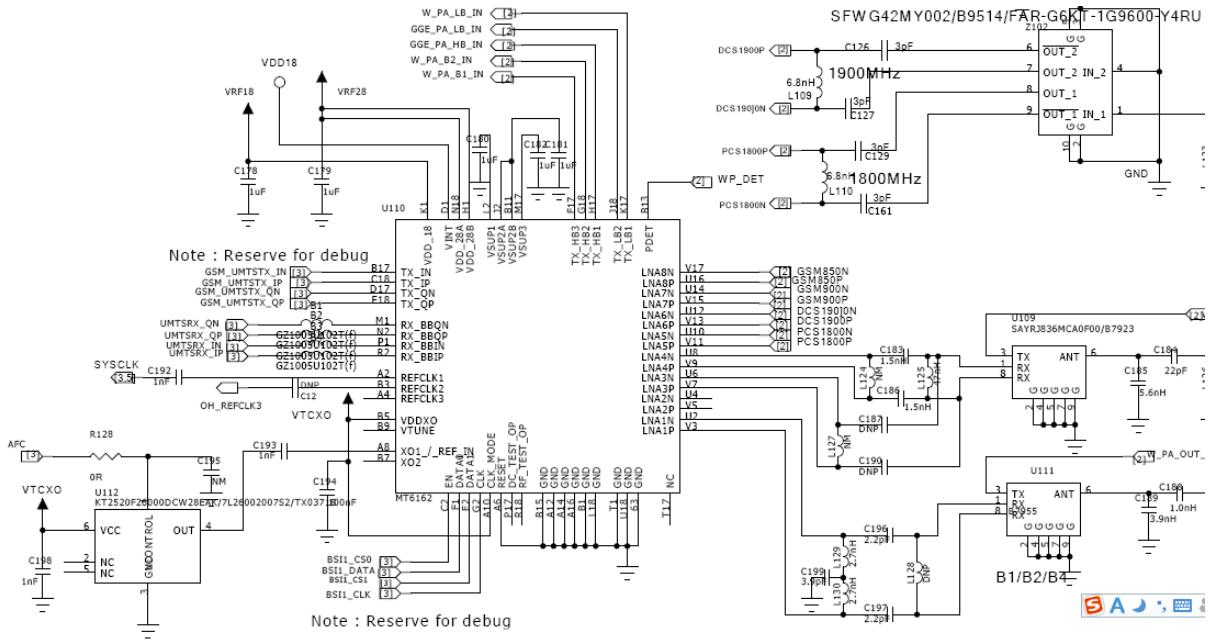
This circuit shows the transmitter and receiver path of GSM/DCS/PCS and WCDMA2100/WCDAM850. The RF signal which is amplified by RF PA transmits to antenna through antenna switch andthan eradiate to the air.C117, L120, L119 make up of the antenna matching circuit.When receiver, the antenna receive the RF signal, and then demodulated by MT6276   after band filter.

1 2
SW105

PWR_KEY [4.8]

power on keypad

GND
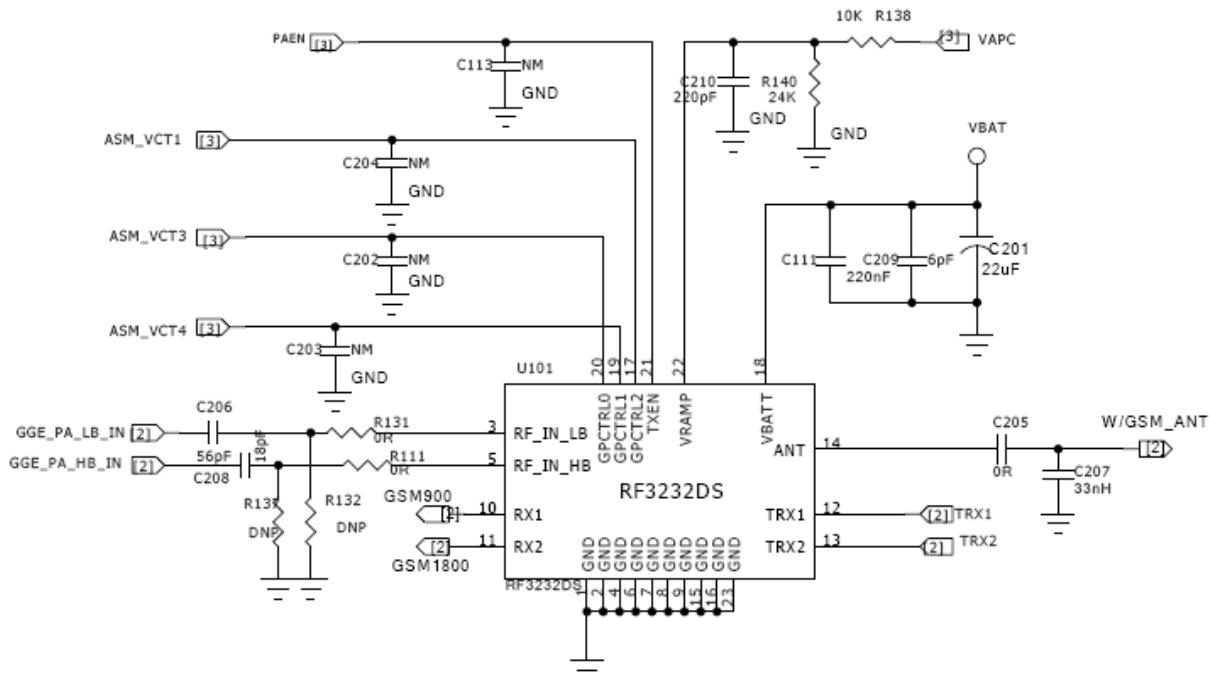
After inserting the battery, VRTC output voltage of 2V, and then the 32.768KHZ crystal start to work. Now press the power on/off switch SW105, then the inner program start initialing. Press the power on/off switch about 2s at normal work status, CPU MT6276 will detect the signal and start the power off program.

VCHG

VCDT[4]

330k (1%) R119

C200

R108
39K

CHR_LDO

40mil 1uF

GND

GND

7.5K R110

D101

CHR_LDO

E C C

U105
STT818B

B C C

SSM3K35MFV DNP
U106

VDRV[4]

2 3

40mil

VBAT

R700 close to battery connector.
ISENSE[4] 4mil

0.2R R129

ISENSE/VBAT trace 4mil, and star-connection to R211

C101
1uF

GND
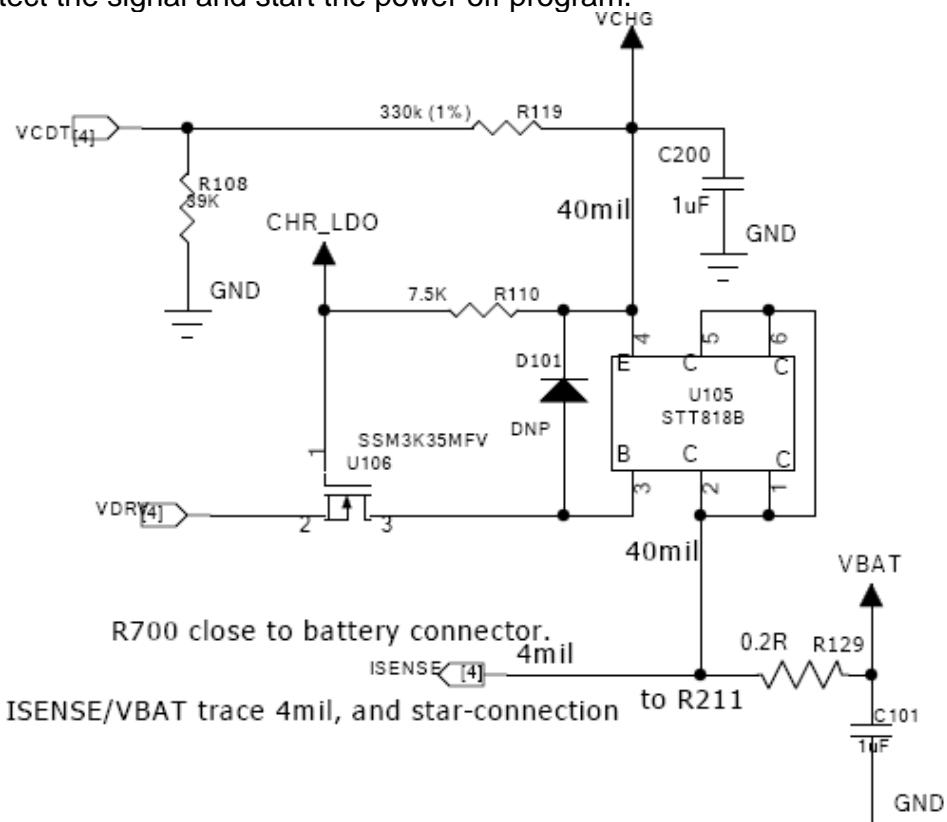
The MT6276 integrate the charger control circuit. When inserting the charging Adapter, CHG_DEC detect high level, and start the charging program.
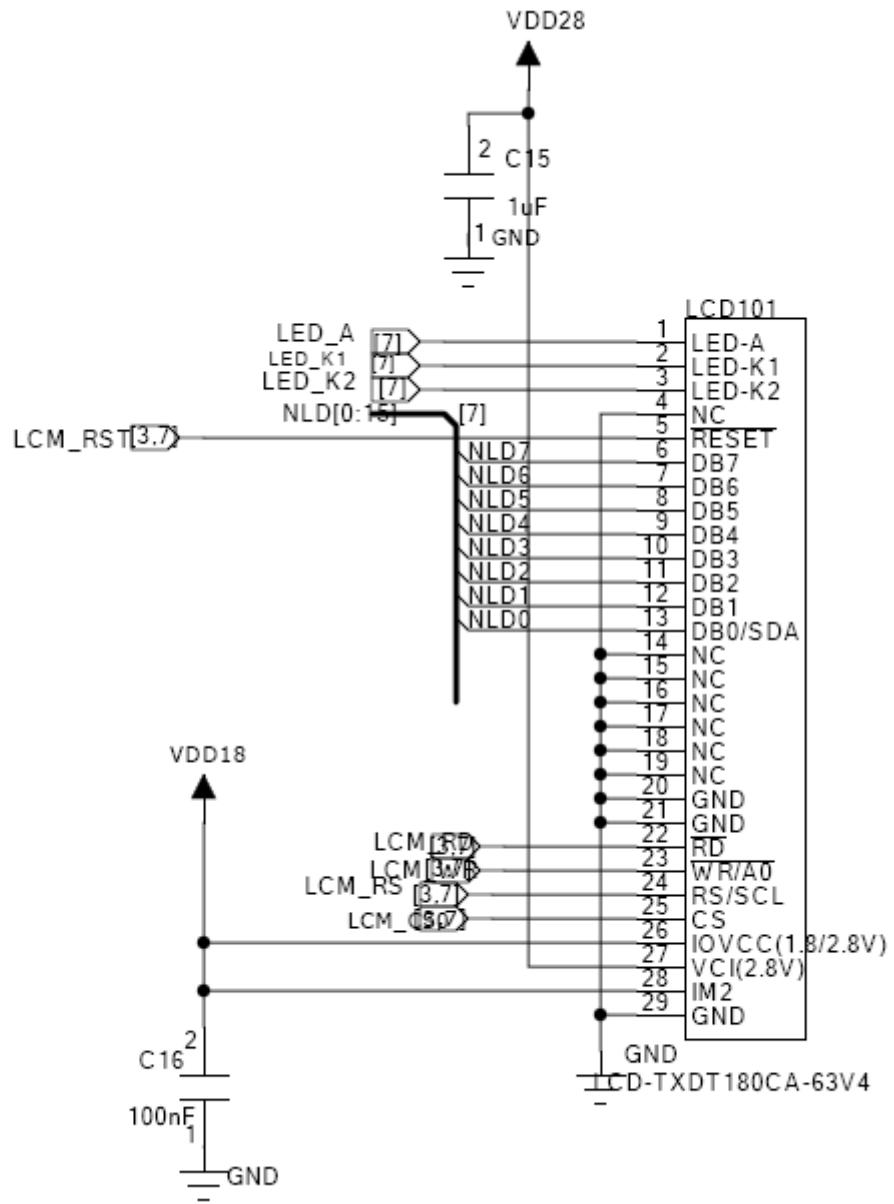
The LCD connects to MT6276 through FPC. The signals are defined as follows: VDD：LCD inner driver voltage，provided by MT6276 RST：Reset signal WR0：LCD writing signal WR1：LCD reading signal CS0：LCD chip select signal CD: Register select D0～D7：LCD data signal
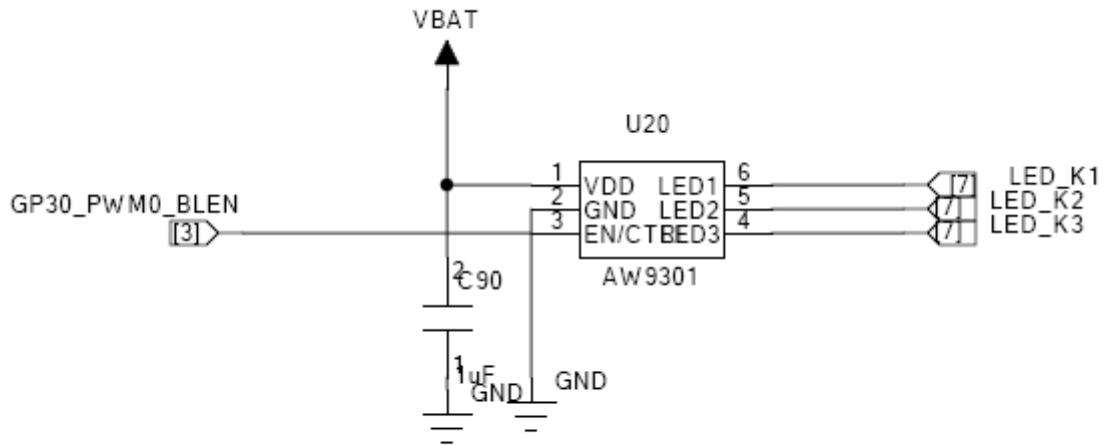
LCD backlight is Control by MT6276 GP30_PWM0_BLEN enable LCD backlight LED.

The keypad contains SW107---SW118
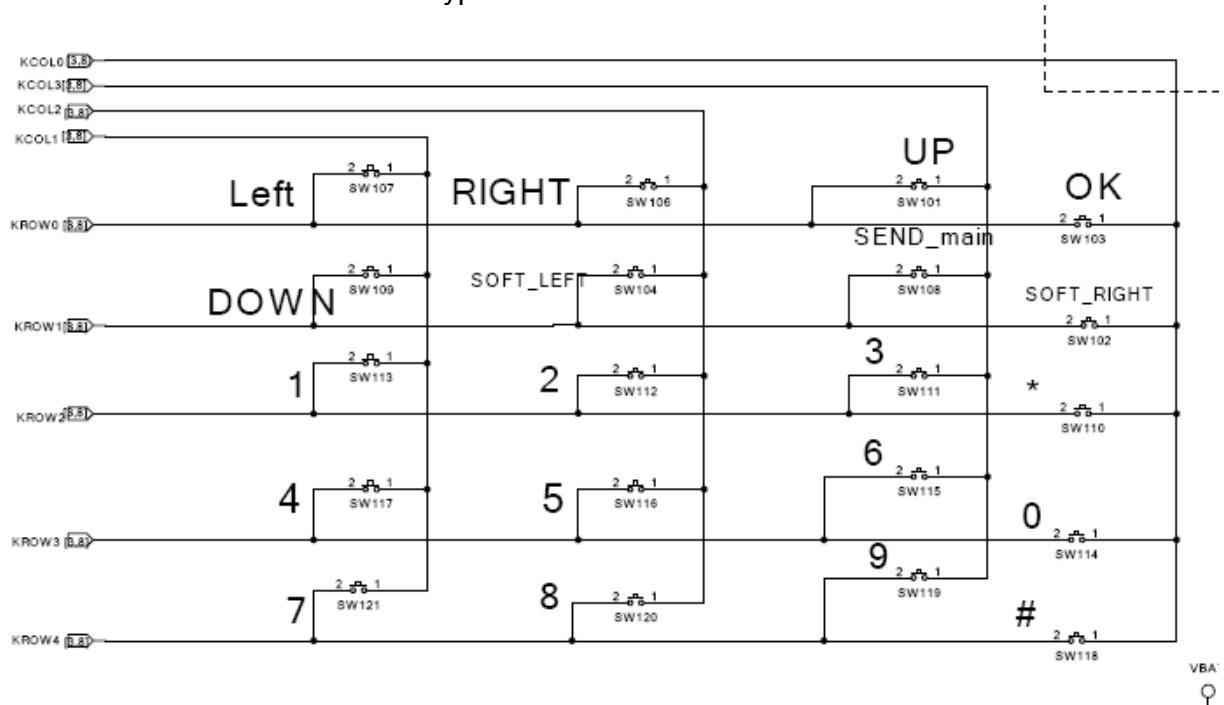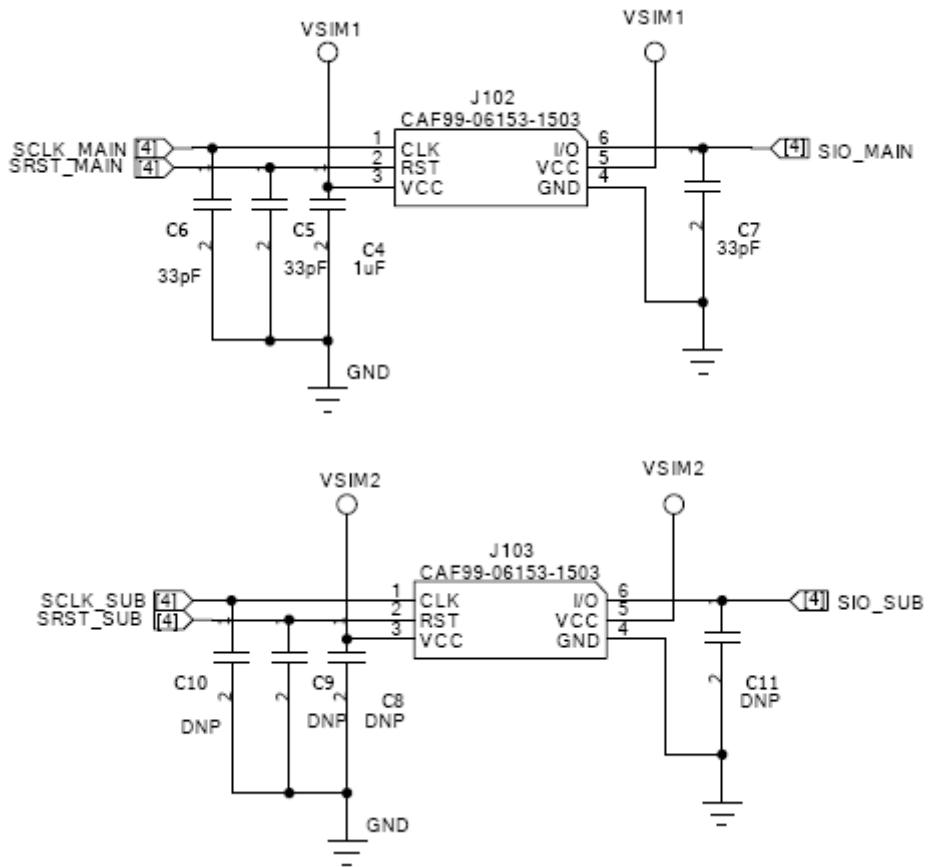
SIM card pin defined as follows：VSIM：SIM card voltage supply, IO：Data input/output
CLK：Clock signal RST：Reset signal
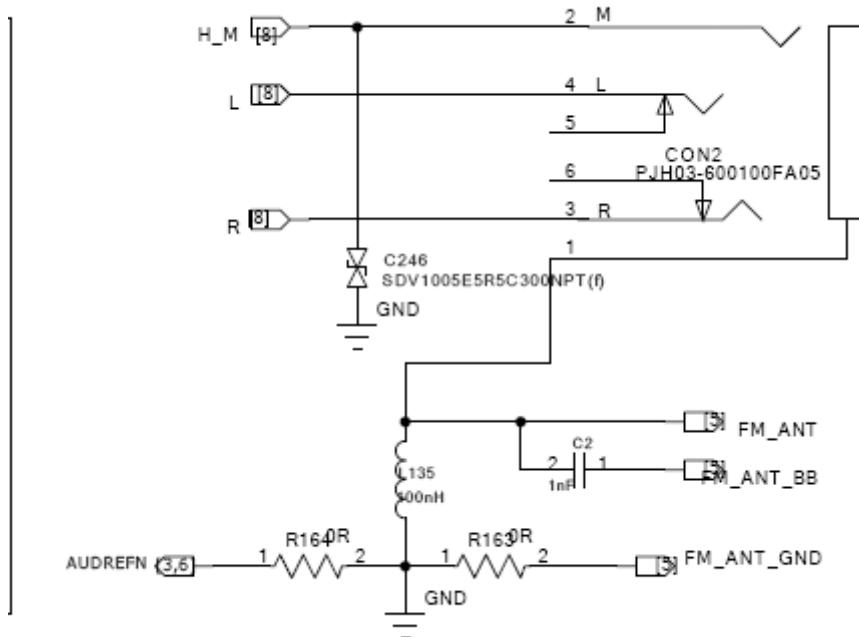
The I/O circuit contains earphone port, UART port, charge input.HP is detecting pin for earphone insert. For normal it is high, and become low when earphone insert.

BT
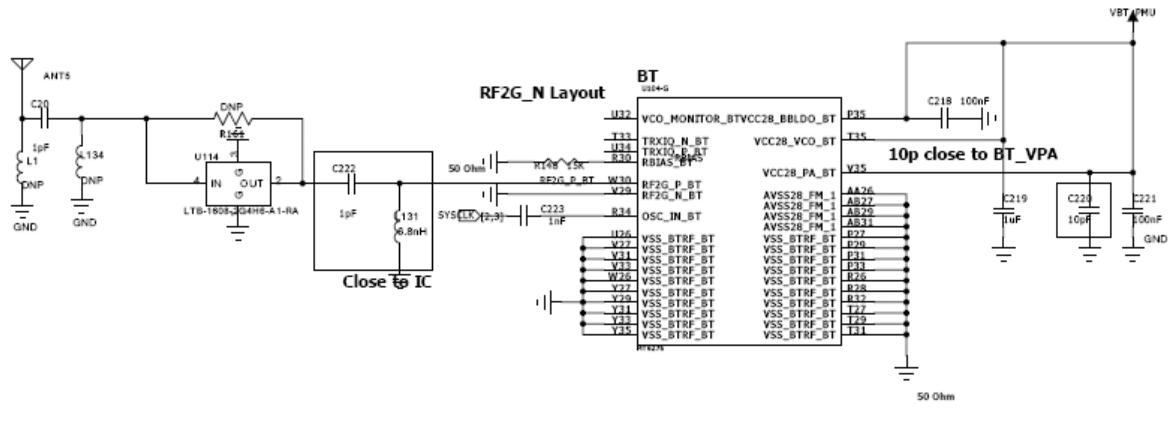
The Bluetooth chip is MT6276 include, and the working frequency is 2400-2483.5MHz