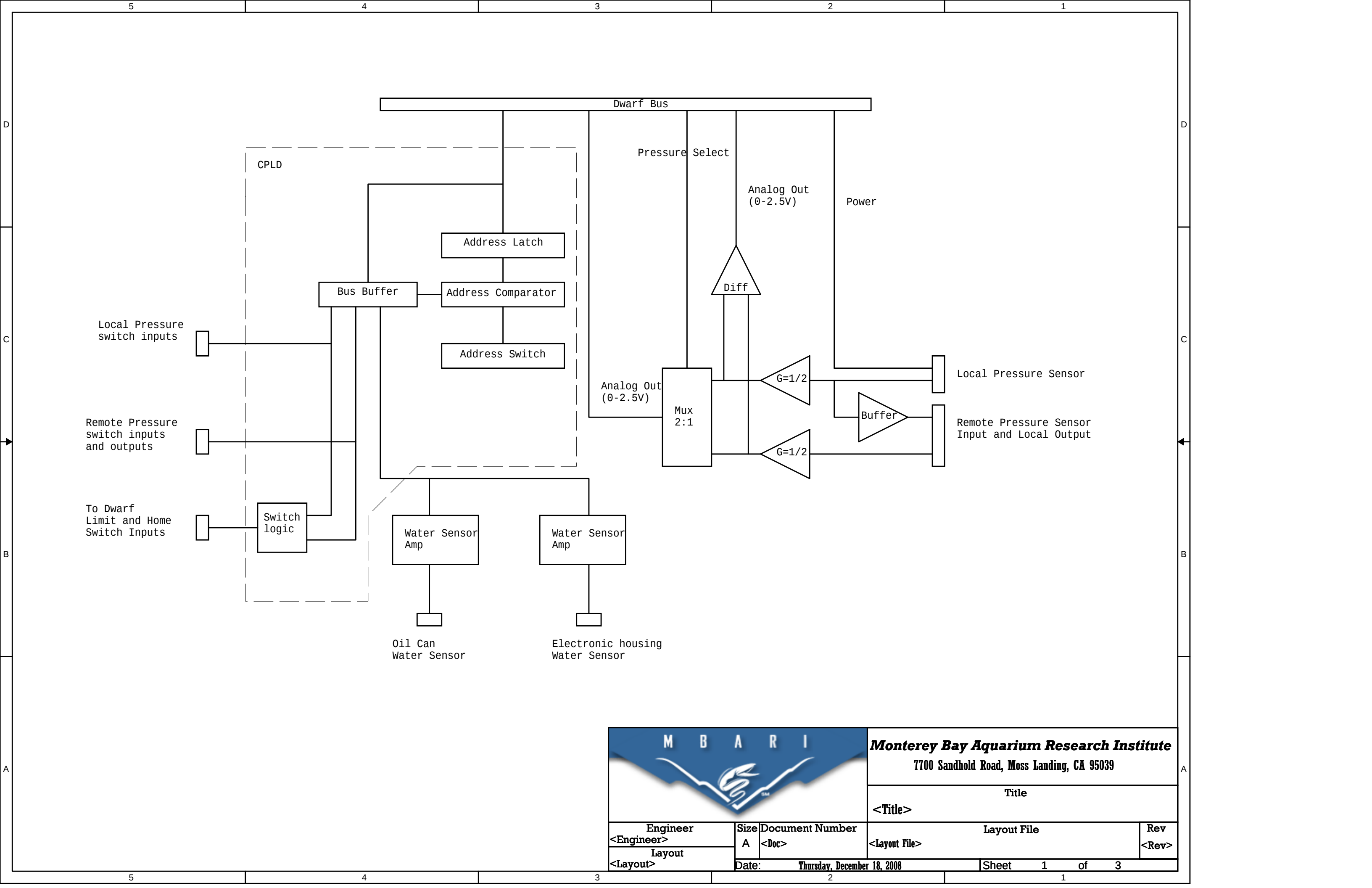




Monterey Bay Aquarium Research Institute 7700 Sandhold Road, Moss Landing, CA 95039			
Title <Title>			
Engineer <Engineer>	Size A	Document Number <Doc>	Rev <Rev>
Layout <Layout>	Date: Thursday, December 18, 2008		
Sheet 1 of 3		Layout File <Layout File>	

The purpose of this circuit is to provide a means of sensing as well as ascertaining the health of the sensing system. Two resistors, R1 and R2, are mounted at or near the switch with the relative values of 1/2 and 3/2 or R100. During normal operation with the switch open a small trickle current is passed through R1, R2 and R100 forming a voltage dividing network with a value at VS equal to: 2/3(5V). When the switch is closed R2 is bypassed and the network assumes a voltage at VS of: 1/3(5V). In a fault condition of an open in the cabling VS rises to 5V. When the cable is shorted VS is pulled down to 0V. On the sensing side R101- R104 define a voltage reference ladder where: V1 is 1/6 (5V), V2 is 1/2 (5V) and V3 is 5/6 (5V).

With this configuration the three comparator outputs generate the following function:

Condition	V01	V02	V03
Open	L	L	L
SW open	L	L	H
SW closed	L	H	H
Short	H	H	H

*** Modified to ***

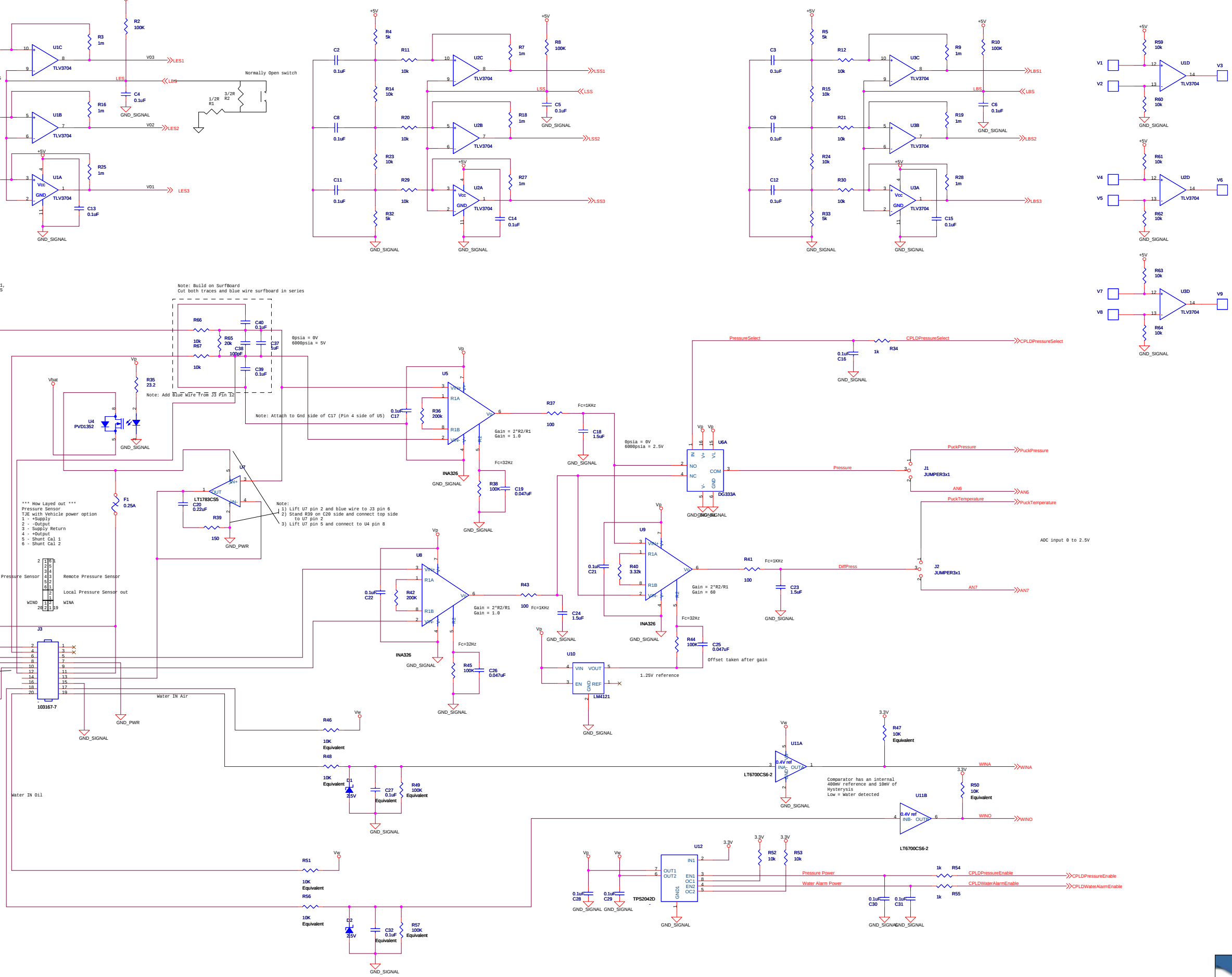
Pressure Sensor
TJE with Vehicle power option

Pin	Function
1	- Supply
2	- Output
3	- Gnd Pwr
4	- Output
5	- Supply Return
6	- Remote Ref

Sensors J3

Pin	Function
1	18V Press
2	18V Press

Note:
Add 03 1M148 between J3 pin 10 anode and pin 6 cathode



Changed R40 value to 3.32k to match what is built

J00sal
11/04/00
- C13,C14,C15 were not correctly tied to "+5V" net.
- Annotated part references to rid the number gaps between them.
- Changed "+5V" net to "+5V" on Schematic 2.
- Added C33,C34,C35,C36 bypass caps on Schematic2 between 3.3v and Gnd_Signal
- Changed resistor part packages to 0805.

