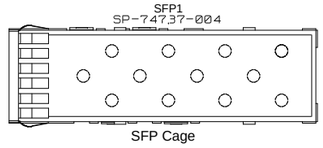
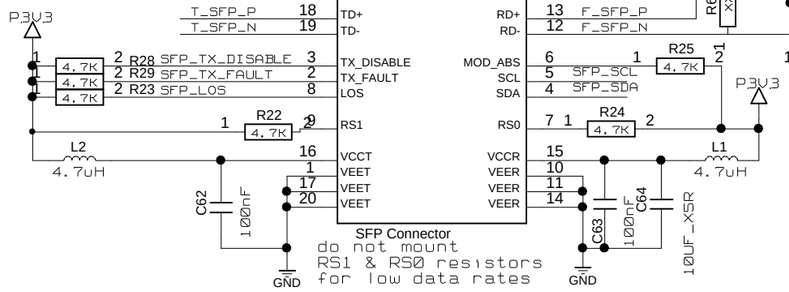
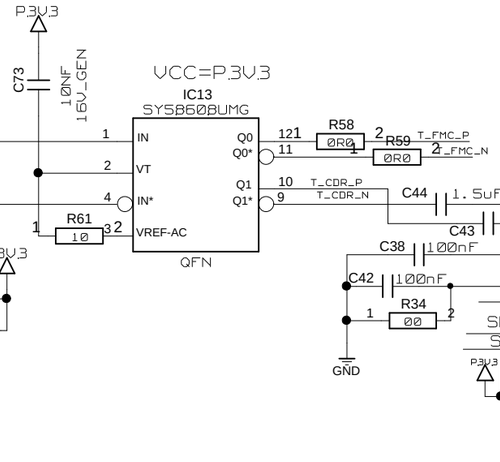


SFP I2C ADDRESSES:
1010000 AND
1010001

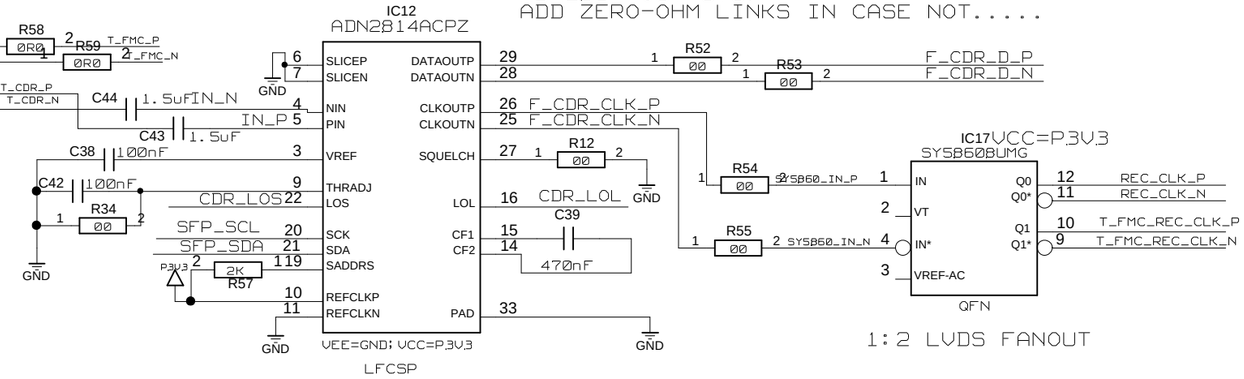




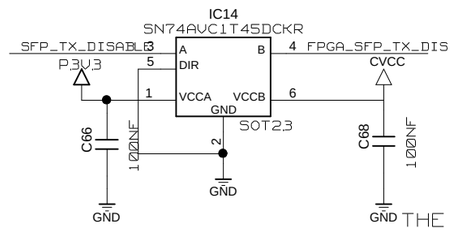
CLOCK AND DATA RECOVERY (CDR)

CDR I2C ADDRESS:
1100000 (SADDRS=1)

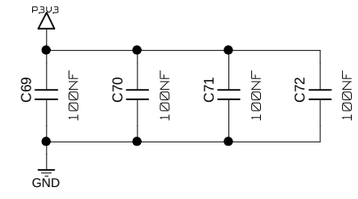
SHOULD BE ABLE TO DC COUPLE
ADN2814 OUTPUTS.
ADD ZERO-OHM LINKS IN CASE NOT.....



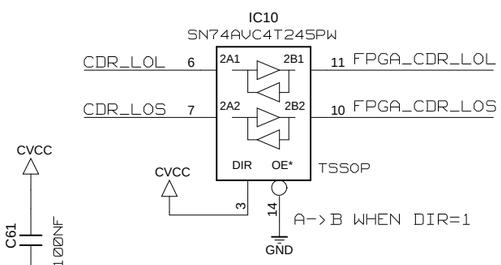
1:2 LVDS FANOUT



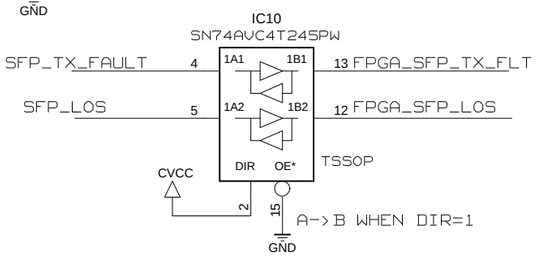
THE PCB IS COMPATIBLE WITH SOT23
USE SN74AVC1T45DBVR INSTEAD OF SN74AVC1T45DCKR.
B->A WHEN DIR=0

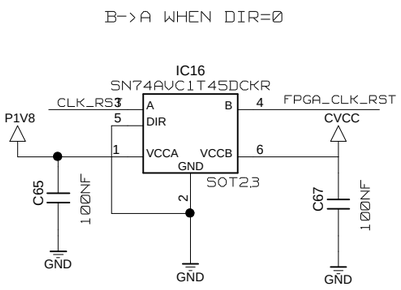


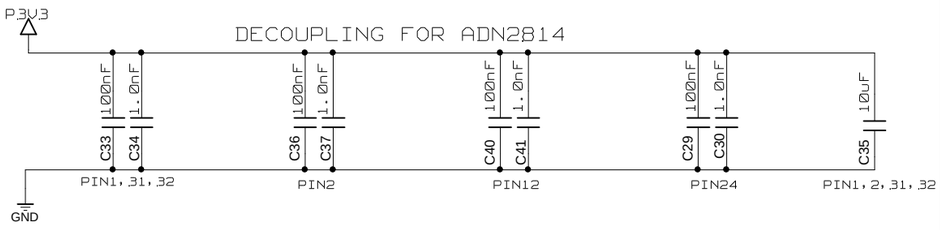
VCCA=P3V3; VCCB=CVCC

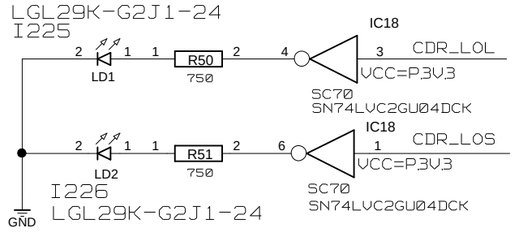


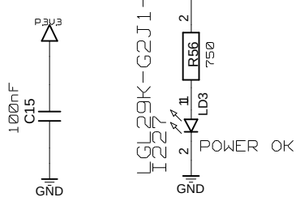
VCCA=P3V3; VCCB=CVCC







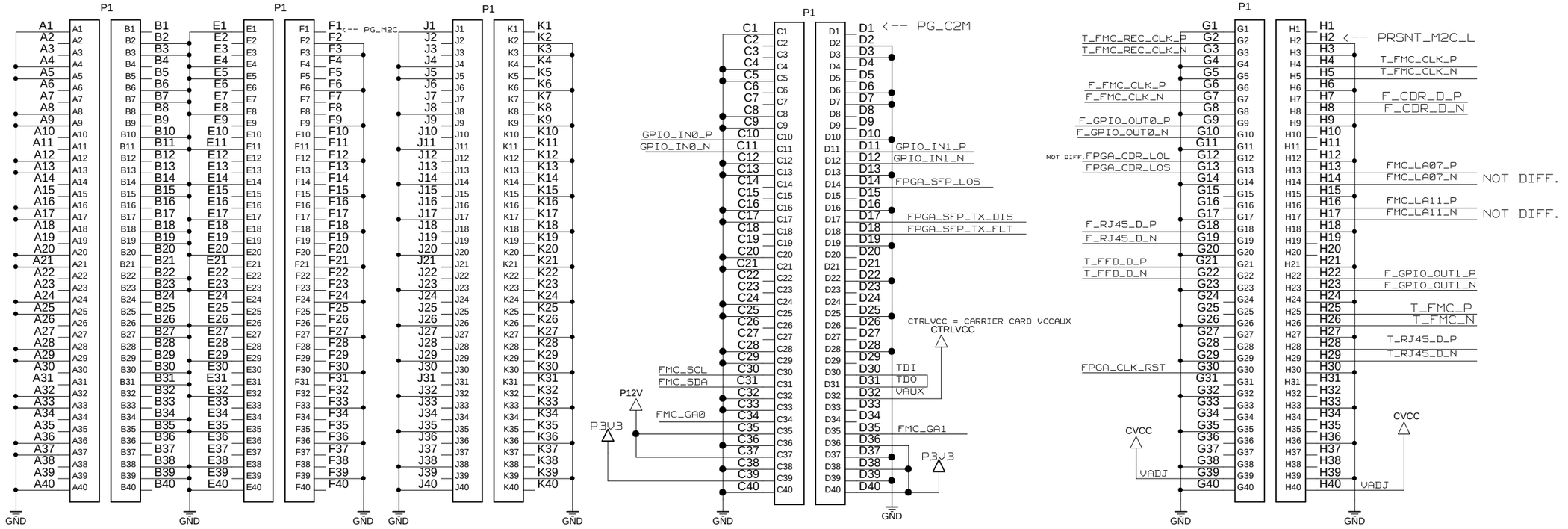




THIS PAGE ADAPTED FROM
CERN PROJECT EDA-02319-V3-1 (TTC_FMC)

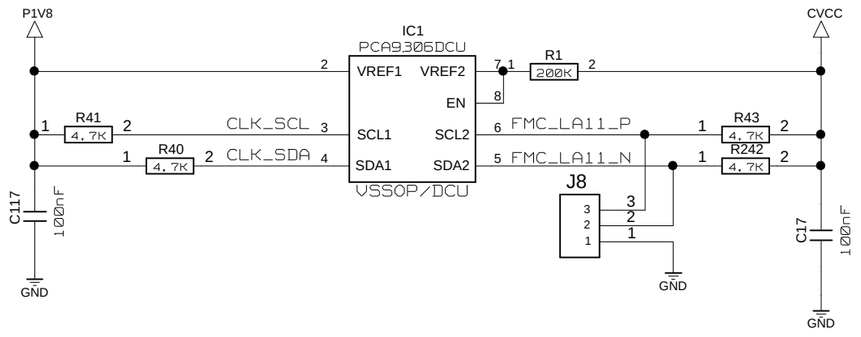
PROTODUNE TIMING/SYNC TEST FMC

PROJECT:	pc053c_toplevel		
PARTICLE PHYSICS UNIVERSITY OF BRISTOL H. H. WILLS PHYSICS LABORATORY TYNDALL AVENUE, BS8 1TL BRISTOL, UK	REVISION: C	DATE MODIFIED: 16/10/2019	
	DESIGNED BY: Baesso, Cussans	SIZE: A3	PAGE: 1 / 6
	SFP AND CDR		



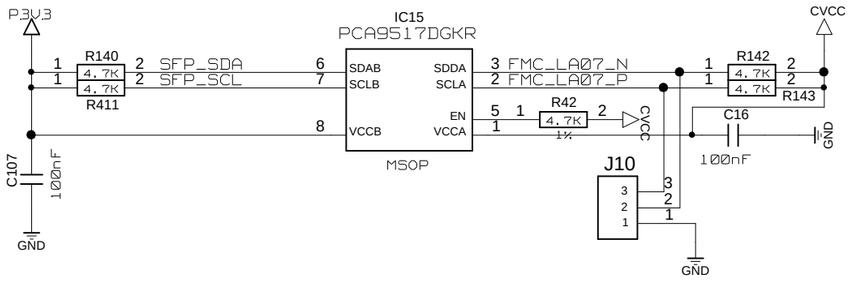
FOR P1 USE SAMTEC MC-LPC-10 OR MC-HPC-10

WHEN USING PCA9306, CVCC MUST BE AT LEAST 1.8V + 0.6V = 2.4V

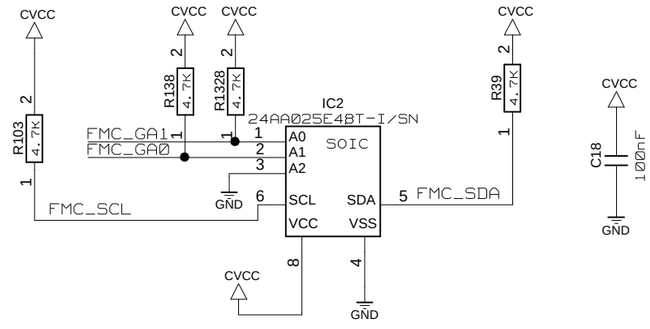


USE TCA9517DGK INSTEAD

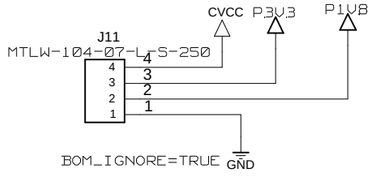
EN PIN INTERNALLY PULLED-UP



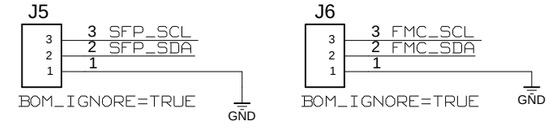
EEPROM WITH UNIQUE ID



TEST POINTS FOR POWER RAILS

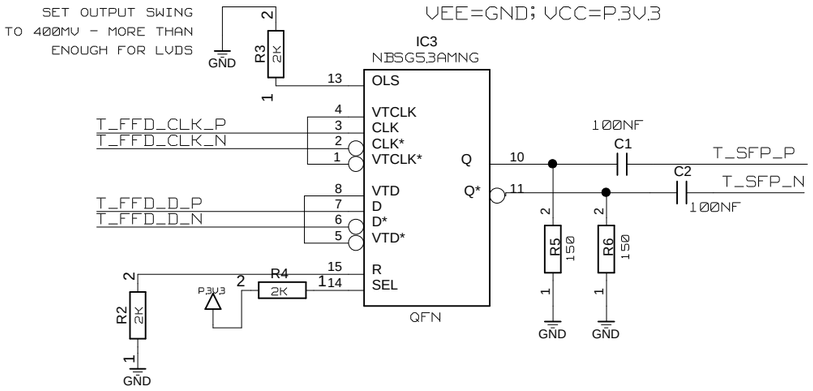


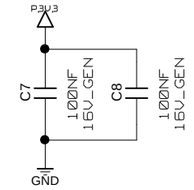
TEST POINTS FOR I2C SIGNALS

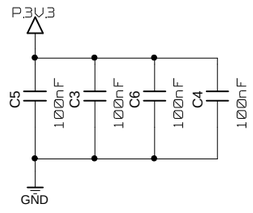


PROJECT:	pc053c_toplevel	
PARTICLE PHYSICS UNIVERSITY OF BRISTOL H. H. WILLS PHYSICS LABORATORY TYNDALL AVENUE, BS8 1TL BRISTOL, UK	REVISION: C	DATE MODIFIED: 16/10/2019
	DESIGNED BY: Baesso, Cussans	SIZE: A3 PAGE: 2 / 6
	FMC CONNECTOR + EEPROM	

HIGH SPEED D-TYPE FLIP-FLOP
(TO REDUCE JITTER ON ENCODED DATA)
(GND: 17; VEE: 12; VCC: 9, 16)
VEE=GND; VCC=P3V3







PROJECT:	pc053c_toplevel		
PARTICLE PHYSICS UNIVERSITY OF BRISTOL H. H. WILLS PHYSICS LABORATORY TYNDALL AVENUE, BS8 1TL BRISTOL, UK	REVISION: C	DATE MODIFIED: 16/10/2019	
	DESIGNED BY: Baesso, Cussans	SIZE: A3	PAGE: 3 / 6
	D-TYPE REGISTER		

JITTER REDUCING CLOCK GENERATOR

VDD=P3V3

QZ1
DSC1103CI5-050.0000
50 MHZ

CONSIDER USING A LARGER FOOTPRINT SUCH AS LV7745GEV-50.0M

1V8 NEEDED FOR SI5344

BOM_IGNORE=TRUE

SELECT INPUT USING I2C

USE SI5394A-A-GM
VDDA=P3V3; VDDS=P3V3; VDD=P1V8

IC4
SI5394A/B-A-GM
QFN

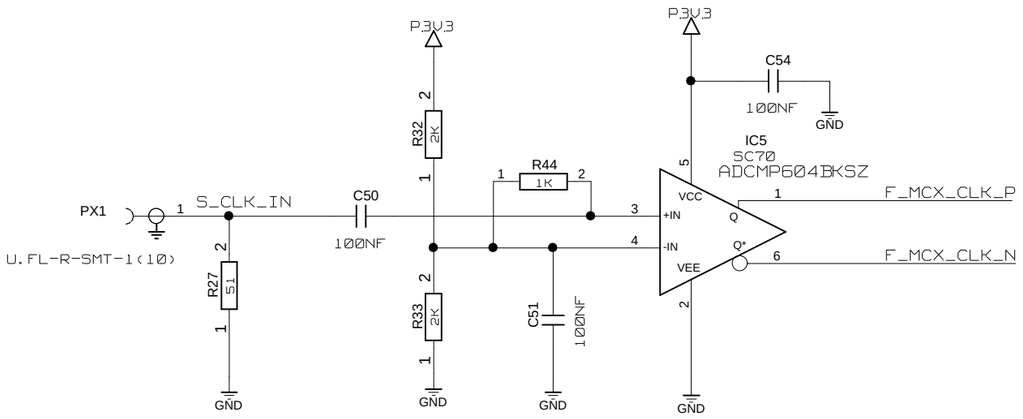
PUT 100NF CLOSE TO EACH POWER PIN

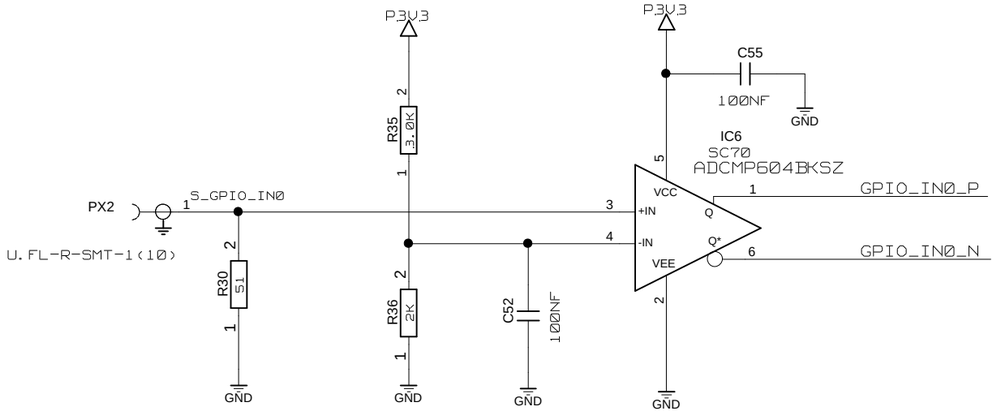
REG1
TPS799185DDCTG4
TSOT23

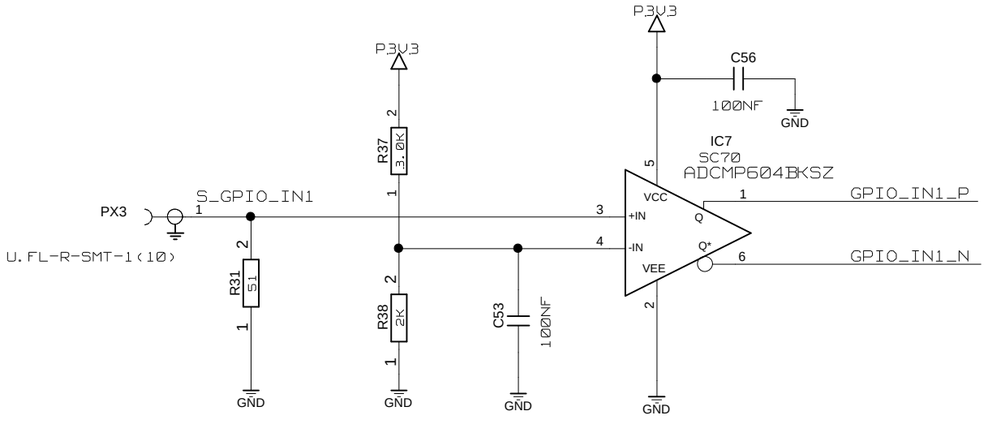
DIODE VF ~ 2.2V
--> DROP ACROSS RESISTOR = 3.3 - 2.2 = 1.1V
WANT < 25MA --> R > 1.1V/0.025A = 44 OHMS

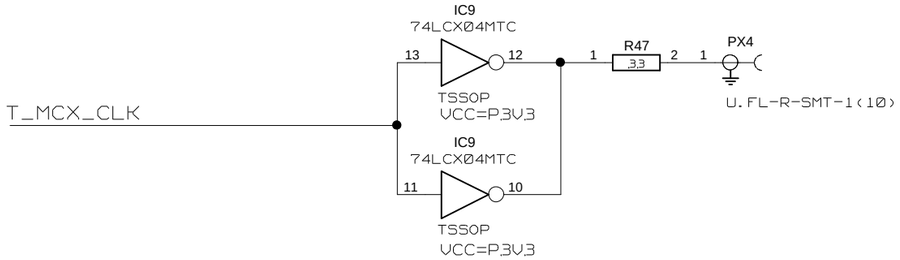
PUT 100NF CLOSE TO EACH POWER PIN

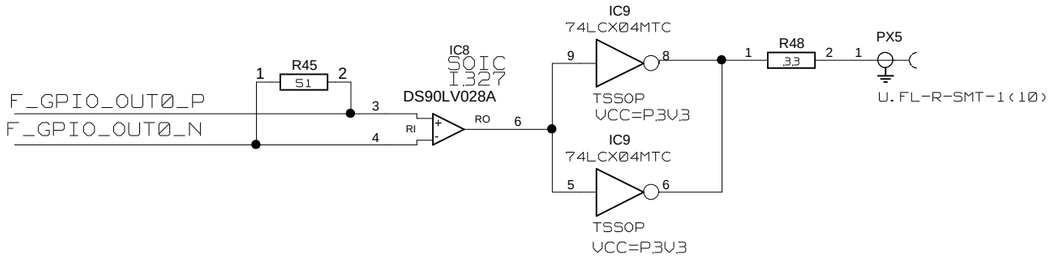
PROJECT:	pc053c_toplevel		
PARTICLE PHYSICS	REVISION: C	DATE MODIFIED: 16/10/2019	
UNIVERSITY OF BRISTOL H. H. WILLS PHYSICS LABORATORY TYNDALL AVENUE, BS8 1TL BRISTOL, UK	DESIGNED BY: Baesso, Cussans	SIZE: A3	PAGE: 4 / 6
	CLOCK GENERATOR		

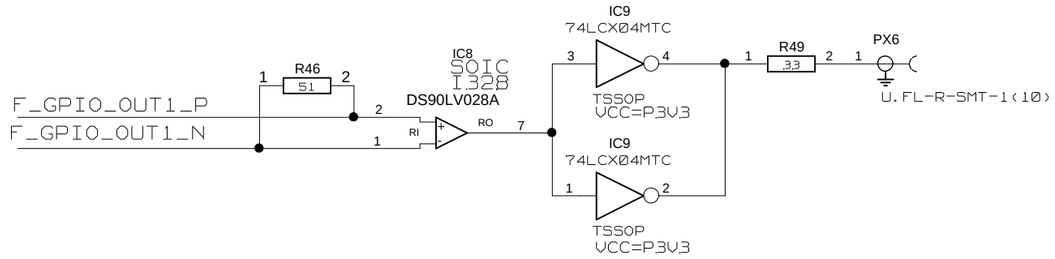


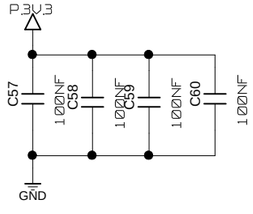






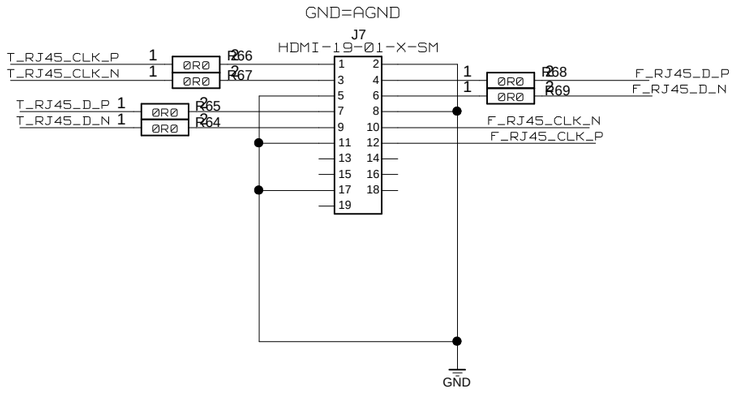


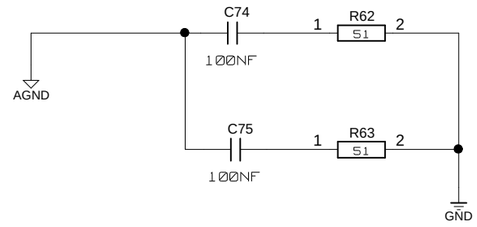




THRESHOLD = 0.825V
E.G. SERIES TERMINATED 3.3V TTL
INTO 50 OHMS

PROJECT:	pc053c_toplevel		
PARTICLE PHYSICS UNIVERSITY OF BRISTOL H. H. WILLS PHYSICS LABORATORY TYNDALL AVENUE, BS8 1TL BRISTOL, UK	REVISION: C	DATE MODIFIED: 16/10/2019	
	DESIGNED BY: Baesso, Cussans	SIZE: A3	PAGE: 5 / 6
	CLOCK I/O AND GPIO		





PROJECT:	pc053c_toplevel		
PARTICLE PHYSICS UNIVERSITY OF BRISTOL H. H. WILLS PHYSICS LABORATORY TYNDALL AVENUE, BS8 1TL BRISTOL, UK	REVISION: C	DATE MODIFIED: 16/10/2019	
	DESIGNED BY: Baesso, Cussans	SIZE: A3	PAGE: 6 / 6
	HDMI CONNECTOR		