

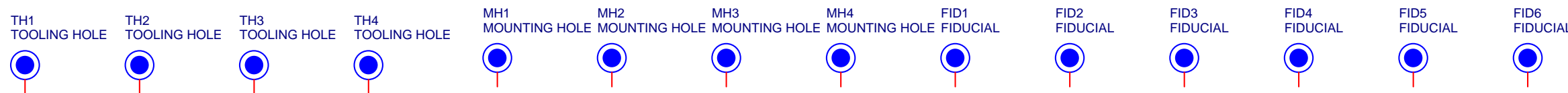
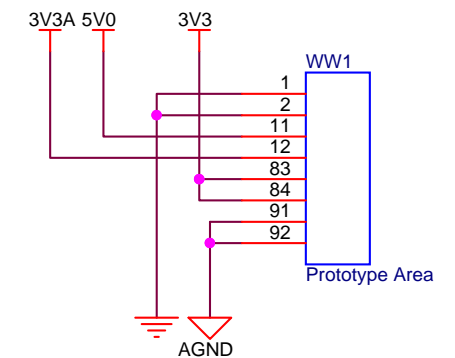
# RENESAS DEVELOPMENT KIT FOR RL78G13

## REVISION HISTORY

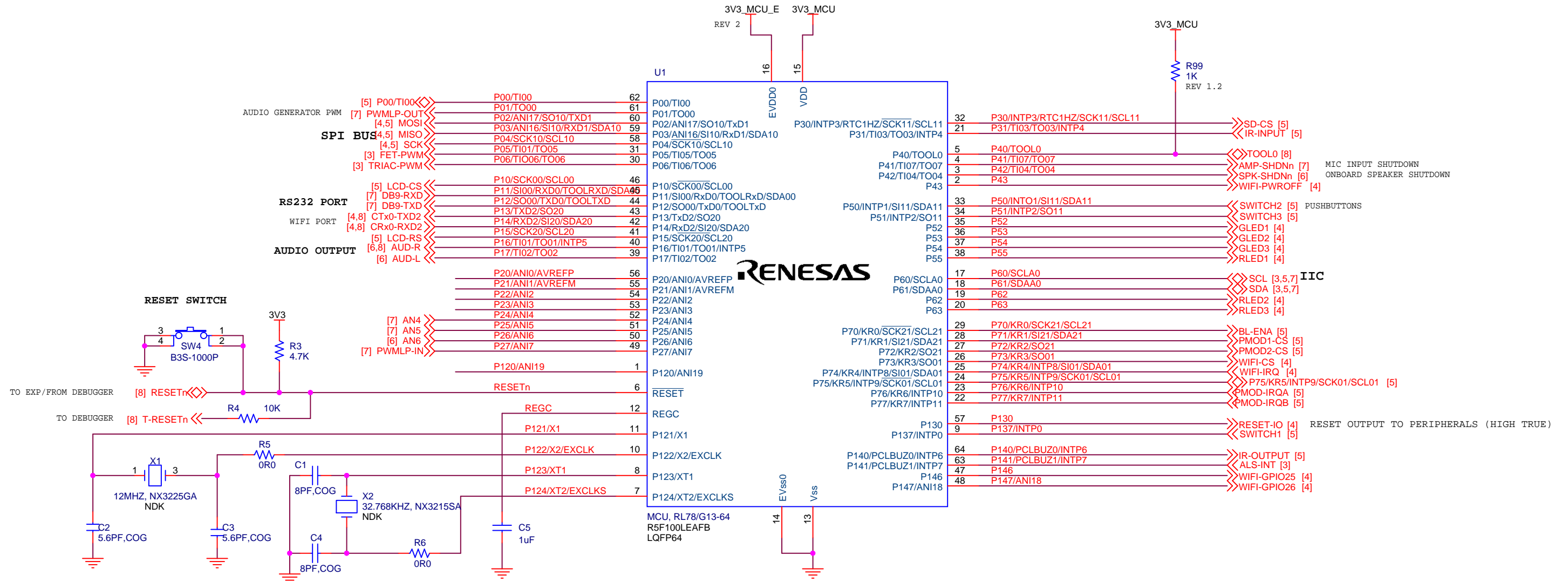
REV 1.0	07/18/2011	INITIAL RELEASE
REV 1.1	08/11/2011	CORRECT EEPROM WP CONNECTIVITY
REV 1.2	08/15/2011	ADD 1K PULLUP TO TOOL0
REV 2.0	08/30/2011	PRODUCTION RELEASE
REV 2.1	11/02/2011	LOAD FET CIRCUITRY CHANGE TO NDK CRYSTALS AND SPECIFIED CAPS

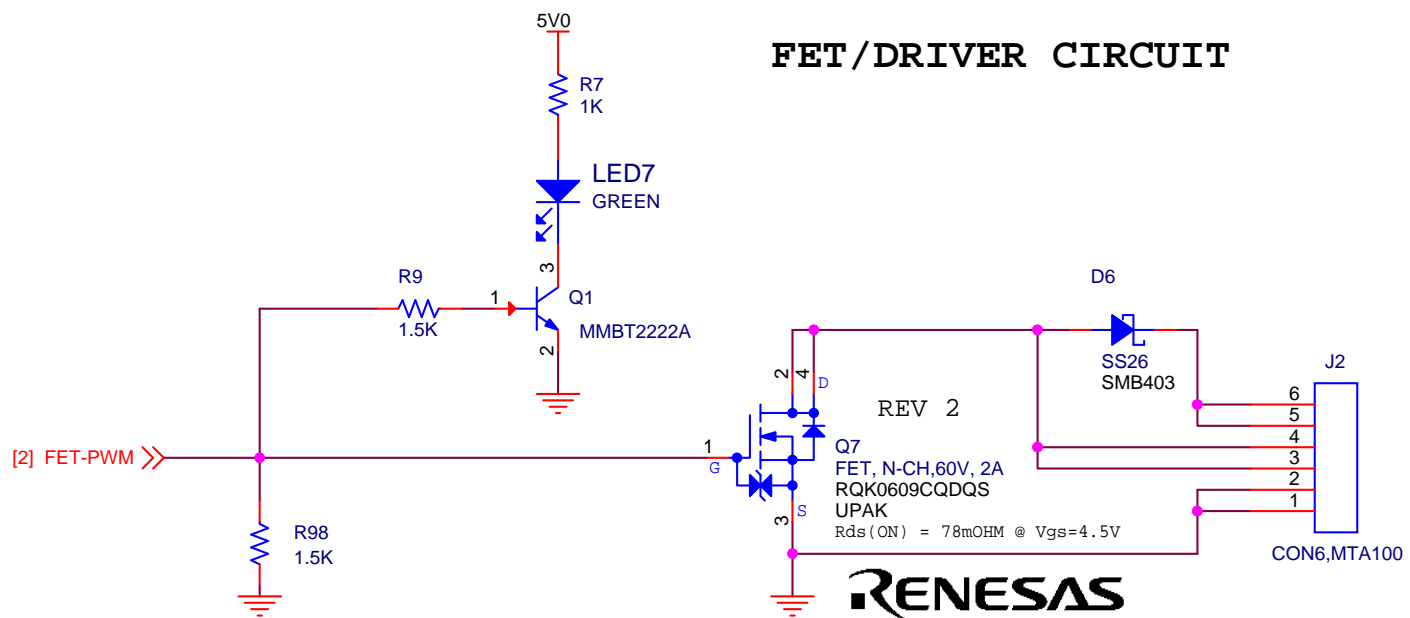
PAGE	DESCRIPTION
1	INDEX
2	RL78G13 MCU
3	FET/TRIAC/EEPROM/ALS
4	REDPINE WIFI/PWR INPUT/LEDS
5	OKAYA LCD/PBTN/BEAGLE/uSD/IR/PMOD
6	NSC AUDIO OUTPUT
7	ADI MIC/ACCEL/TEMP/RS232
8	USB DEBUGGER

**NOTE:**  
**R : FIXED RESISTOR**  
**VR : POTENTIOMETER**  
**U : INTEGRATED CIRCUIT**  
**X : CRYSTAL**  
**SW : PUSHBUTTON/DIP SWITCH**  
**LED : LIGHT EMITTING DIODE**  
**J : CONNECTOR, JUMPER**  
**L : FERRITE BEAD/INDUCTOR**  
**D : DIODE**

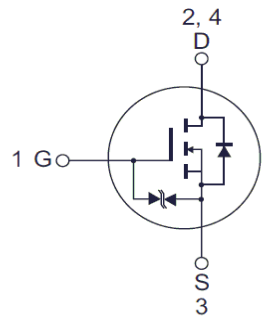
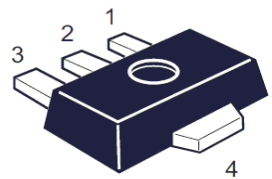


FUTURE DESIGNS, INC.		
Title	YRDKRL78G13	
Size B	Document Number	Rev
	YRDKRL78G13	2.1
Date:	Wednesday, November 02, 2011	Sheet 1 of 8

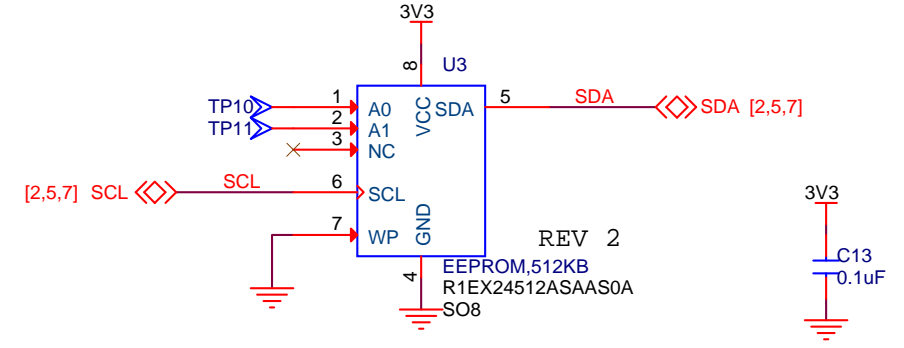




REV 2.1 - FET CIRCUITRY LOADED

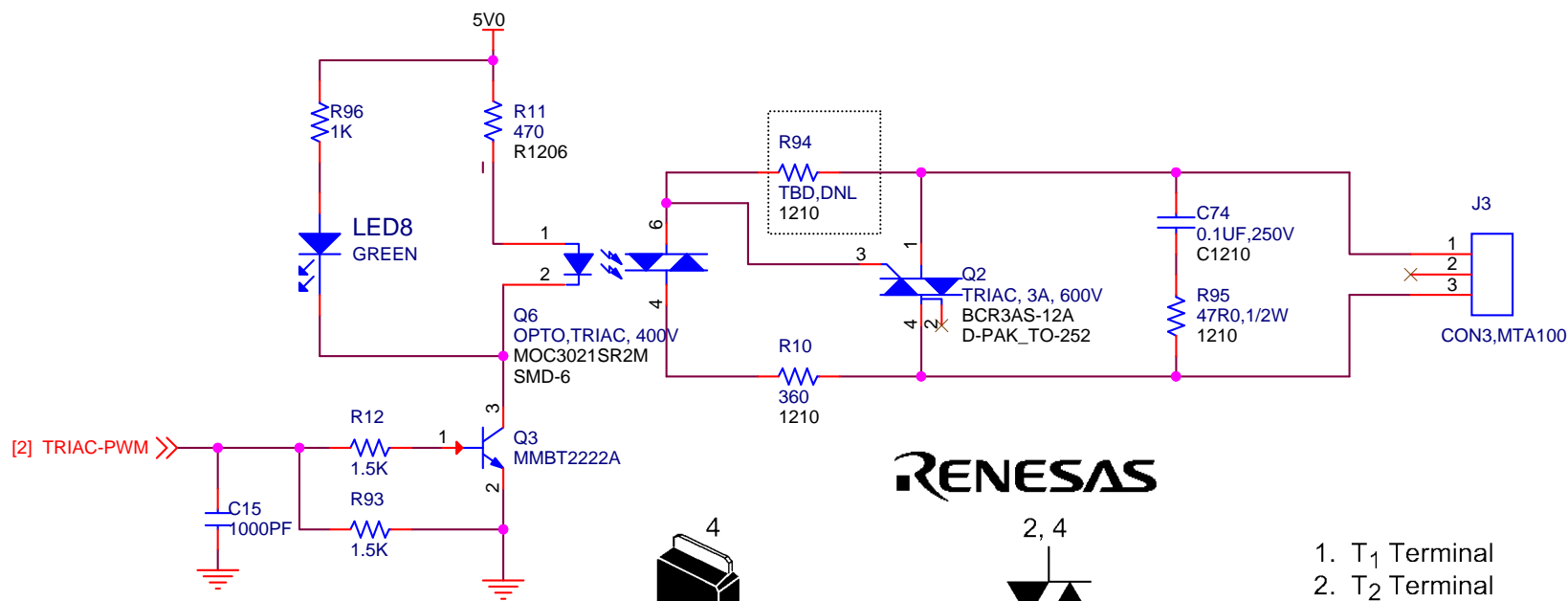


- 1. Gate
- 2. Drain
- 3. Source
- 4. Drain

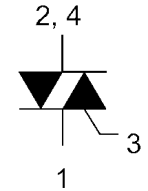
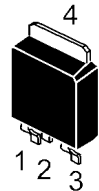


#### SERIAL EEPROM STORAGE

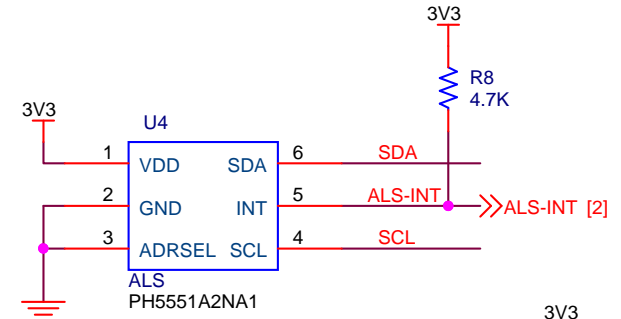
I2C ADDR = 0xA0 (1010aaxr)  
 aa = A2:A1 I2C address  
 x = A16 of memory address  
 r=R/Wn, Read/Write



#### TRIAC CIRCUIT

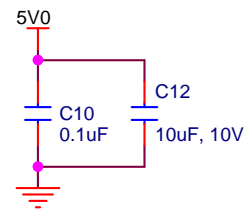


- 1. T<sub>1</sub> Terminal
- 2. T<sub>2</sub> Terminal
- 3. Gate Terminal
- 4. T<sub>2</sub> Terminal

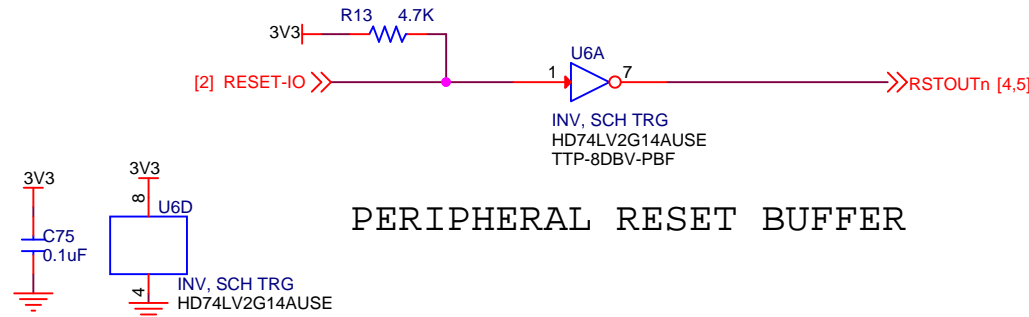


#### AMBIENT LIGHT SENSOR

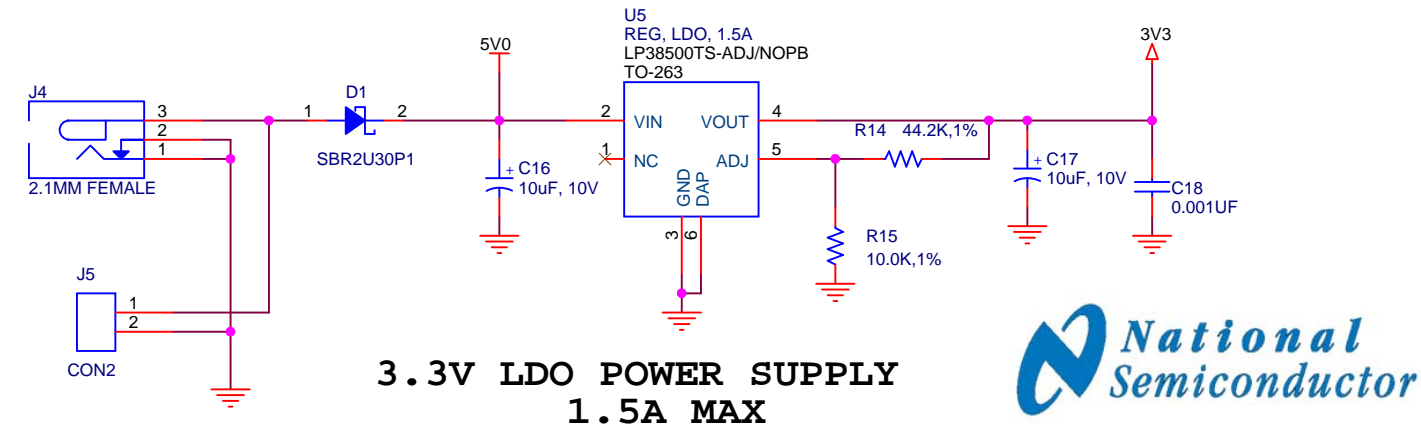
DEFAULT I2C ADDR = 0x72 (0111001r)  
 r=R/Wn, Read/Write



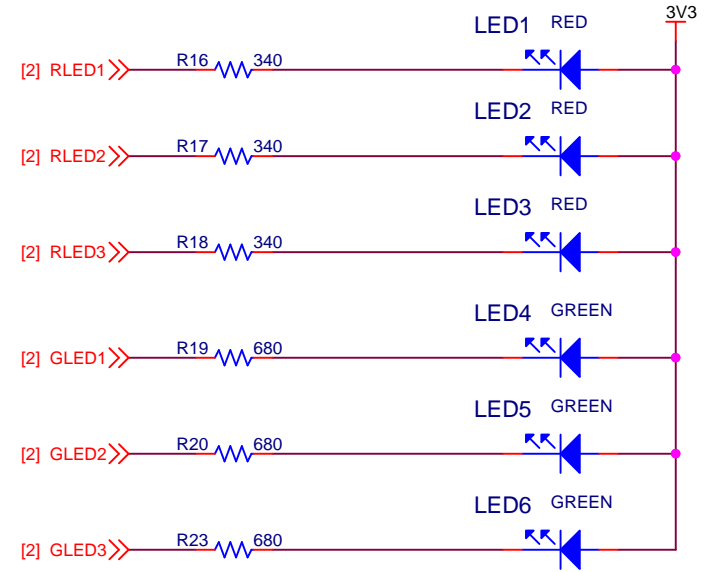
FUTURE DESIGNS, INC.		
Title	YRDKRL78G13	
Size	Document Number	Rev
	YRDKRL78G13	2.1
Date:	Monday, October 17, 2011	Sheet 3 of 8



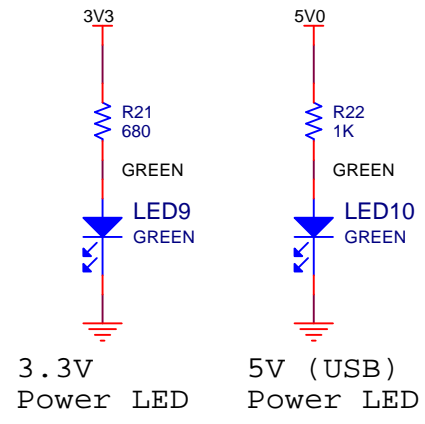
PERIPHERAL RESET BUFFER



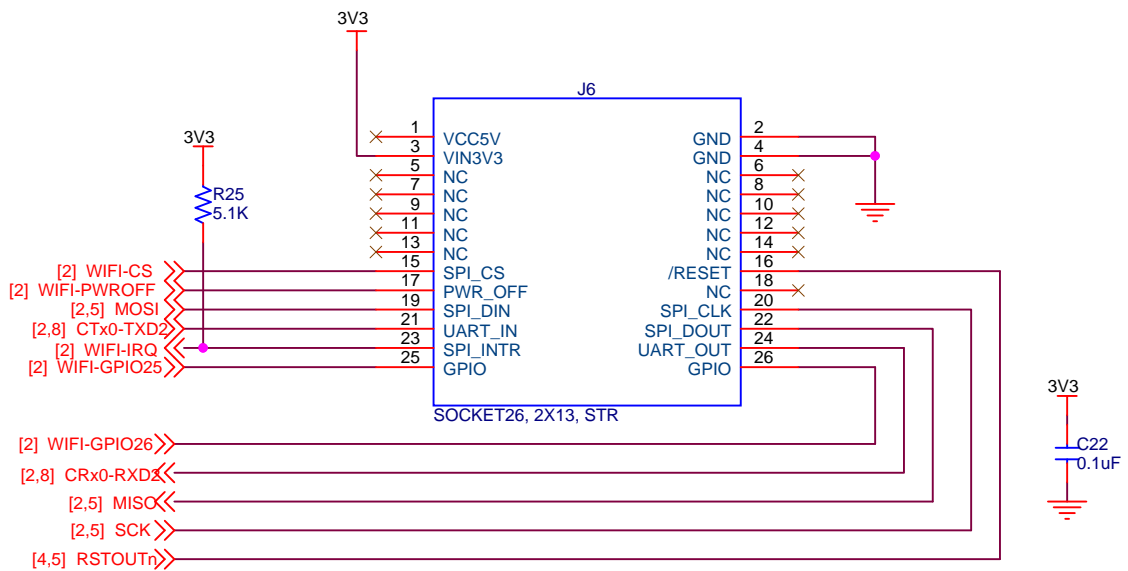
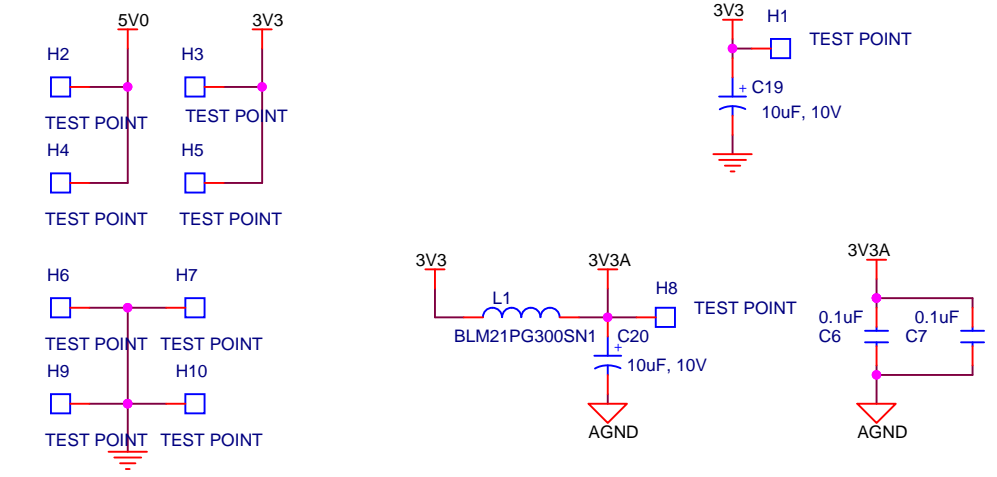
3.3V LDO POWER SUPPLY  
1.5A MAX



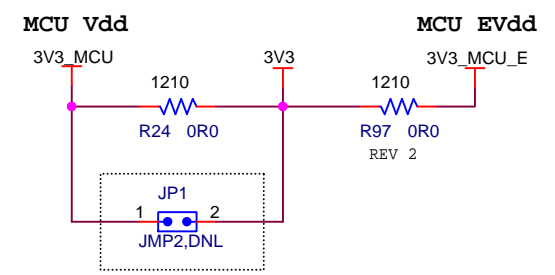
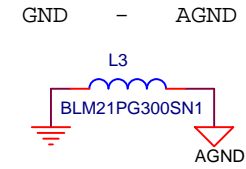
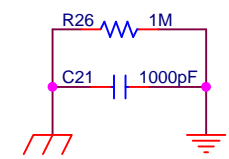
LED RESISTORS LED ARRAY



POWER TEST PIN



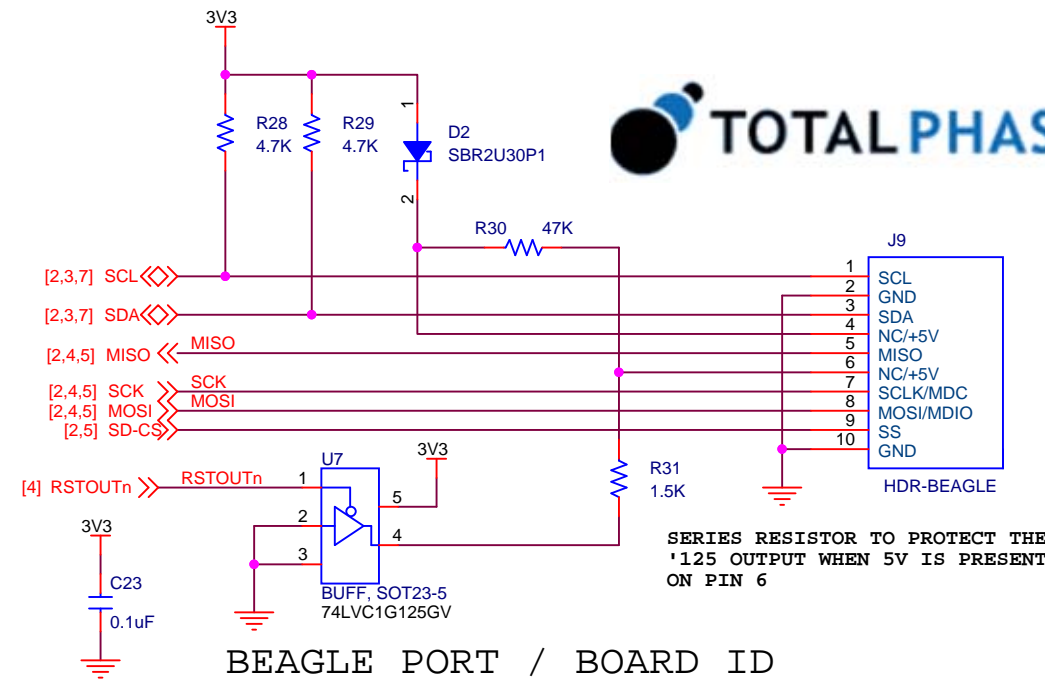
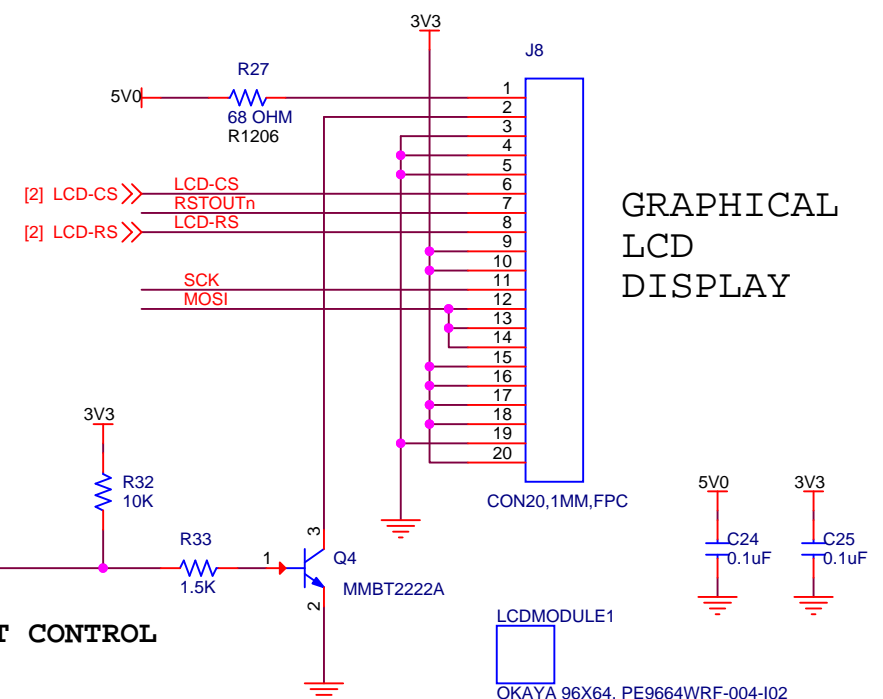
APPLICATION HEADER  
WIFI MODULE



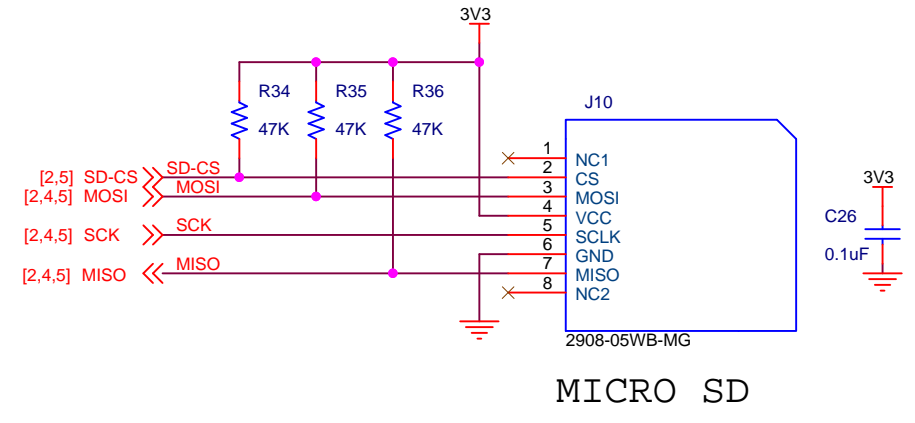
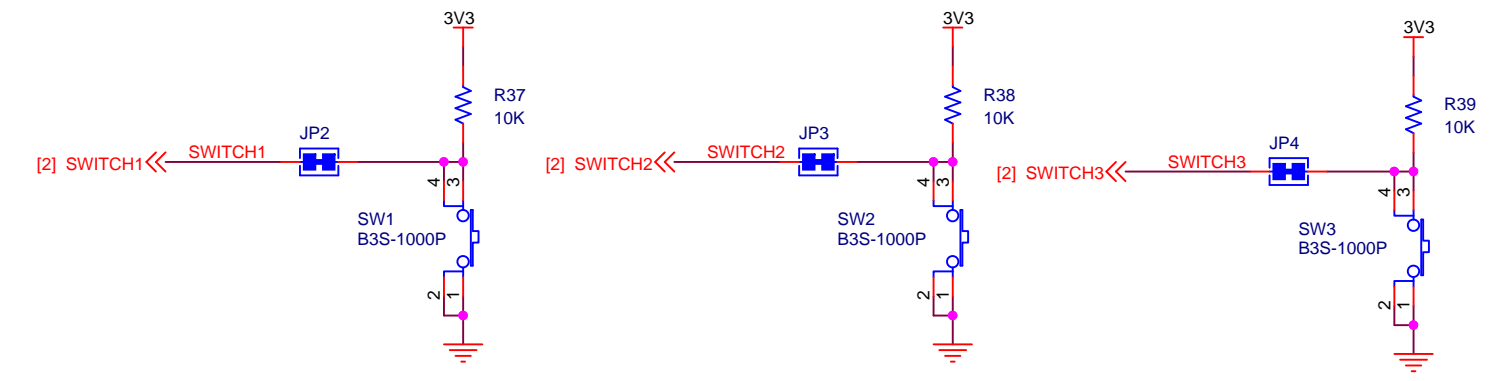
MCU CURENT MEASUREMENT  
NOTE RL78 Vdd REQUIREMENTS:  
1.6V <= EVdd <= Vdd <= 5.5V

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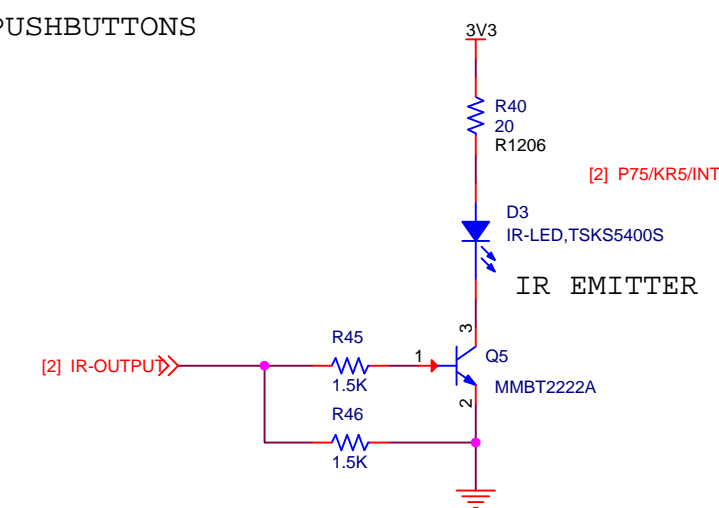
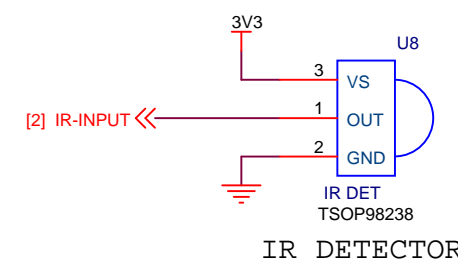
RENESAS		
FUTURE DESIGNS, INC.		
Title	YRDKRL78G13	
Size	Document Number YRDKRL78G13	Rev 2.1
Date:	Monday, October 17, 2011	Sheet 4 of 8



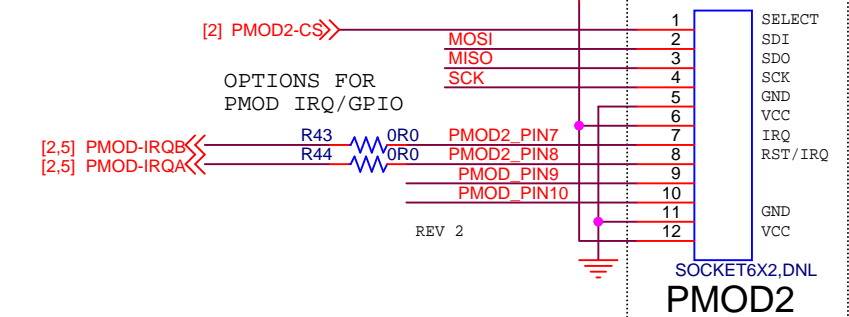
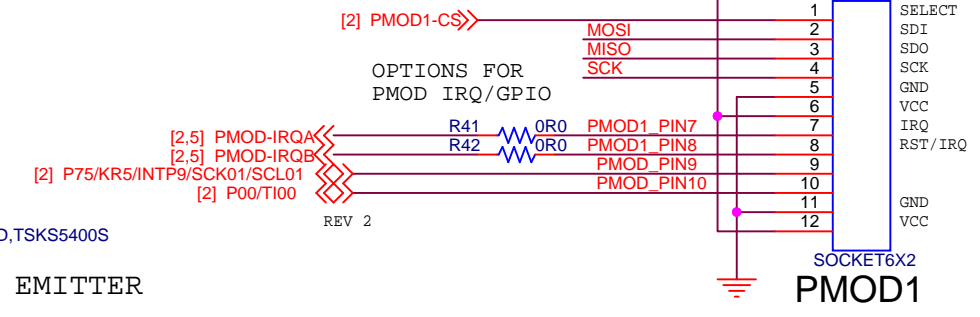
**BACKLIGHT CONTROL**



**USER PUSHBUTTONS**



**IR INTERFACES**

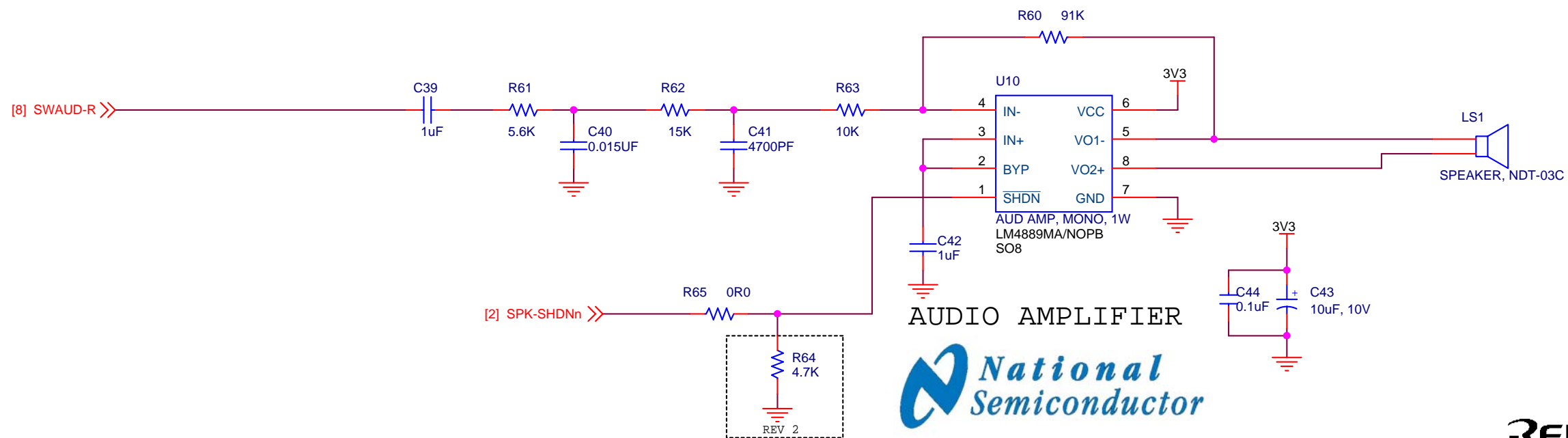
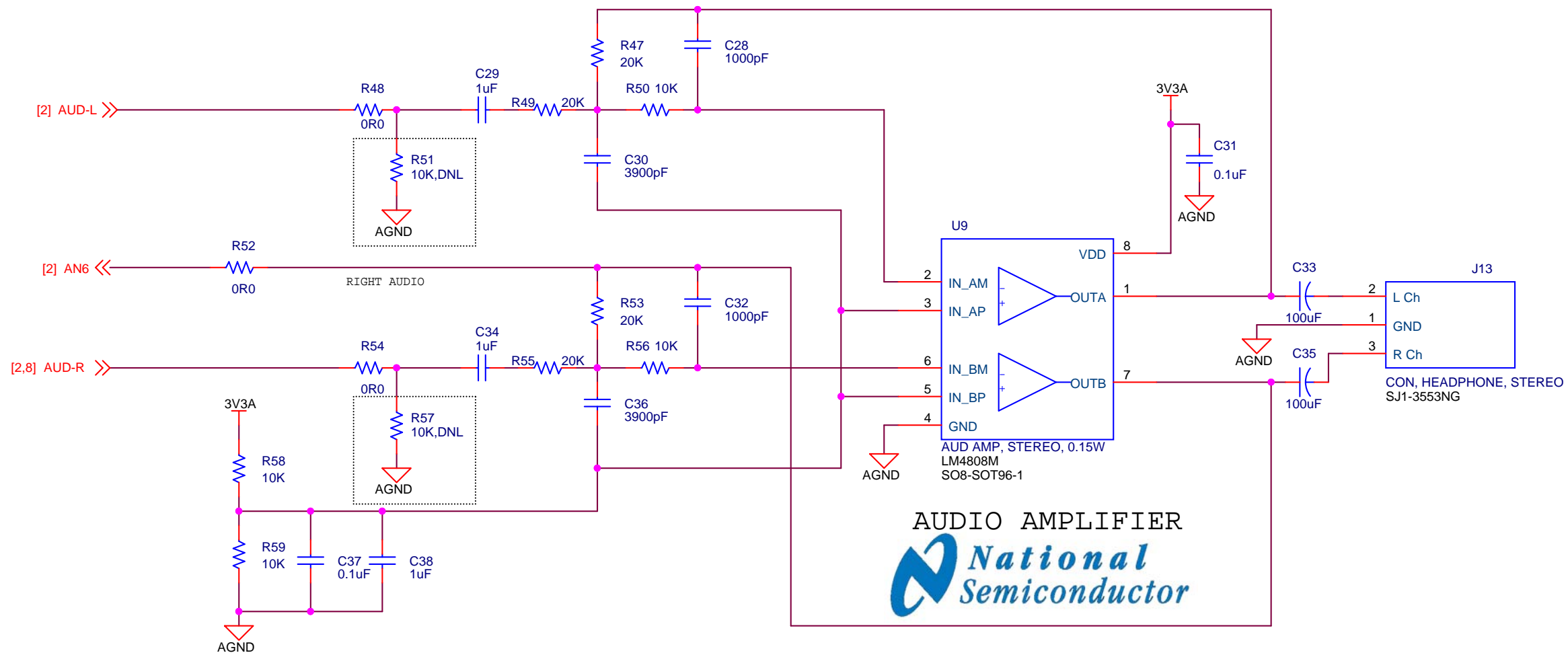


**PMOD CONNECTORS**

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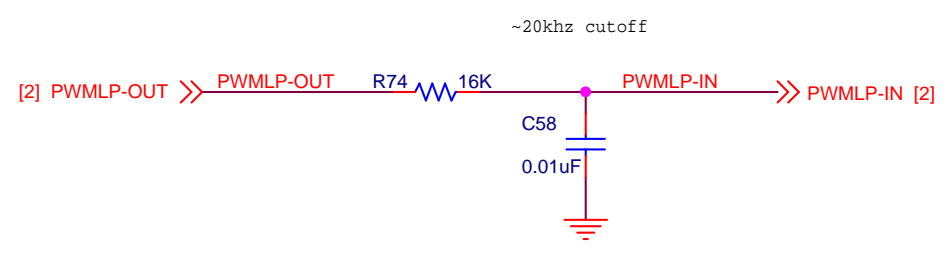
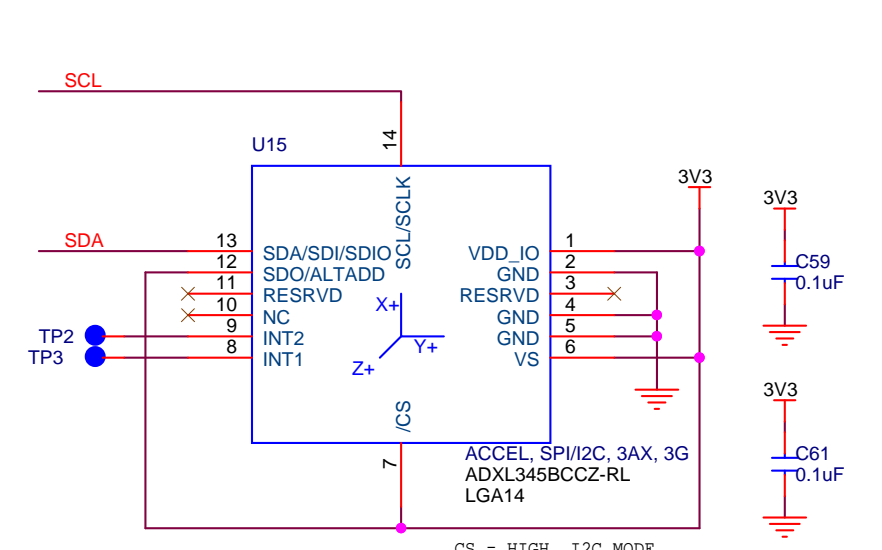
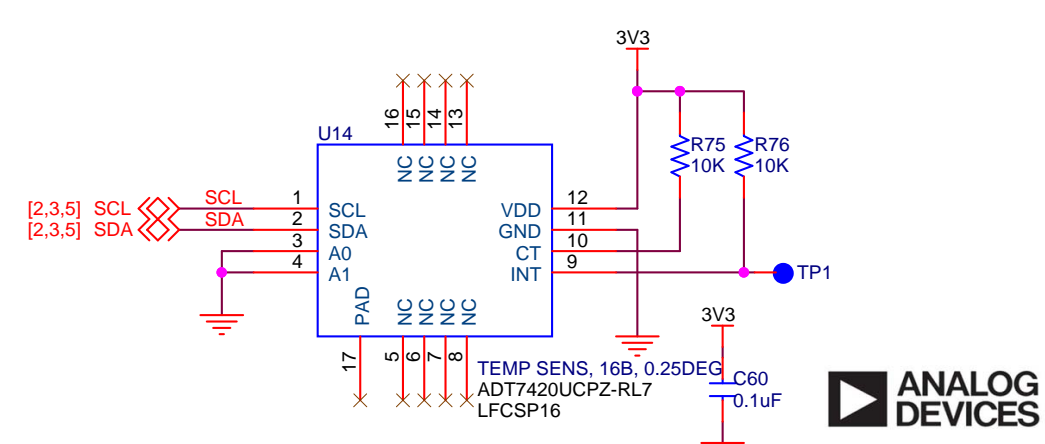
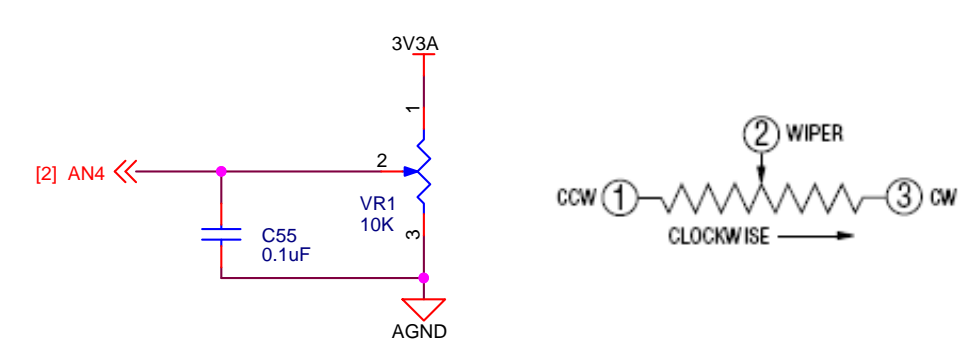
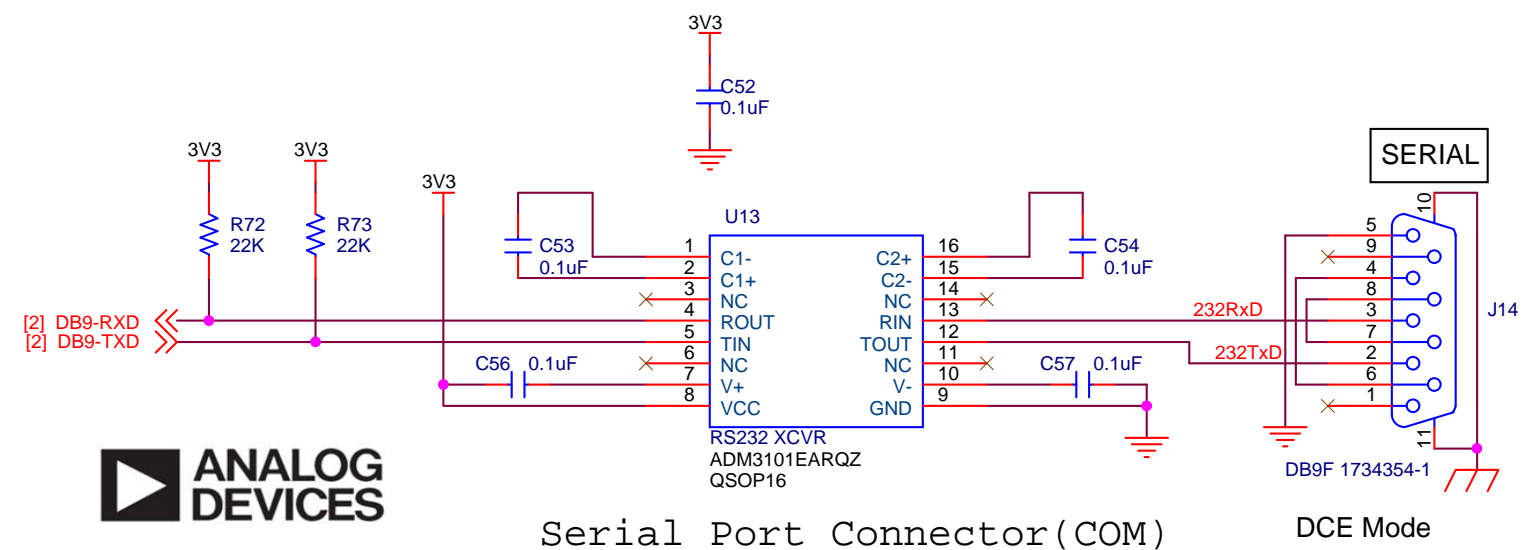
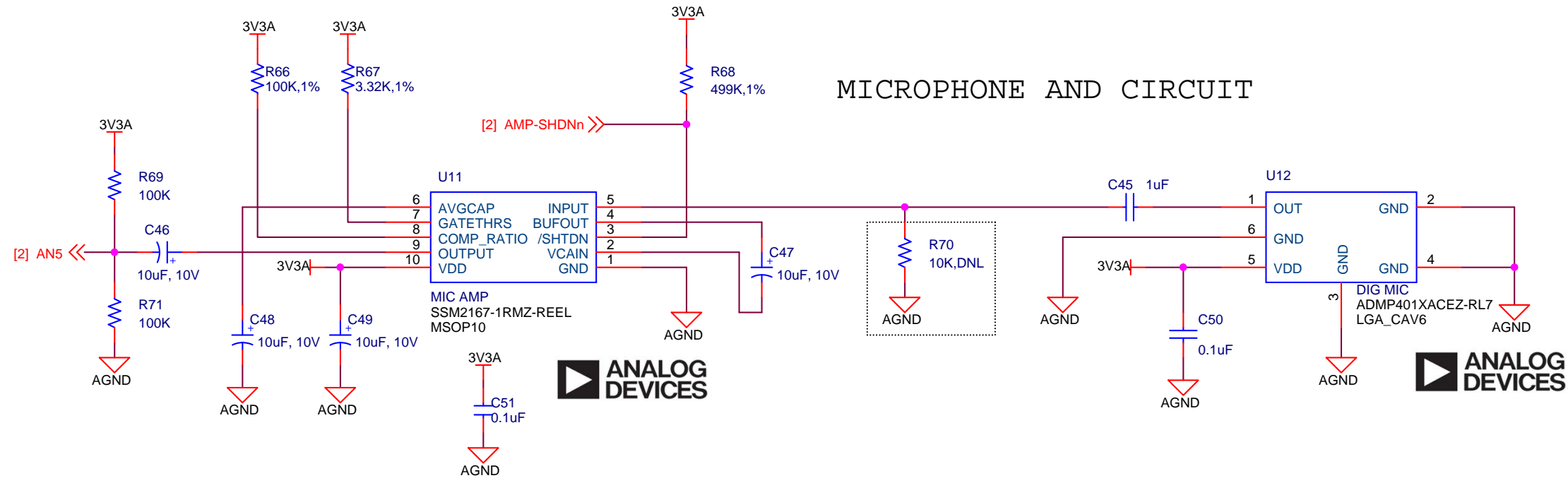
FUTURE DESIGNS, INC.		
Title: YRDKRL78G13		
Size	Document Number: YRDKRL78G13	Rev: 2.1
Date: Monday, October 17, 2011	Sheet: 5	of 8



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**RENESAS**

FUTURE DESIGNS, INC.		
Title YRDKRL78G13		
Size B	Document Number YRDKRL78G13	Rev 2.1
Date: Monday, October 17, 2011	Sheet 6	of 8

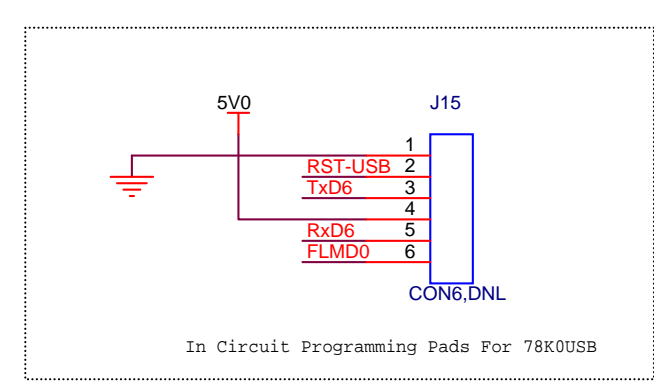
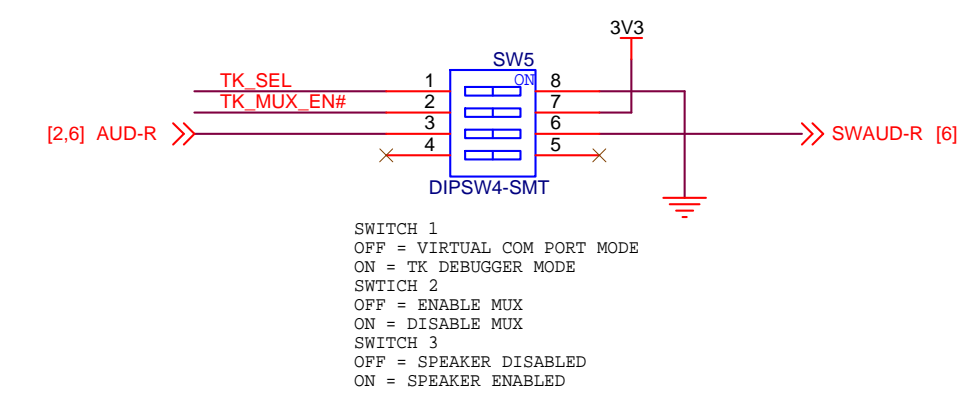
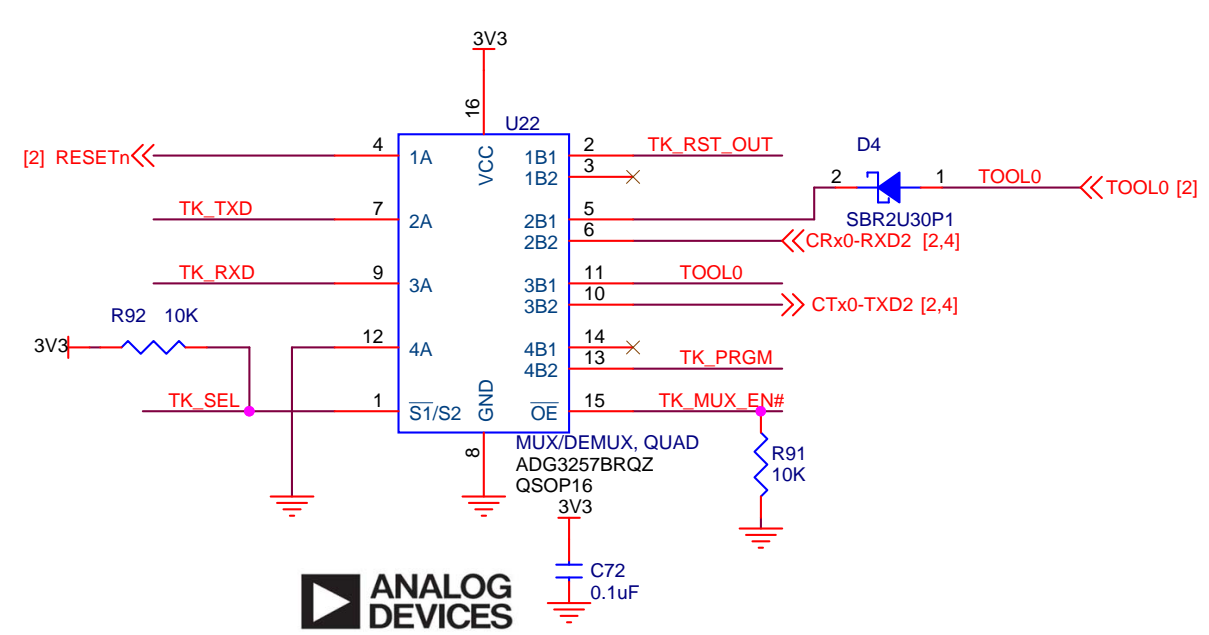
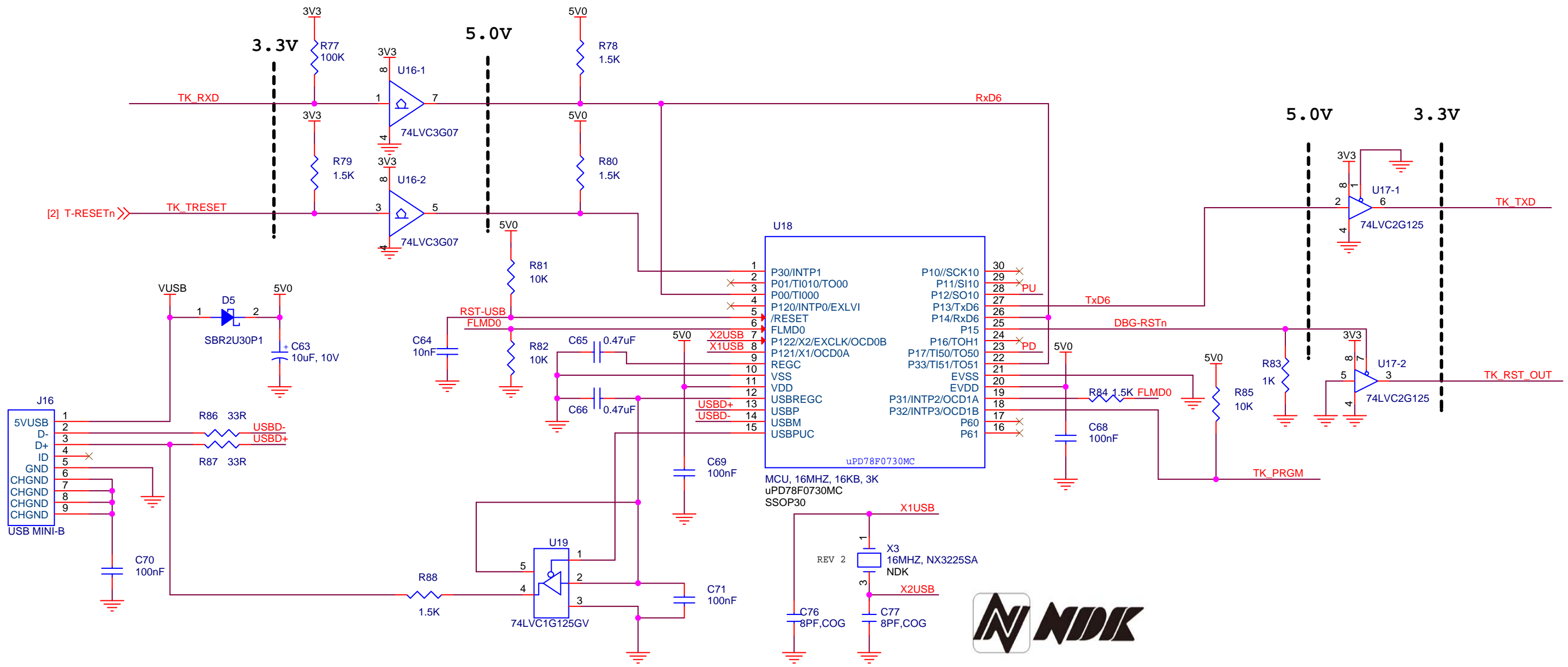


I2C ADDR = 0x90  
(10010aar), aa = A1:A0, r=R/Wn  
MAKE SURE TO PLACE AWAY FROM ANY HEAT SOURCE

I2C ADDR = 0x3A  
(0011101r), r=R/Wn

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FUTURE DESIGNS, INC.		
Title YRDKRL78G13		
Size B	Document Number YRDKRL78G13	Rev 2.1
Date: Tuesday, November 29, 2011	Sheet 7	of 8



Title		
YRDKRL78G13		
Size	Document Number	Rev
B	YRDKRL78G13	2.1
Date:	Wednesday, November 02, 2011	Sheet 8 of 8