RF15 BLOCK DIAGRAM

On Board Planar Inverted-F Antenna(PIFA)

Balun and RF matching circuit

RF-N RF-P

RF MAIN CONTROLLER(CC2500)

RADIO CONTROL

RC OSC

PA

LNA

BIAS

RBIAS
56K BIAS RESISTOR

XOSC_Q1
XOSC_Q2

26MHz 10ppm Crystal Oscillator with two 15pf loading capacitors

XOSC

FREQ SYNC

ADC

ADC

0 90

MODULATOR

DEMODULATOR

FEC/INTERLEAVER

PACKET HANDLER

TX FIFO   RX FIFO

DIGITAL INTERFACE TO MCU

VDD

GDO2 GDO0(ATEST) CSn SI SO(GDO1) SCLK

RC2 RC1 RA2 RC7 RB4 RB6

Micro Controller

RESET
/MCLR RC4   RC5   VDD
LED1 LED2

RB5 RB7 RC0 RTS-T
     RXD
     TXD

3.3V REGULATOR

USB UART IC
(FT232BL)

EEPROM
(HT93C46)

DATA SK CS

VBUS
D-
D+
GND

USB CONNECTOR

HOST(PC)
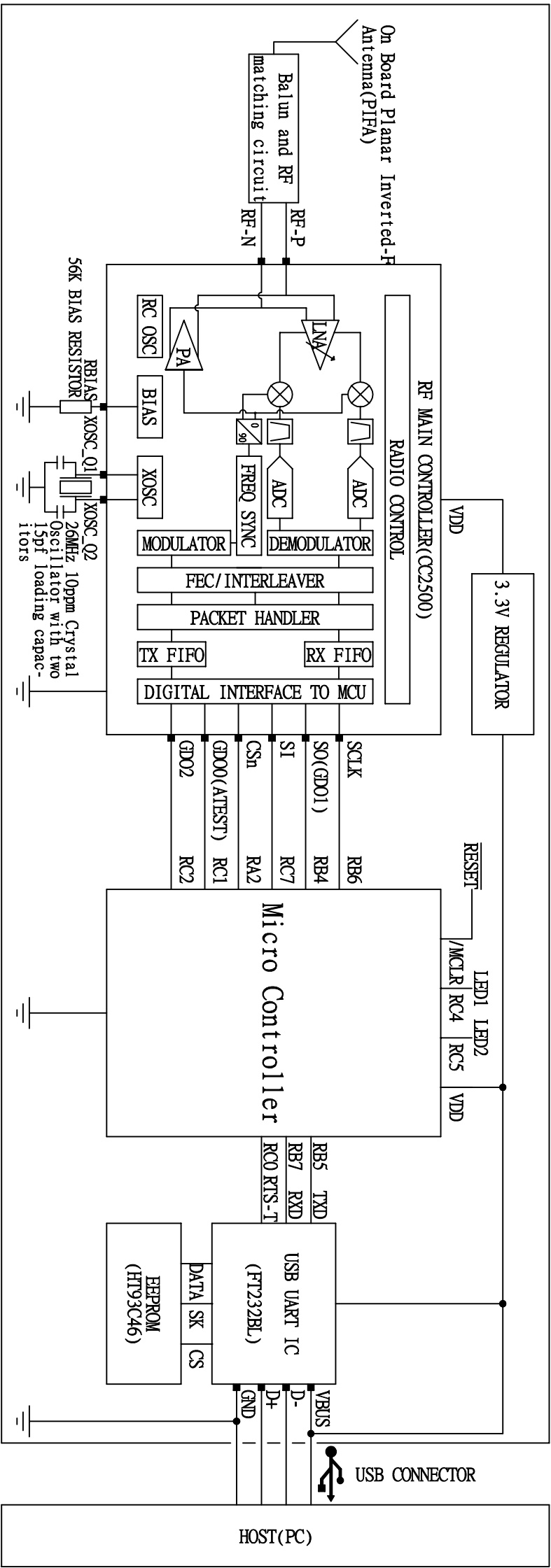
RF CONTROLLER BLOCK DESCRIPTION:
1:CC2500 controlled by an micro controller via six SPI pins
2:Radio frequency range from 2433MHz to 2483MHz can be transmitted and received by cc2500 via an on board PIFA
3:Output power up to 0 dBm with -101dBm receiver sensitivity
4:Data rate up to 500kbps by MSK or FSK modulation
5:Low current consumption 13.3mA
6:Channel Range: 0-250, Channel Spacing:199.951172kHz
7:Suited for system compliant with EN300 328 and EN300 440 class 2 (Europe) FCC CFR47 Part 15(US) ARIB STD-T66(JPN)

MICRO CONTROLLER BLOCK DESCRIPTION:
1:The USB UART IC(FT232BL) connects to HOST(PC) via an USB cable. It receive data from HOST(PC)and it also transmittes data to HOST(PC) controlled by an micro controller through three UART(RS232) pins
2:The micro controller receives and transmittes data from/to CC2500 via six SPI control pins