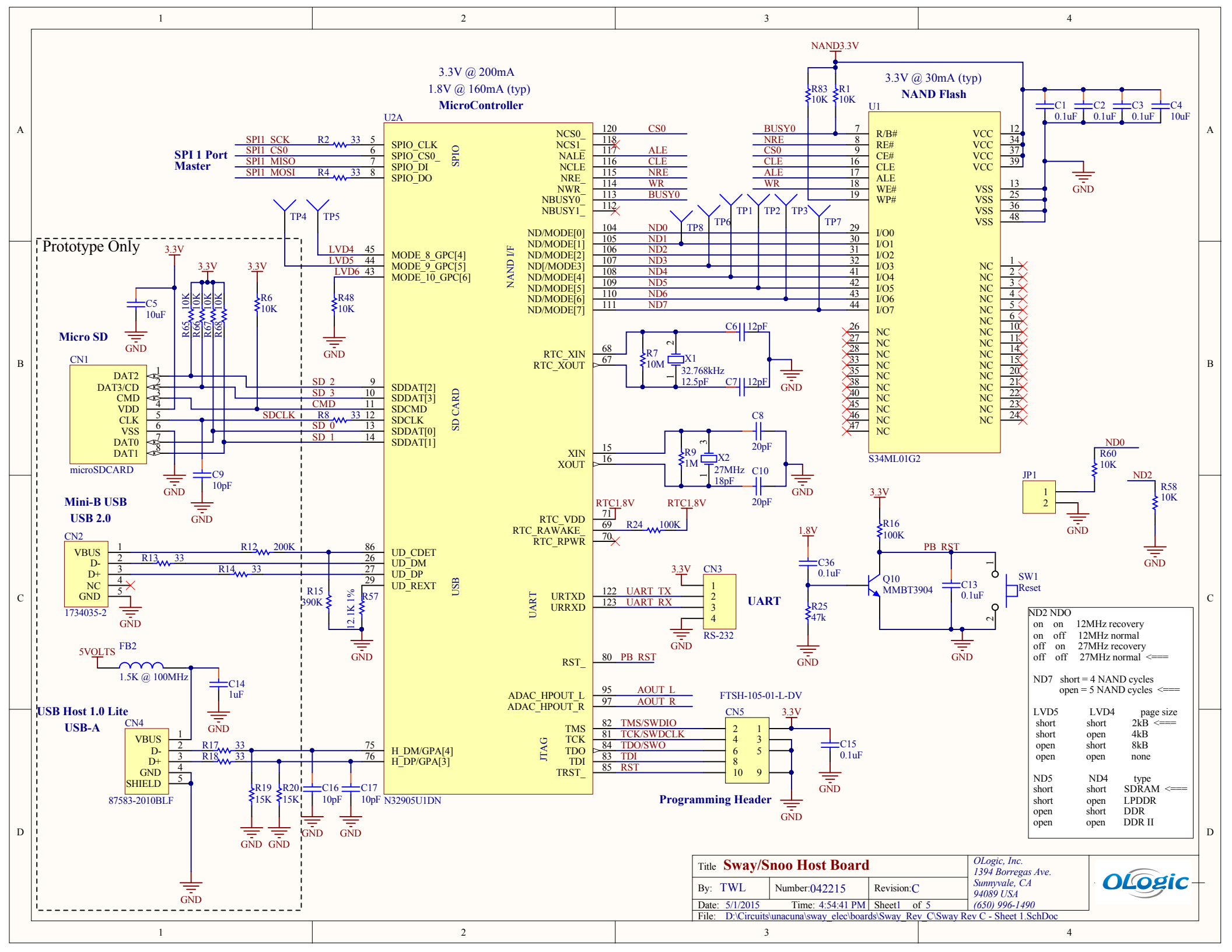
3.3V @ 200mA
1.8V @ 160mA (typ)
MicroController
U2A
SPI 1 Port Master
SPI1_SCK
SPI1_CS0
SPI1_MISO
SPI1_MOSI
SPIO_CLK
SPIO_CS0_
SPIO_DI
SPIO_DO
SPIO
MODE_8_GPC[4]
MODE_9_GPC[5]
MODE_10_GPC[6]
NAND I/F
NCS0_
NCS1_
NALE
NCLE
NRE_
NWR_
NBUSY0_
NBUSY1_
ND/MODE[0]
ND/MODE[1]
ND/MODE[2]
ND/[MODE3]
ND/MODE[4]
ND/MODE[5]
ND/MODE[6]
ND/MODE[7]
NAND3.3V
3.3V @ 30mA (typ)
NAND Flash
U1
S34ML01G2
R/B#
RE#
CE#
CLE
ALE
WE#
WP#
I/O0
I/O1
I/O2
I/O3
I/O4
I/O5
I/O6
I/O7
VCC
VSS
NC
BUSY0
NRE
CS0
CLE
ALE
WR
C1 0.1uF
C2 0.1uF
C3 0.1uF
C4 10uF
GND
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
Prototype Only
3.3V
C5 10uF
R6 10K
R48 10K
R65 10K
R66 10K
R67 10K
R68 10K
Micro SD
CN1
DAT2
DAT3/CD
CMD
VDD
CLK
VSS
DAT0
DAT1
microSDCARD
SD_2
SD_3
CMD
SDCLK
SD_0
SD_1
SD CARD
SDDAT[2]
SDDAT[3]
SDCMD
SDCLK
SDDAT[0]
SDDAT[1]
R8 33
C9 10pF
Mini-B USB
USB 2.0
CN2
VBUS
D-
D+
NC
GND
1734035-2
R12 200K
R13 33
R14 33
R15 390K
R57 12.1K 1%
UD_CDET
UD_DM
UD_DP
UD_REXT
USB
5VOLTS
FB2
1.5K @ 100MHz
C14 1uF
USB Host 1.0 Lite
USB-A
CN4
SHIELD
87583-2010BLF
R17 33
R18 33
R19 15K
R20 15K
C16 10pF
C17 10pF
H_DM/GPA[4]
H_DP/GPA[3]
N32905U1DN
RTC_XIN
RTC_XOUT
R7 10M
X1
32.768kHz
12.5pF
C6 12pF
C7 12pF
XIN
XOUT
R9 1M
X2
27MHz
18pF
C8 20pF
C10 20pF
RTC1.8V
RTC_VDD
RTC_RAWAKE_
RTC_RPWR
R24 100K
UART
URTXD
URRXD
UART_TX
UART_RX
CN3
RS-232
RST_
PB_RST
R16 100K
C36 0.1uF
R25 47k
Q10 MMBT3904
C13 0.1uF
SW1 Reset
JP1
ND0
ND2
R60 10K
R58 10K
ADAC_HPOUT_L
ADAC_HPOUT_R
AOUT_L
AOUT_R
FTSH-105-01-L-DV
CN5
JTAG
TMS
TCK
TDO
TDI
TRST_
TMS/SWDIO
TCK/SWDCLK
TDO/SWO
TDI
RST
C15 0.1uF
Programming Header
ND2 NDO
on on 12MHz recovery
on off 12MHz normal
off on 27MHz recovery
off off 27MHz normal <====
ND7 short = 4 NAND cycles
open = 5 NAND cycles <====
LVD5 LVD4 page size
short short 2kB <====
short open 4kB
open short 8kB
open open none
ND5 ND4 type
short short SDRAM <====
short open LPDDR
open short DDR
open open DDR II
Title Sway/Snoo Host Board
By: TWL
Number:042215
Revision:C
Date: 5/1/2015 Time: 4:54:41 PM
Sheet1 of 5
File: D:\Circuits\unacuna\sway_elec\boards\Sway_Rev_C\Sway Rev C - Sheet 1.SchDoc
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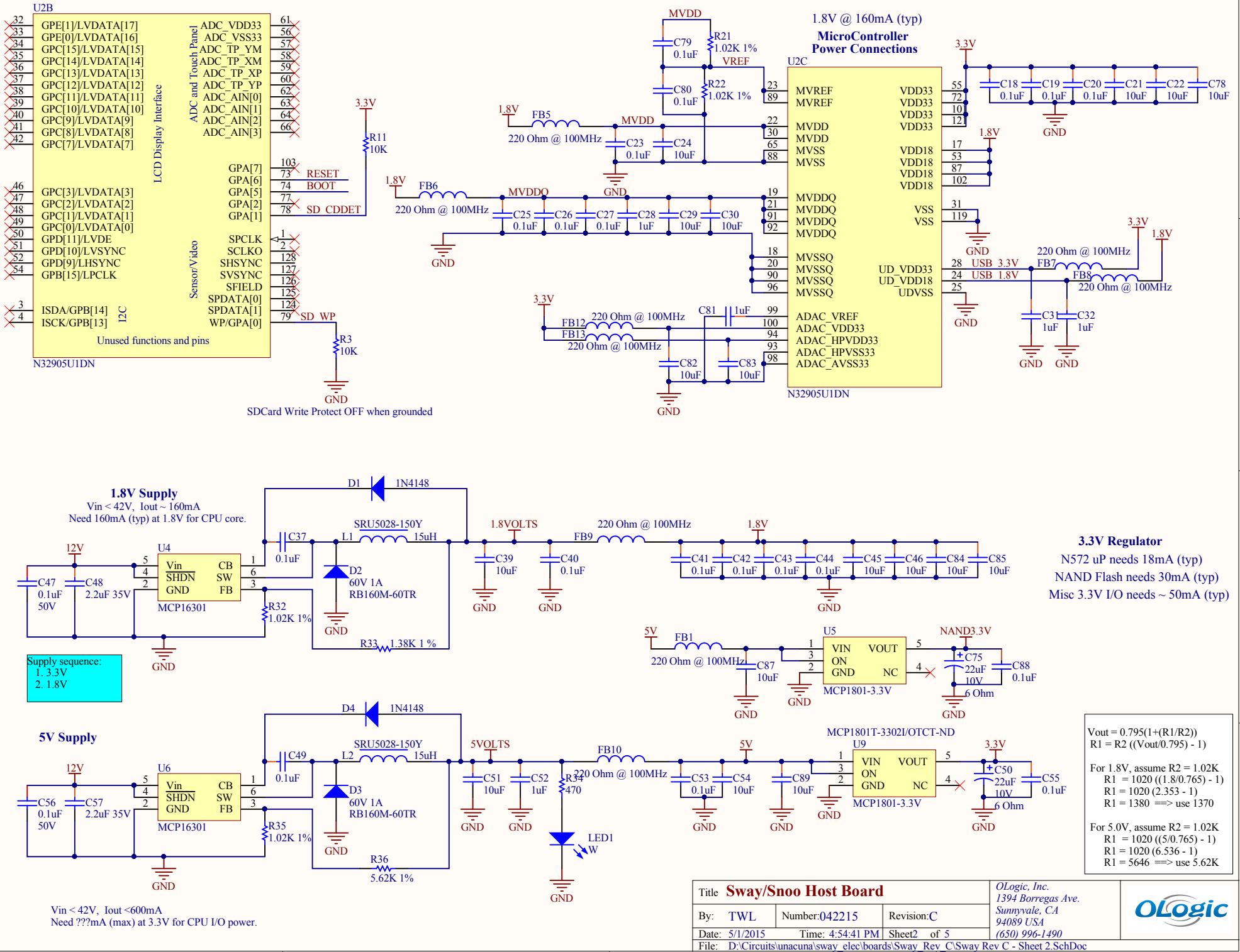
U2B
LCD Display Interface
ADC and Touch Panel
Sensor/Video
I2C
GPE[1]/LVDATA[17]
GPE[0]/LVDATA[16]
GPC[15]/LVDATA[15]
GPC[14]/LVDATA[14]
GPC[13]/LVDATA[13]
GPC[12]/LVDATA[12]
GPC[11]/LVDATA[11]
GPC[10]/LVDATA[10]
GPC[9]/LVDATA[9]
GPC[8]/LVDATA[8]
GPC[7]/LVDATA[7]
GPC[3]/LVDATA[3]
GPC[2]/LVDATA[2]
GPC[1]/LVDATA[1]
GPC[0]/LVDATA[0]
GPD[11]/LVDE
GPD[10]/LVSYNC
GPD[9]/LHSYNC
GPB[15]/LPCLK
ISDA/GPB[14]
ISCK/GPB[13]
ADC_VDD33
ADC_VSS33
ADC_TP_YM
ADC_TP_XM
ADC_TP_XP
ADC_TP_YP
ADC_AIN[0]
ADC_AIN[1]
ADC_AIN[2]
ADC_AIN[3]
GPA[7]
GPA[6]
GPA[5]
GPA[2]
GPA[1]
SPCLK
SCLKO
SHSYNC
SVSYNC
SFIELD
SPDATA[0]
SPDATA[1]
WP/GPA[0]
RESET
BOOT
SD_CDDET
SD_WP
Unused functions and pins
N32905U1DN
3.3V
R11 10K
R3 10K
GND
SDCard Write Protect OFF when grounded
1.8V @ 160mA (typ)
MicroController
Power Connections
U2C
MVDD
C79 0.1uF
R21 1.02K 1%
VREF
C80 0.1uF
R22 1.02K 1%
FB5
220 Ohm @ 100MHz
C23 0.1uF
C24 10uF
FB6
C25 0.1uF
C26 0.1uF
C27 0.1uF
C28 1uF
C29 10uF
C30 10uF
MVDDQ
MVSS
MVSSQ
VDD33
VDD18
VSS
UD_VDD33
UD_VDD18
UDVSS
ADAC_VREF
ADAC_VDD33
ADAC_HPVDD33
ADAC_HPVSS33
ADAC_AVSS33
C81 1uF
FB12
FB13
C82 10uF
C83 10uF
C18 0.1uF
C19 0.1uF
C20 0.1uF
C21 10uF
C22 10uF
C78 10uF
C31 1uF
C32 1uF
USB 3.3V
USB 1.8V
FB7
FB8
1.8V Supply
Vin < 42V, Iout ~ 160mA
Need 160mA (typ) at 1.8V for CPU core.
D1 1N4148
SRU5028-150Y
L1 15uH
U4
MCP16301
Vin
SHDN
GND
CB
SW
FB
C37 0.1uF
C47 0.1uF 50V
C48 2.2uF 35V
D2 60V 1A RB160M-60TR
R32 1.02K 1%
R33 1.38K 1 %
1.8VOLTS
C39 10uF
C40 0.1uF
FB9
C41 0.1uF
C42 0.1uF
C43 0.1uF
C44 0.1uF
C45 10uF
C46 10uF
C84 10uF
C85 10uF
Supply sequence:
1. 3.3V
2. 1.8V
3.3V Regulator
N572 uP needs 18mA (typ)
NAND Flash needs 30mA (typ)
Misc 3.3V I/O needs ~ 50mA (typ)
5V
FB1
U5
MCP1801-3.3V
VIN
VOUT
ON
GND
NC
C87 10uF
NAND3.3V
C75 22uF 10V
6 Ohm
C88 0.1uF
5V Supply
D4 1N4148
SRU5028-150Y
L2 15uH
U6
MCP16301
C49 0.1uF
C56 0.1uF 50V
C57 2.2uF 35V
D3 60V 1A RB160M-60TR
R35 1.02K 1%
R36 5.62K 1%
5VOLTS
C51 10uF
C52 1uF
R34 470
LED1 W
FB10
C53 0.1uF
C54 10uF
C89 10uF
MCP1801T-3302I/OTCT-ND
U9
C50 22uF 10V
6 Ohm
C55 0.1uF
Vout = 0.795(1+(R1/R2))
R1 = R2 ((Vout/0.795) - 1)
For 1.8V, assume R2 = 1.02K
R1 = 1020 ((1.8/0.765) - 1)
R1 = 1020 (2.353 - 1)
R1 = 1380 ==> use 1370
For 5.0V, assume R2 = 1.02K
R1 = 1020 ((5/0.765) - 1)
R1 = 1020 (6.536 - 1)
R1 = 5646 ==> use 5.62K
Vin < 42V, Iout <600mA
Need ???mA (max) at 3.3V for CPU I/O power.
Title Sway/Snoo Host Board
By: TWL
Number:042215
Revision:C
Date: 5/1/2015
Time: 4:54:41 PM
Sheet2 of 5
File: D:\Circuits\unacuna\sway_elec\boards\Sway_Rev_C\Sway Rev C - Sheet 2.SchDoc
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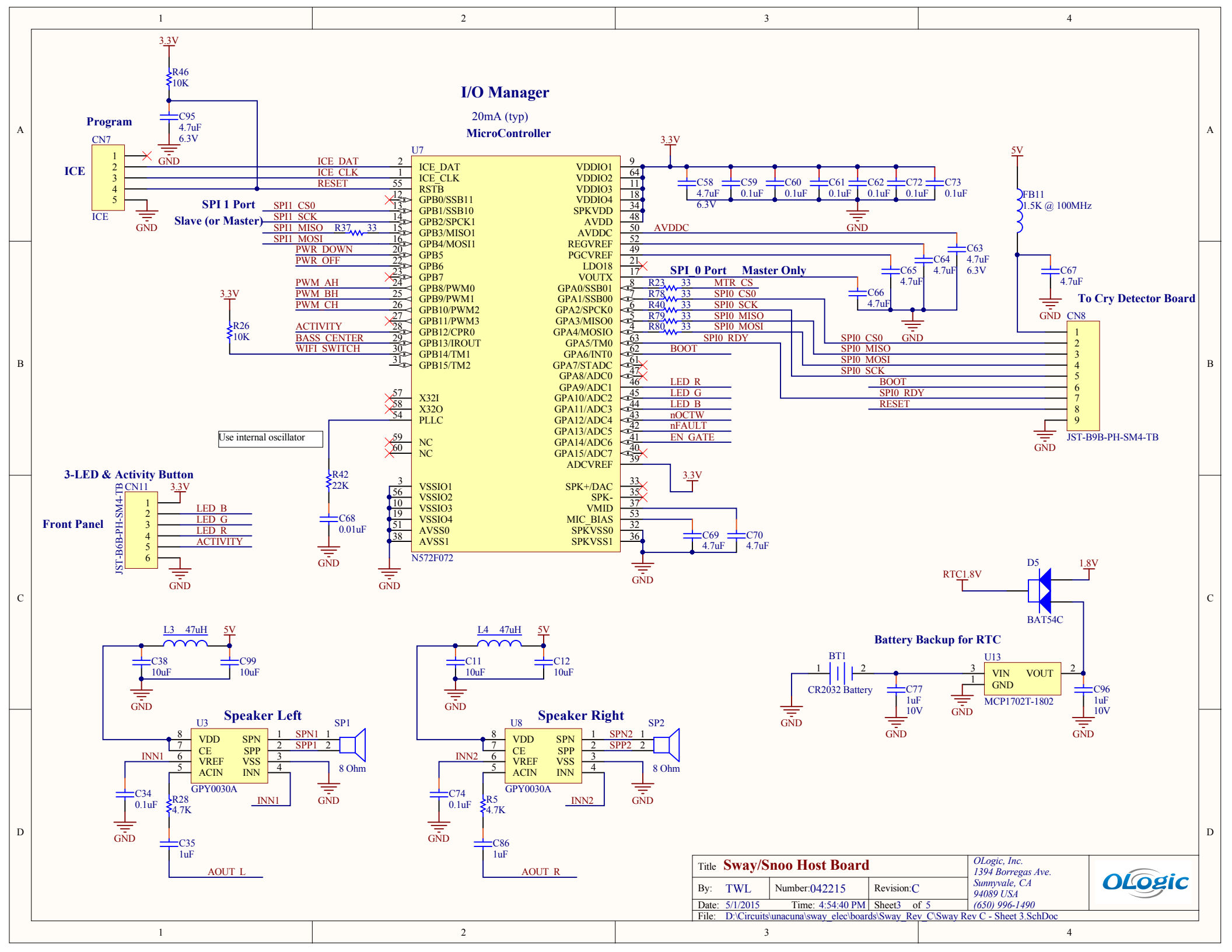
I/O Manager
20mA (typ)
MicroController
U7
N572F072
Program
ICE
CN7
SPI 1 Port
Slave (or Master)
SPI_0 Port Master Only
To Cry Detector Board
CN8
JST-B9B-PH-SM4-TB
3-LED & Activity Button
Front Panel
CN11
JST-B6B-PH-SM4-TB
Use internal oscillator
Speaker Left
Speaker Right
U3
U8
GPY0030A
SP1
SP2
8 Ohm
Battery Backup for RTC
BT1
CR2032 Battery
U13
MCP1702T-1802
BAT54C
ICE_DAT
ICE_CLK
RESET
SPI1_CS0
SPI1_SCK
SPI1_MISO
SPI1_MOSI
PWR_DOWN
PWR_OFF
PWM_AH
PWM_BH
PWM_CH
ACTIVITY
BASS_CENTER
WIFI_SWITCH
MTR_CS
SPI0_CS0
SPI0_SCK
SPI0_MISO
SPI0_MOSI
SPI0_RDY
BOOT
RESET
LED_R
LED_G
LED_B
nOCTW
nFAULT
EN_GATE
AVDDC
INN1
INN2
AOUT_L
AOUT_R
3.3V
5V
1.8V
RTC1.8V
GND
Title Sway/Snoo Host Board
By: TWL
Number:042215
Revision:C
Date: 5/1/2015
Time: 4:54:40 PM
Sheet3 of 5
File: D:\Circuits\unacuna\sway_elec\boards\Sway_Rev_C\Sway Rev C - Sheet 3.SchDoc
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This circuitry is to handle power ON/OFF.
A single push will turn it on.
A single push will turn it off (if the uP is running)
A long push (>5sec) will force the power off
independent of the uP state.

12V Power In

P1 3
1 VINPUT
2
Power 2.5mm
PJ-063BH
GND
C33
47uF
50V
GND

Power ON/OFF Switch

CN12
1 2 3
B3B-PH-SM4-TB
GND
PB
WIFI_SWITCH
3.3V
R77
10K
Q8
FDN361BN
GND

Q3
FDN360P
P-CH 30V 2A
12V
C91
47uF
16V
1.2 Ohm
GND

R73
10K
C93
1uF 35V
R74
100K
TRIG
C92
0.1uF
50V

Q4
S S S G
D D D D
1 2 3 4 8 7 6 5
P-CH 30V 10A
IRF7416TRPBF
VMOTOR
R75
10K
21

Q9
N-CH 30V 1.4A
FDN361BN
GATE
GND

R76
1M
RC_OFF
Q6
FDN361BN
C94
10uF
GND

Q5
FDN361BN
GND

PWR_DOWN
R10
10K
Q7
FDN361BN
GND

PWR_OFF

Bassinet Center Detector

JST-4 Connector

5V
U10
RPI-352
C71
10uF
GND
R38
1K
R39
160
BASS_CENTER
C98
0.001uF
50V
R41
2.2K
GND

JST-4 Connector — Right Safety Clip

5V
U11
RPI-352
C76
10uF
GND
R43
1K
R52
160
SAFETY_CLIP_R
C101
0.001uF
50V
R53
2.2K
GND

JST-4 Connector — Left Safety Clip

5V
U12
RPI-352
C90
10uF
GND
R54
1K
R55
160
SAFETY_CLIP_L
C103
0.001uF
50V
R56
2.2K
GND

Title	Sway/Snoo Host Board		
By: TWL	Number:042215	Revision:C	
Date: 5/1/2015	Time: 4:54:40 PM	Sheet4 of 5	
File: D:\Circuits\unacuna\sway_elec\boards\Sway_Rev_C\Sway Rev C - Sheet 4.SchDoc			

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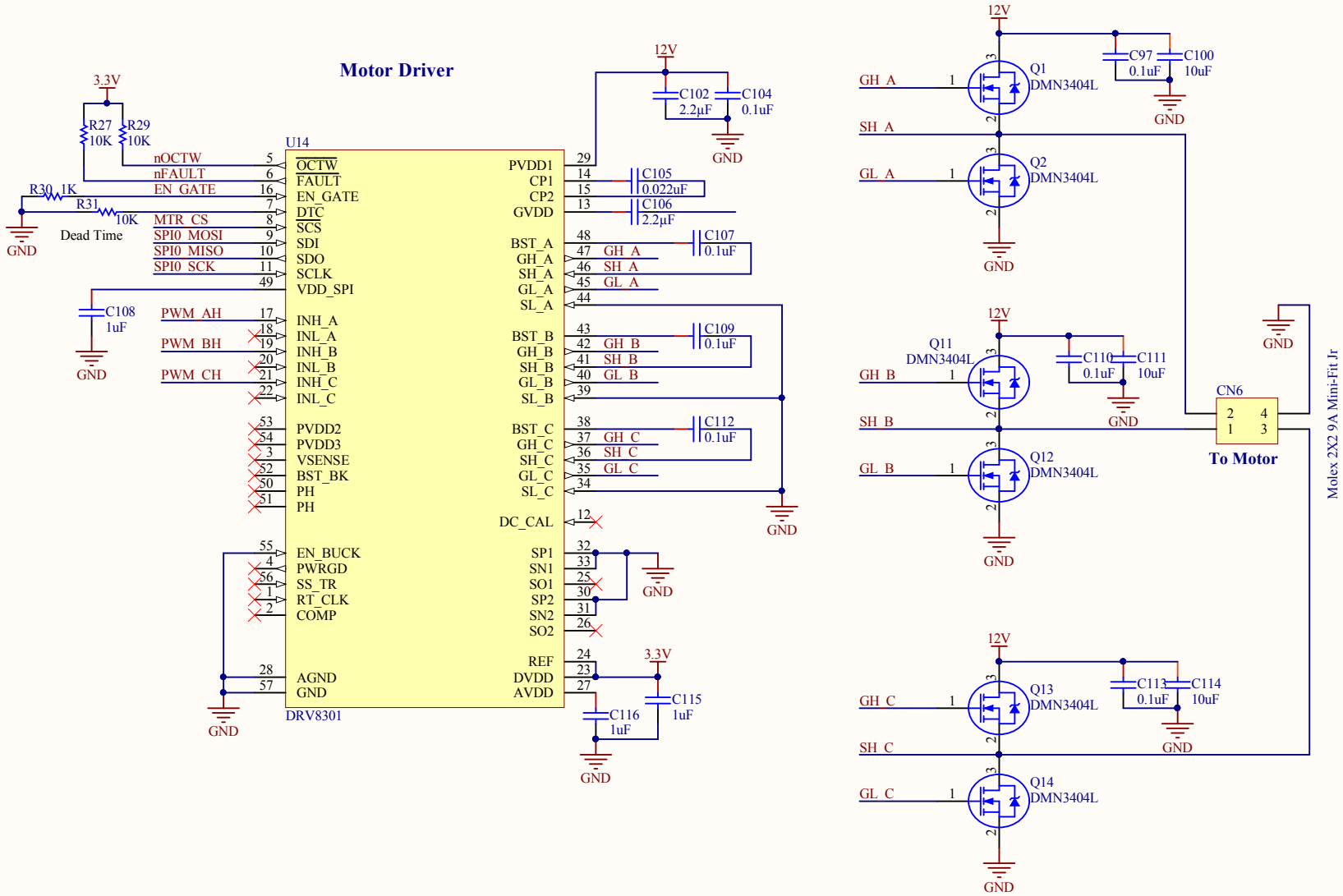

Title	**Sway/Snoo Host Board**		*OLogic, Inc.* *1394 Borregas Ave.* *Sunnyvale, CA* *94089 USA* *(650) 996-1490*
By: TWL	Number:042215	Revision:C	
Date: 5/1/2015	Time: 4:54:40 PM	Sheet5 of 5	
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