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Change list

A1	1. Add 2x10 male JTAG header J12 for zigbe module
	2. Separate CT pins of magnetic U1/U2 to save several mA current
	3. Change MPC8308 pin Y23 from NC to VDD (net VCORE) per latest MPC8308EC Rev 2
	4. Remove DNP pull up resistors R42/R43 on net MDIO
	5. EMI consideration 1) Change R140 from DNP to populate 2) Change C75/C78/C80/C93 from DNP to populate 3) Change C121/C122 decoupling capacitors for PHY VDDH from 0.1uF to 100pF 4) Add 18pF capacitors C359/C360 to GND on net TSEC1_GTX_CLK25 & TSEC2_GTX_CLK25 5) Change terminated series resistors R36/R37 on net G1_RX_CLK & G2_RX_CLK from 0ohm to 22ohm, add series bead L32/L31 and 18pF capacitors C363/C362 to GND 6) Add series bead L30/L31 and 18pF capacitors C361/C362 to GND on net G1_GTX_CLK & G2_GTX_CLK 7) Add bead L34/L35 on U6/U7 pin3 VDD33 8) Swap MDI interface on magnetic U1/U2
	6. Remove test point TP1~TP2, TP6~TP8, TP10~TP16, TP21, TP22, TP18 for layout space limitation

Revisions

Rev	Description	Date	Approved
A	Release Rev. A	April 6,11	
A1	Add 2X10 JTAG Header for Zigbee Module	June 24,11	
	Changes for EMI consideration. Details refer to A1 change list.		
B	Release Rev. B	June 30,11	

MPC8308 - NSG

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Networking & Multimedia Group
6501 William Cannon Drive West
Austin, TX 78735-8598

ICAP Classification: FCP: FIUO: X PUBI:

Designer: James Zhang	Drawing Title: MPC8308 - NSG		
Drawn by: James Zhang	Page Title: TITLE PAGE		
Approved: Tanis Qiu	Size C	Document Number SCH-27072 PDF: SPF-27072	Rev B
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1. Unless Otherwise Specified:
   All resistors are in ohms
   All voltages are DC

2. Interrupted lines coded with the same letter or letter combinations are electrically connected.

3. Device type number is for reference only. The number varies with the manufacturer.

4. Special signal usage:
   # Denotes - Active-Low Signal
   <> or [] Denotes - Vectored Signals

5. Interpret diagram in accordance with American National Standards Institute specifications, current revision, with the exception of logic block symbology.

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Drawing Title: **MPC8308 - NSG**

Page Title: **NOTES**

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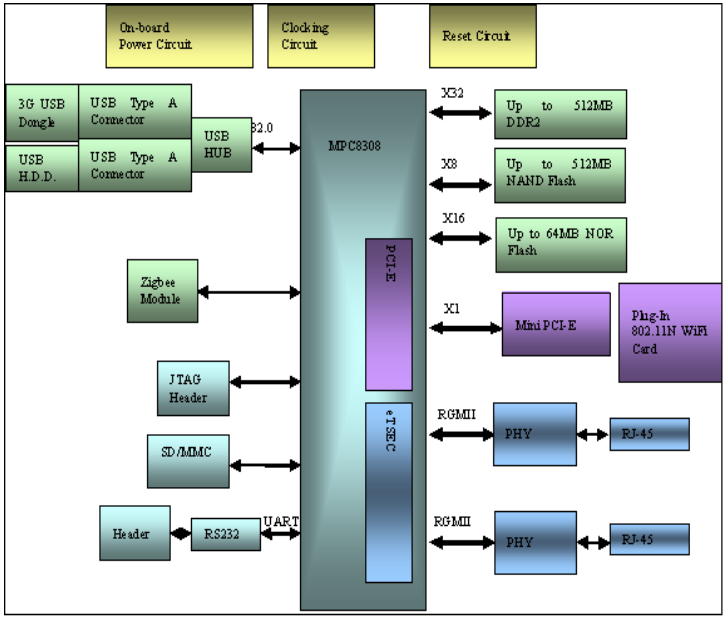

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MPC8308 - NSG

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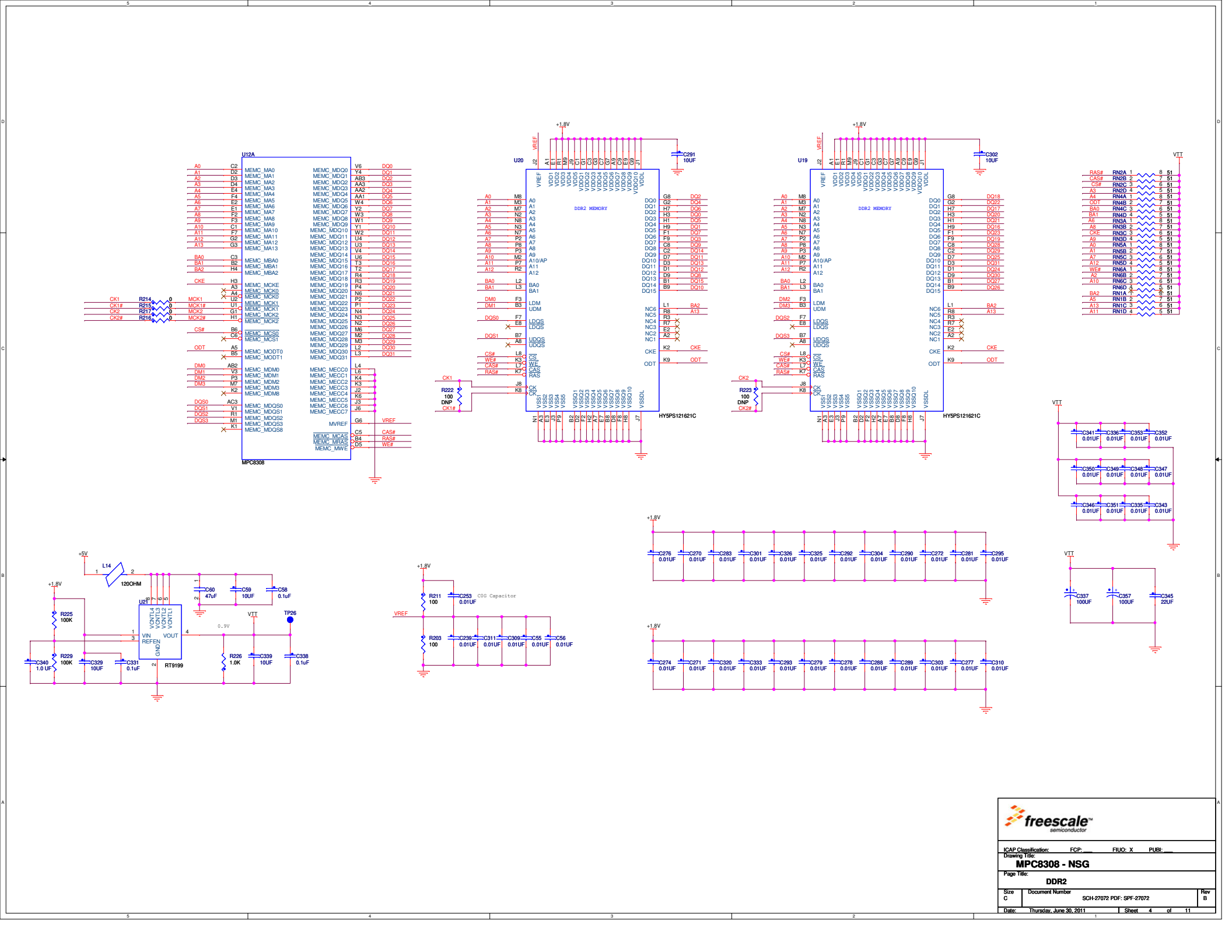

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Page Title: DDR2			
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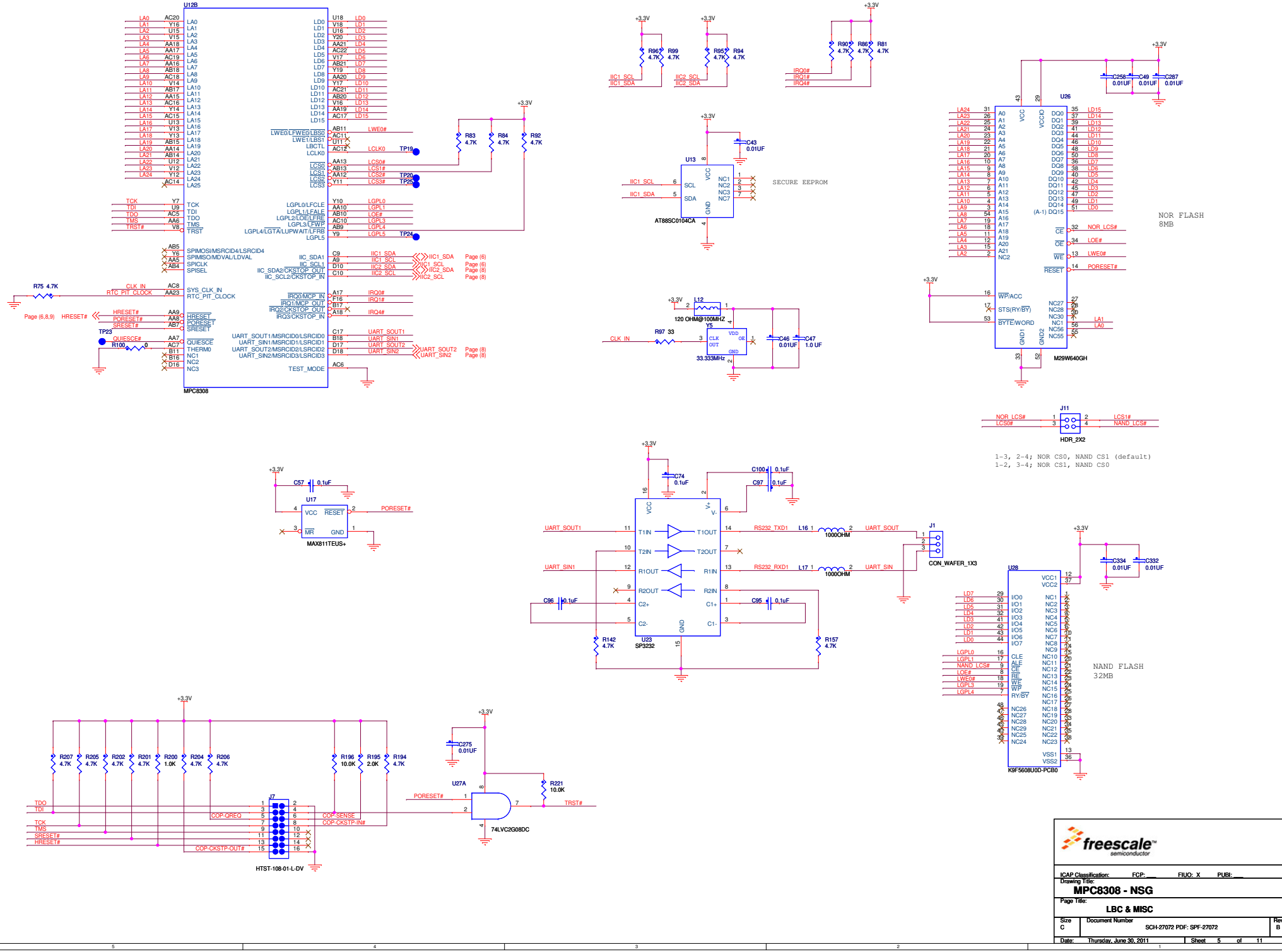
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MPC8308
U13
AT88SC0104CA
SECURE EEPROM
U26
M29W640GH
NOR FLASH
8MB
U28
K9F5608U0D-PCB0
NAND FLASH
32MB
U17
MAX811TEUS+
U23
SP3232
U27A
74LVC2G08DC
J7
HTST-108-01-L-DV
J11
HDR_2X2
1-3, 2-4; NOR CS0, NAND CS1 (default)
1-2, 3-4; NOR CS1, NAND CS0
CON_WAFER_1X3
freescale semiconductor
ICAP Classification:
FCP:
FIUO: X
PUBI:
Drawing Title:
MPC8308 - NSG
Page Title:
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Size
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Document Number
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B
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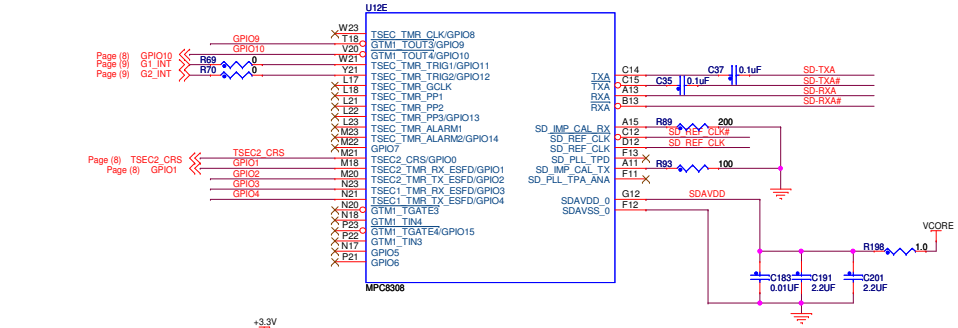
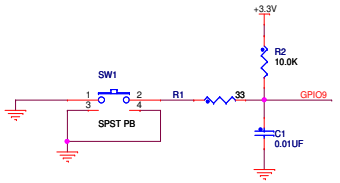
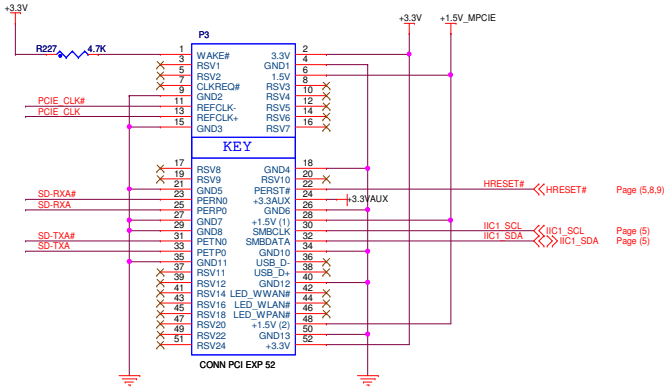
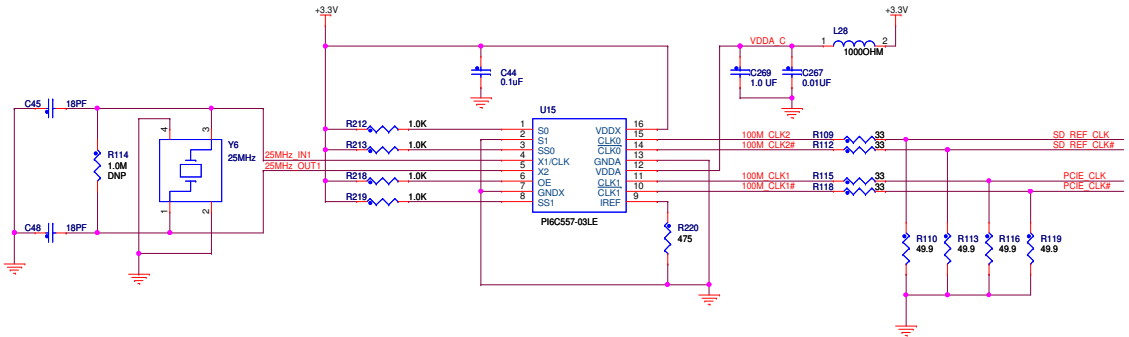
11

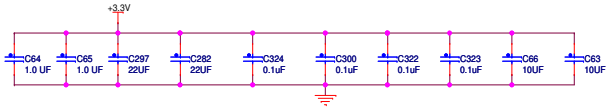


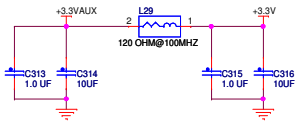


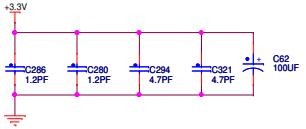
Manual Reset Buttom

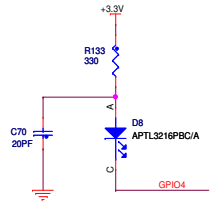




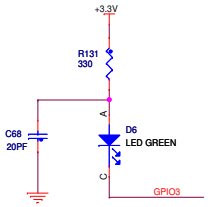




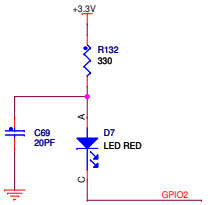




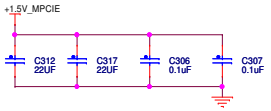
WiFi LED



Run LED



Error LED



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Page Title: **PCIE**

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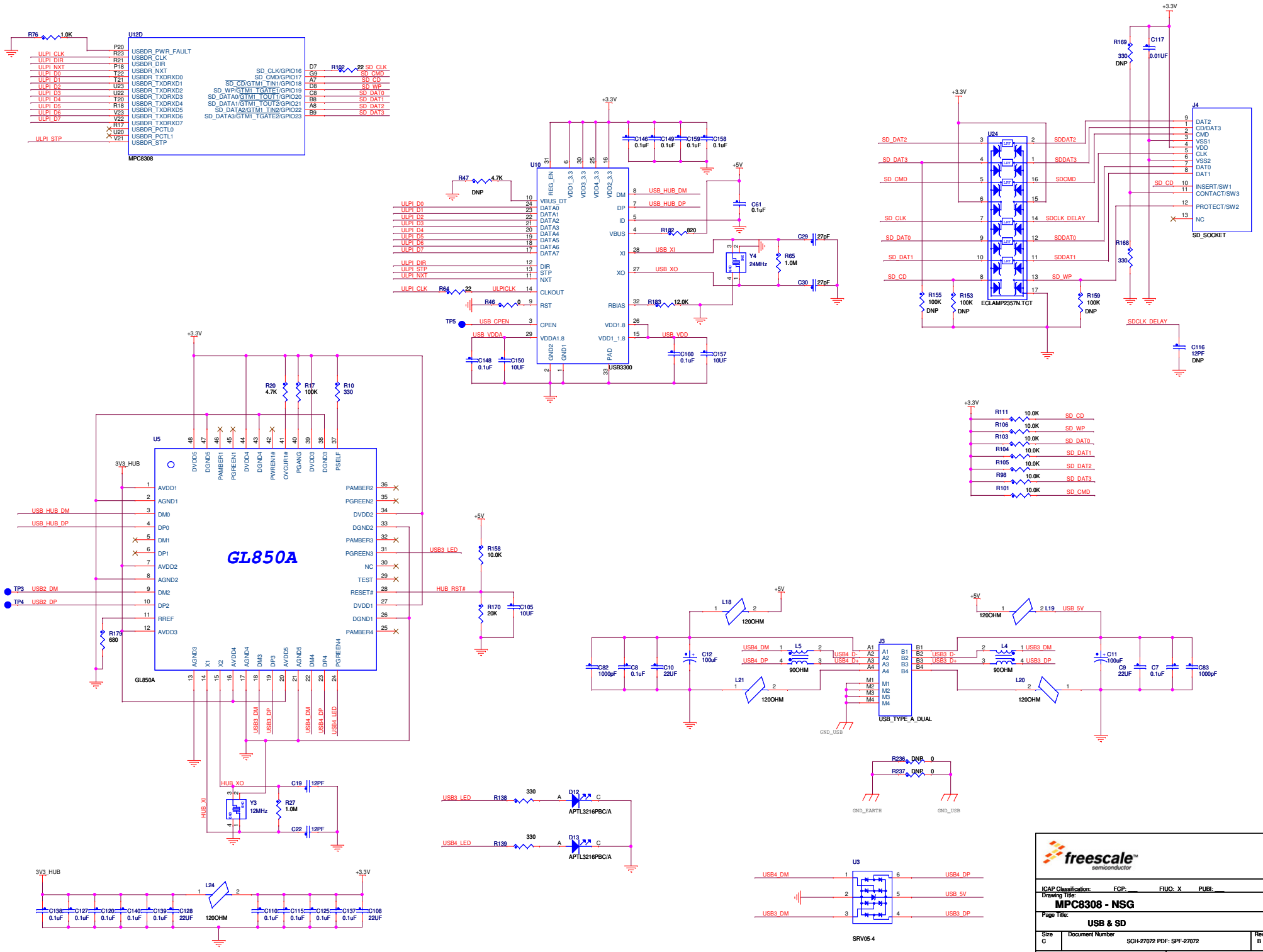
U12D
MPC8308
R76 1.0K
ULPI_CLK
ULPI_DIR
ULPI_NXT
ULPI_D0
ULPI_D1
ULPI_D2
ULPI_D3
ULPI_D4
ULPI_D5
ULPI_D6
ULPI_D7
ULPI_STP
USBDR_PWR_FAULT
USBDR_CLK
USBDR_DIR
USBDR_NXT
USBDR_TXDRXD0
USBDR_TXDRXD1
USBDR_TXDRXD2
USBDR_TXDRXD3
USBDR_TXDRXD4
USBDR_TXDRXD5
USBDR_TXDRXD6
USBDR_TXDRXD7
USBDR_PCTL0
USBDR_PCTL1
USBDR_STP
SD_CLK/GPIO16
SD_CMD/GPIO17
SD_CD/GTM1_TIN1/GPIO18
SD_WP/GTM1_TGATE1/GPIO19
SD_DATA0/GTM1_TOUT1/GPIO20
SD_DATA1/GTM1_TOUT2/GPIO21
SD_DATA2/GTM1_TIN2/GPIO22
SD_DATA3/GTM1_TGATE2/GPIO23
R102 22
SD_CLK
SD_CMD
SD_CD
SD_WP
SD_DAT0
SD_DAT1
SD_DAT2
SD_DAT3
U10
USB3300
R47 4.7K DNP
R64 22
R46 0
R182 820
R183 12.0K
TP5 USB_CPEN
USB_VDDA
USB_HUB_DM
USB_HUB_DP
USB_XI
USB_XO
USB_VDD
ULPICLK
Y4 24MHz
C29 27pF
C30 27pF
R65 1.0M
C61 0.1uF
C146 0.1uF
C149 0.1uF
C159 0.1uF
C158 0.1uF
C148 0.1uF
C150 10UF
C160 0.1uF
C157 10UF
+3.3V
+5V
J4
SD_SOCKET
U24
ECLAMP2357N.TCT
R169 330 DNP
C117 0.01UF
R168 330
R155 100K DNP
R153 100K DNP
R159 100K DNP
C116 12PF DNP
SDCLK_DELAY
R111 10.0K
R106 10.0K
R103 10.0K
R104 10.0K
R105 10.0K
R98 10.0K
R101 10.0K
U5
GL850A
3V3_HUB
R20 4.7K
R17 100K
R10 330
R179 680
R158 10.0K
R170 20K
C105 10UF
TP3 USB2_DM
TP4 USB2_DP
USB3_LED
HUB_RST#
HUB_XO
HUB_XI
Y3 12MHz
R27 1.0M
C19 12PF
C22 12PF
L18 120OHM
L21 120OHM
L5 90OHM
L4 90OHM
L20 120OHM
L19 USB_5V
J3
USB_TYPE_A_DUAL
C82 1000pF
C8 0.1uF
C10 22UF
C12 100uF
C11 100uF
C9 22UF
C7 0.1uF
C83 1000pF
GND_USB
R236 DNP 0
R237 DNP 0
GND_EARTH
R138 330
R139 330
D12 APTL3216PBC/A
D13 APTL3216PBC/A
L24 120OHM
C138 0.1uF
C127 0.1uF
C120 0.1uF
C140 0.1uF
C139 0.1uF
C128 22UF
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SRV05-4
freescale semiconductor
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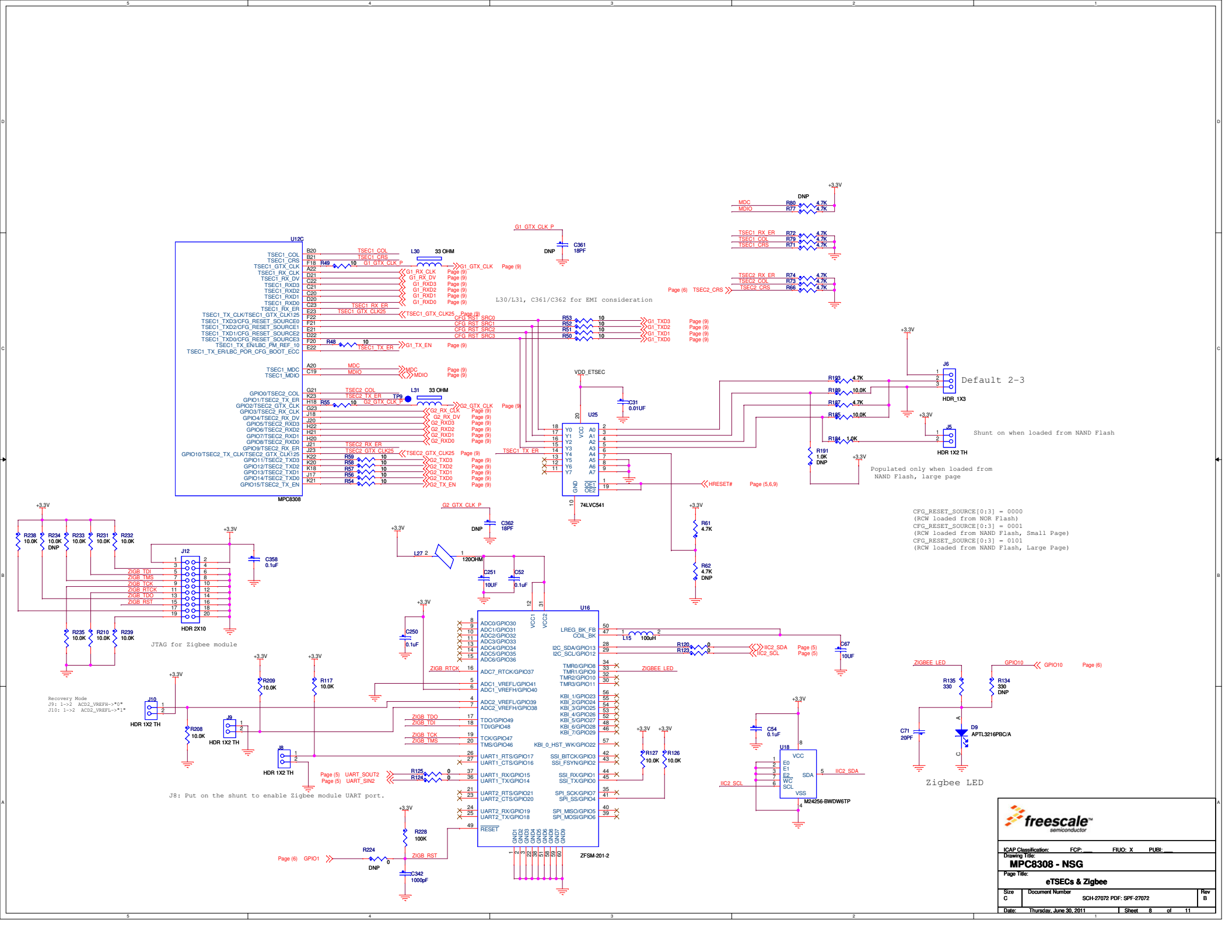
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U12C
TSEC1_COL
TSEC1_CRS
TSEC1_GTX_CLK
TSEC1_RX_CLK
TSEC1_RX_DV
TSEC1_RXD3
TSEC1_RXD2
TSEC1_RXD1
TSEC1_RXD0
TSEC1_RX_ER
TSEC1_TX_CLK/TSEC1_GTX_CLK125
TSEC1_TXD3/CFG_RESET_SOURCE0
TSEC1_TXD2/CFG_RESET_SOURCE1
TSEC1_TXD1/CFG_RESET_SOURCE2
TSEC1_TXD0/CFG_RESET_SOURCE3
TSEC1_TX_EN/LBC_PM_REF_10
TSEC1_TX_ER/LBC_POR_CFG_BOOT_ECC
TSEC1_MDC
TSEC1_MDIO
GPIO0/TSEC2_COL
GPIO1/TSEC2_TX_ER
GPIO2/TSEC2_GTX_CLK
GPIO3/TSEC2_RX_CLK
GPIO4/TSEC2_RX_DV
GPIO5/TSEC2_RXD3
GPIO6/TSEC2_RXD2
GPIO7/TSEC2_RXD1
GPIO8/TSEC2_RXD0
GPIO9/TSEC2_RX_ER
GPIO10/TSEC2_TX_CLK/TSEC2_GTX_CLK125
GPIO11/TSEC2_TXD3
GPIO12/TSEC2_TXD2
GPIO13/TSEC2_TXD1
GPIO14/TSEC2_TXD0
GPIO15/TSEC2_TX_EN
L30/L31, C361/C362 for EMI consideration
U25
74LVC541
VDD_ETSEC
HRESET#
U16
ZFSM-201-2
ADC0/GPIO30
ADC1/GPIO31
ADC2/GPIO32
ADC3/GPIO33
ADC4/GPIO34
ADC5/GPIO35
ADC6/GPIO36
ADC7_RTCK/GPIO37
TDO/GPIO49
TDI/GPIO48
TCK/GPIO47
TMS/GPIO46
UART1_RTS/GPIO17
UART1_CTS/GPIO16
UART1_RX/GPIO15
UART1_TX/GPIO14
UART2_RTS/GPIO21
UART2_CTS/GPIO20
UART2_RX/GPIO19
UART2_TX/GPIO18
RESET
LREG_BK_FB
COIL_BK
I2C_SDA/GPIO13
I2C_SCL/GPIO12
TMR0/GPIO8
TMR1/GPIO9
TMR2/GPIO10
TMR3/GPIO11
KBI_1/GPIO23
KBI_2/GPIO24
KBI_3/GPIO25
KBI_4/GPIO26
KBI_5/GPIO27
KBI_6/GPIO28
KBI_7/GPIO29
KBI_0_HST_WK/GPIO22
SSI_BITCK/GPIO3
SSI_FSYN/GPIO2
SSI_RX/GPIO1
SSI_TX/GPIO0
SPI_SCK/GPIO7
SPI_SS/GPIO4
SPI_MISO/GPIO5
SPI_MOSI/GPIO6
M24256-BWDW6TP
HDR 2X10
HDR 1X2 TH
HDR_1X3
JTAG for Zigbee module
Recovery Mode
J9: 1->2 ACD2_VREFH->"0"
J10: 1->2 ACD2_VREFL->"1"
J8: Put on the shunt to enable Zigbee module UART port.
Default 2-3
Shunt on when loaded from NAND Flash
Populated only when loaded from NAND Flash, large page
CFG_RESET_SOURCE[0:3] = 0000
(RCW loaded from NOR Flash)
CFG_RESET_SOURCE[0:3] = 0001
(RCW loaded from NAND Flash, Small Page)
CFG_RESET_SOURCE[0:3] = 0101
(RCW loaded from NAND Flash, Large Page)
Zigbee LED
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eTSECs & Zigbee
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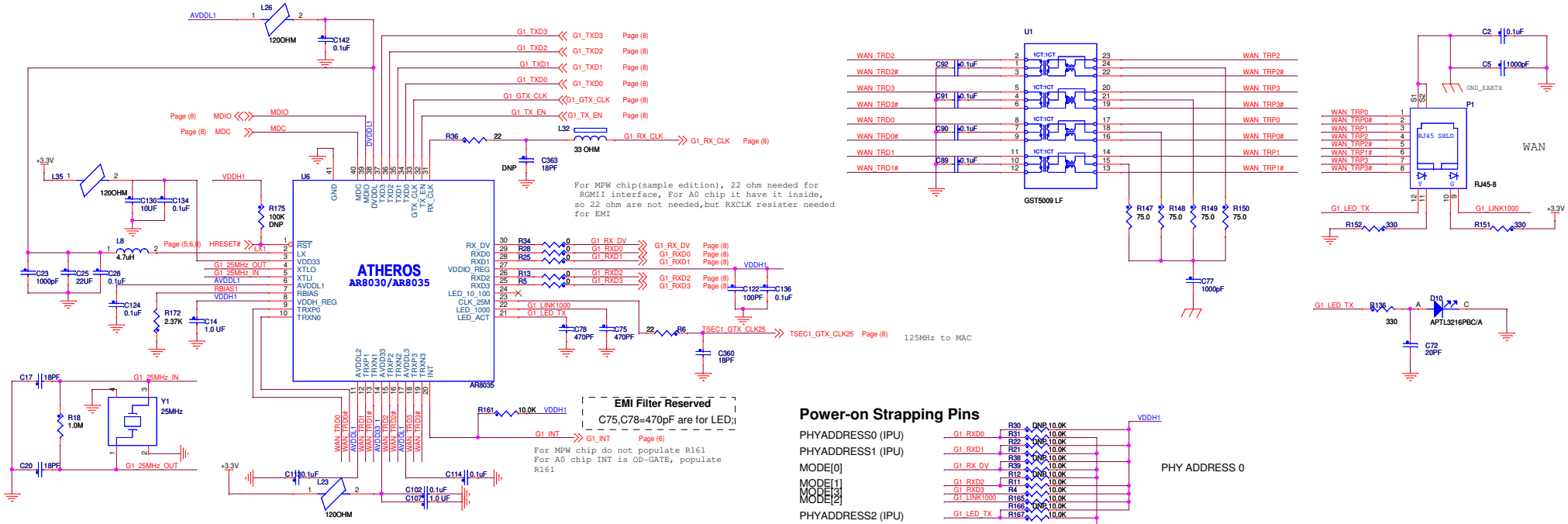

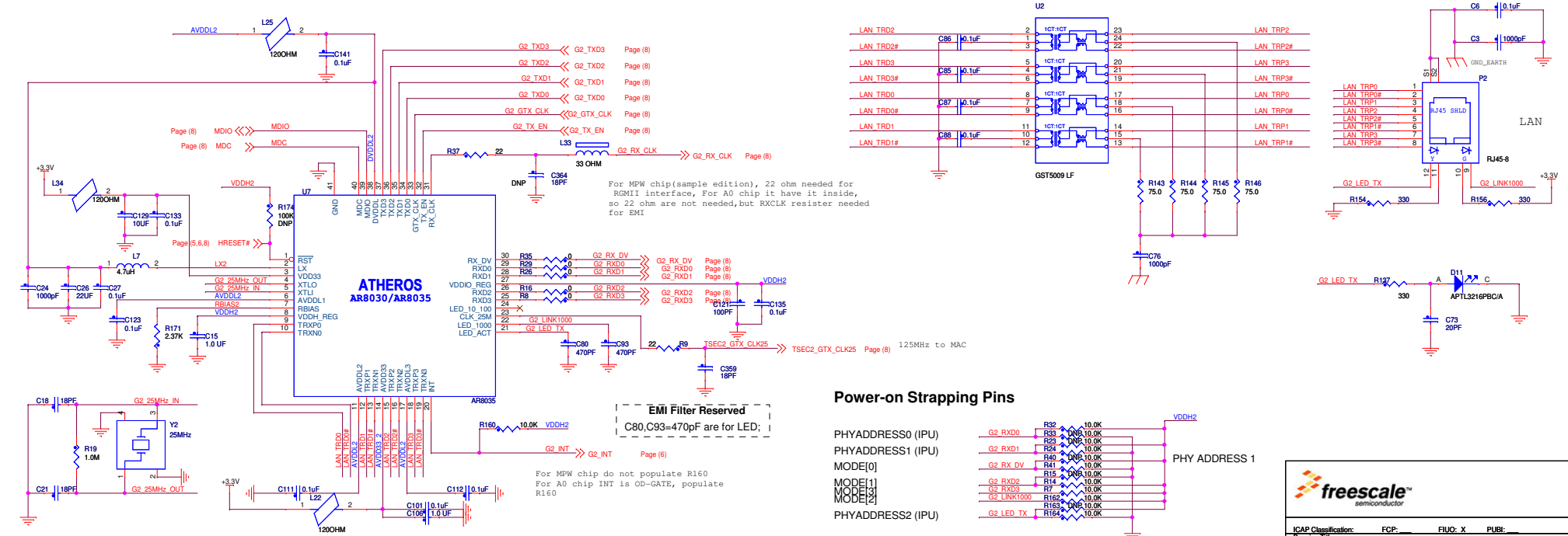

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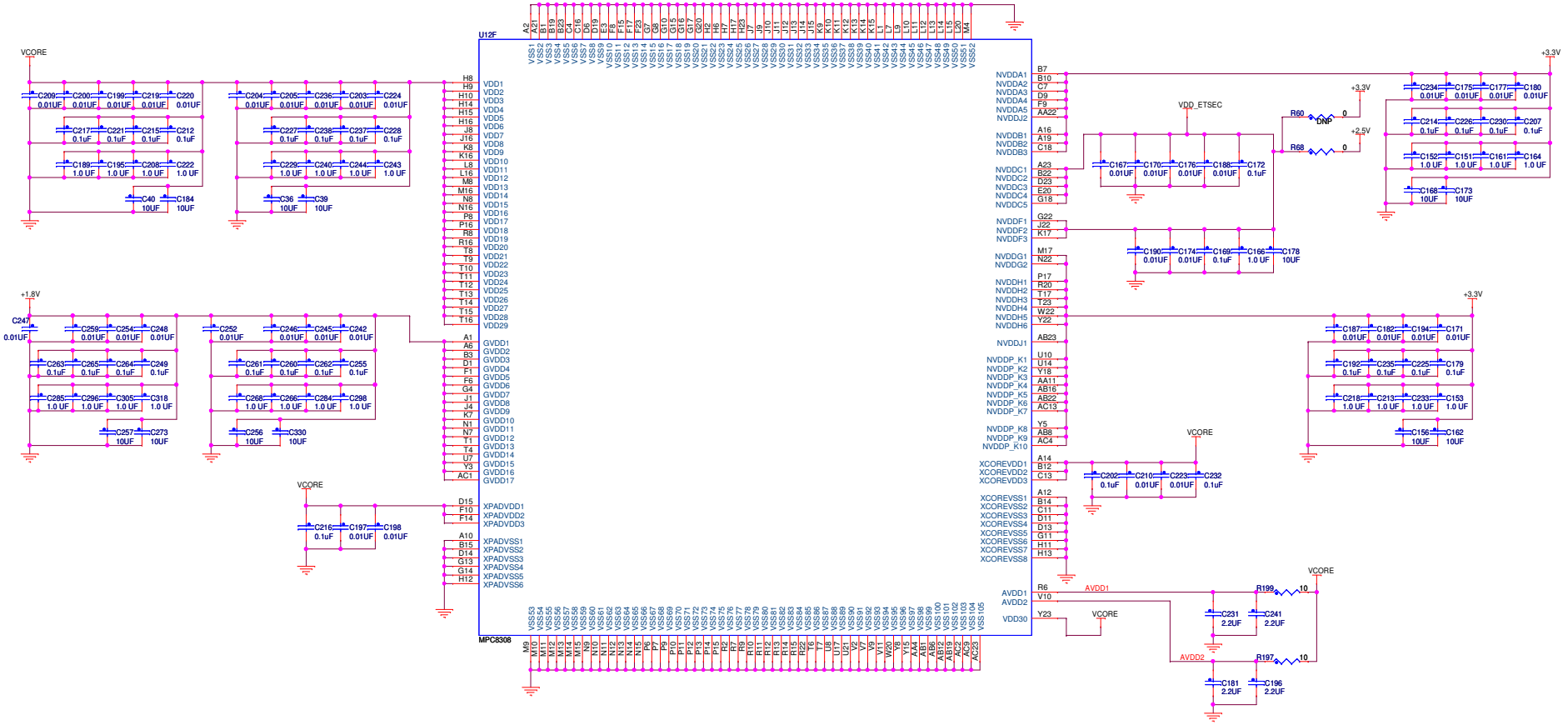

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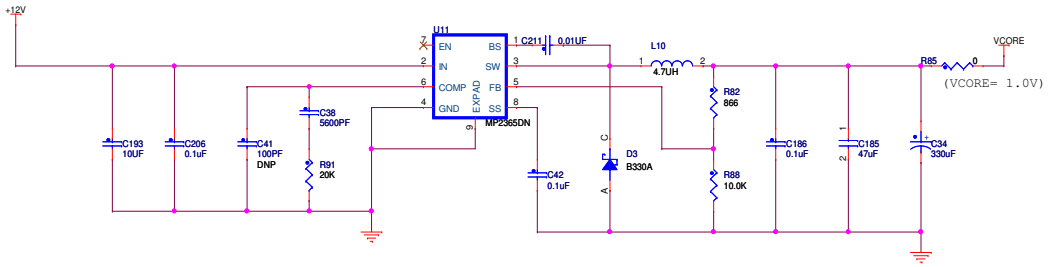

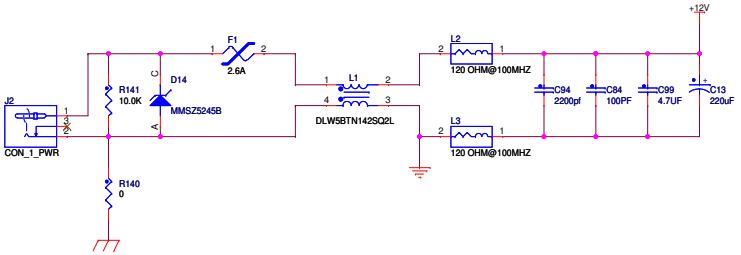

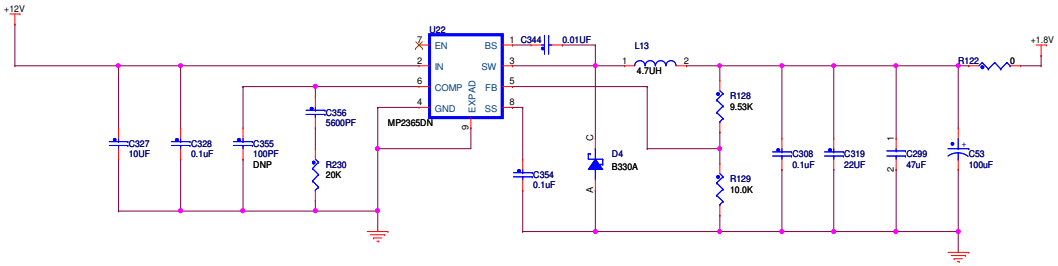

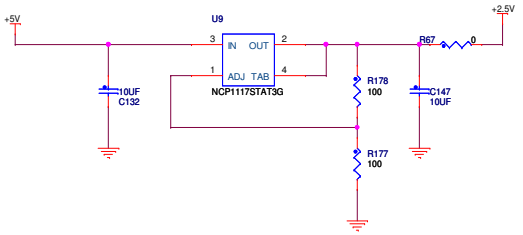

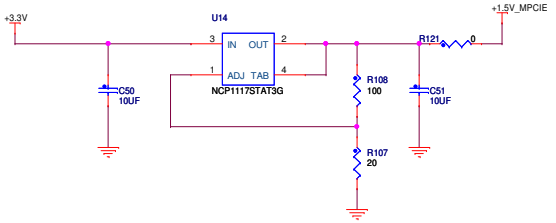

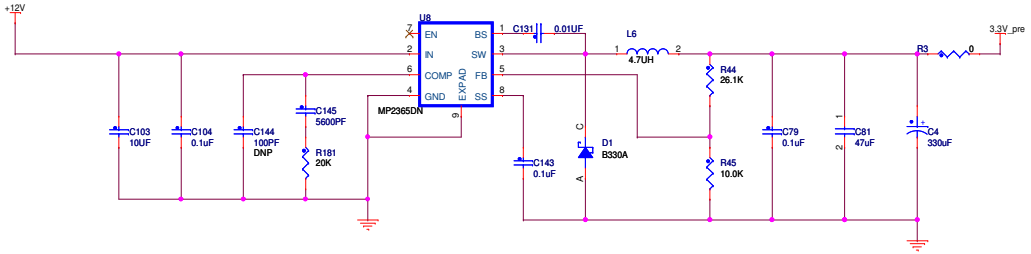

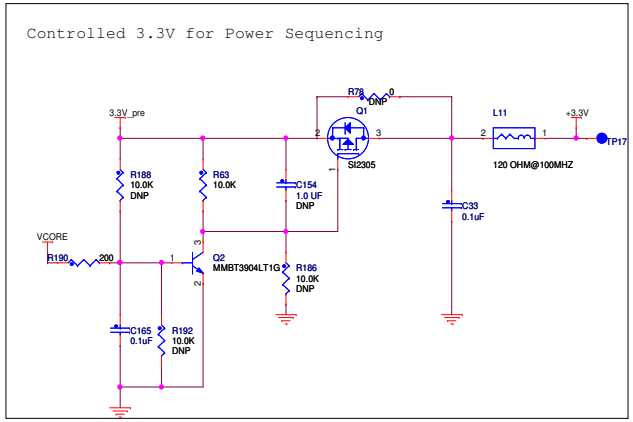

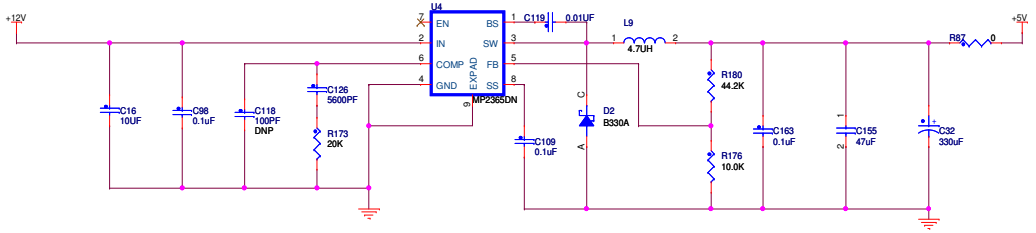

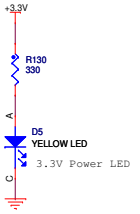

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ICAP Classification: FCP: ___ FIUO: X PUBI: ___

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Page Title: **Power Supply**

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