REVISION RECORD				
WHO:	SCH REV:	PCB REV:	NOTES:	DATE:
TI-BL	R1.0	R1.0	Draft	05-Jun-2013
TI-BL	R1.1	R1.1	Edited SVS circuitry (U3,U4); Changed power supply (U14) resistors Changed F28377D (U1) pinout and connector pinout (J1) Changed ADC VREFHI circuitry (U17,U13) and switches (SW3, SW4)	24-Oct-2013

NOTES:

1) USB Differential Pairs - 90 Ohm

(A) USB-DM & USB-DP

(B) USB0_GPIO-42 & USB0_GPIO-43

(C) MCU_GPIO-42 & MCU_GPIO-43

2) EMIF - External Memory Interface Impedance Matching from J1 to U1

(A) MCU_GPIO-39:41, MCU_GPIO-44:52, MCU_GPIO-86:94 - Address [0:21]

(B) MCU_GPIO-85, MCU_GPIO-83:53 - Data [0:31]

(C) MCU_GPIO-30 - Clock

(D) MCU_GPIO-37, 31, 29 - Read/Write/ClkEn Pins

(E) MCU_GPIO-32, 34, 35, 28 - Chip Select Pins

3) ADC Differential Pair Impedance Matching

(A) HSEC_ADC even pins should match with HSEC_ADC + 1 pin (ie HSEC_ADC-C2 should match with HSEC_ADC-C3)

(B) MCU_ADC even pins should match with MCU_ADC + 1 pin (ie MCU_ADC-A0 should match with MCU_ADC-A1)

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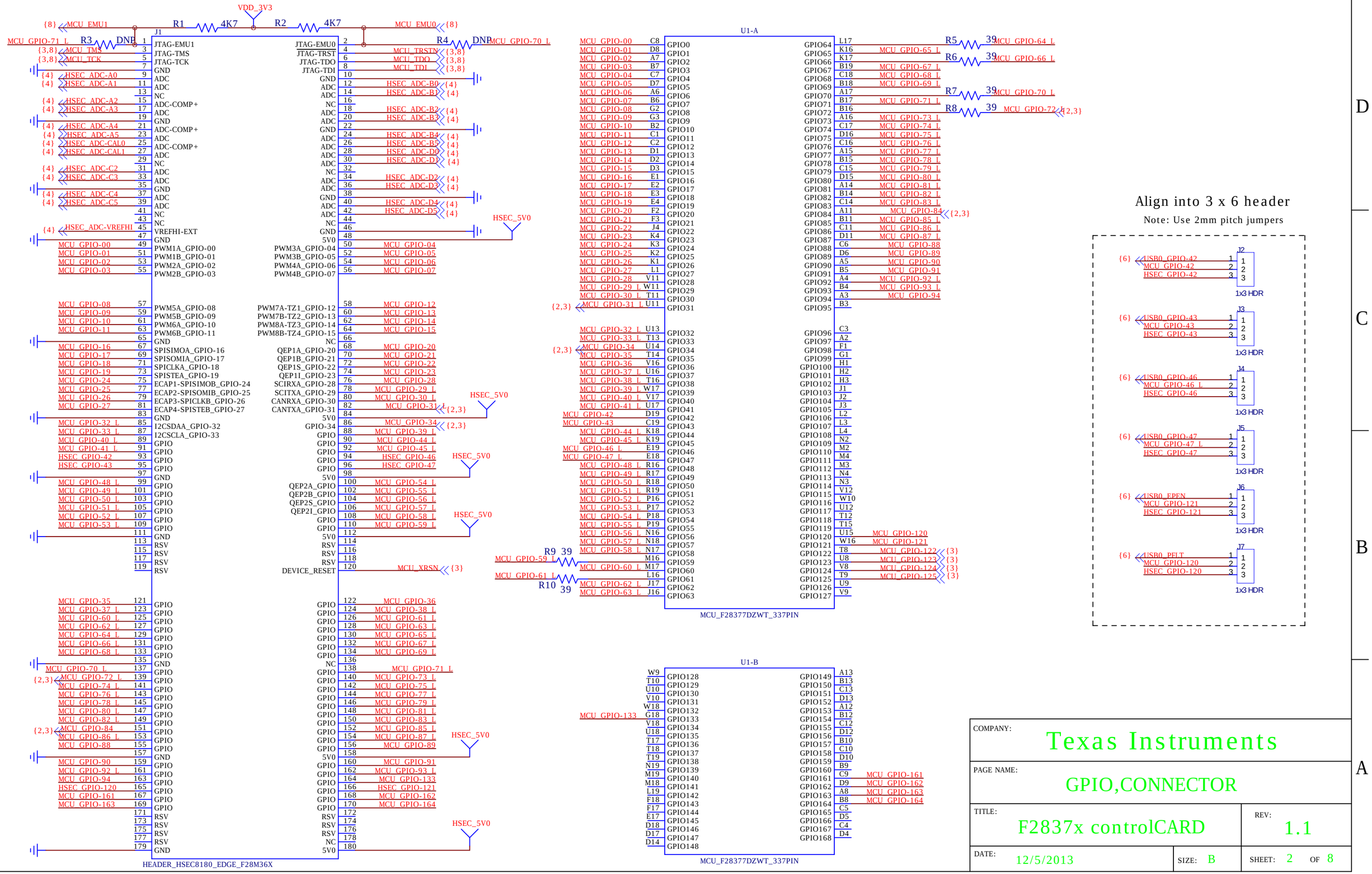
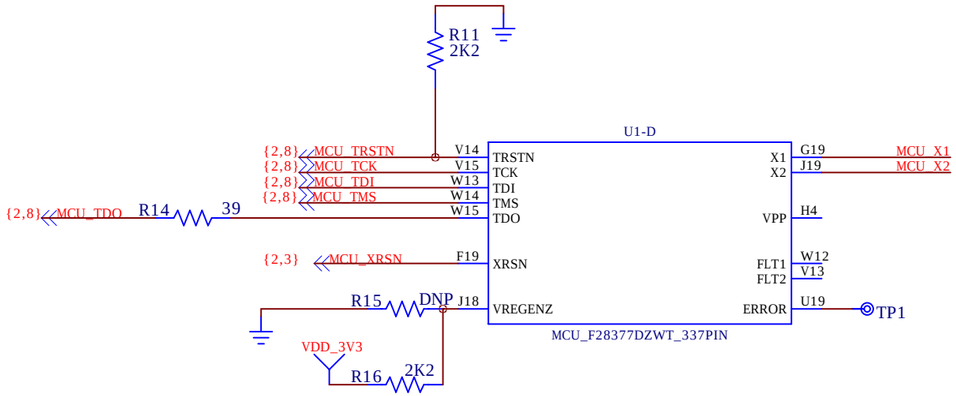
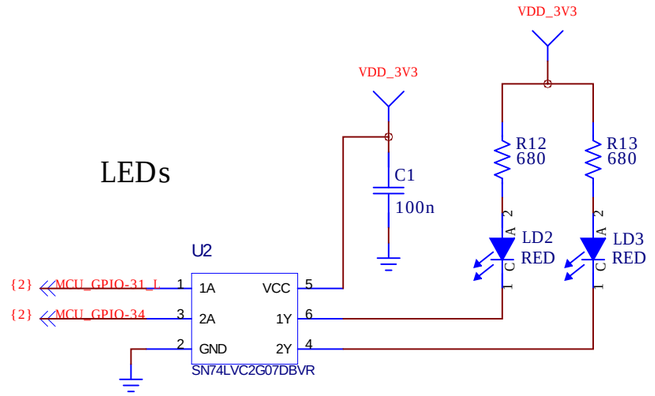
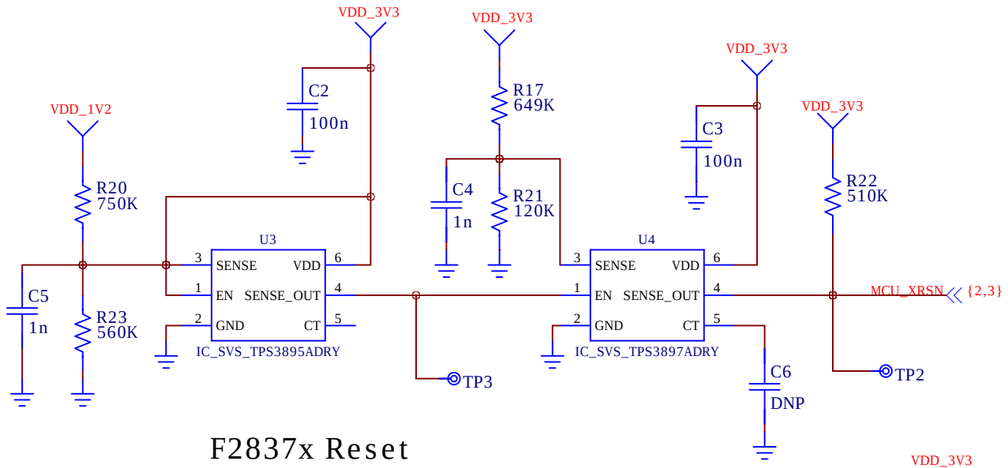
PAGE NAME: TITLE			
TITLE: F2837x controlCARD			REV: 1.1
DATE: 12/5/2013	SIZE: B	SHEET: 1	OF 8

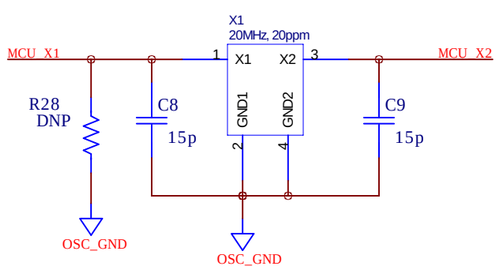

VDD_3V3
R1 4K7
R2 4K7
R3 DNP
R4 DNP
J1
HEADER_HSEC8180_EDGE_F28M36X
U1-A
MCU_F28377DZWT_337PIN
U1-B
MCU_F28377DZWT_337PIN
R5 39
R6 39
R7 39
R8 39
R9 39
R10 39
HSEC_5V0
Align into 3 x 6 header
Note: Use 2mm pitch jumpers
J2
J3
J4
J5
J6
J7
1x3 HDR
COMPANY: Texas Instruments
PAGE NAME: GPIO,CONNECTOR
TITLE: F2837x controlCARD
REV: 1.1
DATE: 12/5/2013
SIZE: B
SHEET: 2 OF 8



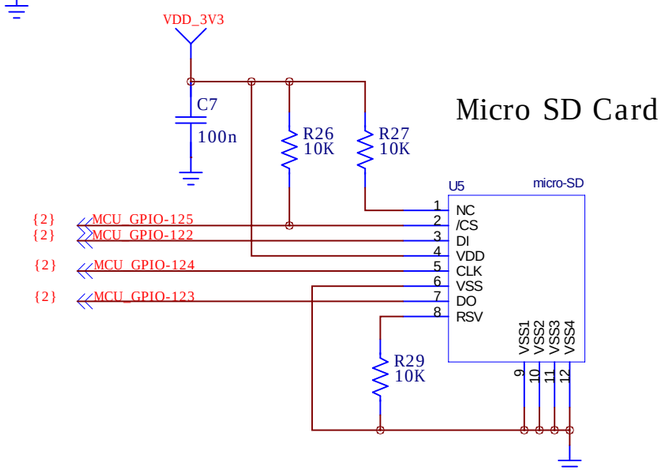




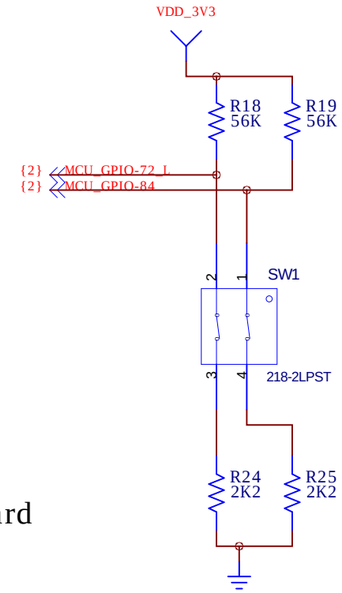
F2837x Reset



F2837x Clock



Micro SD Card



Boot Mode Selection Switch

*SW1 placed upside-down (so UP is open (1), DOWN is closed (0))

Selected Boot Mode Chart

(see datasheet for other boot modes and more information)

Mode #	GPIO72	GPIO84	Boot Mode
00	0	0	Boot from Parallel GPIO
01	0	1	Boot from SCI
02	1	0	Wait Boot Mode
03	1	1	Get Mode (Flash by default)

COMPANY: Texas Instruments		
PAGE NAME: SUPPORT		
TITLE: F2837x controlCARD		REV: 1.1
DATE: 12/5/2013	SIZE: B	SHEET: 3 OF 8

If desired, isolate (or semi-isolate) all GND nets on this page (GNDA) from the main GND. If done, the GND terminal of C82 should also go to GNDA.

All positions of SW2 should be in the ON/up state.

VDDA_MCU_3V3

C10 100n C11 100n C12 100n

U6 U7 U8 U9 U10 U11 NUP4201MR6T1G (VP, VN, I/O_6, I/O_4, I/O_3, I/O_1)

HSEC_ADC-A0 R30 0
HSEC_ADC-A1 R31 0
HSEC_ADC-A2 R32 0
HSEC_ADC-A3 R33 0
HSEC_ADC-A4 R34 0
HSEC_ADC-A5 R35 0

HSEC_ADC-B0 R36 0
HSEC_ADC-B1 R37 0
HSEC_ADC-B2 R38 0
HSEC_ADC-B3 R39 0
HSEC_ADC-B4 R40 0
HSEC_ADC-B5 R41 0

HSEC_ADC-CAL0 R44 0
HSEC_ADC-CAL1 R45 0

HSEC_ADC-C2 R46 0
HSEC_ADC-C3 R47 0
HSEC_ADC-C4 R48 0
HSEC_ADC-C5 R49 0

HSEC_ADC-D0 R50 0
HSEC_ADC-D1 R51 0
HSEC_ADC-D2 R52 0
HSEC_ADC-D3 R53 0
HSEC_ADC-D4 R54 0
HSEC_ADC-D5 R55 0

U1-C

U1	ADCINA0
T1	ADCINA1
U2	ADCINA2
T2	ADCINA3
U3	ADCINA4
T3	ADCINA5
V2	ADCINB0
W2	ADCINB1
V3	ADCINB2
W3	ADCINB3
V4	ADCINB4
W4	ADCINB5
T4	ADCINCAL0
U4	ADCINCAL1
R3	ADCINC2
P3	ADCINC3
R4	ADCINC4
P4	ADCINC5
T5	ADCIND0
U5	ADCIND1
T6	ADCIND2
U6	ADCIND3
T7	ADCIND4
U7	ADCIND5

MCU_F28377DZWT_337PIN

C19 C20 C21 C22 C23 C24 C25 C26 C27 C28 C29 C30 C31 C32 C33 C34 C35 C36 C37 C38 C39 C40 C41 C42 DNP

Place near U1

VDDA_MCU_3V3

VDDA	P6
VDDA	R6
VSSA	P1
VSSA	P5
VSSA	R5
VSSA	V7
VSSA	W1

C13 100n C14 100n

VREFHIA	V1
VREFHIB	W5
VREFHIC	R1
VREFHID	V5
VREFLOA	R2
VREFLOB	W6
VREFLOC	P2
VREFLOD	V6

C15 2u2 C16 2u2 C17 2u2 C18 2u2

SW2 4xSPST

IN_5V0

C95 100n
C96 2u2

VDDA_MCU_3V3

C43 100n
C44 2u2

U17 REF3033AIDBZR (IN, GND, OUT) — 3.3V vref

U13 REF3030AIDBZR (IN, GND, OUT) — 3.0V vref

R42 0
R43 DNP

HSEC_ADC-VREFHI {2}

C46 470n

SW3 CAS-D20TA

SW4 CAS-D20TA

VDDA_MCU_3V3

C45 100n

U12-A IC_OPA_LMP7709MT

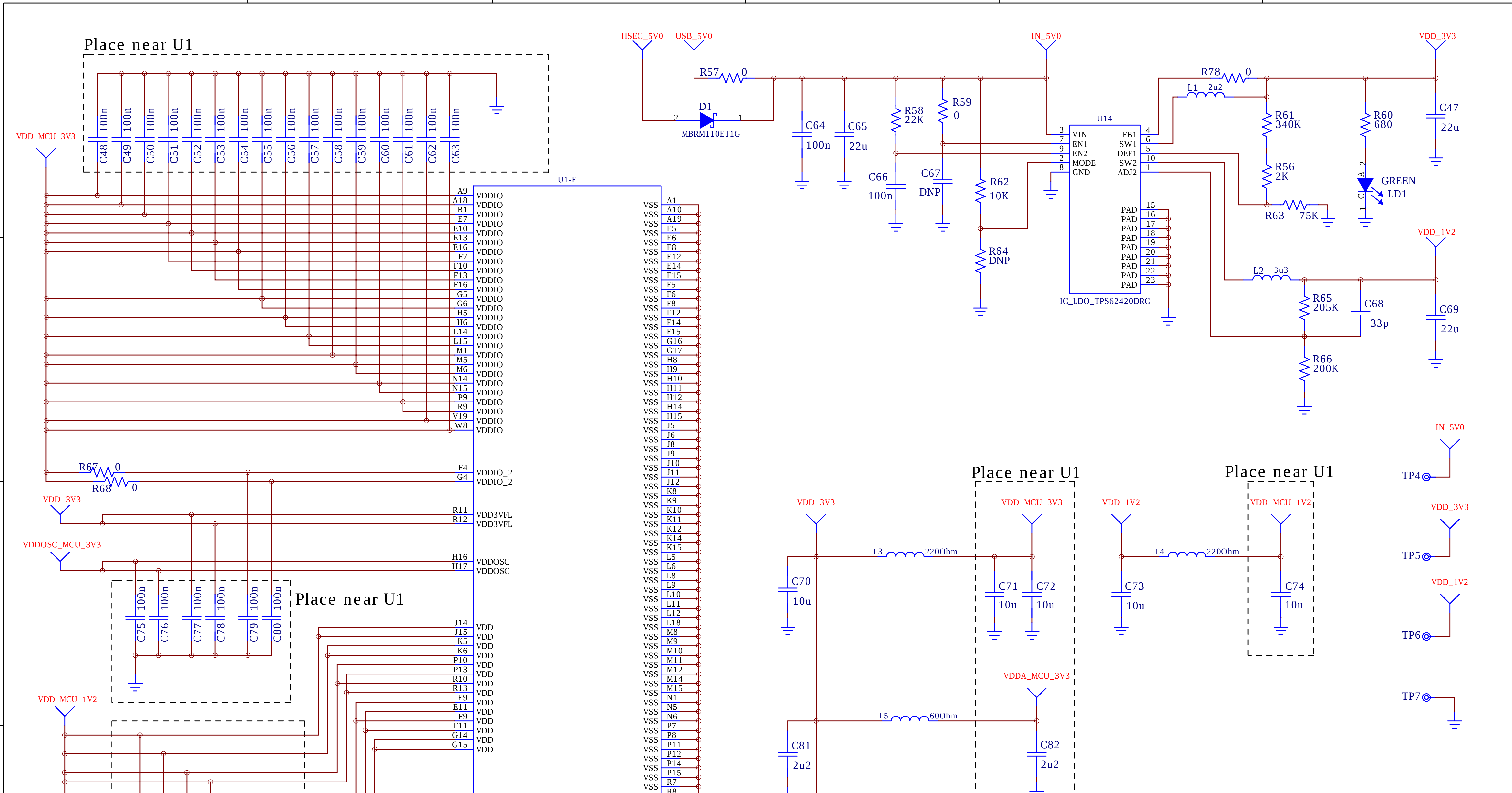
U12-B IC_OPA_LMP7709MT

U12-C IC_OPA_LMP7709MT

U12-D IC_OPA_LMP7709MT

C97 100n C98 100n C99 100n C100 100n

COMPANY:	Texas Instruments
PAGE NAME:	ADC
TITLE:	F2837x controlCARD
REV:	1.1
DATE:	12/5/2013
SIZE:	B
SHEET:	4 OF 8



COMPANY: Texas Instruments

PAGE NAME: POWER

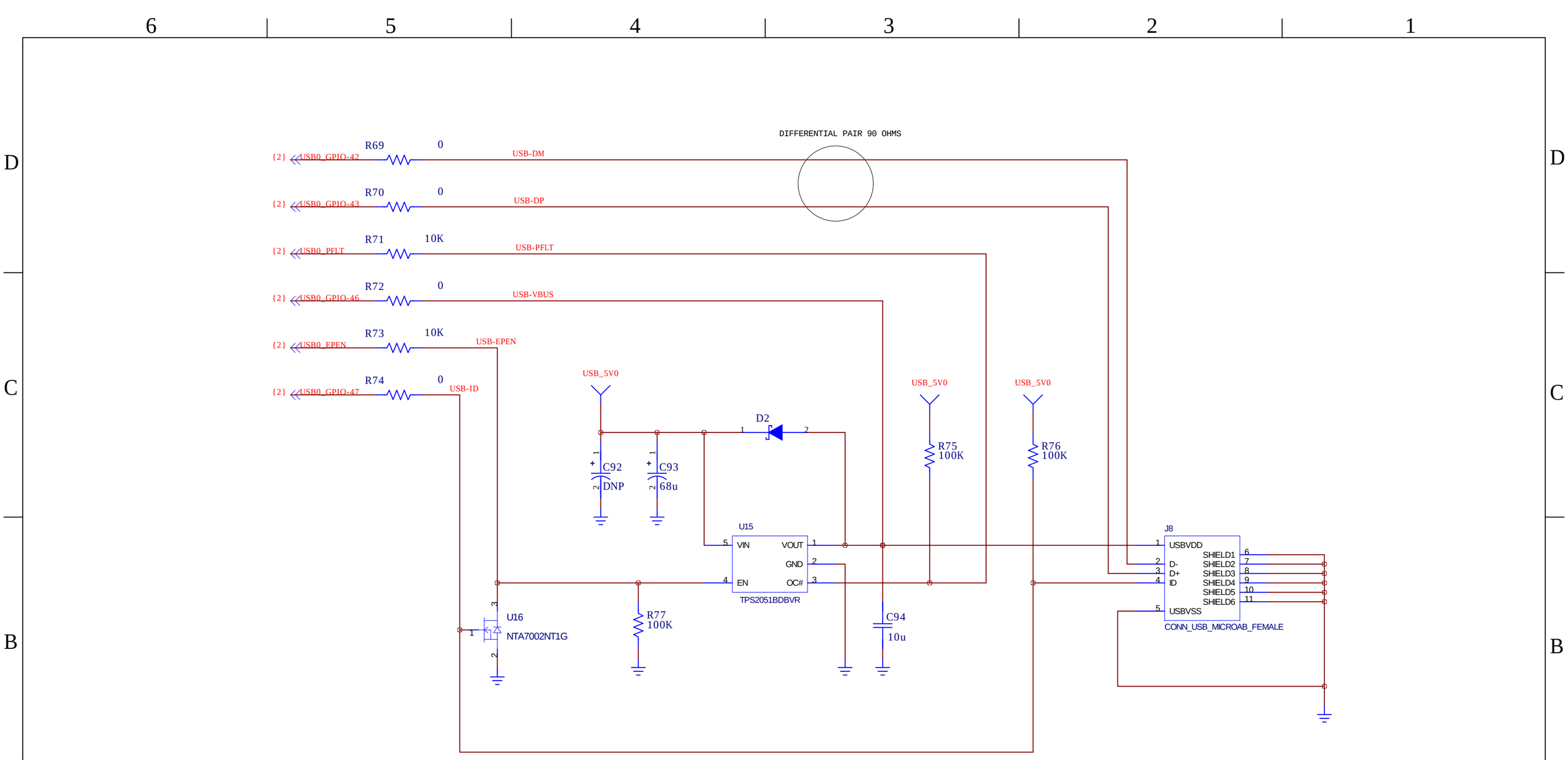
TITLE: F2837x controlCARD

REV: 1.1

DATE: 12/5/2013

SIZE: B

SHEET: 5 OF 8



COMPANY:	Texas Instruments
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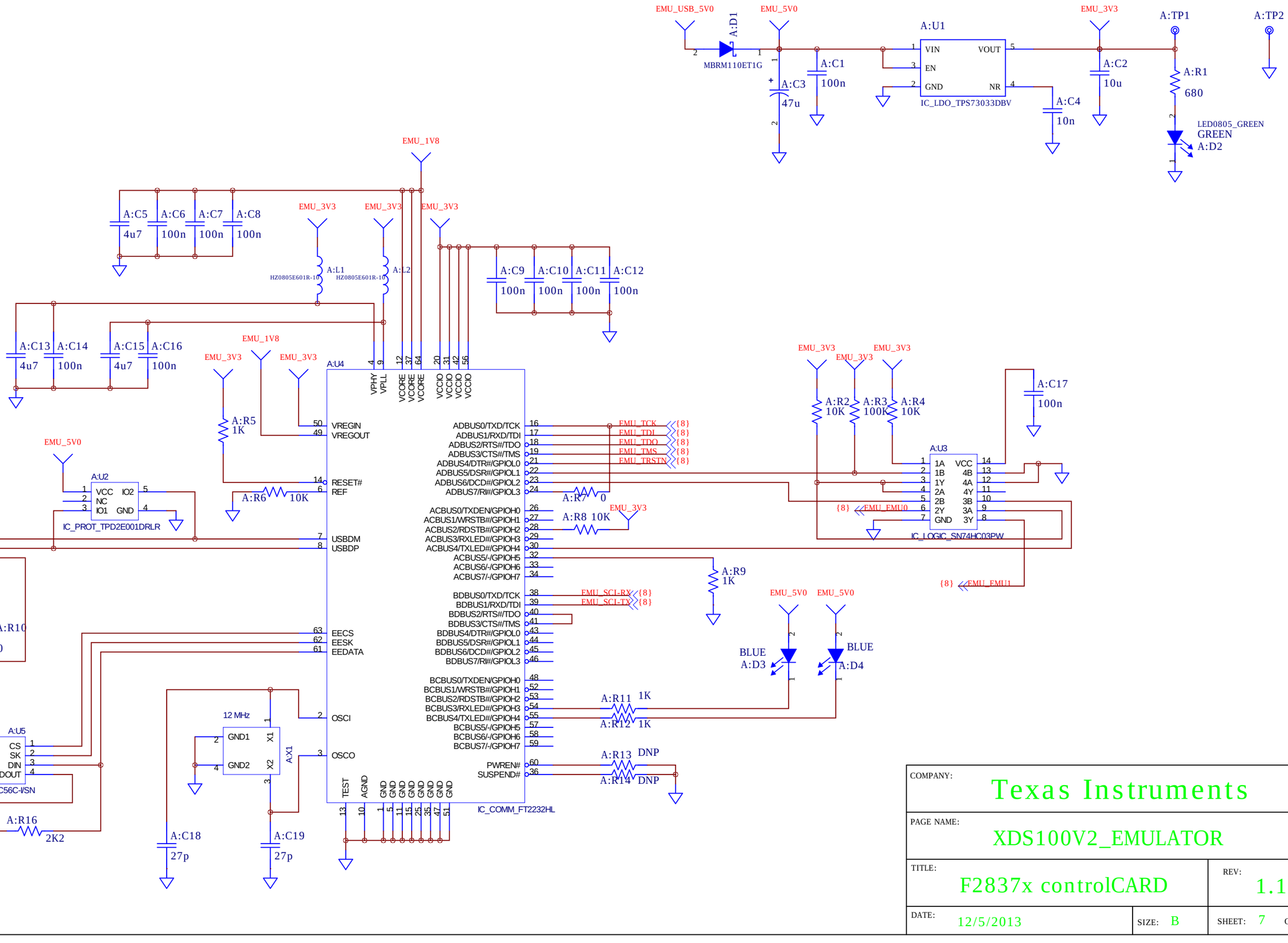
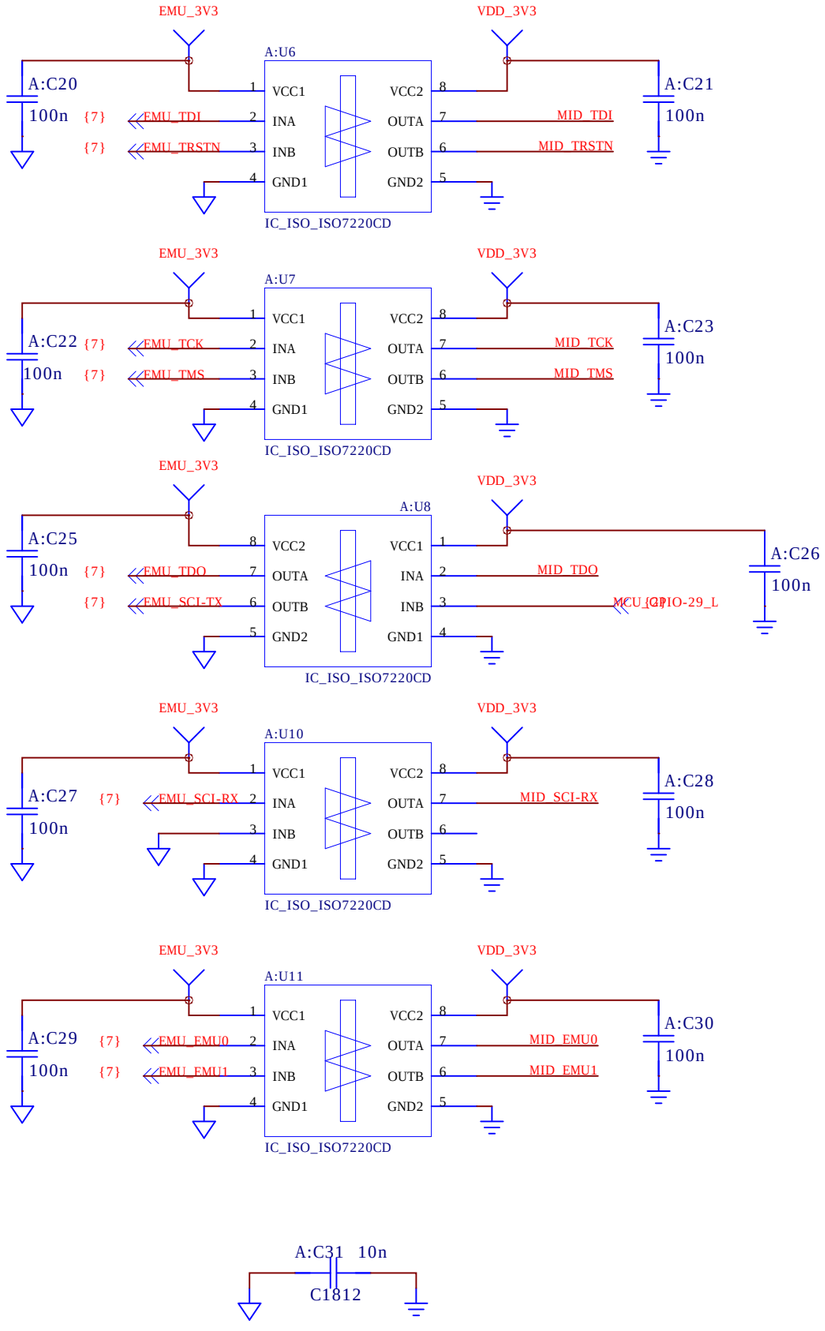
REV:	1.1
DATE:	12/5/2013
SIZE:	B
SHEET:	6 OF 8

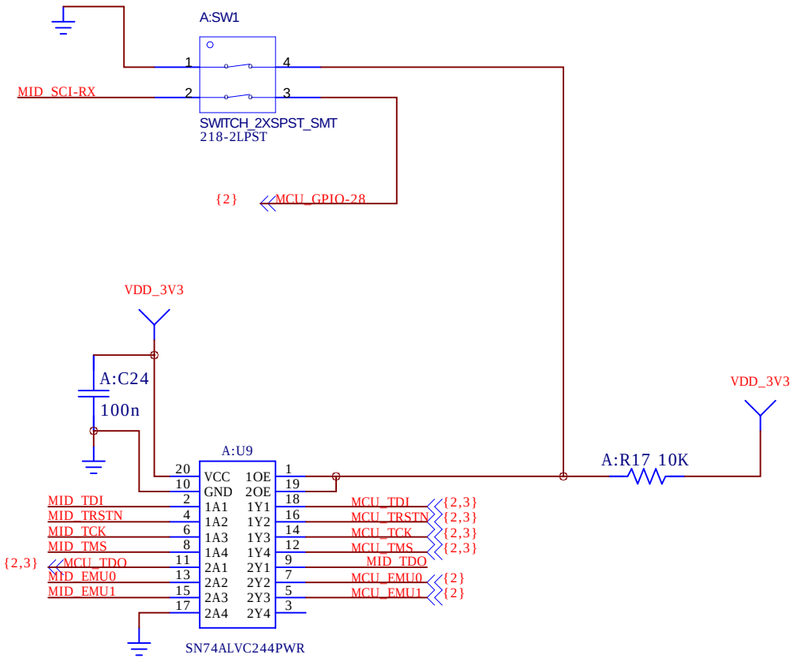


COMPANY:	Texas Instruments
PAGE NAME:	XDS100V2_EMULATOR
TITLE:	F2837x controlCARD
REV:	1.1
DATE:	12/5/2013
SIZE:	B
SHEET:	7 OF 8



A:SW1 - Emulation & GPIO28 Switch

Pos 1 ON: Use xds100v2 emulator that is on the cCARD
Pos 1 OFF: Boot from FLASH/peripheral (see boot mode switch) OR use emulator on baseboard
Pos 2 ON: GPIO28 will be controlled by the USB-to-UART adapter on the FTDI chip
Pos 2 OFF: GPIO-28 can be controlled by a pin in HSEC connector



COMPANY: Texas Instruments		
PAGE NAME: EMULATOR_INTERFACE		
TITLE: F2837x controlCARD		REV: 1.1
DATE: 12/5/2013	SIZE: B	SHEET: 8 OF 8