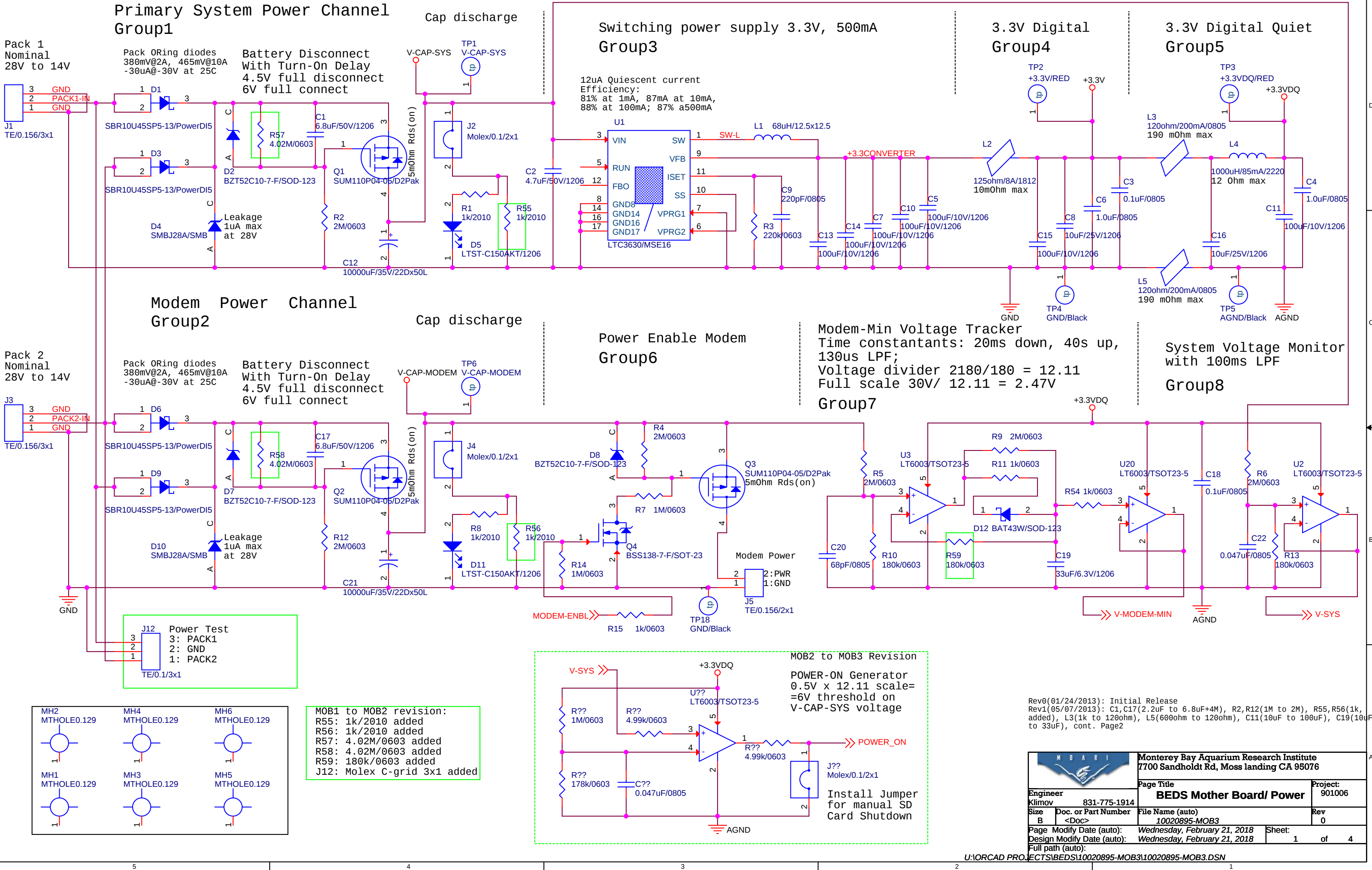
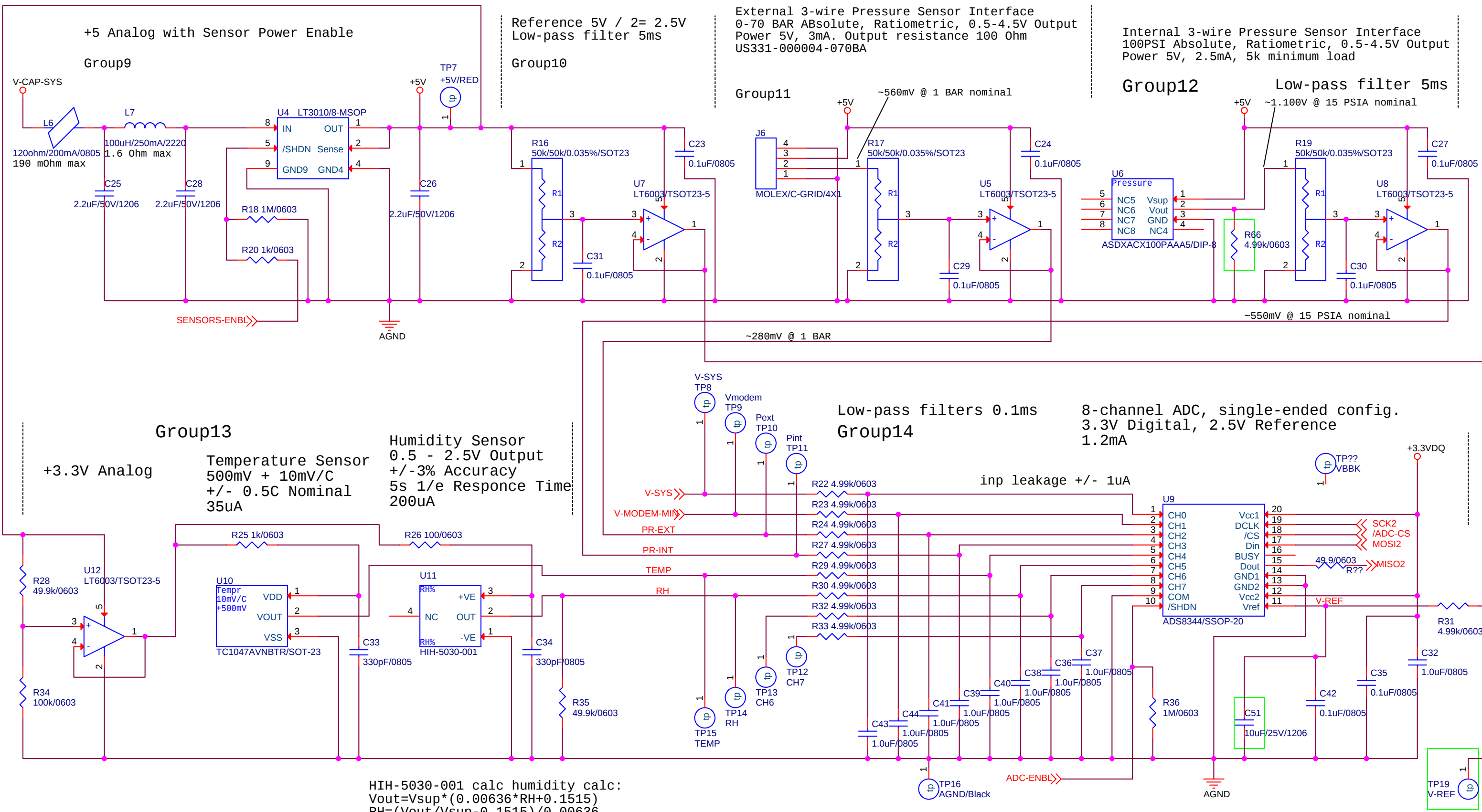




Rev0(01/24/2013): Initial Release
Rev1(05/07/2013): C1,C17(2.2uF to 6.8uF+4M), R2,R12(1M to 2M), R55,R56(1k, added), L3(1k to 120ohm), L5(600ohm to 120ohm), C11(10uF to 100uF), C19(10uF to 33uF), cont. Page2

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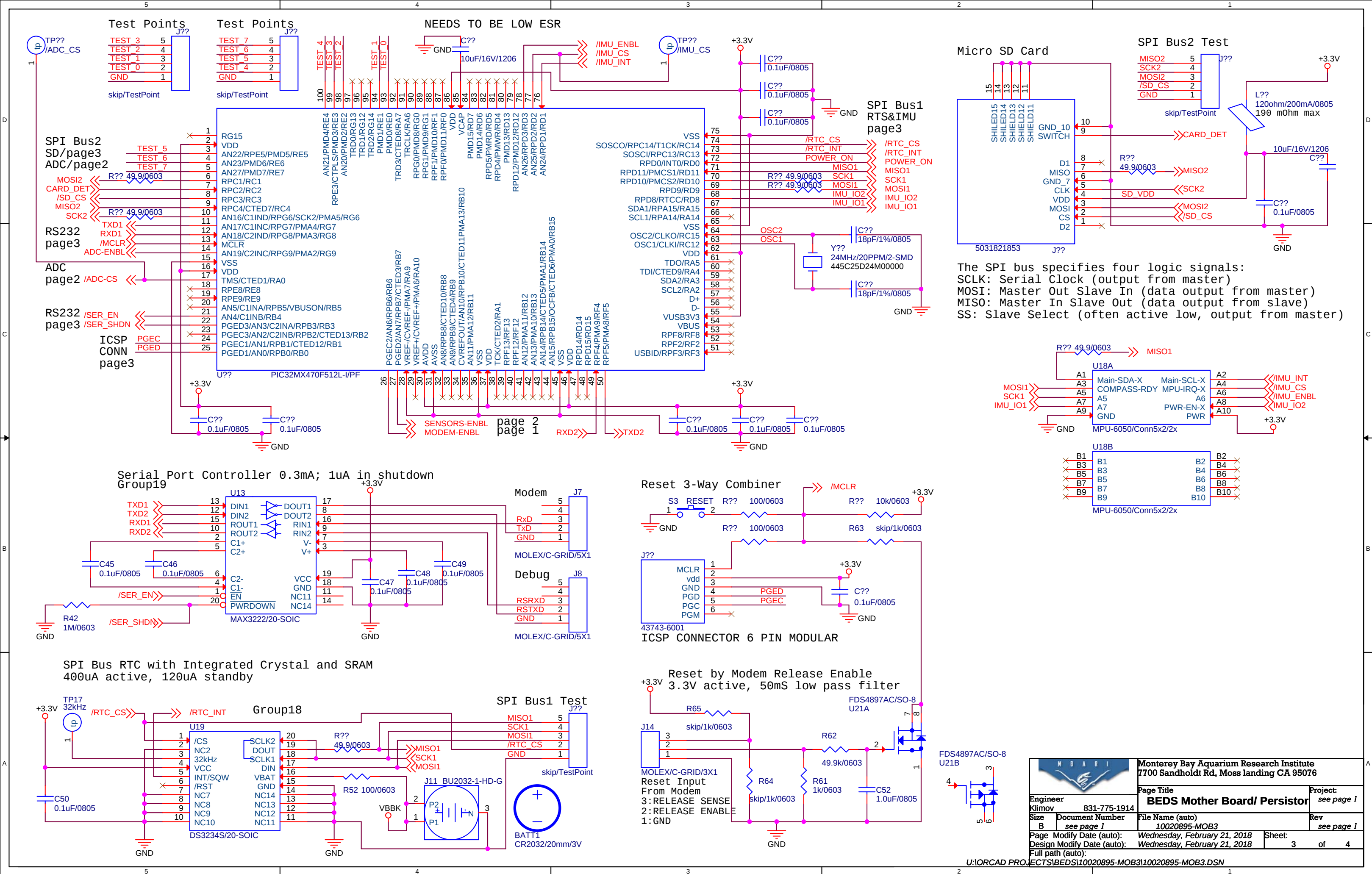


HIH-5030-001 calc humidity calc:
Vout=Vsup*(0.00636*RH+0.1515)
RH=(Vout/Vsup-0.1515)/0.00636

MOB1 to MOB2 revision:
C51: 10uF/25V/1206 added
TP19: V-REF added
R66: 4.99k/0603 added

Rev2 (cont. from Page1): L6(1k/200mA to 120ohm/200mA), R25(100 to 1k),
C33,C34(0.1uF to 330pF), R22-R33(1k to 5k), C37-C41,C43,C44(0.1uF to
1.0uF), C42(0.1uF to 0.1uF+10uF), R31(1k to 5k), cont. to Page3

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Bring-up Checklist

Fully assembled Mother Board, no Persistor Board, no MPU-6050 board. Set power supply to 12V, power up.

- 0. Connect jumpers to J2 and J4, verify LEDs light up, record PS current with and without LEDs running
- 1. Check voltage level and noise on 3.3V (TP2) with test load on 3.3V, 100mA (33 Ohm) and 200mA (16 Ohm)
- 2. Check voltage level and noise on 3.3VDQ (TP3) with 100mA (33 Ohm) test load on 3.3V power
- 3. Check operation of Modem_Enable with 5 Ohm 50W test load in J5 (2.3A).
- 4. Measure V-CAP-MODEM (TP6), voltage at J5.2, and difference between them (<50mV)
- 5. Check V-SYS (TP8) and V-MODEM-MIN (TP9) trackers with Modem-ENBL cycling and 5 Ohm 50W test load in J5
- 6. Check operation of SENSOR-ENBL and measure 5V (TP7) value and noise.
- 7. Check operation of TPU6 (U14.C27) and voltage on U18.A10

Sensors

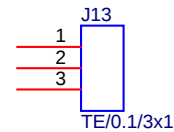
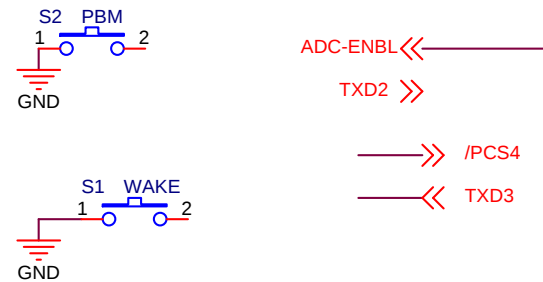
- 8. External pressure sensor. Check voltages on J6.3, J6.2, and TP10
- 9. Internal Pressure sensor. Check voltages on U6.1, U6.2, TP11
- 10. Temperature sensor. Check voltage on U10.1 (3.3V) and TP15
- 11. Humidity sensor. Check voltage on U11.3 (3.3V) and TP14.

Plug test Persistor board and run AD Test.
Record values on channels:

- 0:
- 1:
- 2:
- 3:
- 4:
- 5:

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```
PPS/GPS: 5V 100ms active high
PPS/Clock: 3.3V 400us active high
5nS low pass filter
```



R60
100/0603

TP20
VBBK

1



R21 1M/0603

MPU-6050 With Power Enable Group17

MPU-6050 With Power Enable Group17

The diagram illustrates the power enable circuit for the MPU-6050, specifically for Group 17. It features two MOSFETs, U15A and U15B, both of type FDS4897AC/SO-8.

U15A MOSFET:

- Gate: Connected to TPU2 through resistor R44 (1k/0603).
- Source: Connected to GND through resistor R45 (2M/0603).
- Drain: Connected to the gate of U15B.

U15B MOSFET:

- Gate: Connected to +3.3V through resistor R43 (2M/0603).
- Source: Connected to GND.
- Drain: Connected to the +3.3V supply.

Resistor Network:

- A +3.3V supply is connected to a network of resistors R46 (1M/0603), R47 (1M/0603), and R53 (1M/0603).

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