ChipWhisperer CW305 Artix Target Board

NewAE Technology Inc.

Revision Information

-01:
Initial Release

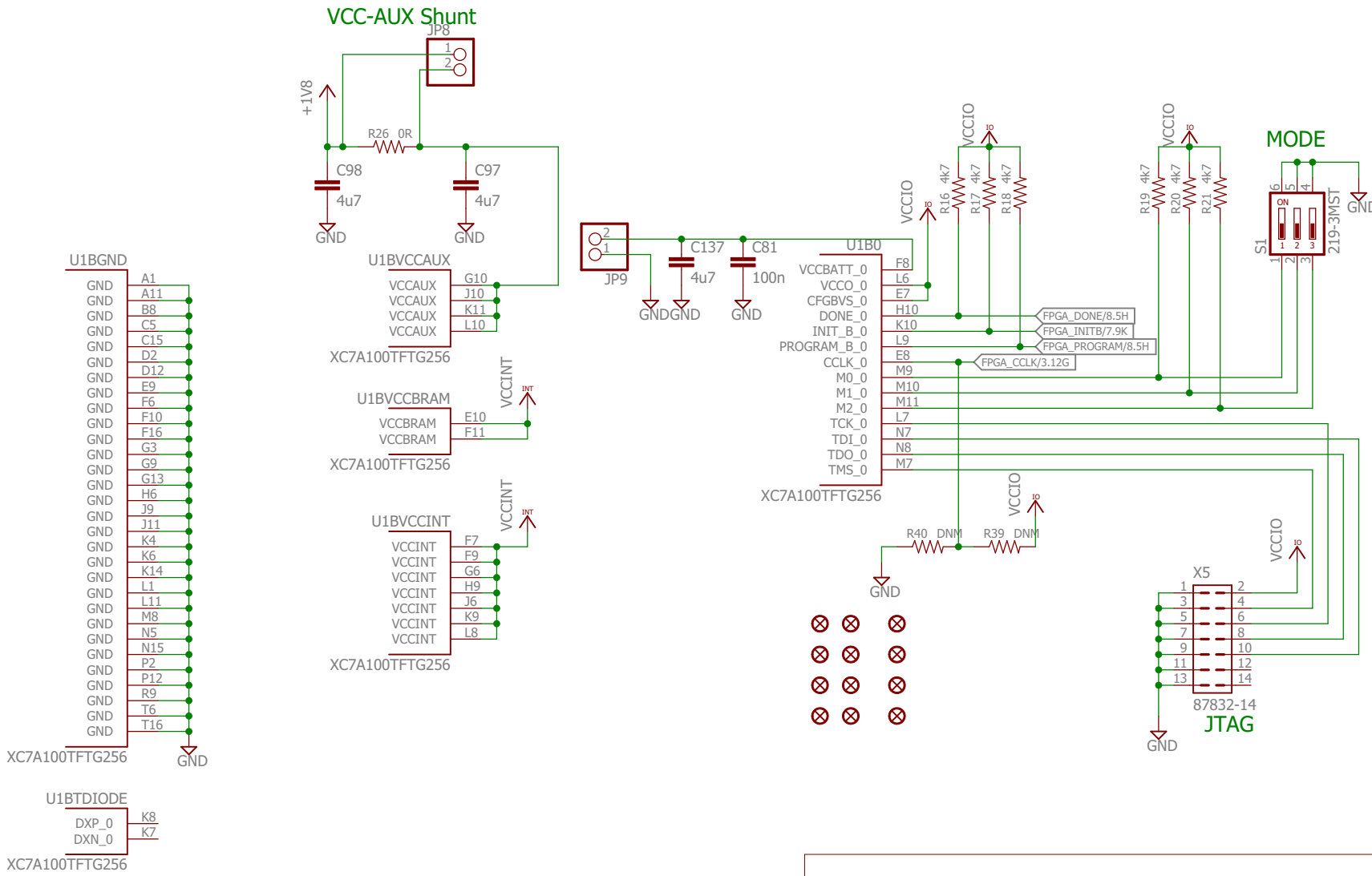
-02:
Fix D3,D4 had anode/cathode reversed
Fix part number of 7-Seg LED

-03:
Fix routing of clock to _N, need to route to _P
Fix D4/A0 Swap
Fix USBRF/SPARE1 Swap
Change TRIG to IO4 (was IO3)
Connect VBUSDETECT
Addition of extra decoupling caps

-04:
Various cleanup
Addition of headers for linear regulator addition

NewAE

TITLE: artixtest		
Document Number:		REV:
Date: 20/02/2016 7:17 PM	Sheet: 1/14	



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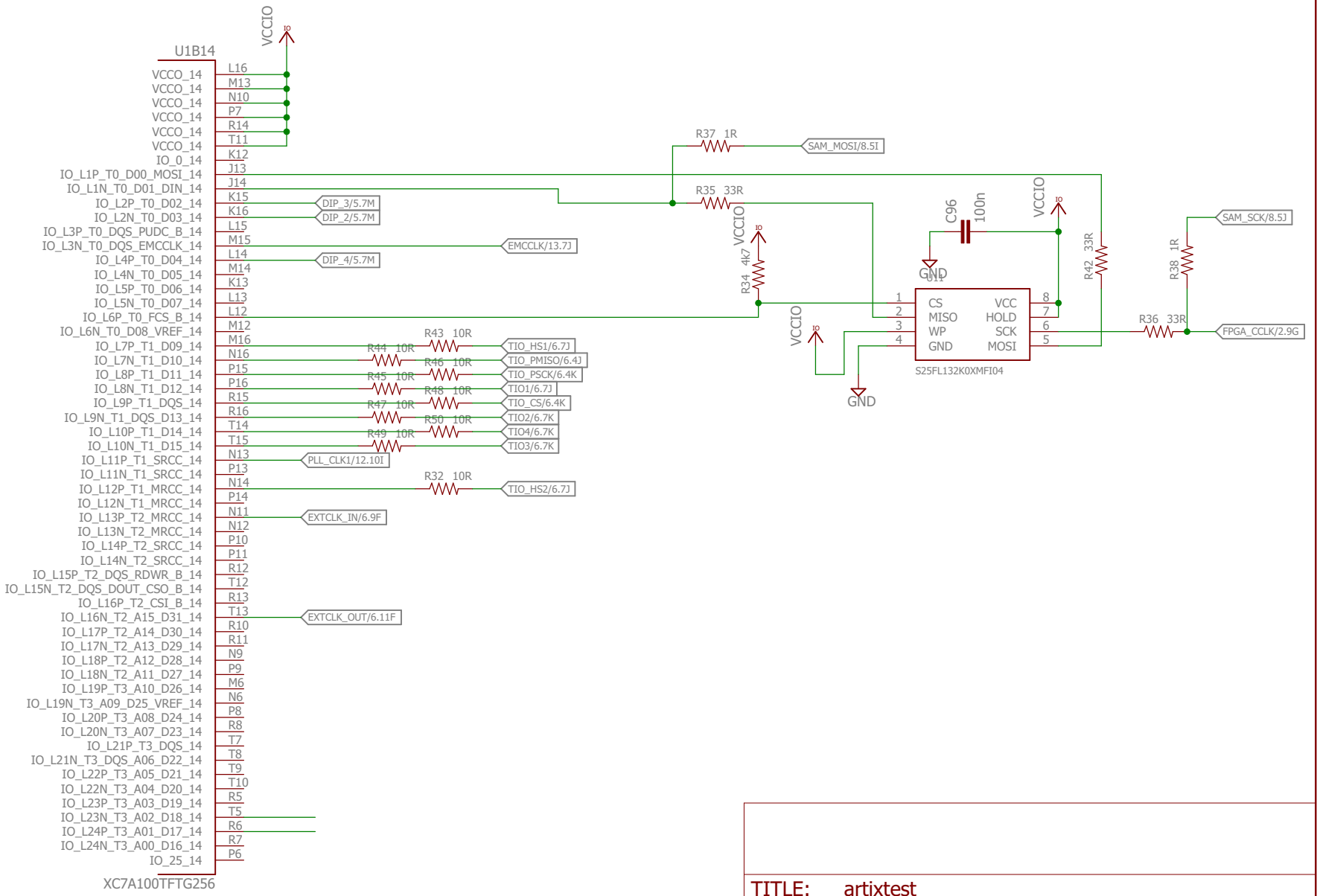
Document Number:	REV:
Date: 20/02/2016 7:17 PM	Sheet: 2/14



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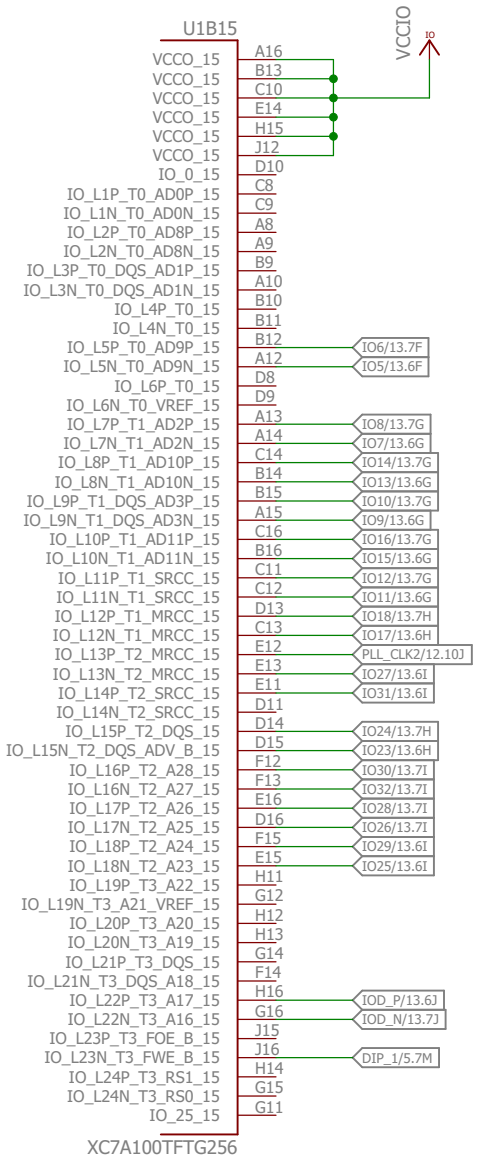
Document Number:	REV:
Date: 20/02/2016 7:17 PM	Sheet: 3/14



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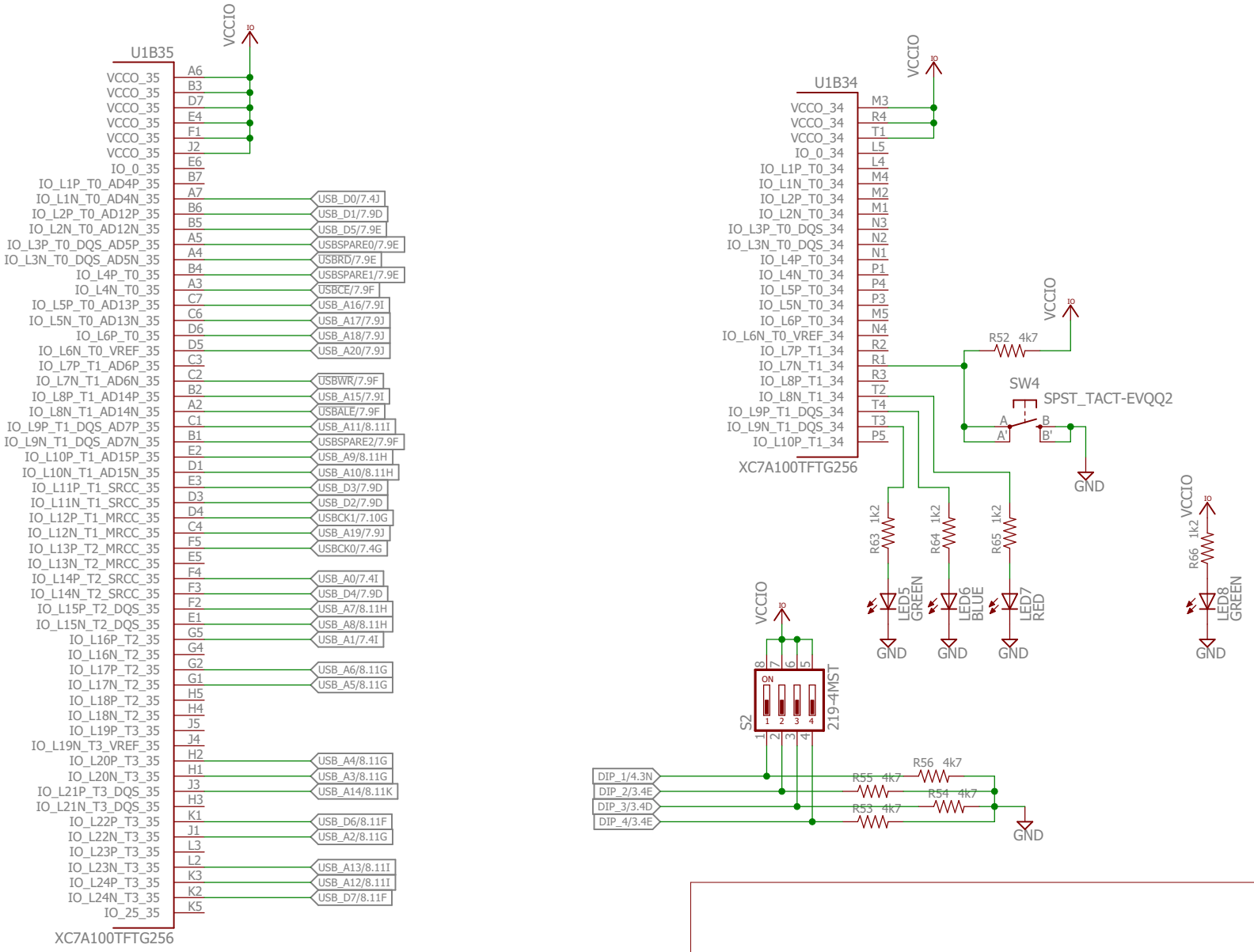
Document Number:		REV:
Date: 20/02/2016 7:17 PM	Sheet: 4/14	



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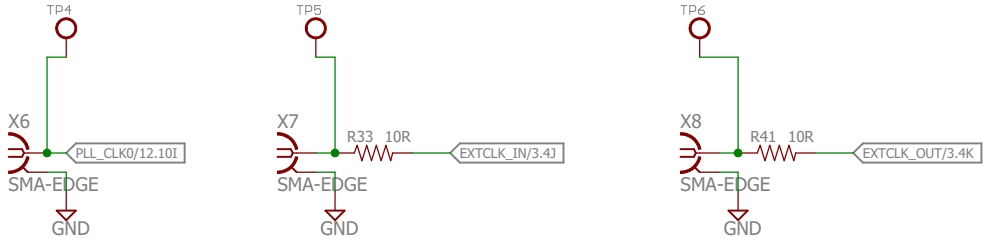
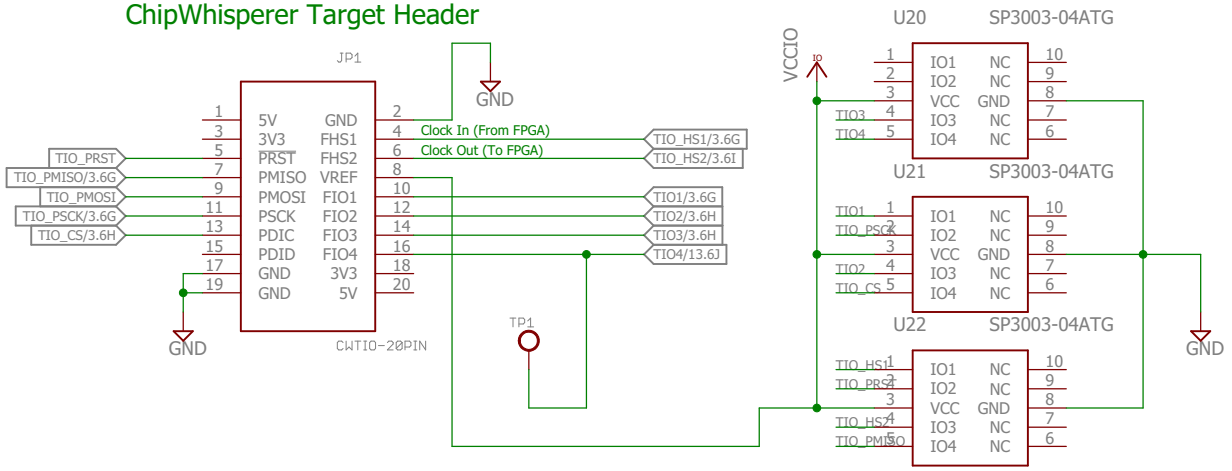
Date: 20/02/2016 7:17 PM	Sheet: 5/14

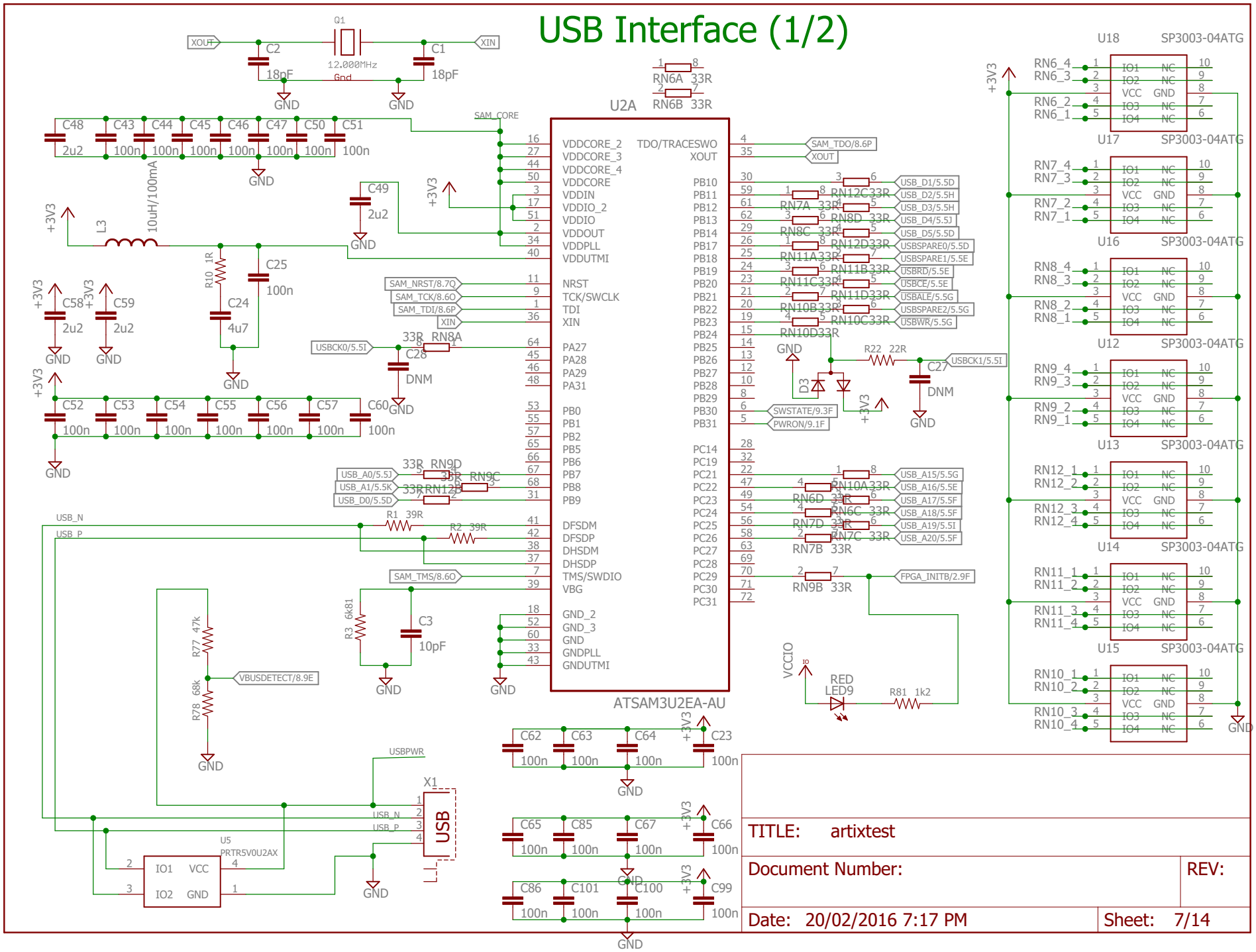


ChipWhisperer Target Header

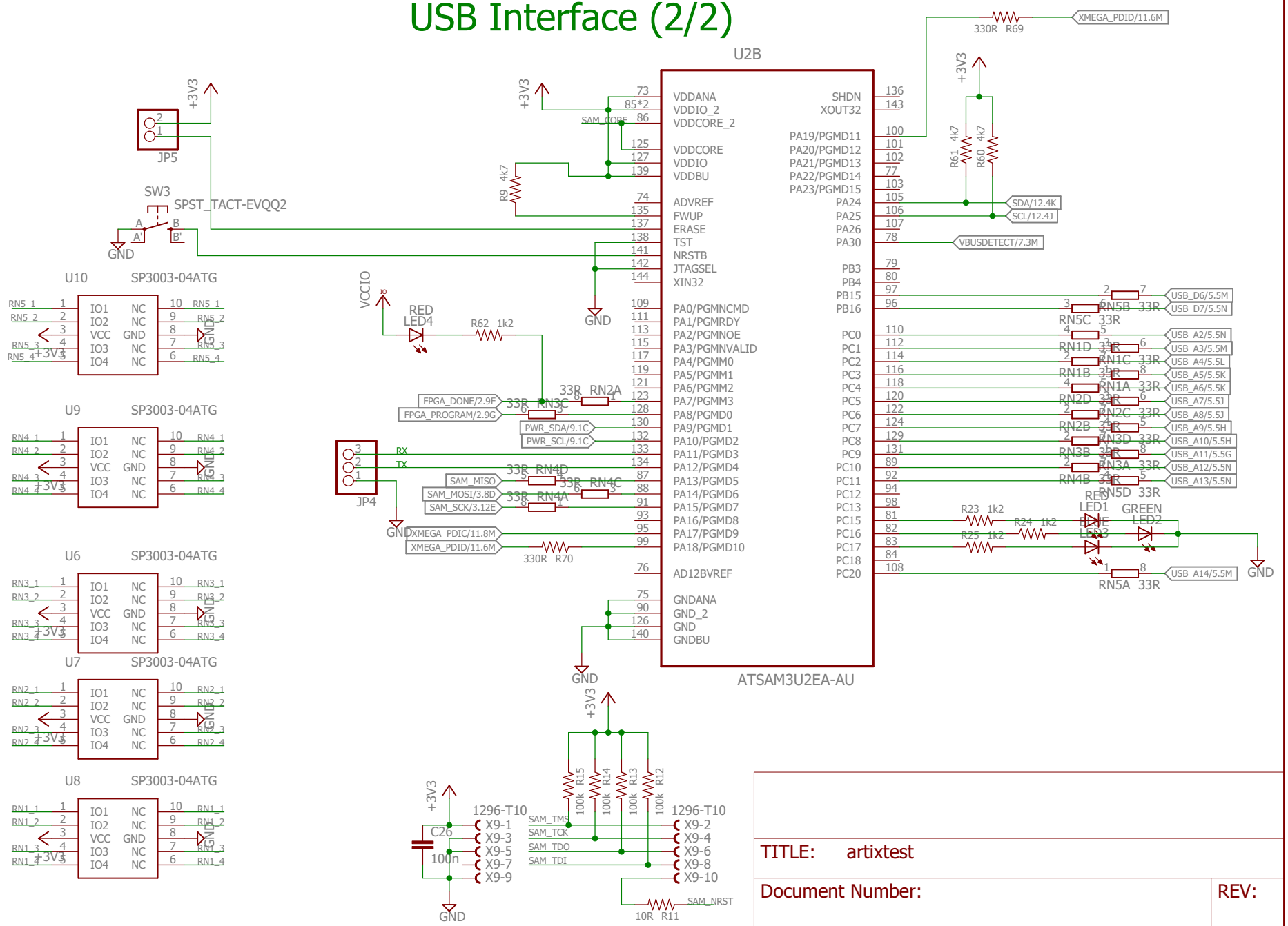


H4 MOUNT-PAD-ROUND3.0
H3 MOUNT-PAD-ROUND3.0
H2 MOUNT-PAD-ROUND3.0
H1 MOUNT-PAD-ROUND3.0
H8 MOUNT-PAD-ROUND3.0
H7 MOUNT-PAD-ROUND3.0
H6 MOUNT-PAD-ROUND3.0
H5 MOUNT-PAD-ROUND3.0

TITLE: artixtest	
Document Number:	REV:
Date: 20/02/2016 7:17 PM	Sheet: 6/14


USB Interface (1/2)
U2A
ATSAM3U2EA-AU
SAM_CORE
VDDCORE_2
VDDCORE_3
VDDCORE_4
VDDCORE
VDDIN
VDDIO_2
VDDIO
VDDOUT
VDDPLL
VDDUTMI
NRST
TCK/SWCLK
TDI
XIN
PA27
PA28
PA29
PA31
PB0
PB1
PB2
PB5
PB6
PB7
PB8
PB9
DFSDM
DFSDP
DHSDM
DHSDP
TMS/SWDIO
VBG
GND_2
GND_3
GND
GNDPLL
GNDUTMI
TDO/TRACESWO
XOUT
PB10
PB11
PB12
PB13
PB14
PB17
PB18
PB19
PB20
PB21
PB22
PB23
PB24
PB25
PB26
PB27
PB28
PB29
PB30
PB31
PC14
PC19
PC21
PC22
PC23
PC24
PC25
PC26
PC27
PC28
PC29
PC30
PC31
Q1
12.000MHz
XOUT
XIN
C1
C2
18pF
GND
C48
C43
C44
C45
C46
C47
C50
C51
2u2
100n
L3
10uH/100mA
+3V3
C49
C25
C24
4u7
R10 1R
C58
C59
C52
C53
C54
C55
C56
C57
C60
C26
DNM
33R RN8A
SAM_NRST/8.7Q
SAM_TCK/8.6O
SAM_TDI/8.6P
USBCK0/5.5I
USB_A0/5.5J
USB_A1/5.5K
USB_D0/5.5D
33R RN9D
RN9C
RN12D
USB_N
USB_P
R1 39R
R2 39R
SAM_TMS/8.6O
C3
10pF
R3 6k81
R77 47k
R78 68k
VBUSDETECT/8.9E
USBPWR
X1
USB
U5
PRTR5V0U2AX
IO1
IO2
VCC
C62
C63
C64
C23
C65
C85
C67
C66
C86
C101
C100
C99
RN6A 33R
RN6B 33R
SAM_TDO/8.6P
XOUT
RN12C 33R
RN7A 33R
RN8D 33R
RN8C 33R
RN12D 33R
RN11A 33R
RN11B 33R
RN11C 33R
RN11D 33R
RN10B 33R
RN10C 33R
RN10D 33R
USB_D1/5.5D
USB_D2/5.5H
USB_D3/5.5H
USB_D4/5.5J
USB_D5/5.5D
USBSPARE0/5.5D
USBSPARE1/5.5E
USBRD/5.5E
USBCE/5.5E
USBALE/5.5G
USBSPARE2/5.5G
USBWR/5.5G
SWSTATE/9.3F
PWRON/9.1F
D3
R22 22R
C27
DNM
USBCK1/5.5I
RN10A 33R
RN6D 33R
RN6C 33R
RN7D 33R
RN7C 33R
RN7B 33R
USB_A15/5.5G
USB_A16/5.5E
USB_A17/5.5F
USB_A18/5.5F
USB_A19/5.5I
USB_A20/5.5F
RN9B 33R
FPGA_INITB/2.9F
VCCIO
RED
LED9
R81 1k2
U18
U17
U16
U12
U13
U14
U15
SP3003-04ATG
RN6_4
RN6_3
RN6_2
RN6_1
RN7_4
RN7_3
RN7_2
RN7_1
RN8_4
RN8_3
RN8_2
RN8_1
RN9_4
RN9_3
RN9_2
RN9_1
RN12_1
RN12_2
RN12_3
RN12_4
RN11_1
RN11_2
RN11_3
RN11_4
RN10_1
RN10_2
RN10_3
RN10_4
IO1
IO2
NC
VCC
GND
IO3
IO4
TITLE: artixtest
Document Number:
REV:
Date: 20/02/2016 7:17 PM
Sheet: 7/14

USB Interface (2/2)



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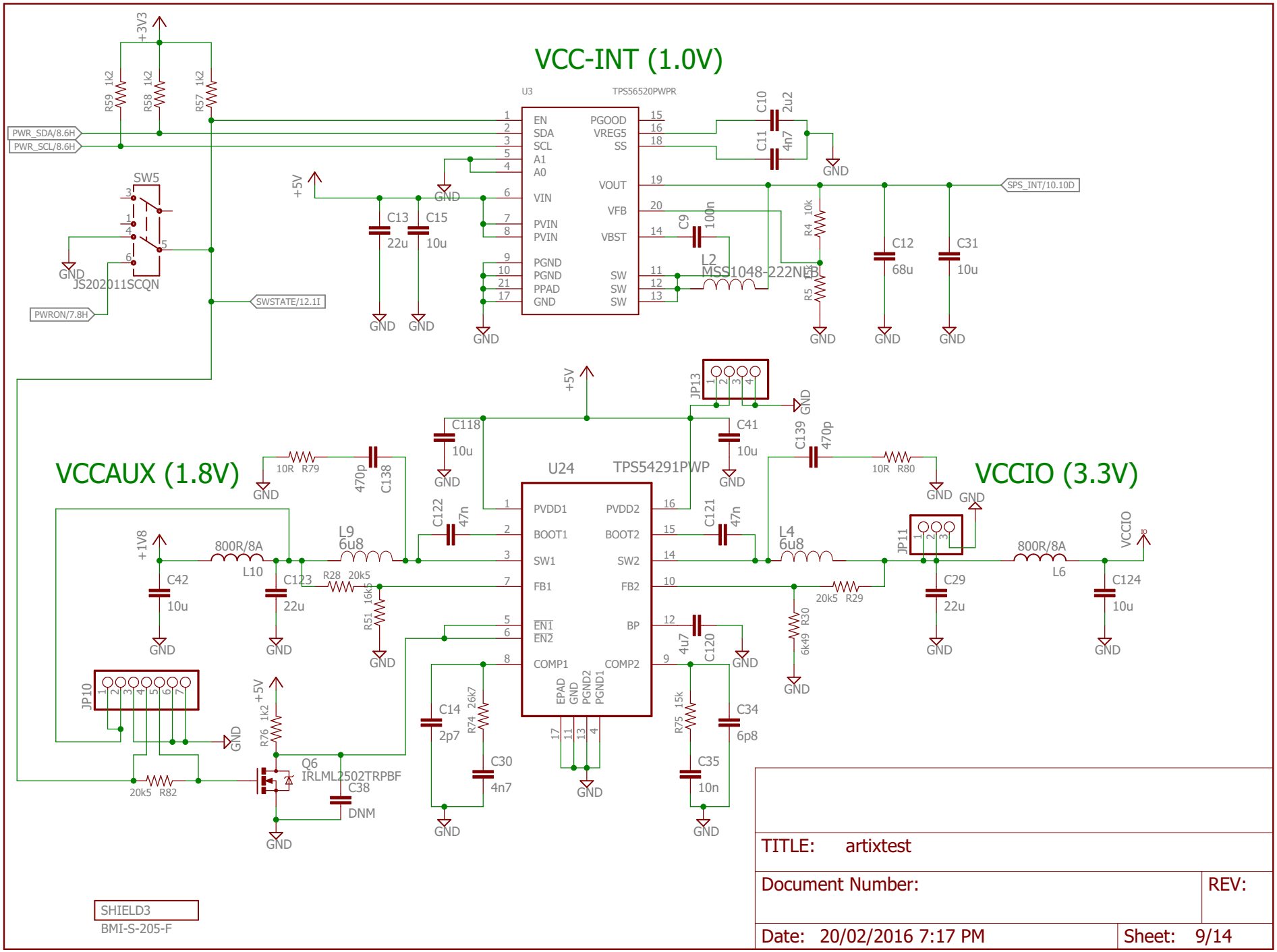
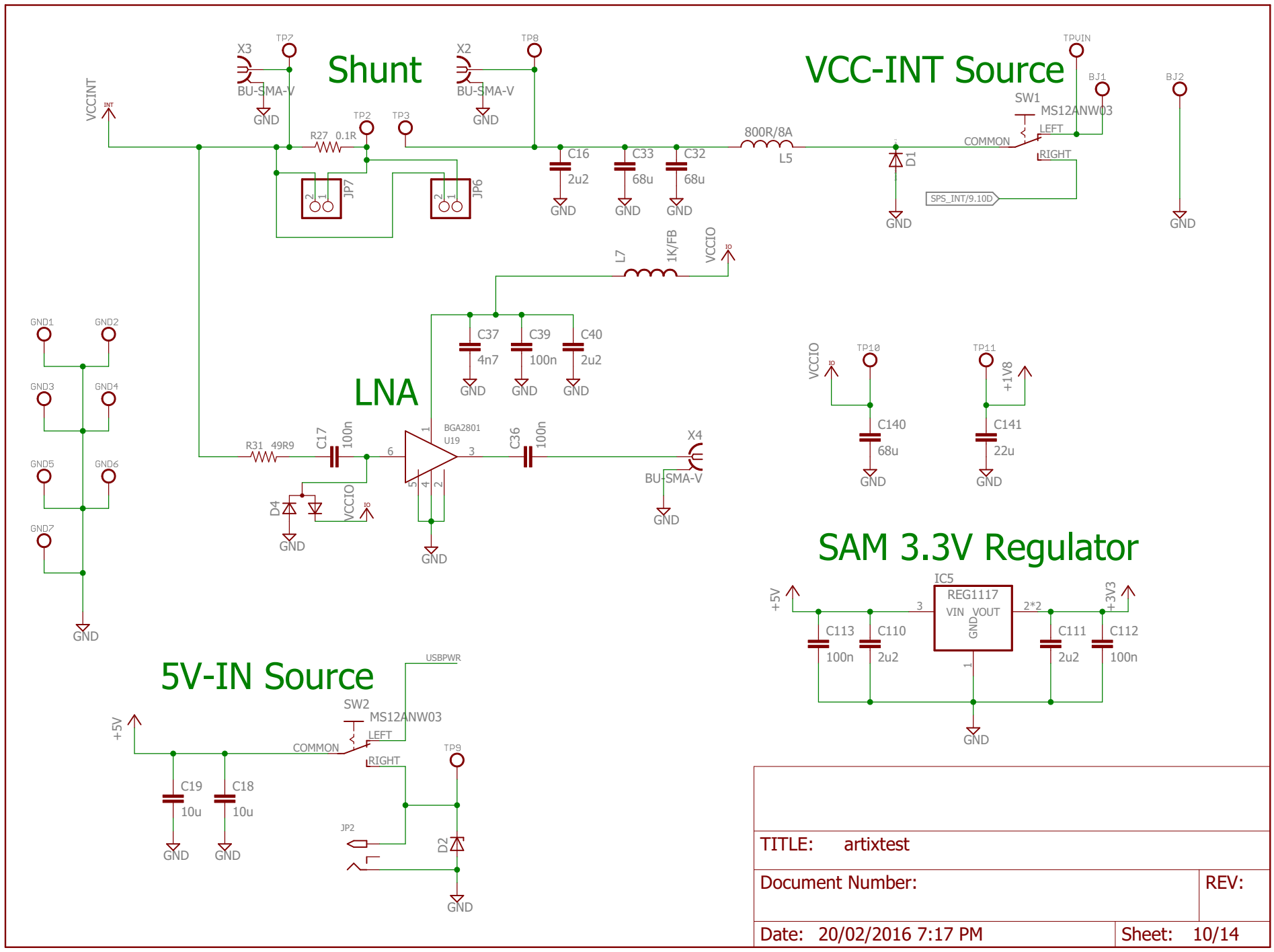
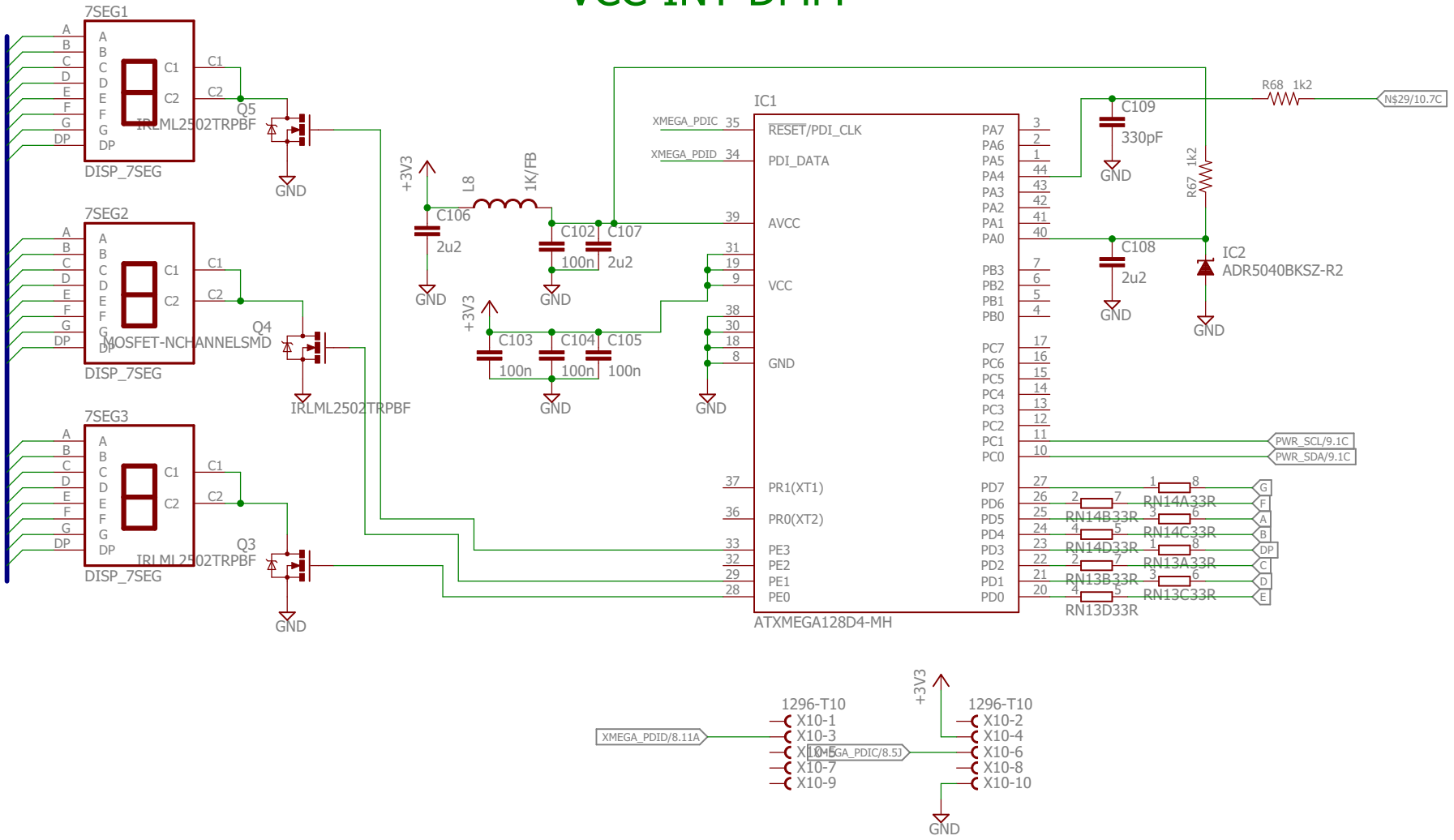
Document Number:		REV:
Date: 20/02/2016 7:17 PM	Sheet: 8/14	


VCC-INT (1.0V)
VCCAUX (1.8V)
VCCIO (3.3V)
U3
TPS56520PWPR
U24
TPS54291PWP
+3V3
+5V
+1V8
PWR_SDA/8.6H
PWR_SCL/8.6H
PWRON/7.8H
SWSTATE/12.1I
SPS_INT/10.10D
SW5
JS202011SCQN
L2
MSS1048-222NLB
L9
6u8
L10
800R/8A
L4
6u8
L6
800R/8A
Q6
IRLML2502TRPBF
DNM
SHIELD3
BMI-S-205-F
TITLE: artixtest
Document Number:
REV:
Date: 20/02/2016 7:17 PM
Sheet: 9/14



TITLE: artixtest	
Document Number:	REV:
Date: 20/02/2016 7:17 PM	Sheet: 10/14

VCC-INT DMM



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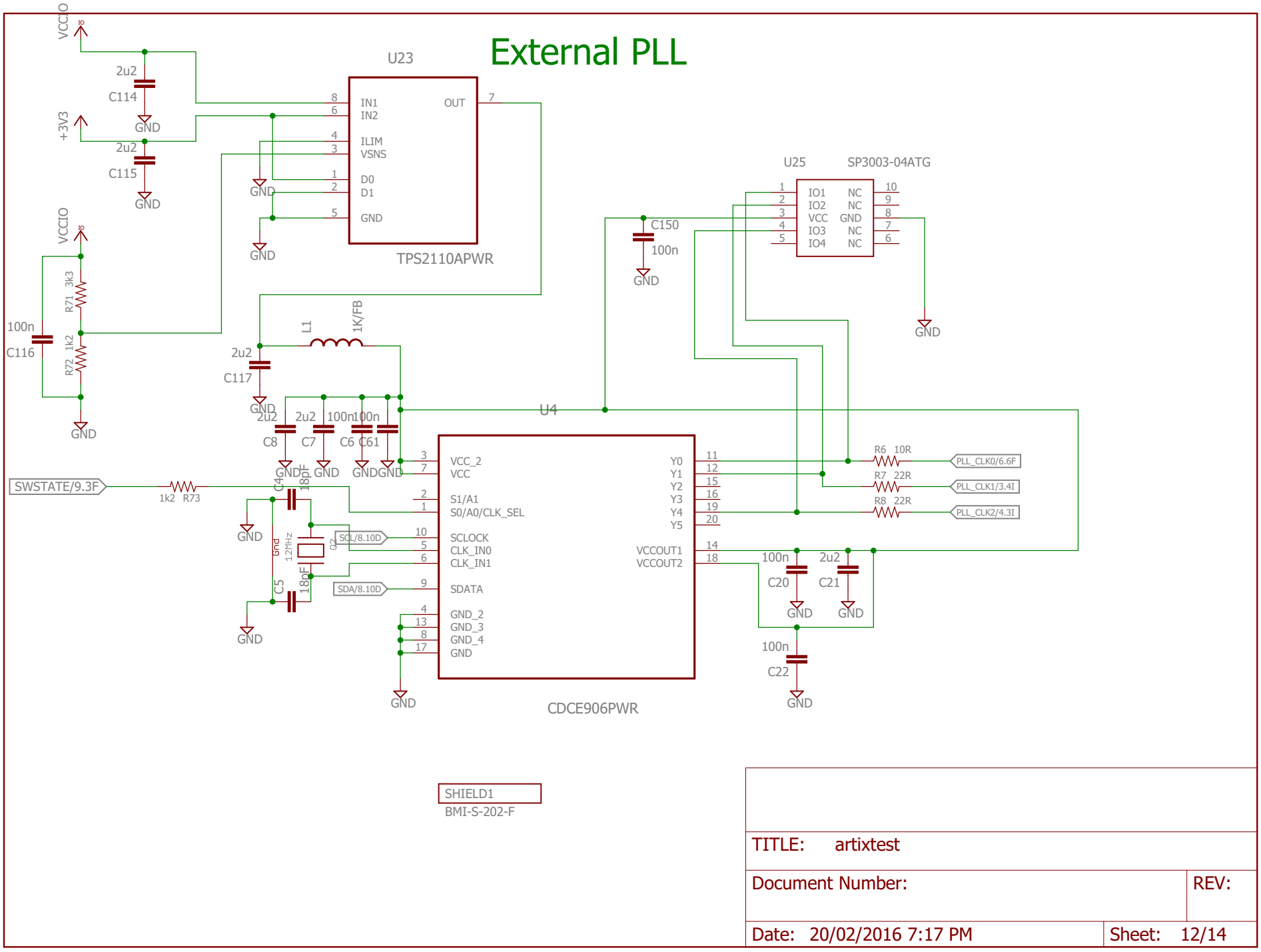
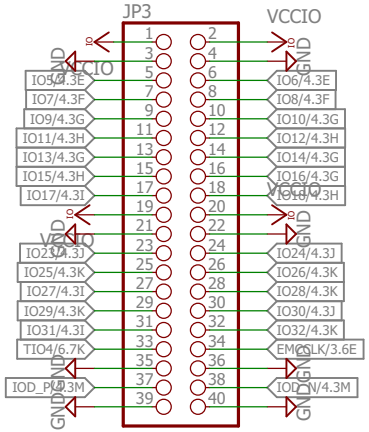
Document Number:	REV:
Date: 20/02/2016 7:17 PM	Sheet: 11/14


External PLL
U23
TPS2110APWR
IN1
IN2
ILIM
VSNS
D0
D1
GND
OUT
VCCIO
+3V3
2u2
C114
C115
C116
100n
R71 3k3
R72 1k2
L1
1K/FB
C117
C8
C7
C6
C61
U25
SP3003-04ATG
IO1
IO2
VCC
IO3
IO4
NC
C150
U4
CDCE906PWR
VCC_2
VCC
S1/A1
S0/A0/CLK_SEL
SCLOCK
CLK_IN0
CLK_IN1
SDATA
GND_2
GND_3
GND_4
Y0
Y1
Y2
Y3
Y4
Y5
VCCOUT1
VCCOUT2
R6 10R
R7 22R
R8 22R
PLL_CLK0/6.6F
PLL_CLK1/3.4I
PLL_CLK2/4.3I
C20
C21
C22
SWSTATE/9.3F
1k2 R73
C4
18pF
C5
12MHz
SCL/8.10D
SDA/8.10D
SHIELD1
BMI-S-202-F
TITLE: artixtest
Document Number:
REV:
Date: 20/02/2016 7:17 PM
Sheet: 12/14



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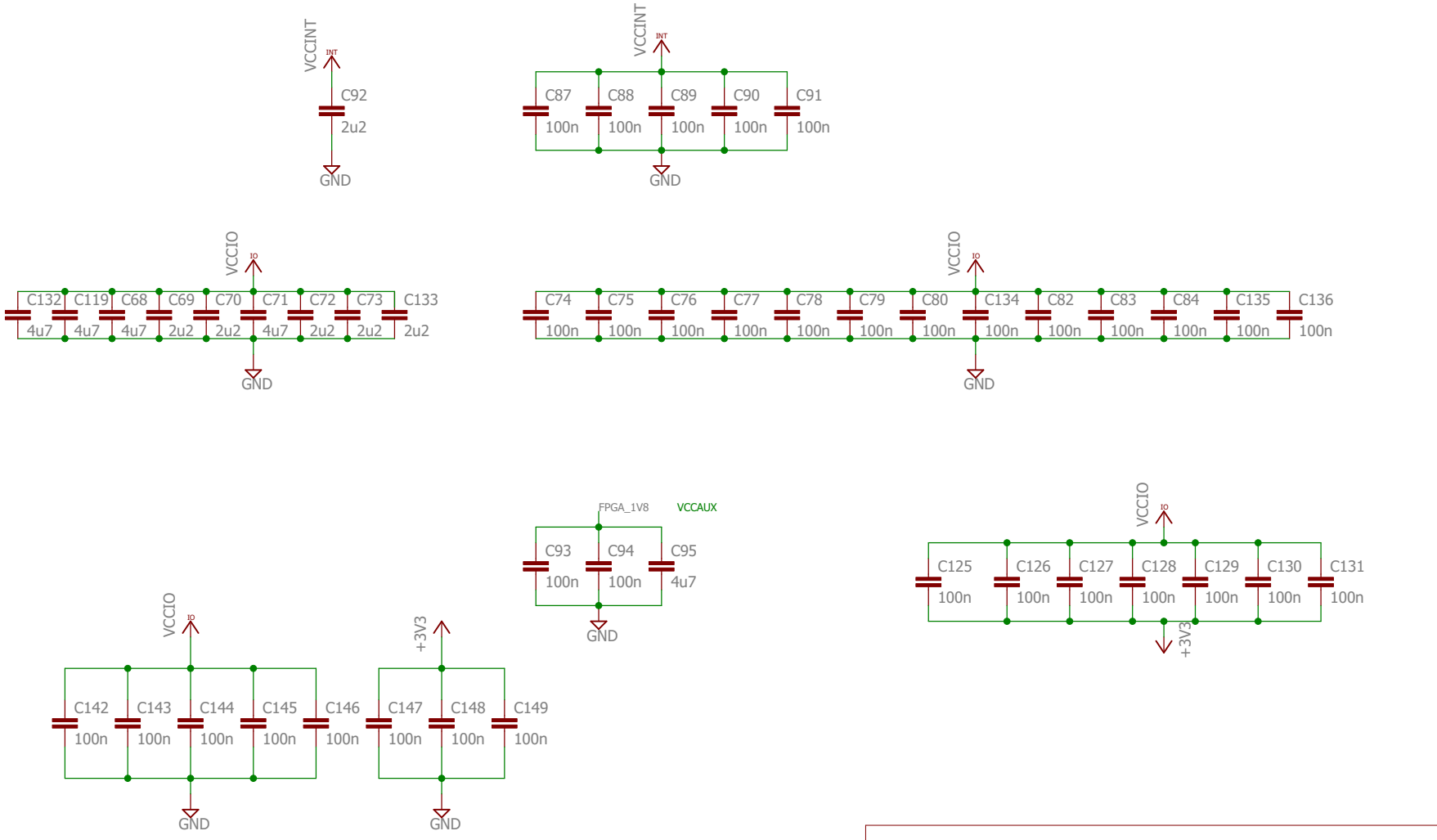
Document Number:		REV:
Date: 20/02/2016 7:17 PM	Sheet: 13/14	



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Date: 20/02/2016 7:17 PM	Sheet: 14/14	