

# ODMB7 Radiation Evaluation Test Board

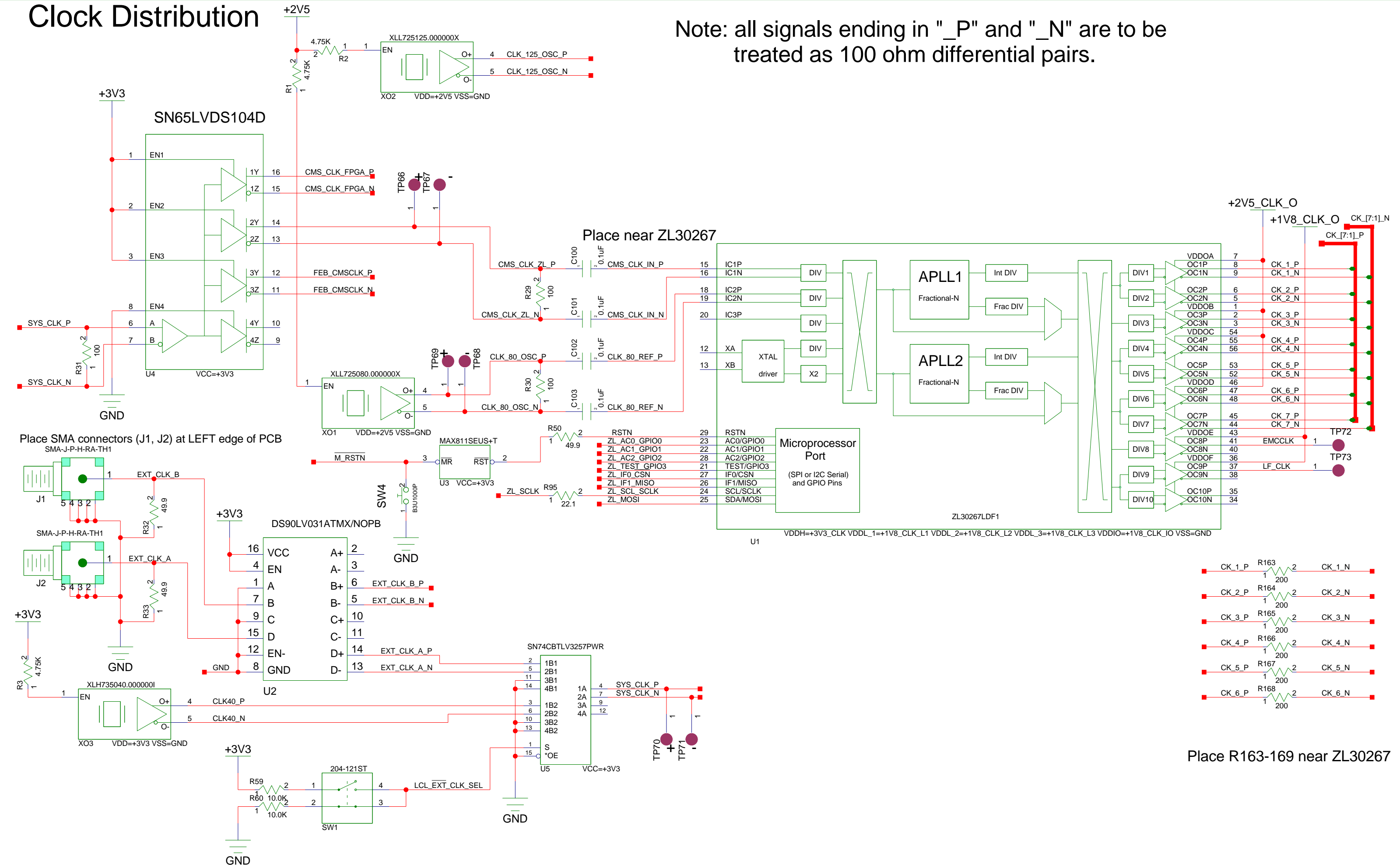
O7\_Rad\_Eval  
Schematic Revision 5

CMS CSC Electronics

PHYSICS DEPARTMENT  
THE OHIO STATE UNIVERSITY  
191 WEST WOODRUFF AVE  
COLUMBUS OHIO 43210

Clock Distribution

Note: all signals ending in "\_P" and "\_N" are to be treated as 100 ohm differential pairs.

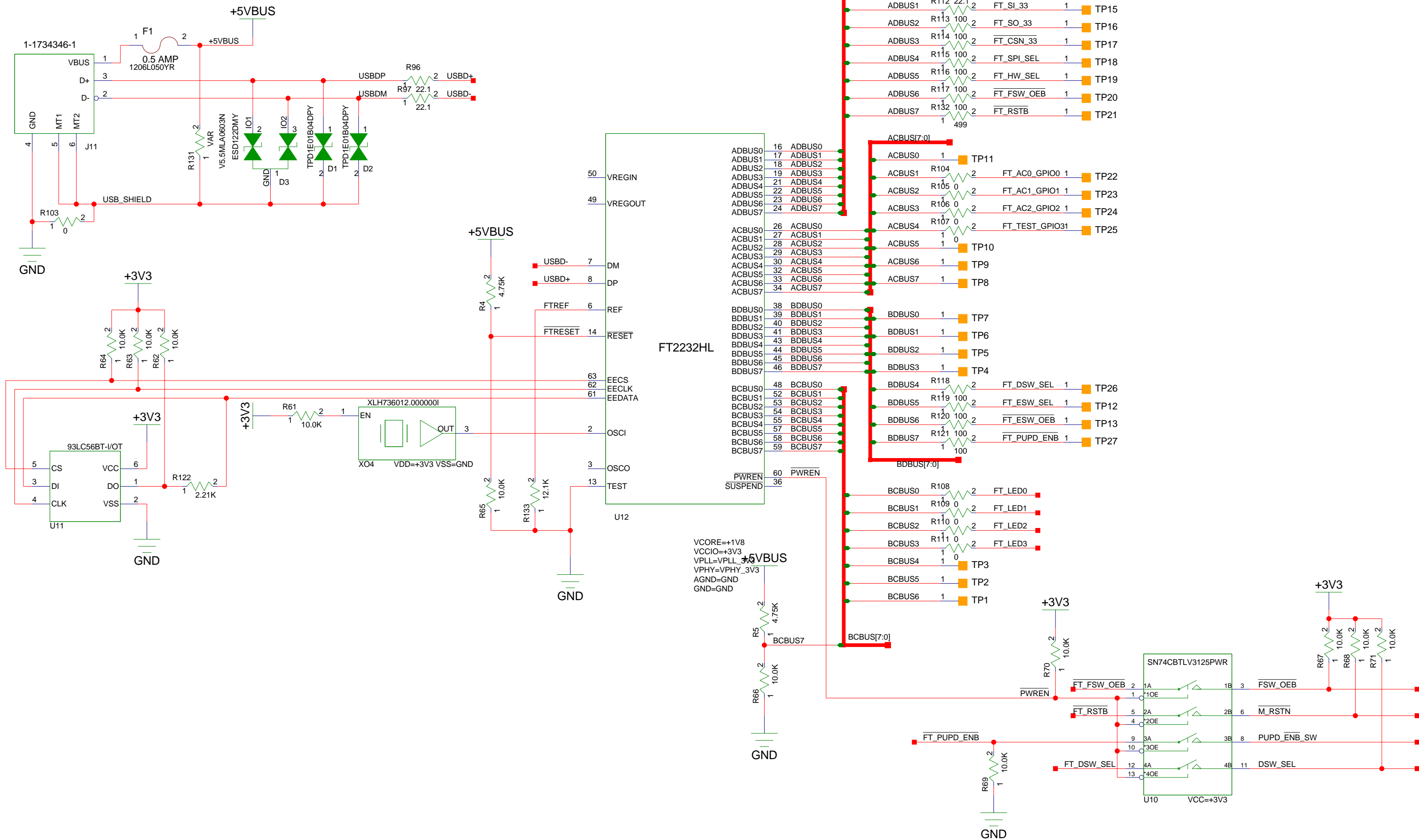


Place R163-169 near ZL30267

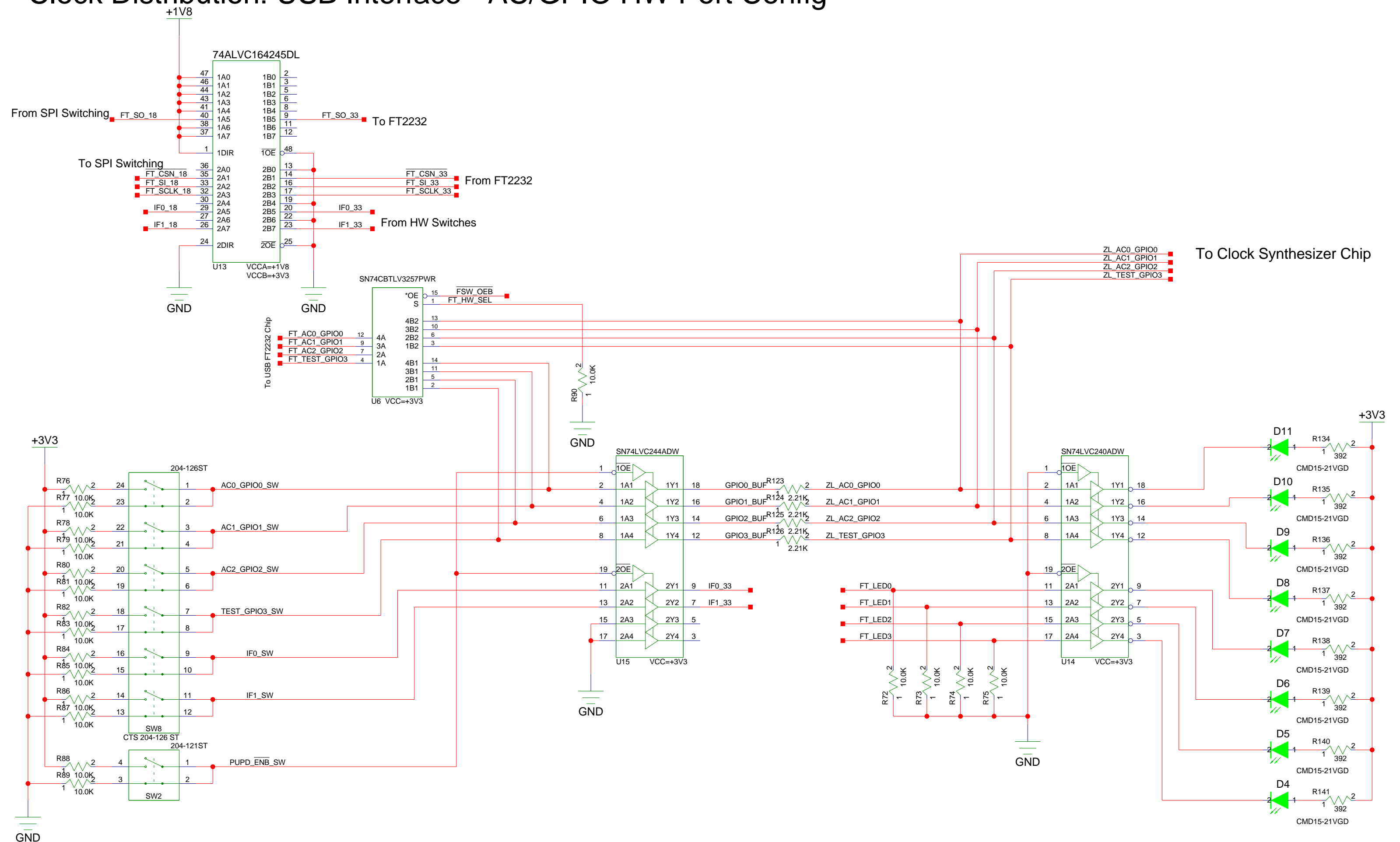
□

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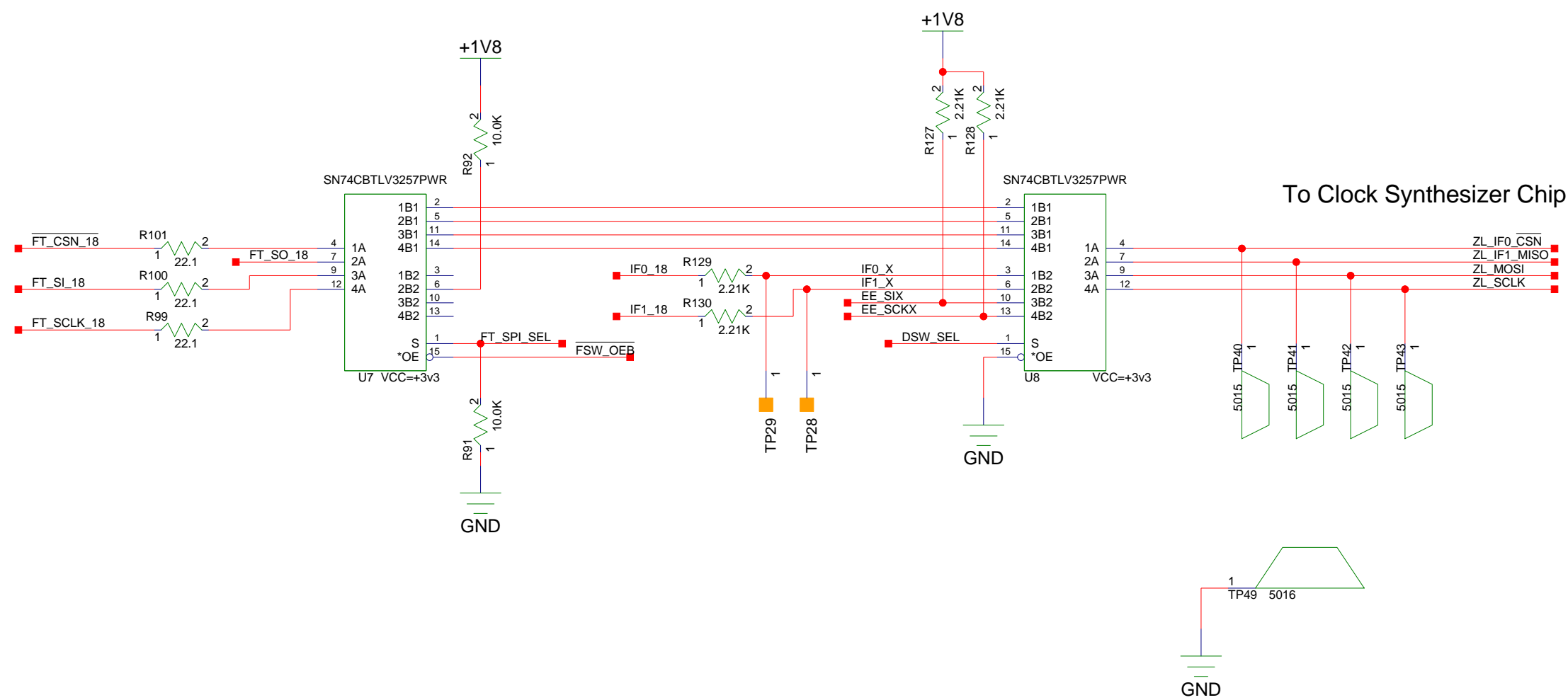




# Clock Distribution: USB Interface - AC/GPIO HW Port Config

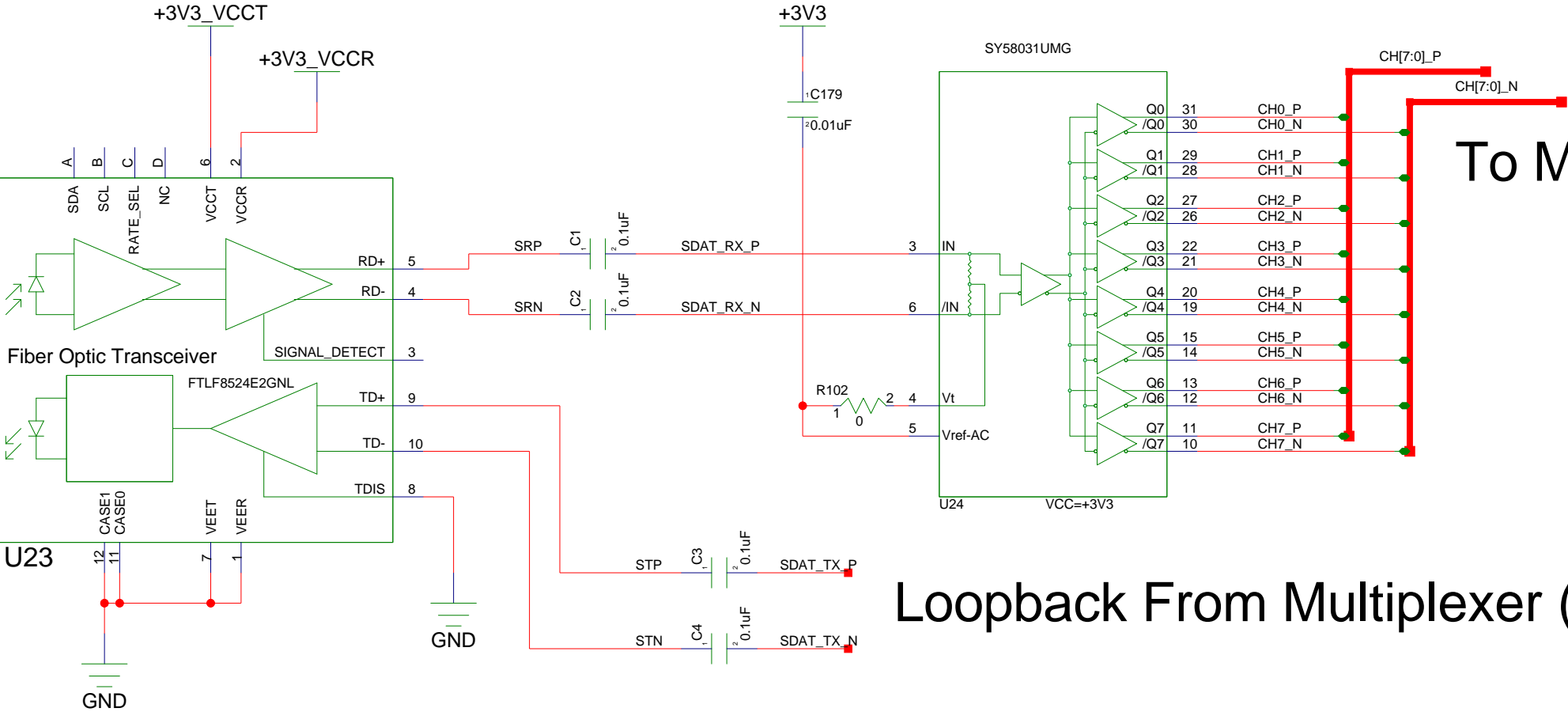


# Clock Distribution: USB Interface - SPI Bus Switching



Optical Interface: Fanout

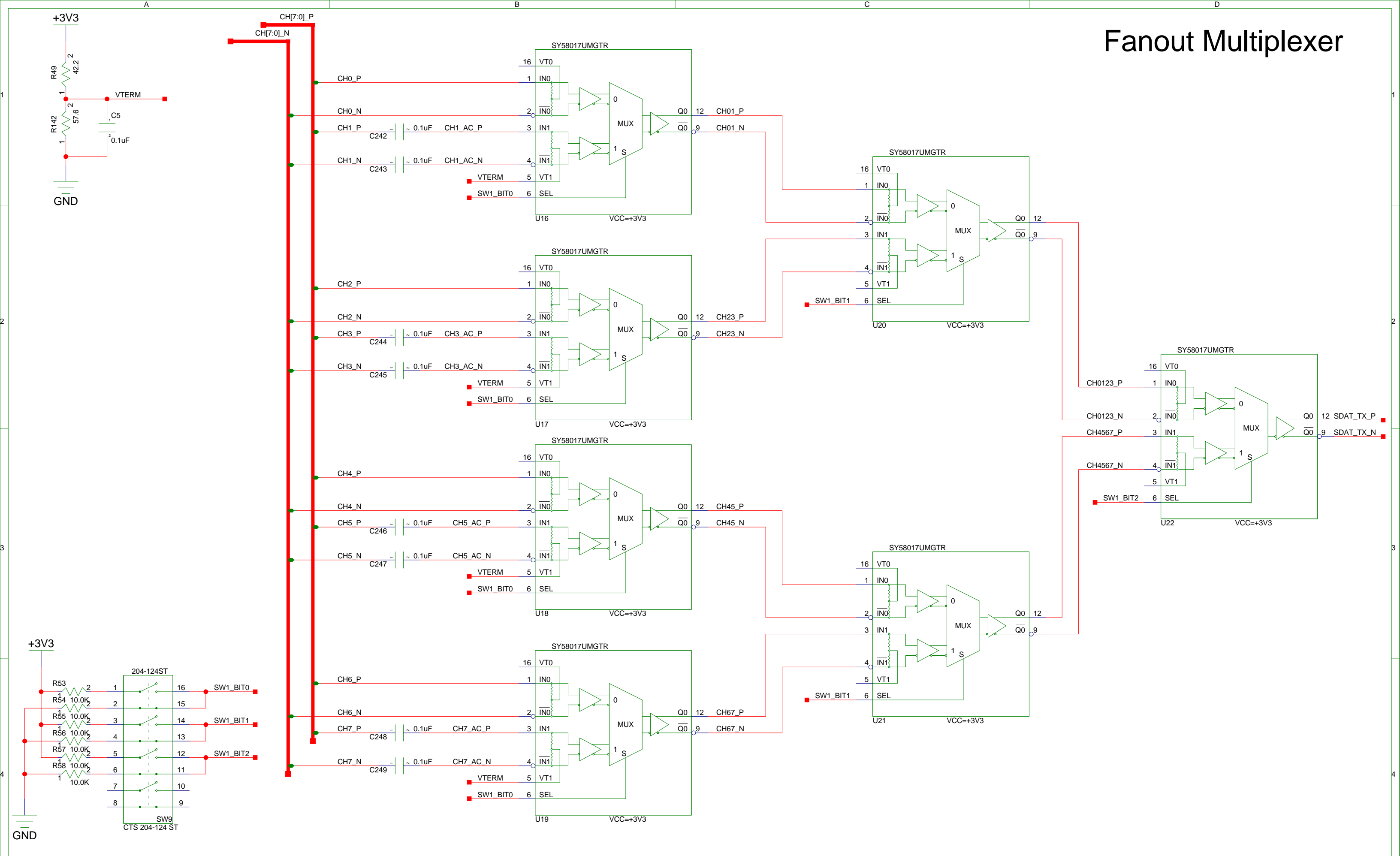
Finisar



To Multiplexer (page 8)

Loopback From Multiplexer (page 8)



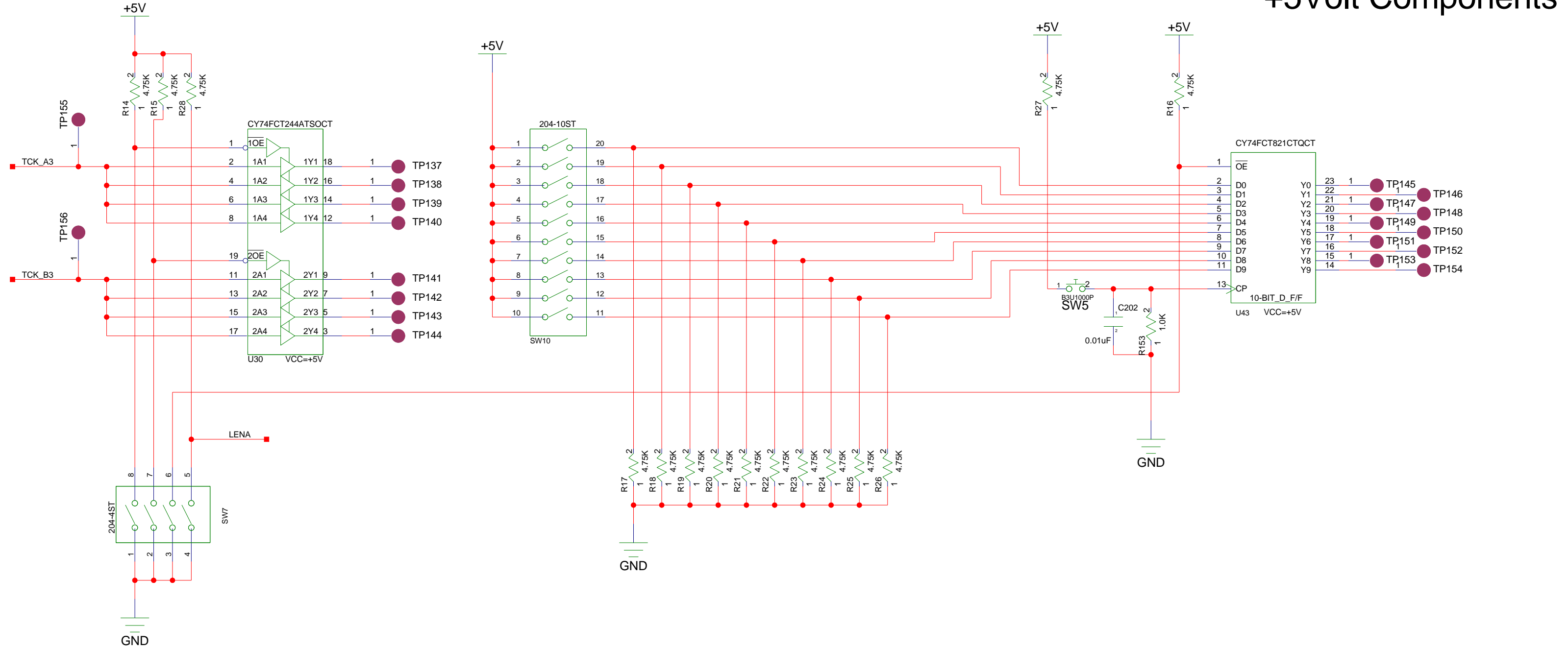


# Fanout Multiplexer

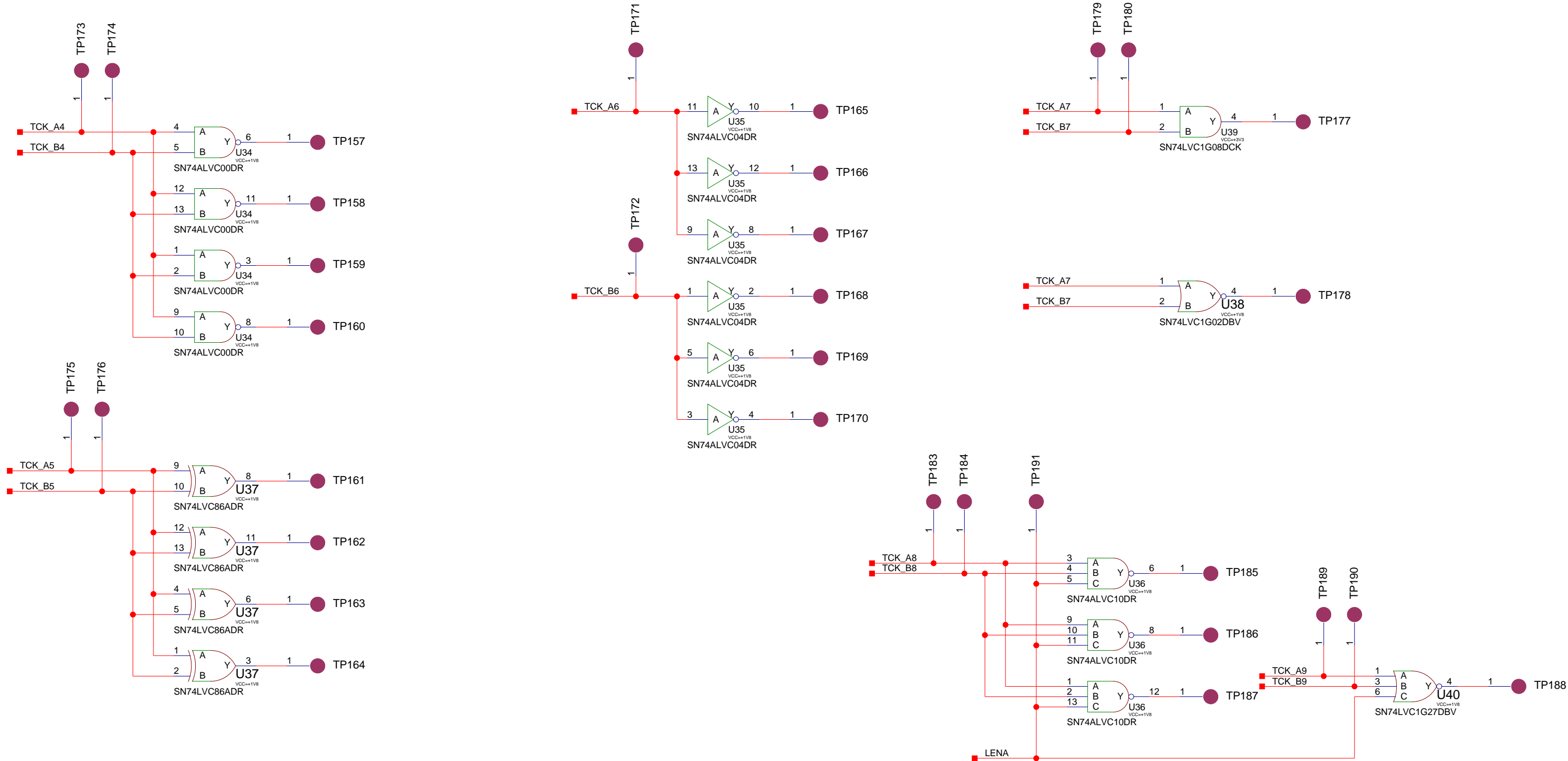




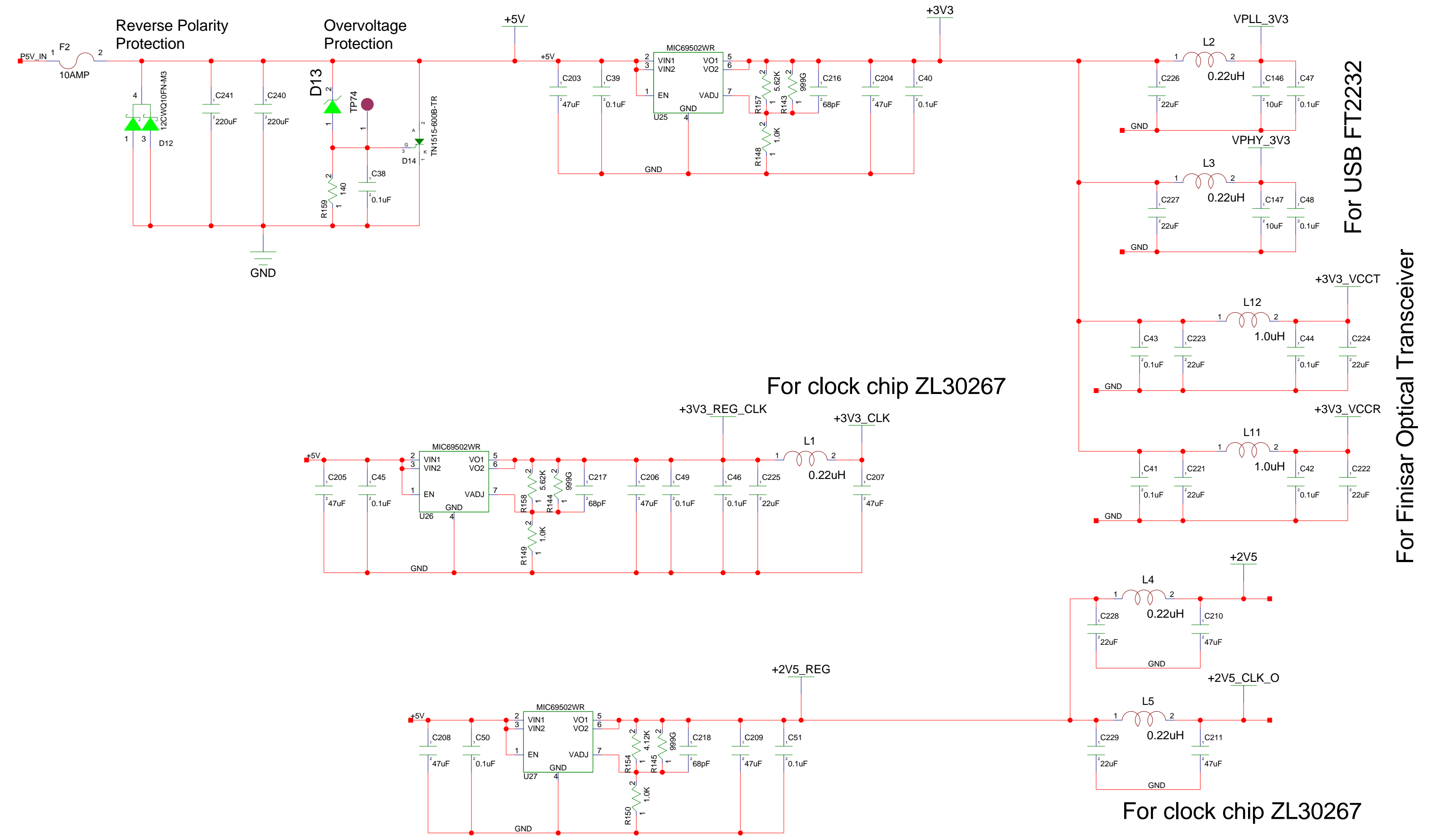
+5Volt Components



Discrete Logic Devices



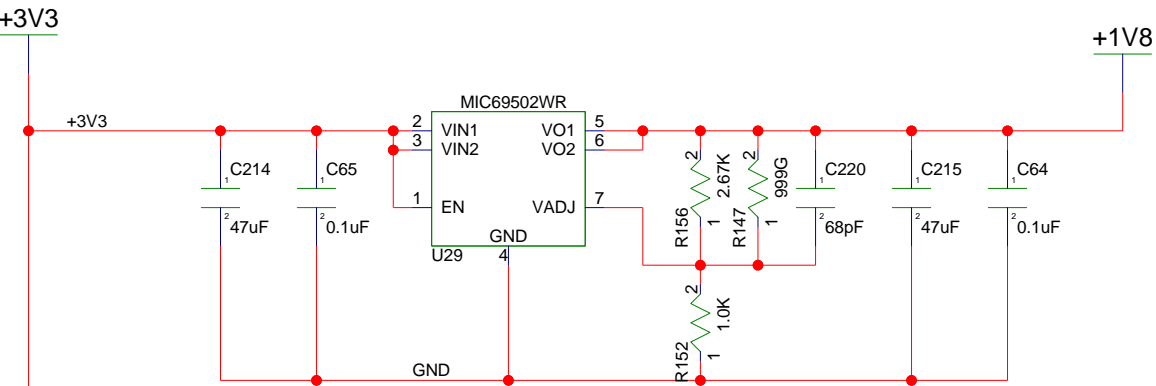
Power Distribution: From 5 Volt Supply



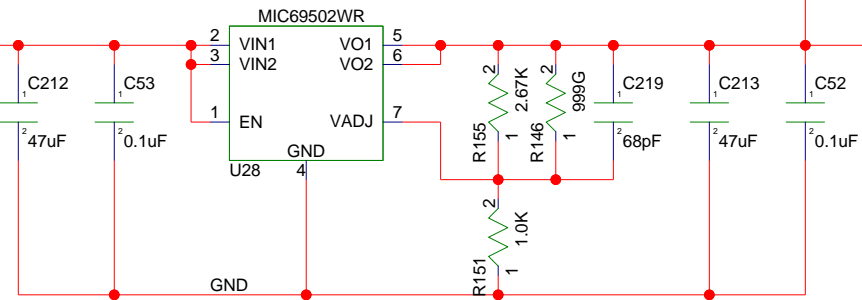
For USB FT232

For Finisar Optical Transceiver

# Power Distribution: From 3.3 Volt Regulator

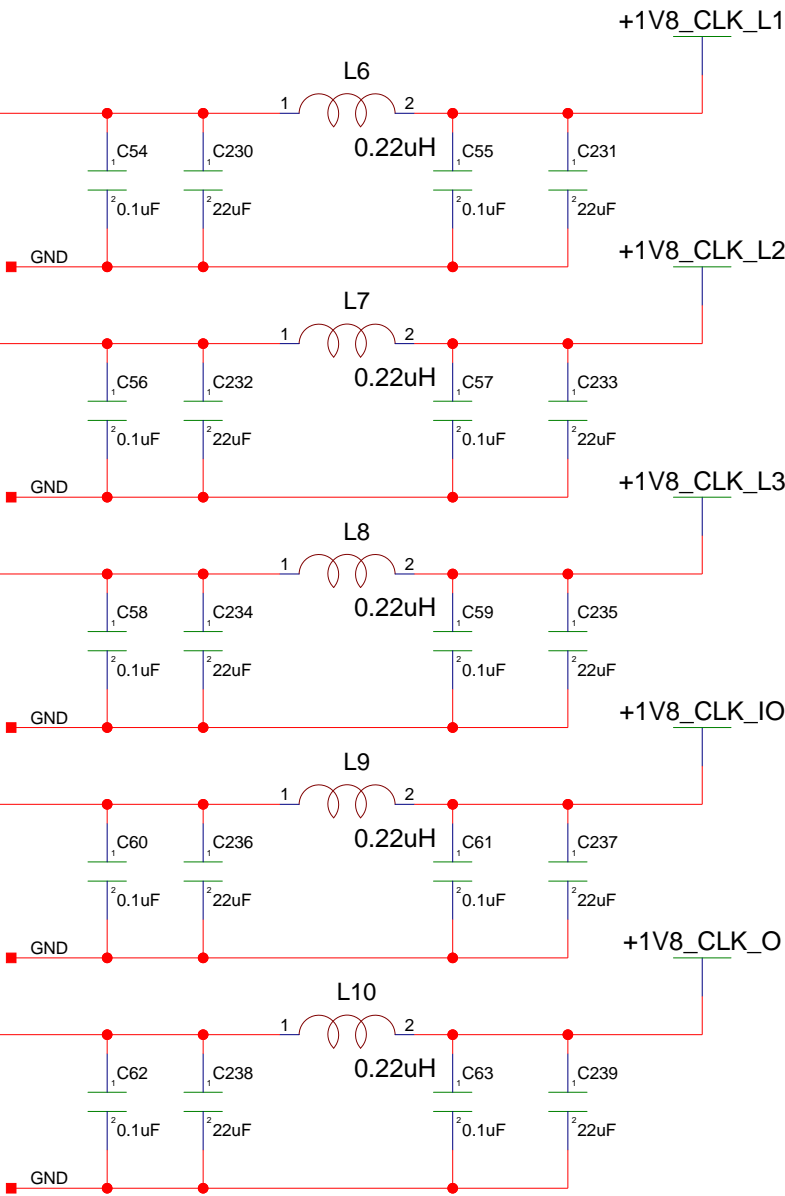


+3V3\_REG\_CLK



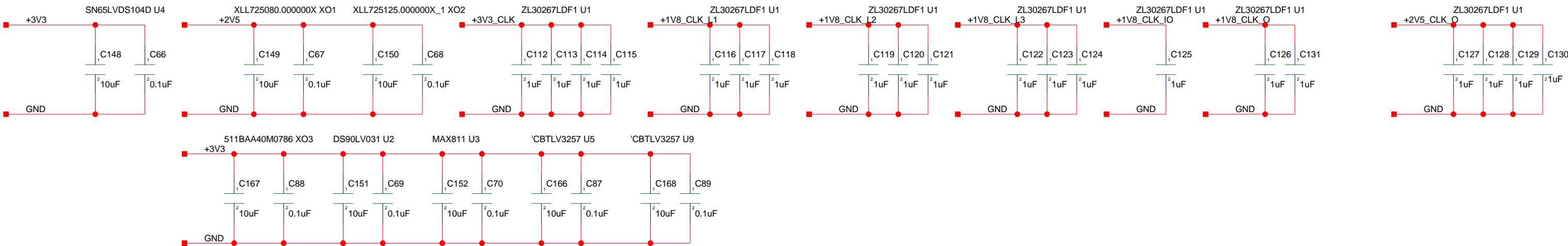
For clock chip ZL30267

+1V8\_REG\_CLK

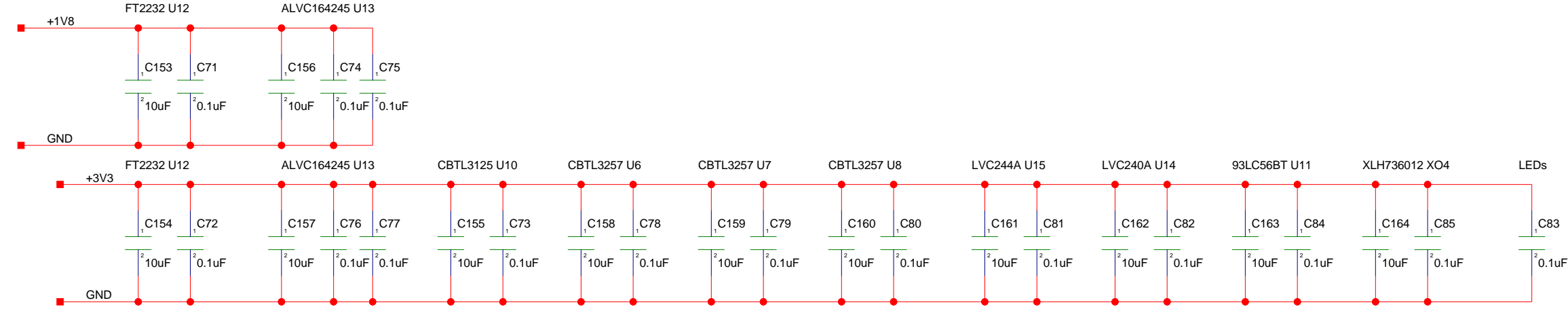


# Bypass Capacitors

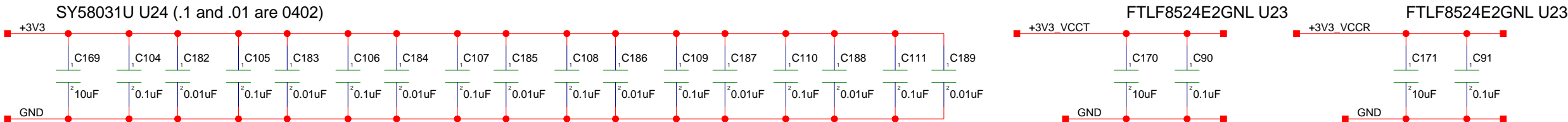
## Clocks Page 2, 3



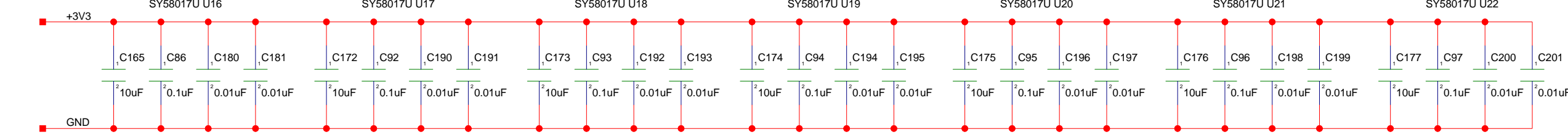
## USB Interface Pages 4, 5, 6



## Clock Fanout Page 7

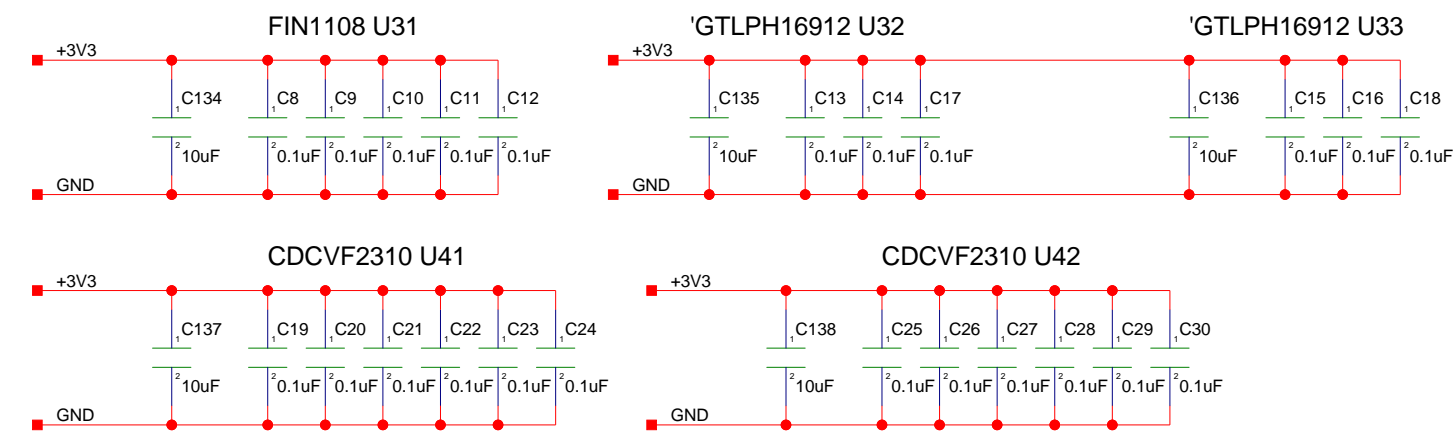


## Clock Mux Page 8

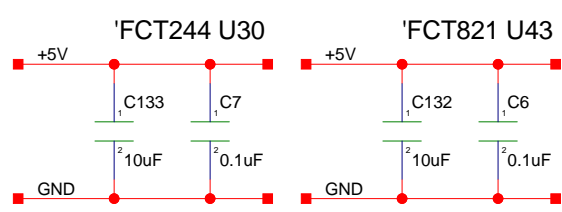


# Bypass Capacitors Cont.

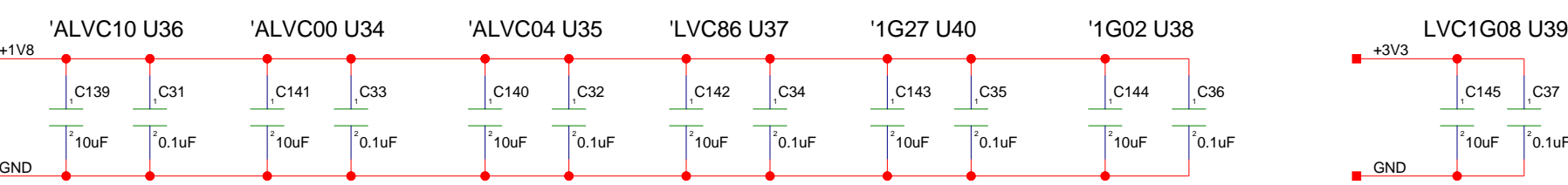
## FIN1108 and GTLP Transcievers Page 9



## 5Volt Components Pages 10



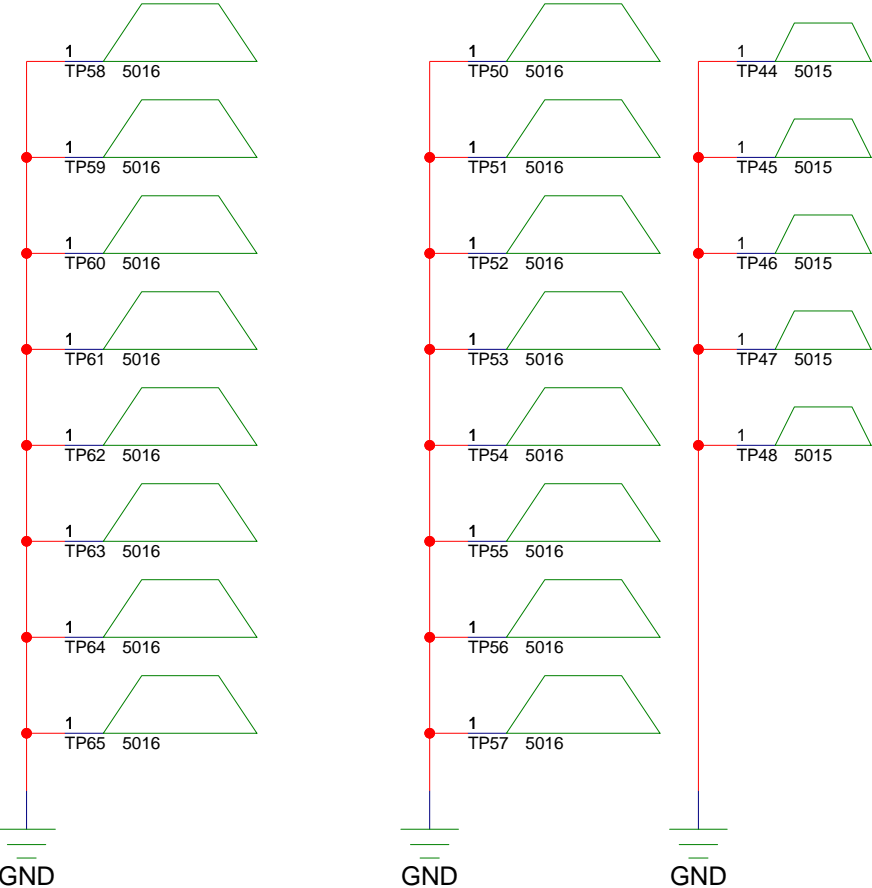
## Discrete Logic Page 11



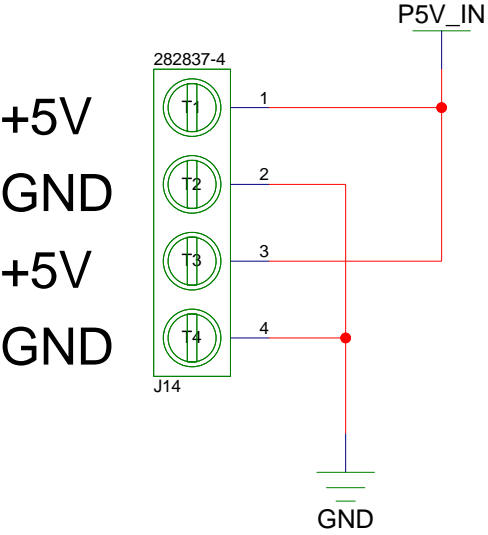


# Mechanical Components

## Ground Test Points



## Power Lug



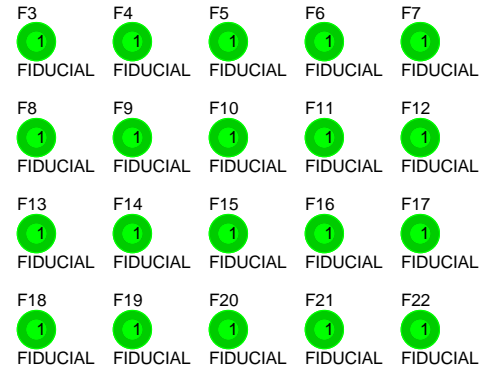
## Standoff Mounting Holes



Note: Mounting holes are to be 144 mil hole with a 270 mil OD annular ring

Note: Place mounting holes near board corners

## Fiducials

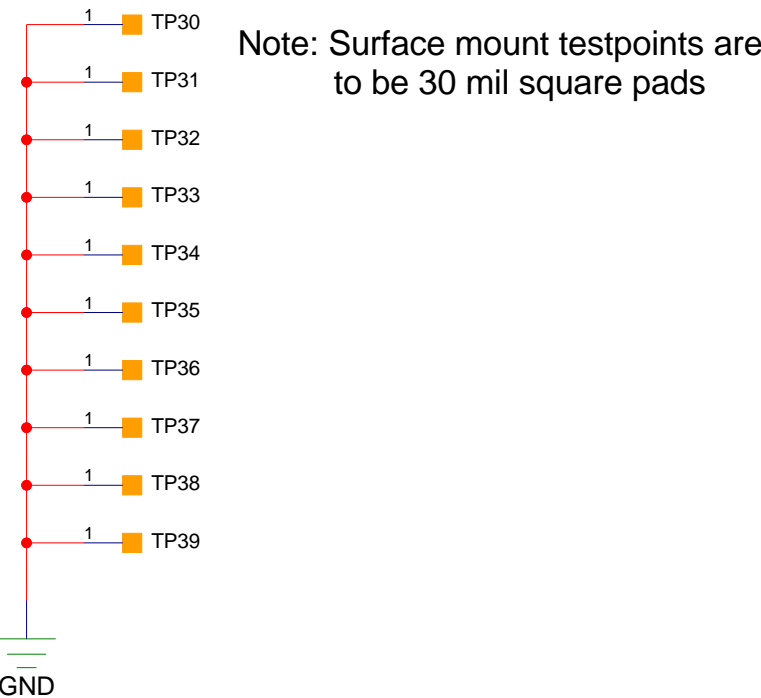


Note: Fiducials are to be 50 mil pad with 160 mil solder mask and 160 mil keepout

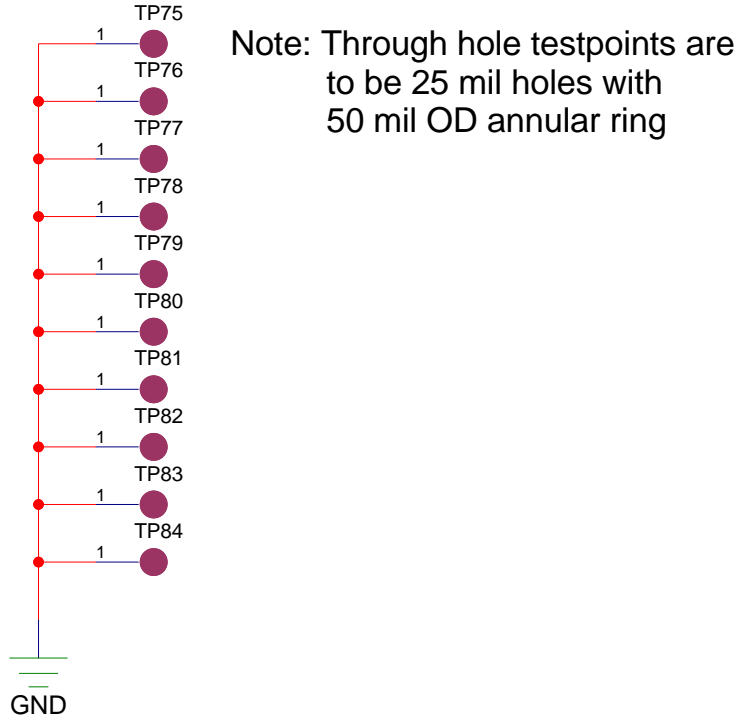
Note: Place fiducials near BGAs and fine pitch components and at two diagonal corners of the board.

Distribute ground test points around the board

## Surface Mount Test Points



## Through Hole Test Points



Place heat sinks directly on on PCB near regulators.

