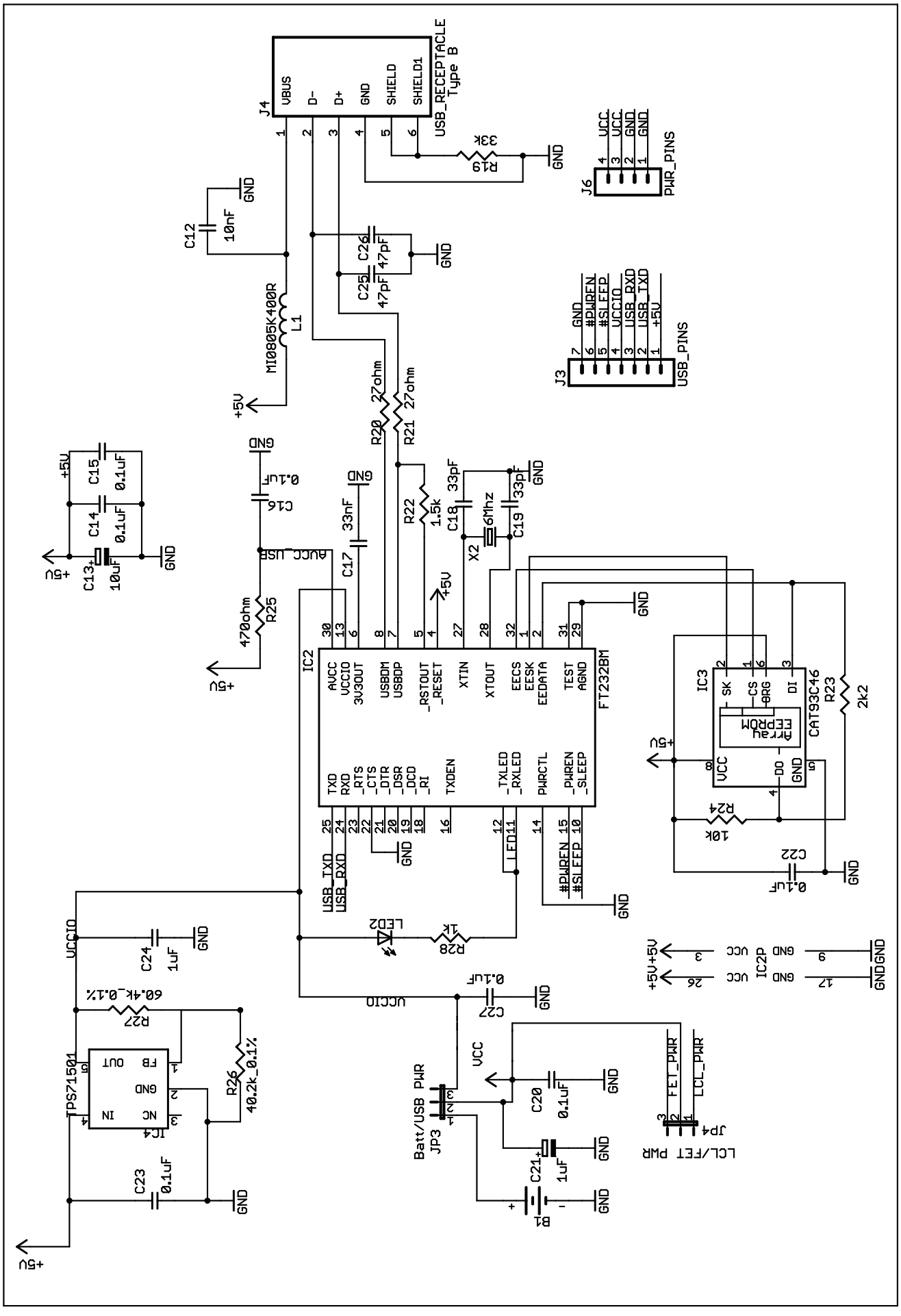
J4
USB_RECEPTACLE
Type B
VBUS
D-
D+
GND
SHIELD
SHIELD1
R19
33K
J6
PWR_PINS
VCC
VCC
GND
GND
C12
10nF
C26
47pF
C25
47pF
L1
MI0805K400R
R20
27ohm
R21
27ohm
J3
USB_PINS
GND
#PWREN
#SLEEP
VCCIO
USB_RXD
USB_TXD
+5V
C15
0.1uF
C14
0.1uF
C13
10uF
C16
0.1uF
C17
33nF
R22
1.5k
C18
33pF
X2
6Mhz
C19
33pF
AVCC_USB
R25
470ohm
IC2
FT232BM
AVCC
VCCIO
3V3OUT
USBDM
USBDP
_RSTOUT
_RESET
XTIN
XTOUT
EECS
EESK
EEDATA
TEST
AGND
TXD
RXD
_RTS
_CTS
_DTR
_DSR
_DCD
_RI
TXDEN
_TXLED
_RXLED
PWRCTL
_PWREN
_SLEEP
USB_TXD
USB_RXD
LED1
#PWREN
#SLEEP
IC3
CAT93C46
EEPROM
Array
SK
CS
DI
DO
VCC
GND
ORG
R23
2k2
R24
10K
C22
0.1uF
LED2
R28
1K
C24
1uF
C27
0.1uF
R27
60.4K_0.1%
R26
40.2k_0.1%
IC4
TPS71501
FB
OUT
GND
NC
IN
C23
0.1uF
Batt/USB PWR
JP3
C20
0.1uF
C21
1uF
B1
JP4
FET_PWR
LCL_PWR
LCL/FET PWR
IC2P
GND
VCC
+5V+5V
GNDGND

Pulsoximeter Demo Board - Power Supply Options

Bhargavi Nisarga *MSP430*

The power options for the revised pulsoximeter demo board can be broadly classified as FET power and LCL (local) power. The local power options include the Battery and USB power configurations. The power source for the board is selected by configuring the jumpers JP3 and JP4. Both the jumpers are 3-pin headers. Figure 1 shows the jumper hierarchy and power configuration options.

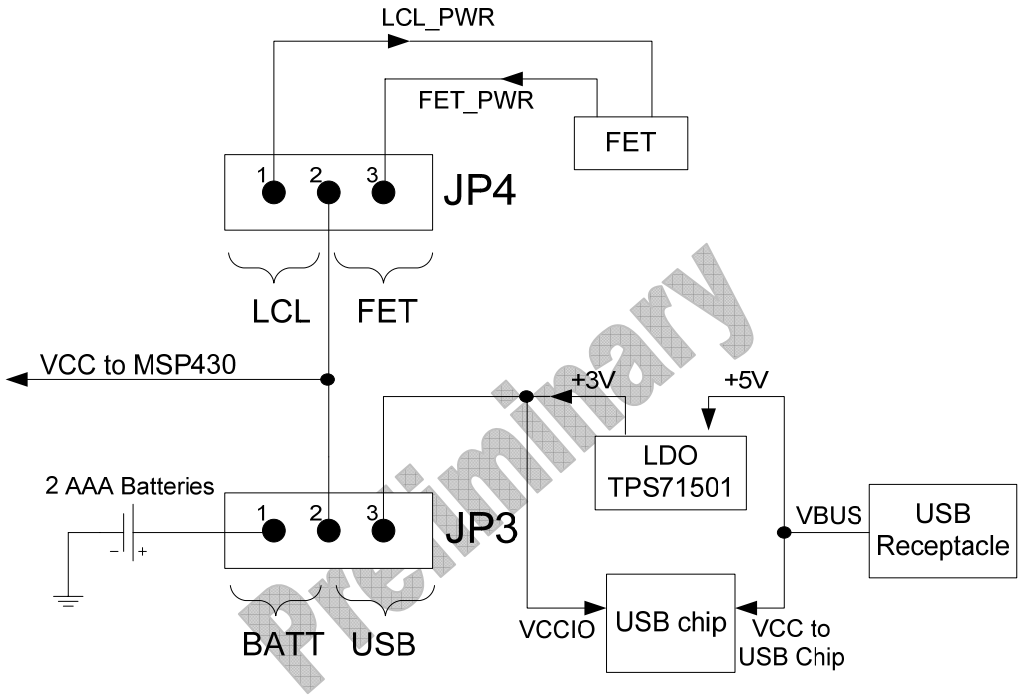

Figure 1. Jumper Settings for Power Selection

The power selection jumper JP4 selects power connections between the board and FET interface. A jumper placed on the pins 2 and 3 of JP4 (**FET**) selects the JTAG FET as the power source. A jumper placed on the pins 1 and 2 of JP4 (**LCL**) would enable local power (either from the batteries or USB bus) to be applied to the FET for proper logic threshold level matching during program/debug.

Upon selecting LCL option in JP4, jumper JP3 is used to select between the Battery power and USB bus power. A jumper placed on the pins 1 and 2 of JP3 (**BATT**) selects the on-board batteries to power the system. Similarly a jumper placed on the pins 2 and 3 of JP3 (**USB**) enables USB bus to power the board. The USB section of the board is powered up only if the board is USB bus powered.

NOTE 1: Battery or USB bus power options in JP3 can be used to power the board independent of the FET connections in JP4. However, do not place a jumper on the FET option in JP4 and select BATT or USB option in jumper JP3. Jumper should be placed on JP3 only if local power (LCL) option is selected in jumper JP4.

NOTE 2: The USB portion of the board is powered up only if the board is USB-bus powered. So, the USB circuitry does not consume any extra power when battery powered.

RF Daughter Card Connect

RF1

RF2

JP6

J5

J1

JTAG

IC1

MSP430FG43x

SoftBaugh SBLCDA4

Probe Connector

TITLE: Pulsox-0.01a

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