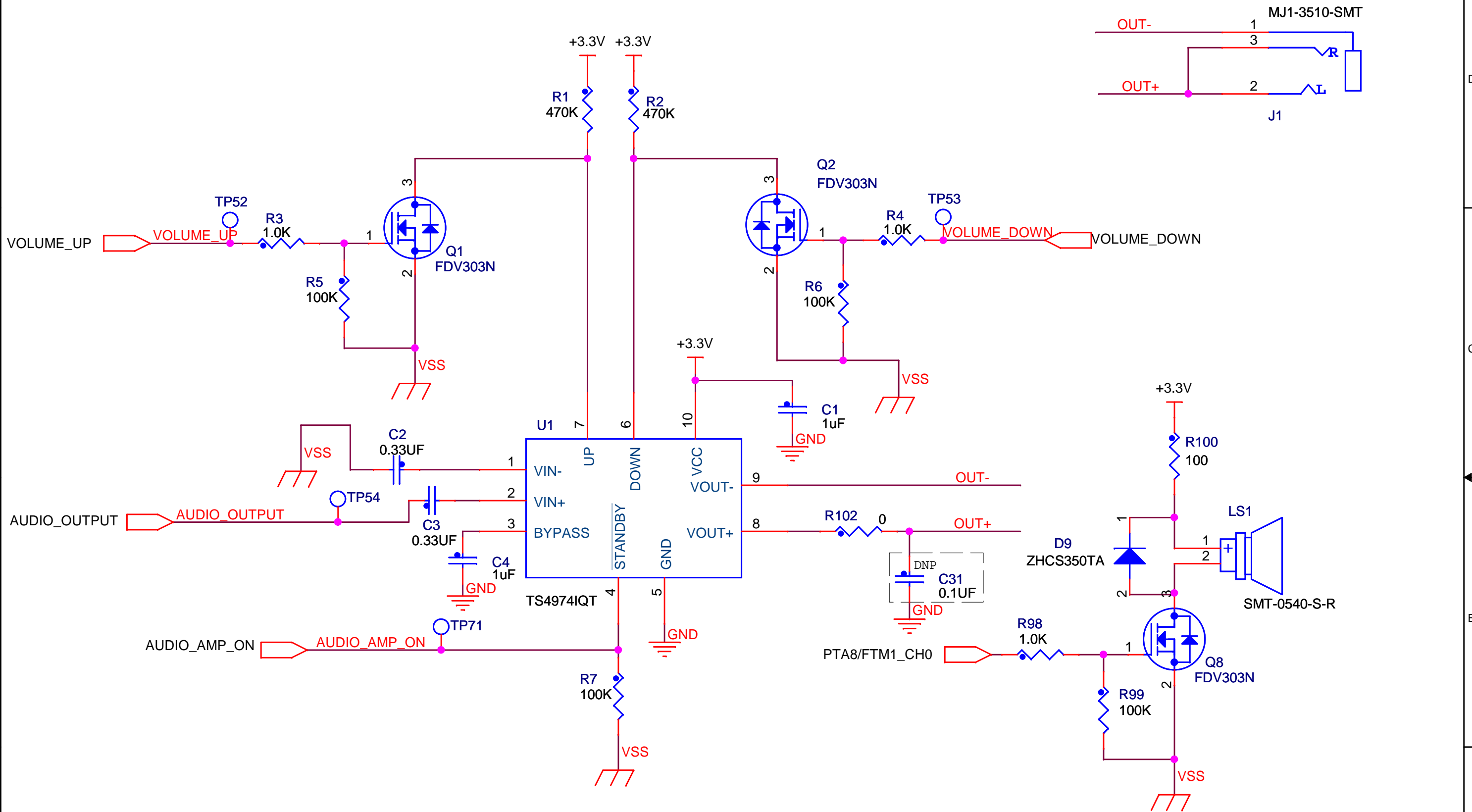
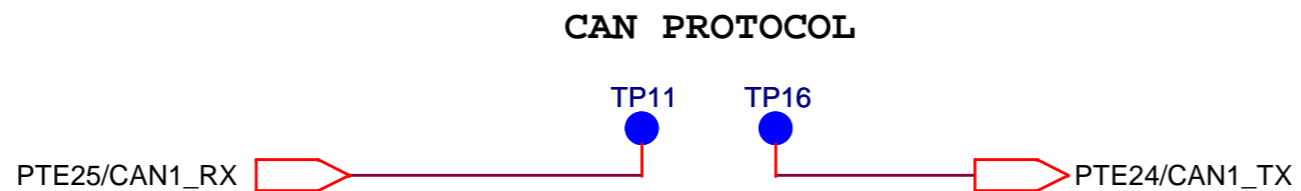
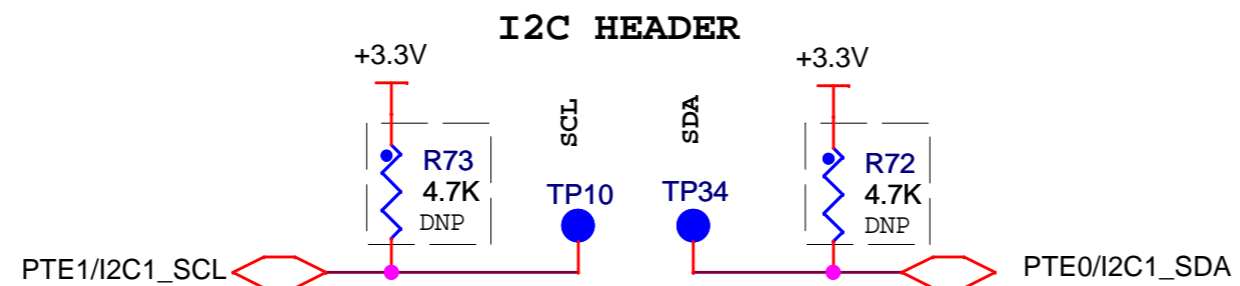
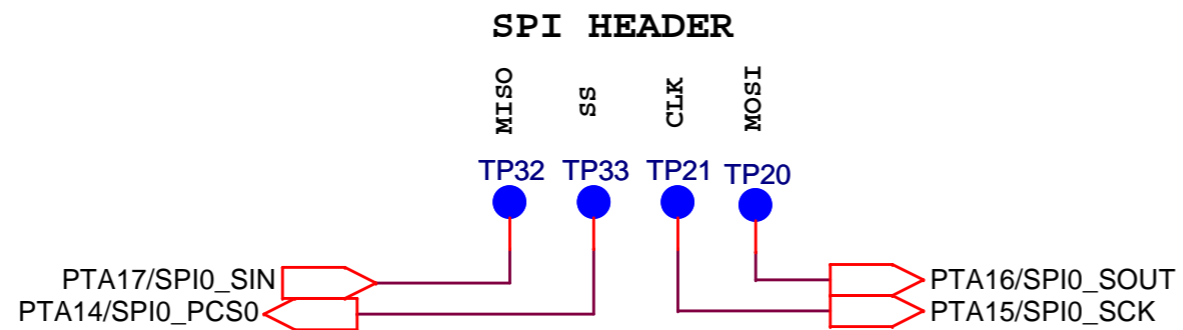
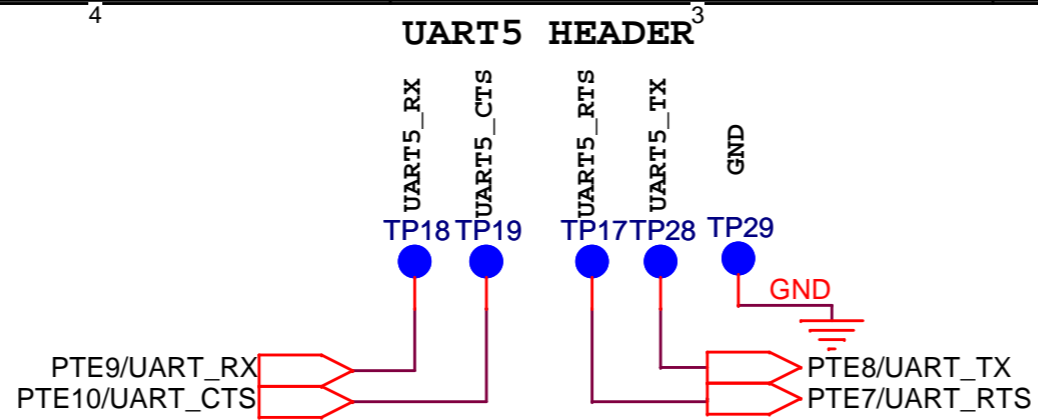


Power & Ground Nets

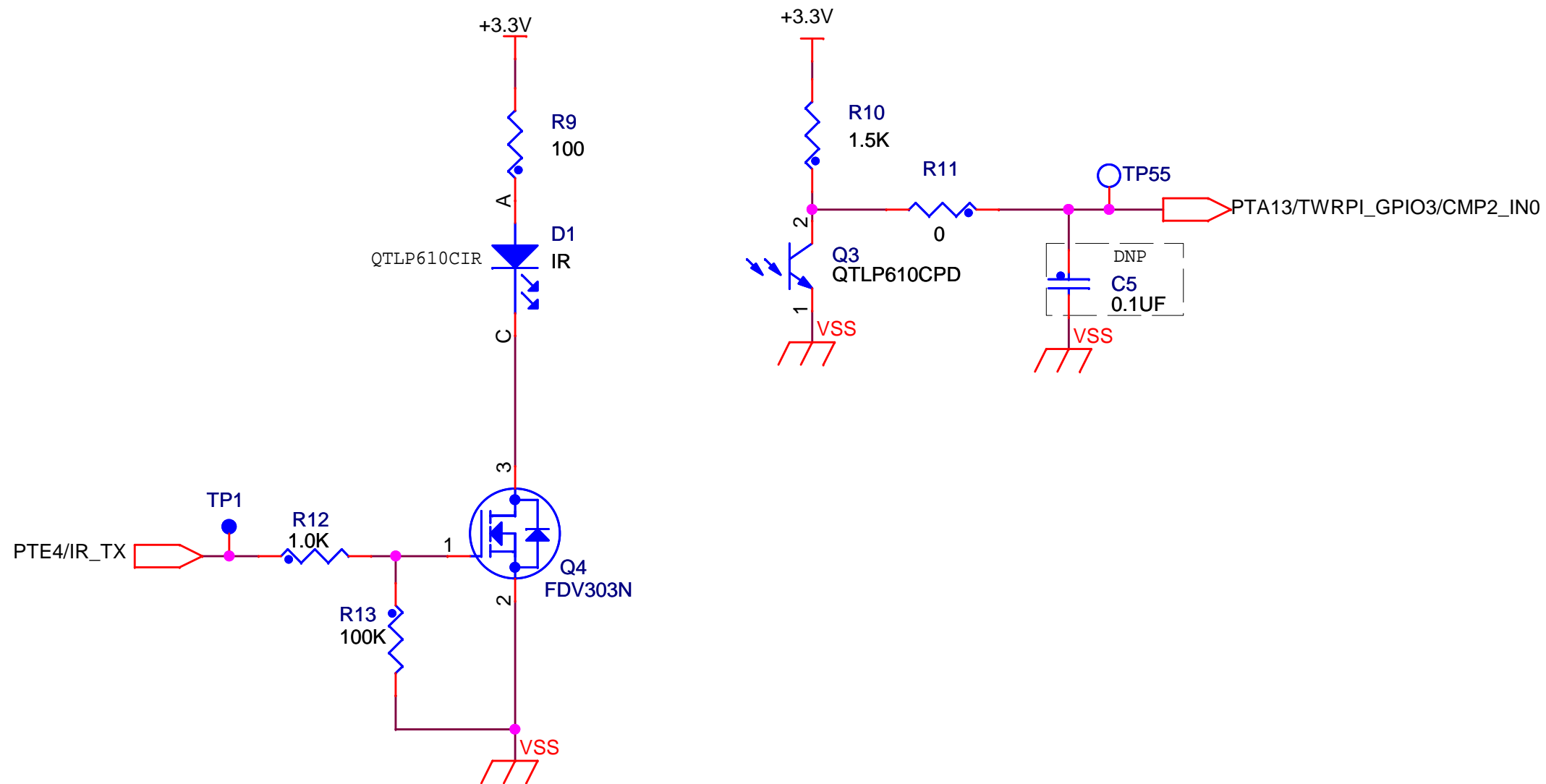
NET	VOLTAGE	DESCRIPTION
BAT+	3.0V Rated	Primary input power. Discharged Battery positive electrode.
+3.3V	3.3V	Battery voltage in full charge after protection diode (D3) and switch transistor (Q6)
+3.3V	3.3V	Output of voltage regulator using USB power input
+5V_USB	5V	USB power Input
+3.3VDD	3.3V	Digital power. Filtered from +3.3V
VREFH	3.3V	Upper reference voltage for ADC on the MCU. Filtered from +3.3VDD.
+3.3V_SWITCH	3.3V	Input power to switch ON/OFF, output switching regulator
+3.3VDDMCU	3.3V	Main MCU K40 voltage
GND	0V	Digital Ground.
VSS	0V	VSS power for MCU and analog circuits. Filtered from GND.
VREFL	0V	Lower reference voltage for ADC on the MCU. Filtered from VSS.
JTAG_VSS	0V	VSS power for JTAG connector to program external MCU devices, switched by VSS.
EXT_VDD	3.3V	External input power. Only for programming external JTAG devices.
+3.3VDD_JLINK	3.3V	Digital power. Filtered from +3.3V. Power supply J-LINK (JM128)



Title			AUDIO OUTPUT		
Size	Document Number				Rev
A	SCH-20110422_HYDRA_v4.1				4.1
Date:	Thursday, April 28, 2011			Sheet	2 of 14

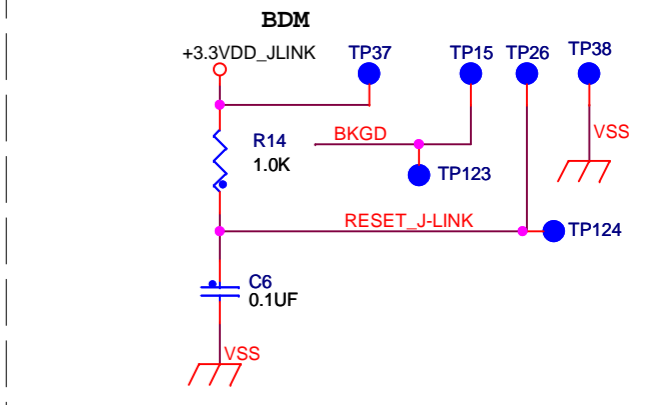
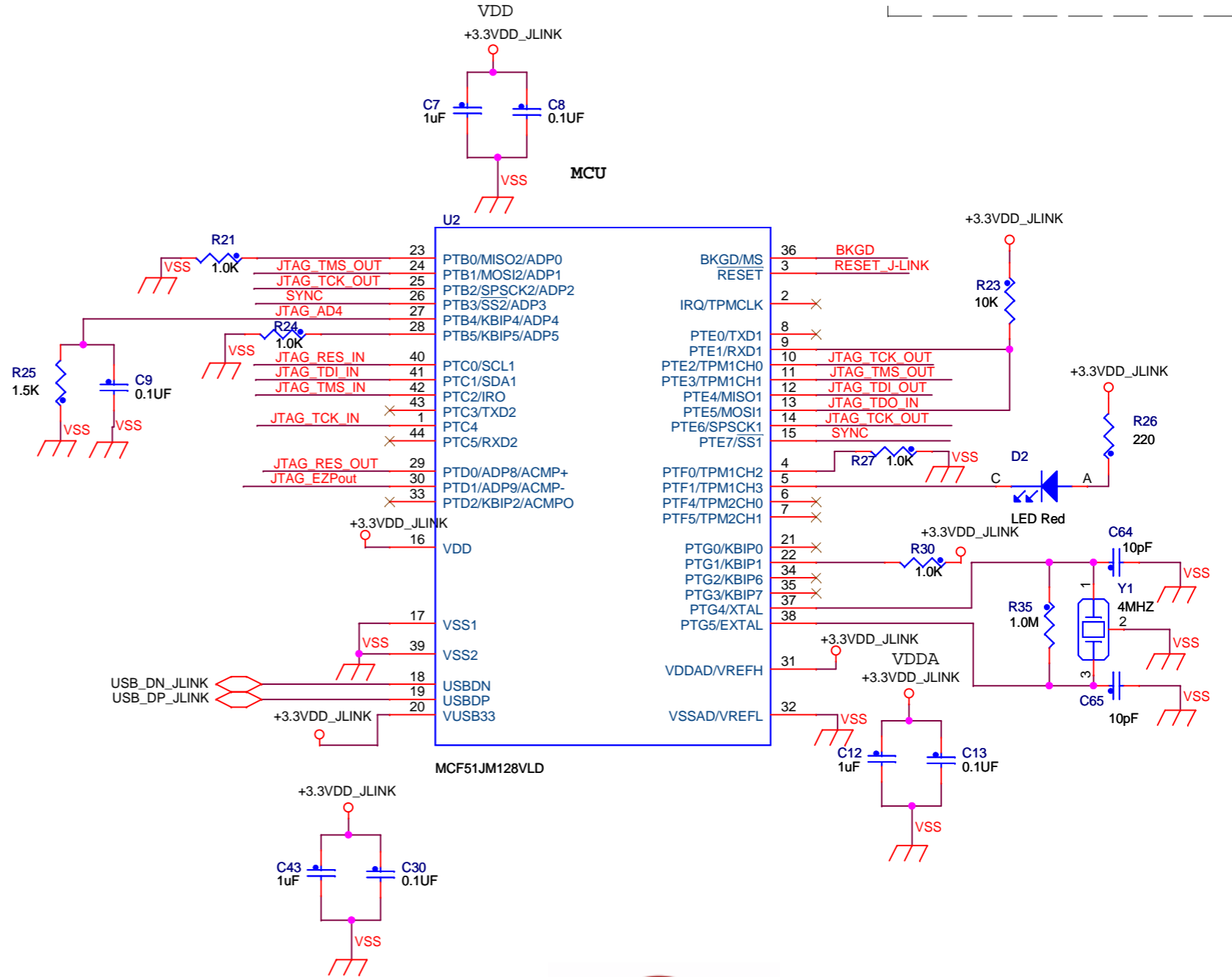
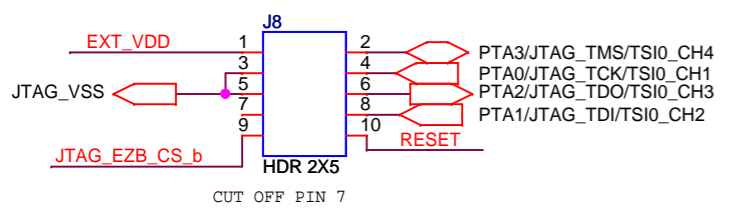
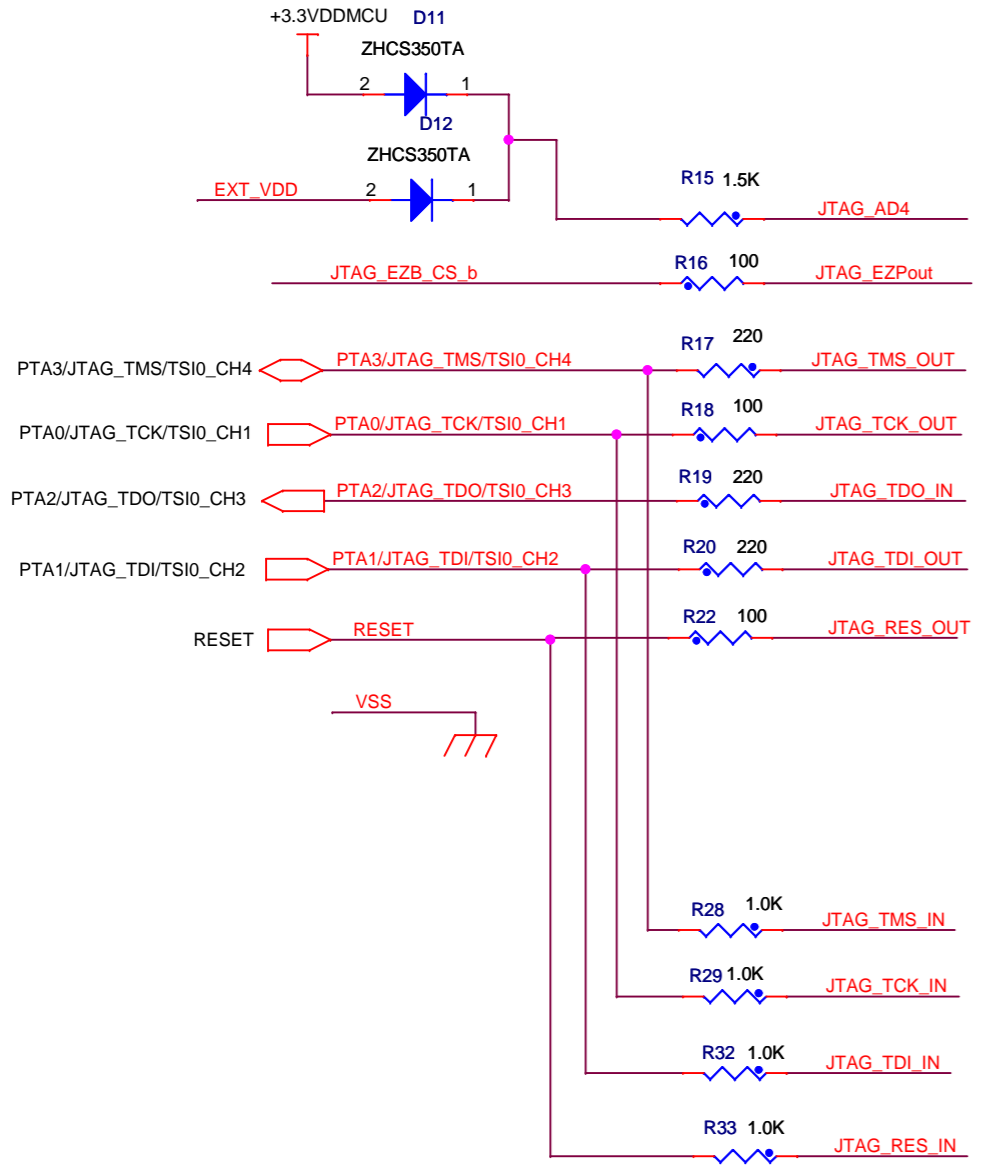


Title			COMMUNICATION HEADERS		
Size	Document Number				Rev
A	SCH-20110422_HYDRA_v4.1				4.1
Date:	Thursday, April 28, 2011		Sheet	3	of 14





JTAG INTERFACE



Title			J-LINK INTERFACE		
Size	Document Number				Rev
B	SCH-20110422_HYDRA_v4.1				4.1
Date:	Thursday, April 28, 2011	Sheet	5	of	14

D

D

C

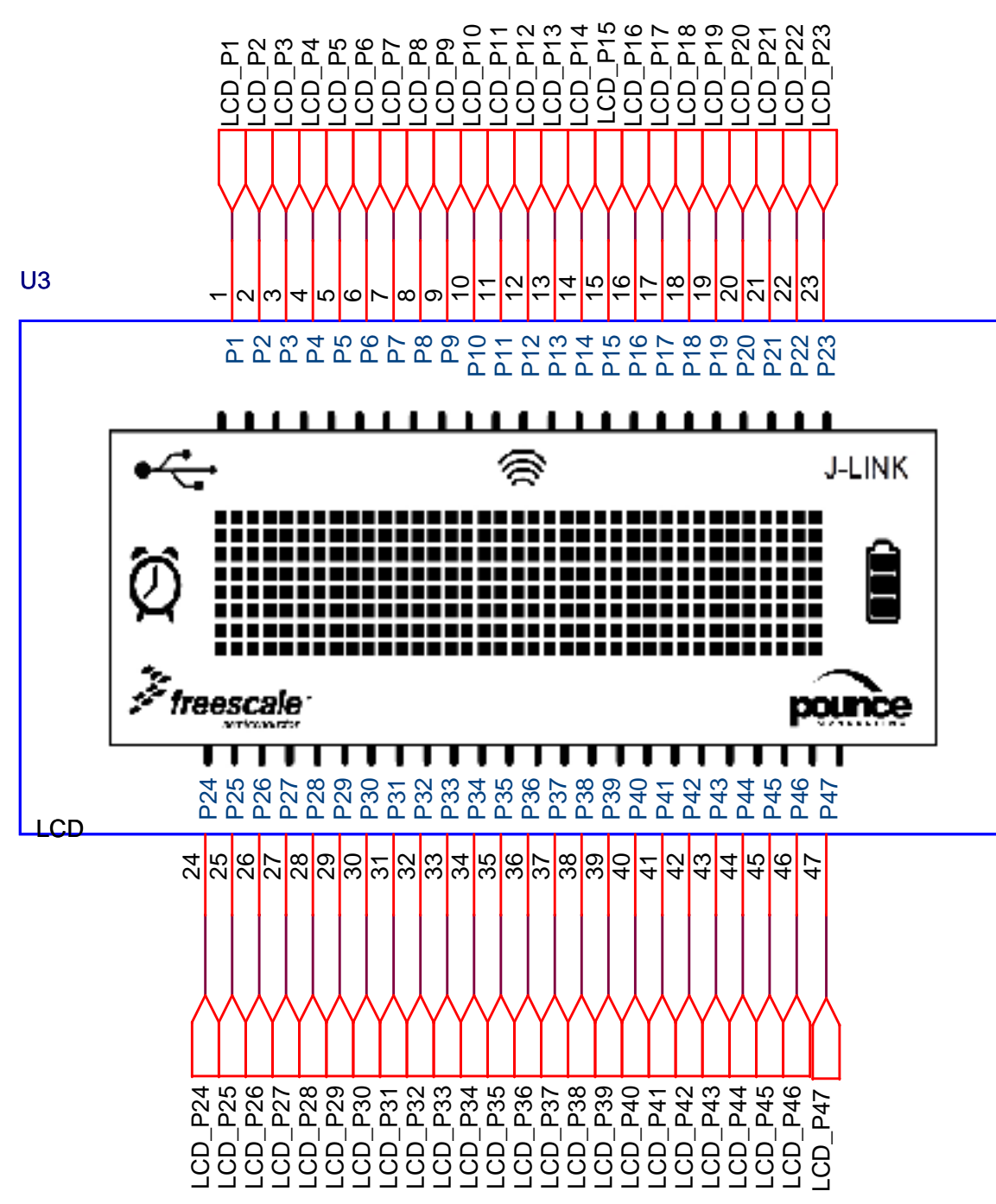
C

B

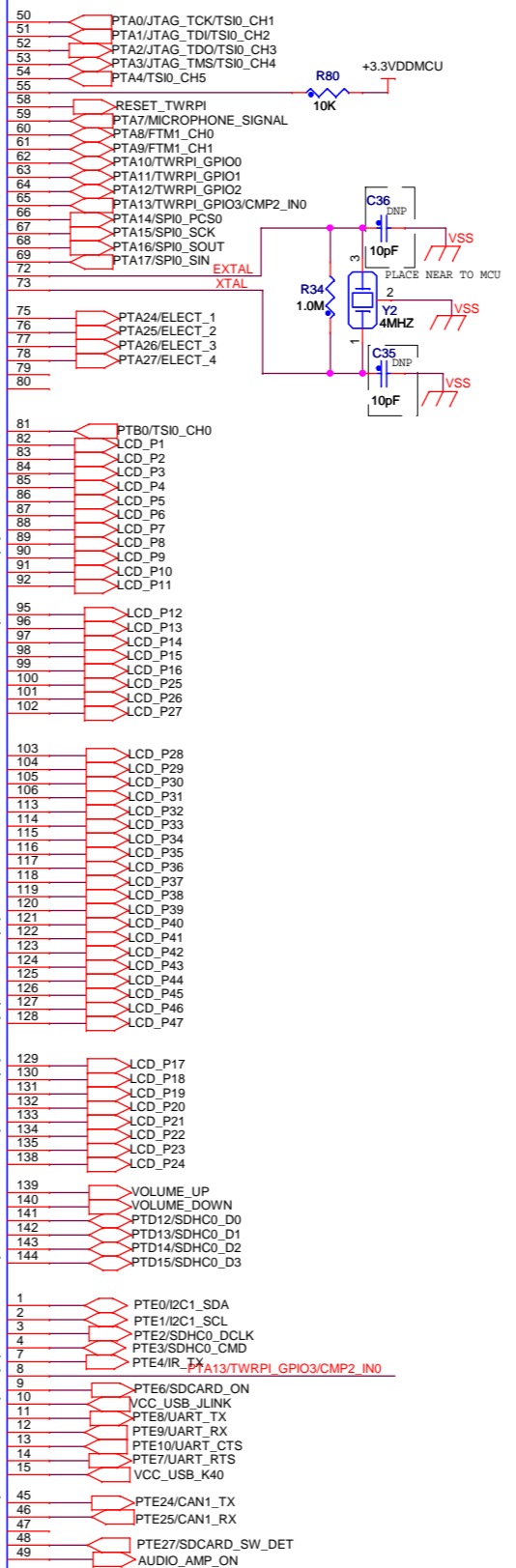
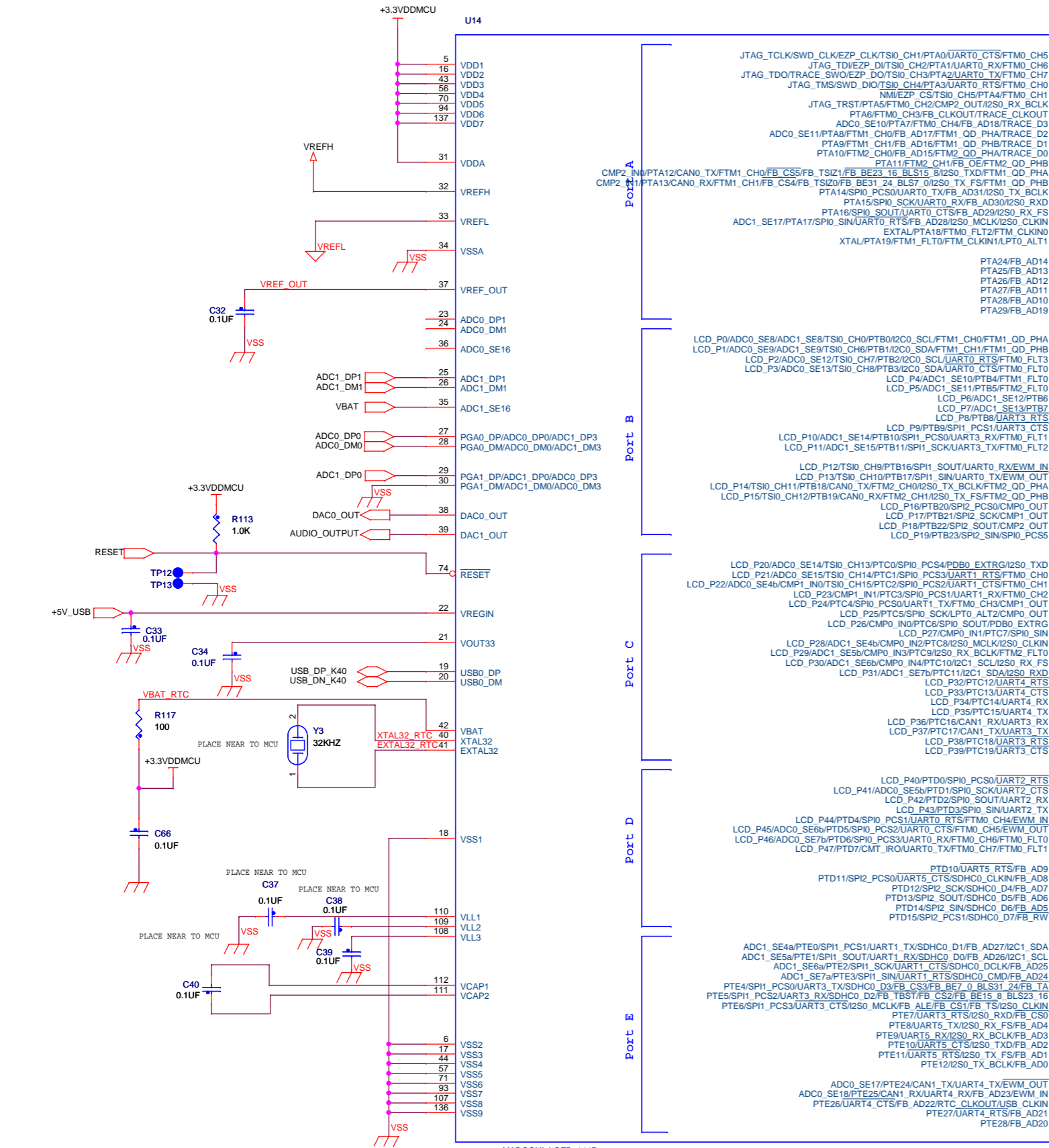
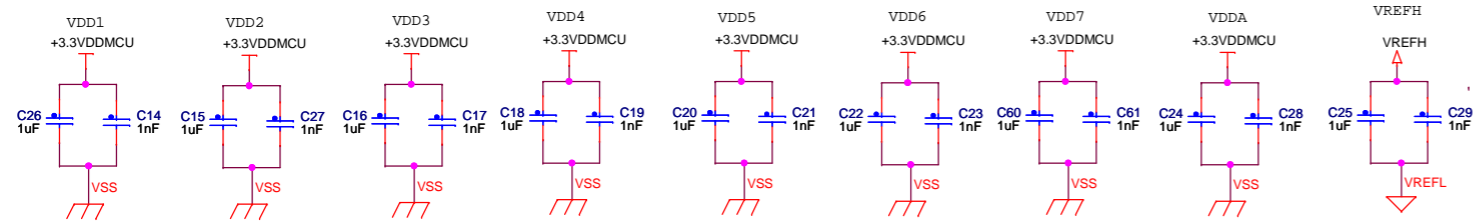
B

A

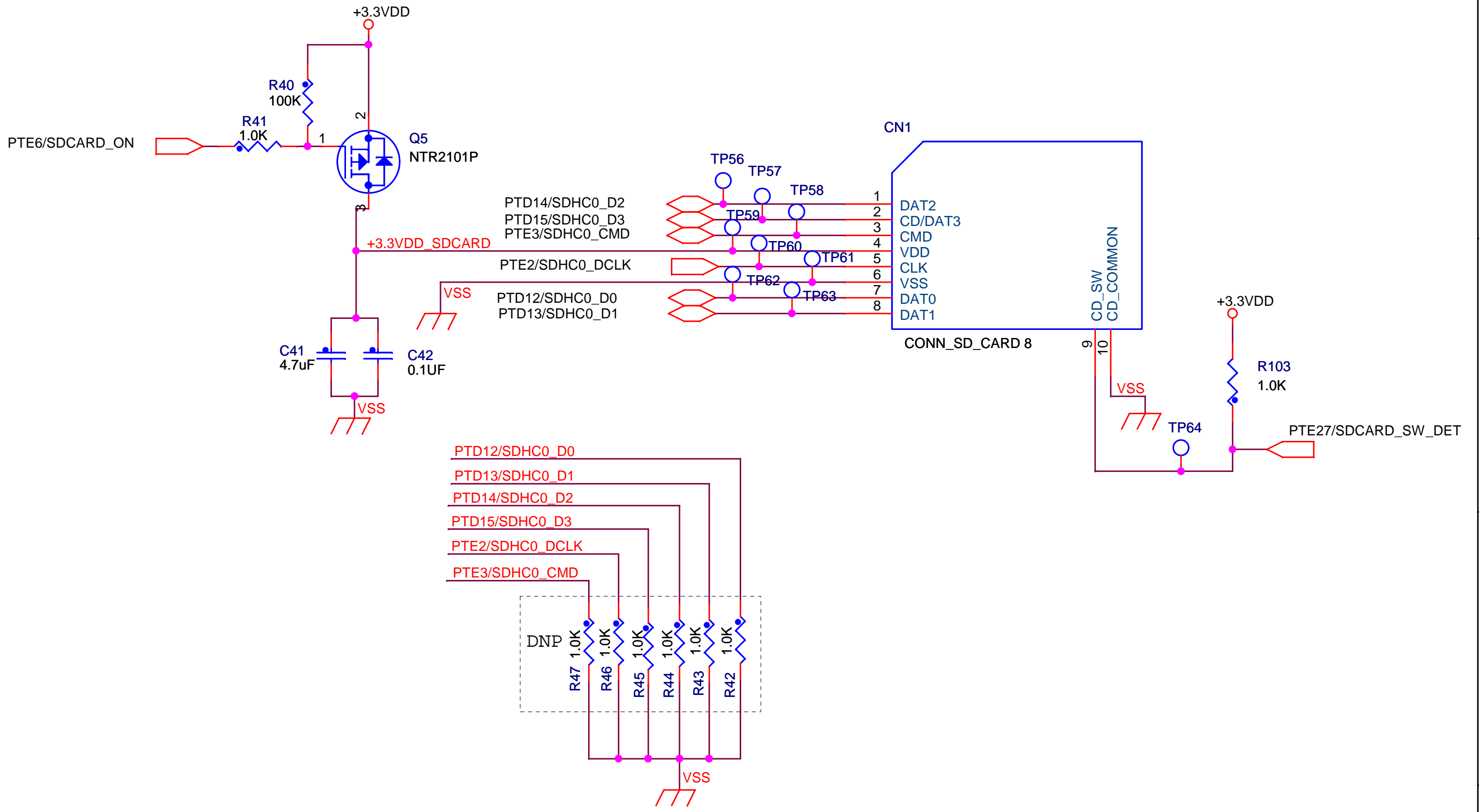
A



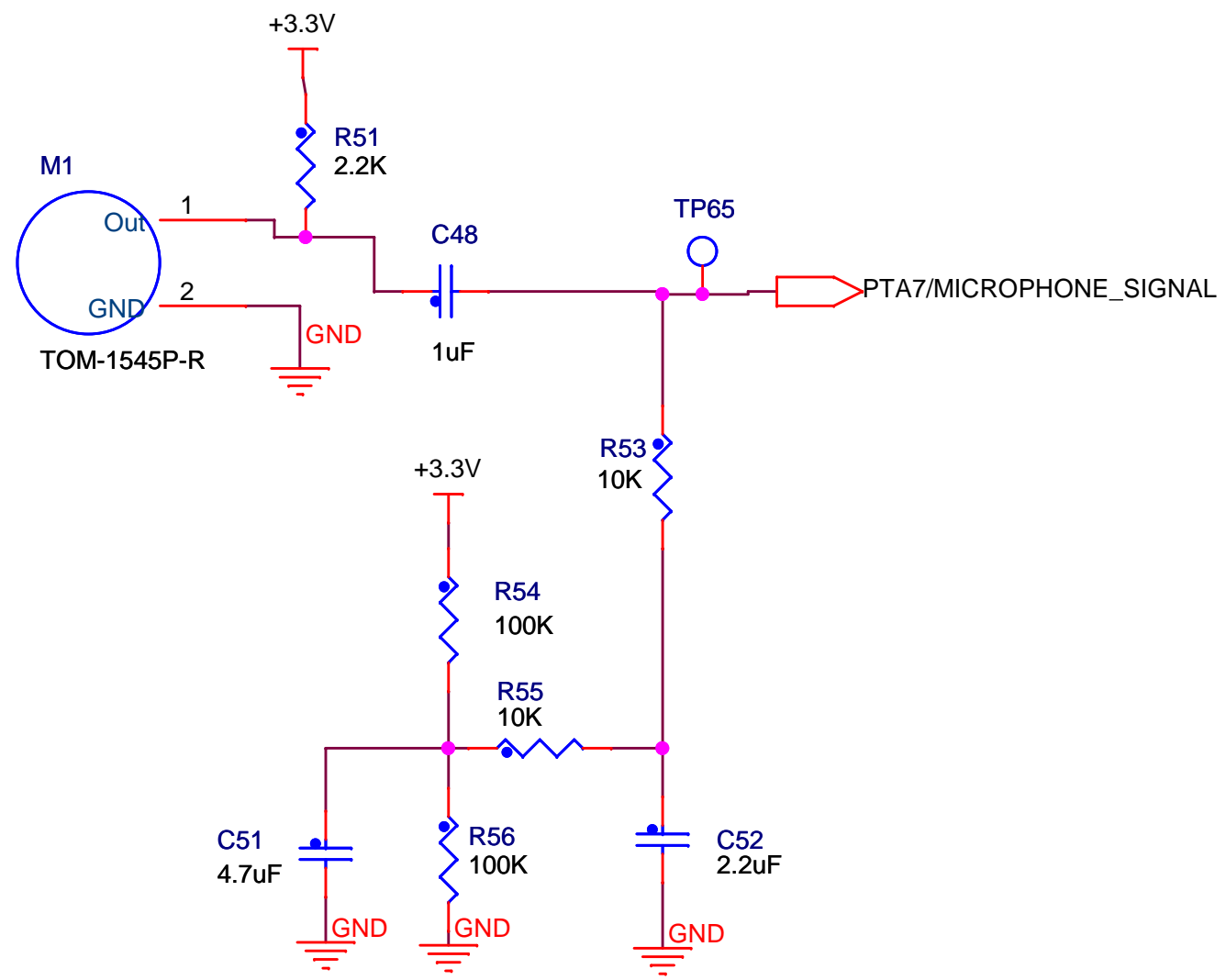
Title			LCD		
Size	Document Number	Rev			
A	SCH-20110422_HYDRA_v4.1	4.1			
Date:	Thursday, April 28, 2011	Sheet	6	of	14



Title		MCU K40	
Size	Document Number	SCH-20110422_HYDRA_v4.1	
C		Rev	4.1
Date:	Thursday, April 28, 2011	Sheet	7 of 14



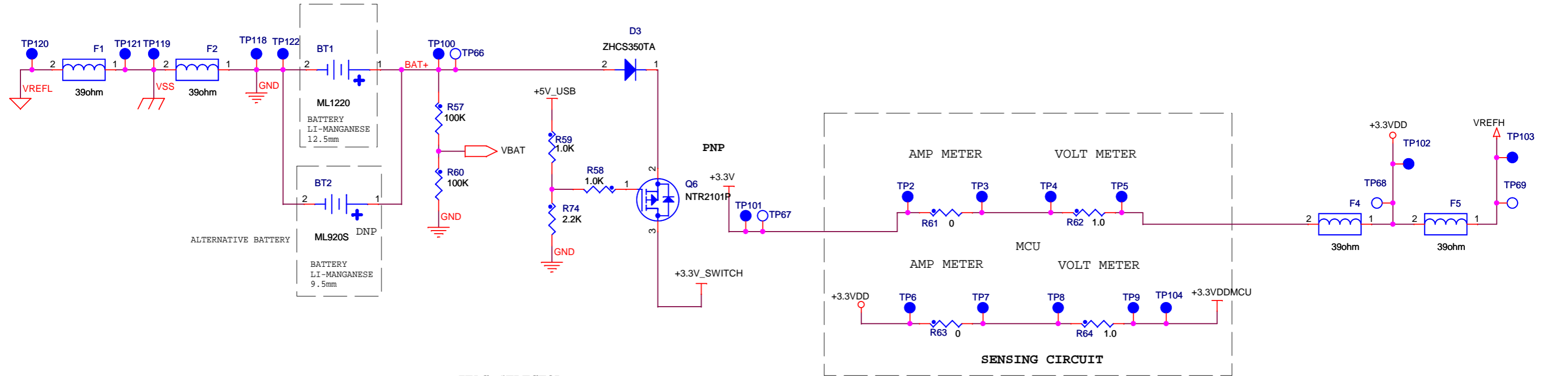
Title			MICRO SD CARD		
Size	Document Number	Rev			
A	SCH-20110422_HYDRA_v4.1	4.1			
Date:	Thursday, April 28, 2011	Sheet	8	of	14



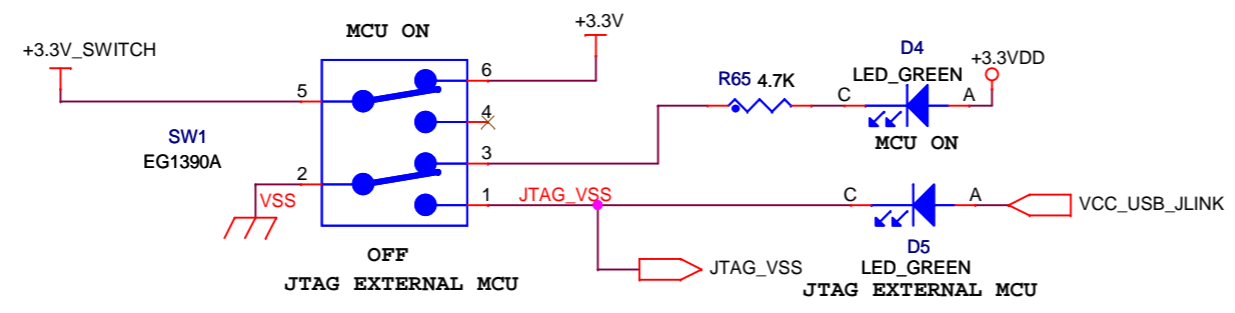
Title			MICROPHONE		
Size	Document Number	Rev			
A	SCH-20110422_HYDRA_v4.1	4.1			
Date:	Thursday, April 28, 2011	Sheet	9	of	14



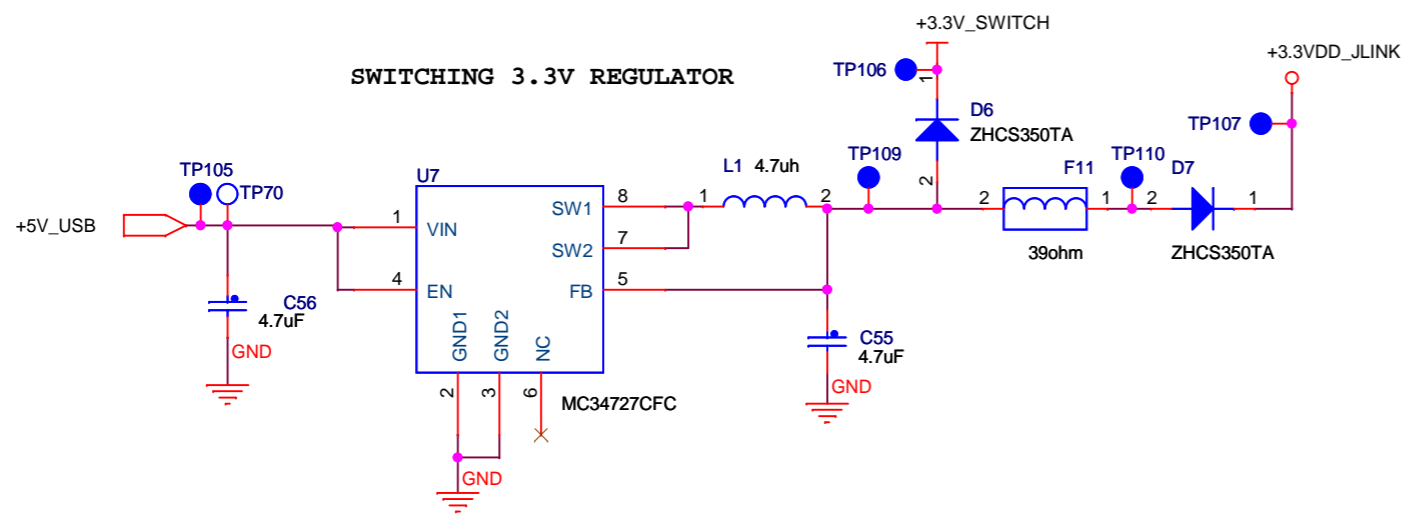
BATTERY CIRCUIT



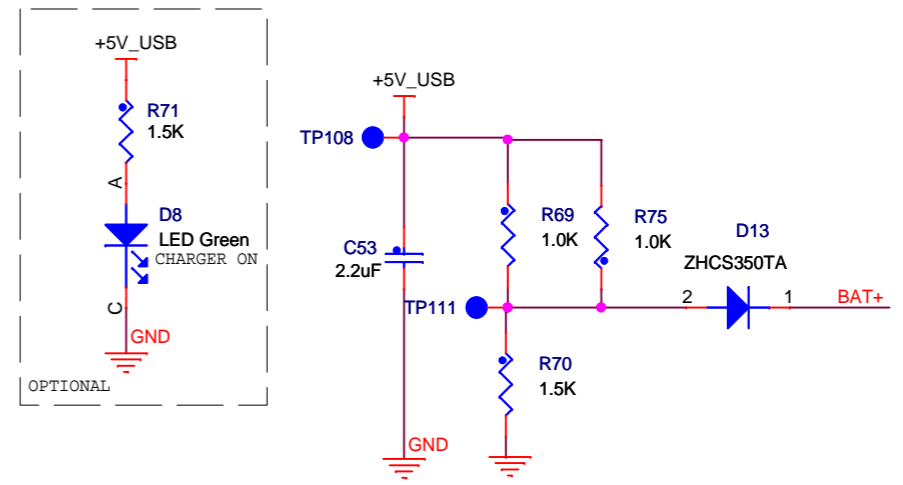
JTAG SELECTOR



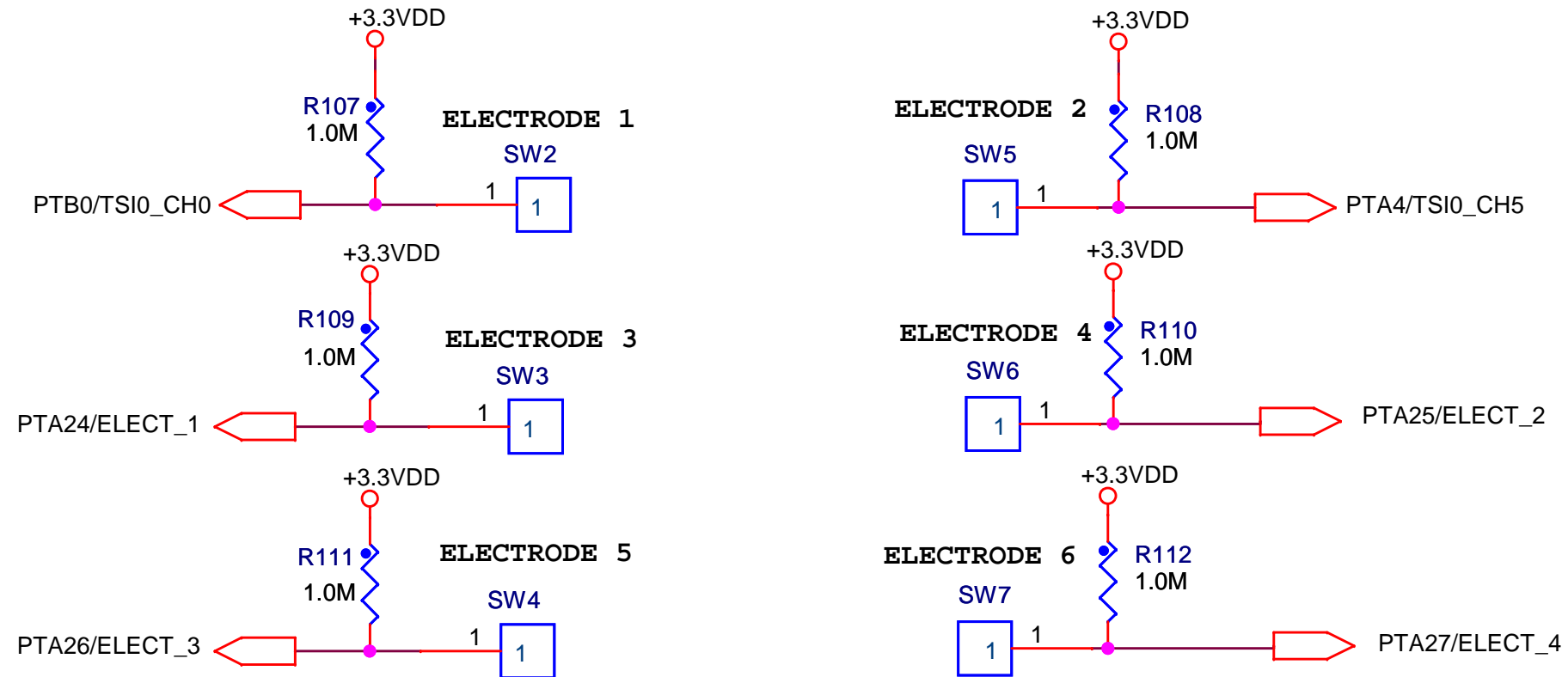
SWITCHING 3.3V REGULATOR



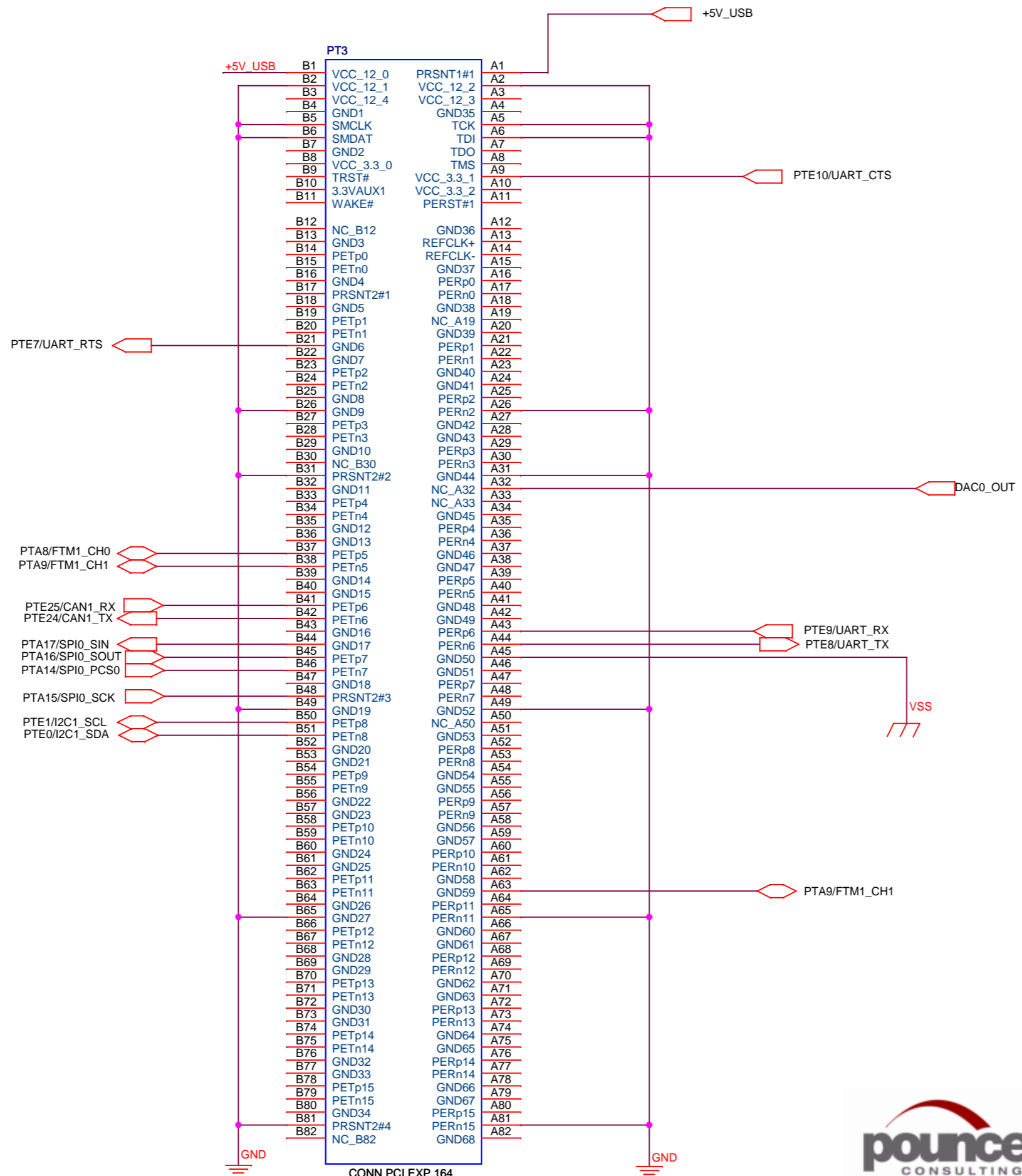
BATTERY CHARGER



Title			POWER MANAGEMENT		
Size	Document Number		Rev		
B	SCH-20110422_HYDRA_v4.1		4.1		
Date:	Thursday, April 28, 2011	Sheet	10	of	14

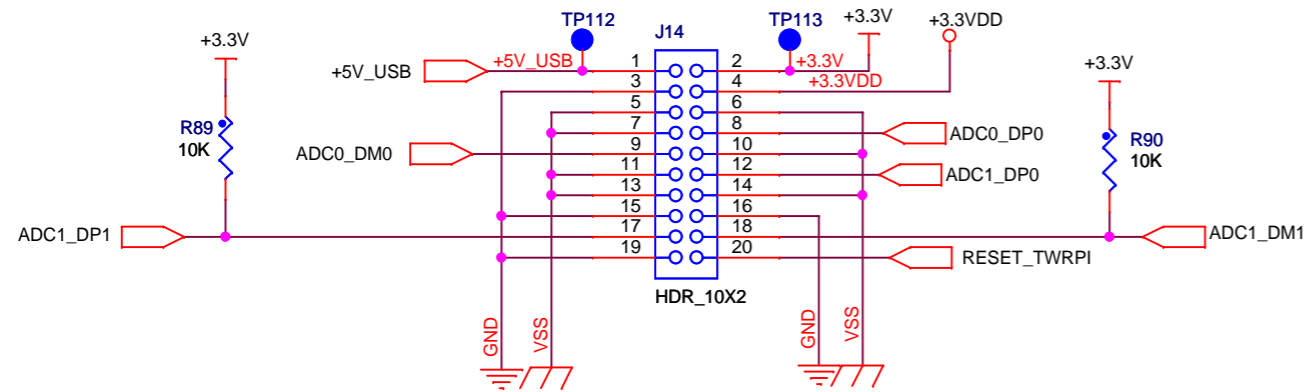


Title		
TOUCH SENSING		
Size A	Document Number SCH-20110422_HYDRA_v4.1	Rev 4.1
Date:	Thursday, April 28, 2011	Sheet 11 of 14

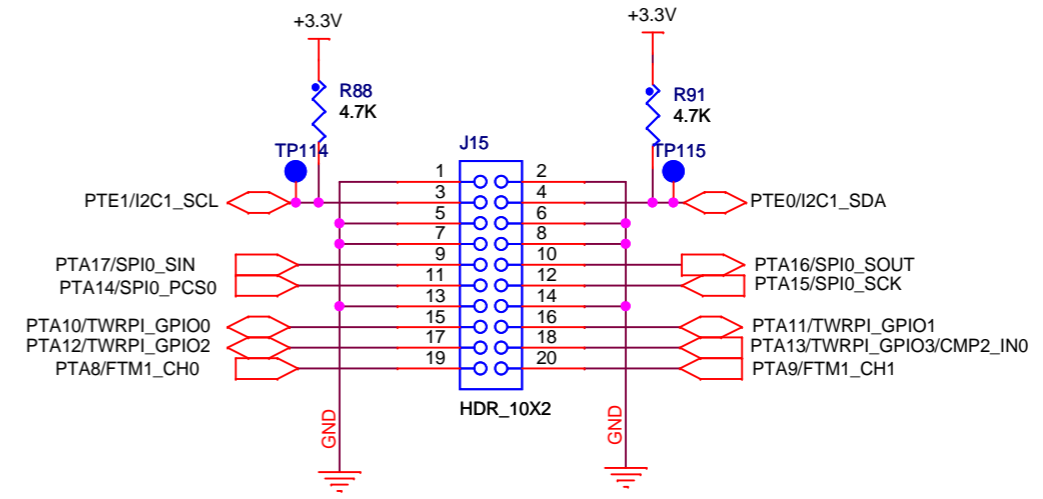


Title			TOWER PORT		
Size	Document Number				Rev
B	SCH-20110422_HYDRA_v4.1				4.1
Date:	Thursday, April 28, 2011	Sheet	12	of	14

LEFT SIDE



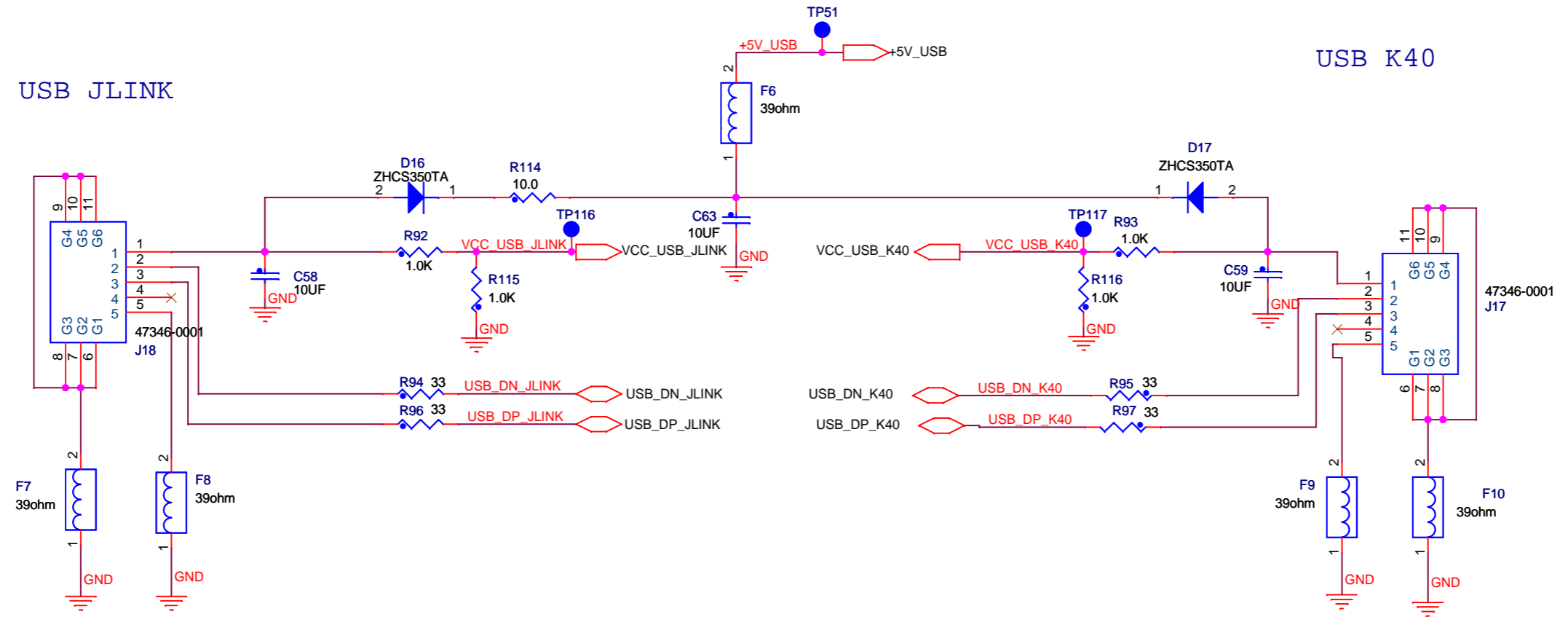
RIGHT SIDE



Title			TWRPI SOCKETS		
Size	Document Number	Rev			
B	SCH-20110422_HYDRA_v4.1	4.1			
Date:	Thursday, April 28, 2011	Sheet	13	of	14

USB JLINK

USB K40



Title			USB		
Size	Document Number				Rev
B	SCH-20110422_HYDRA_v4.1				4.1
Date:	Thursday, April 28, 2011			Sheet	14 of 14