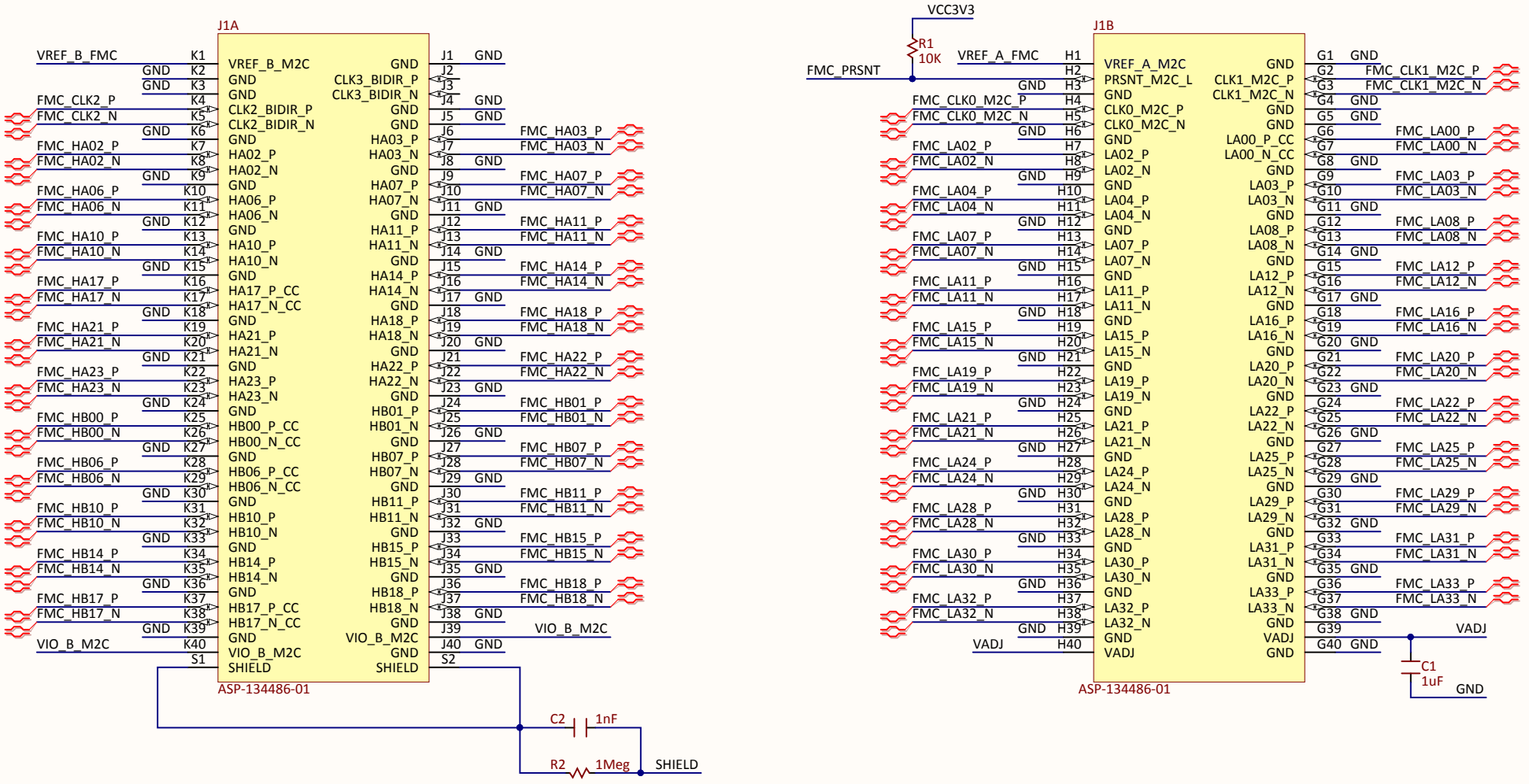


Title: Genesys 2

Rev: H.1

Circuit: FMC CONNECTOR

Doc# 500-300

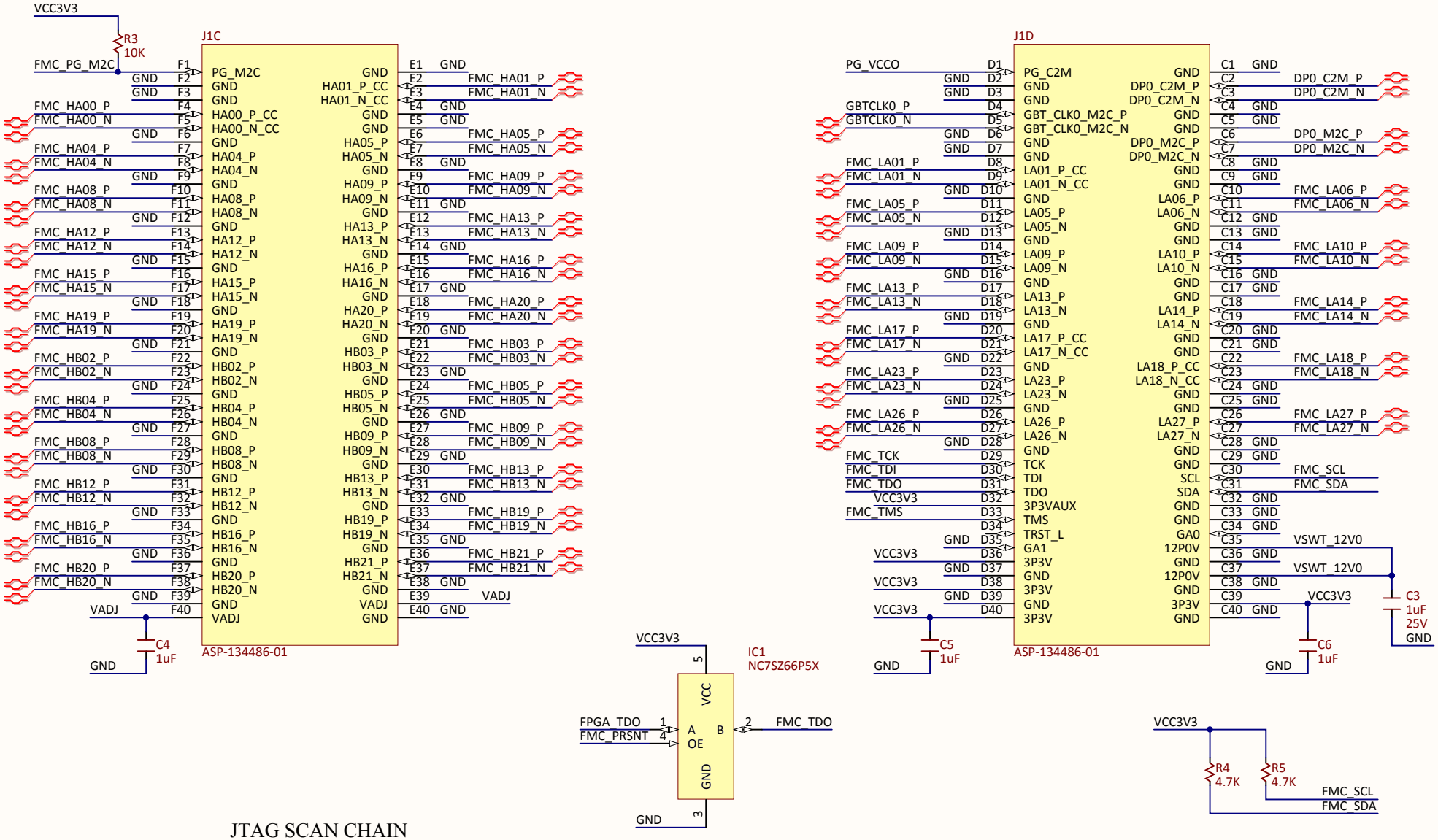
Engineer EG

Author DL

Date 7/17/2015

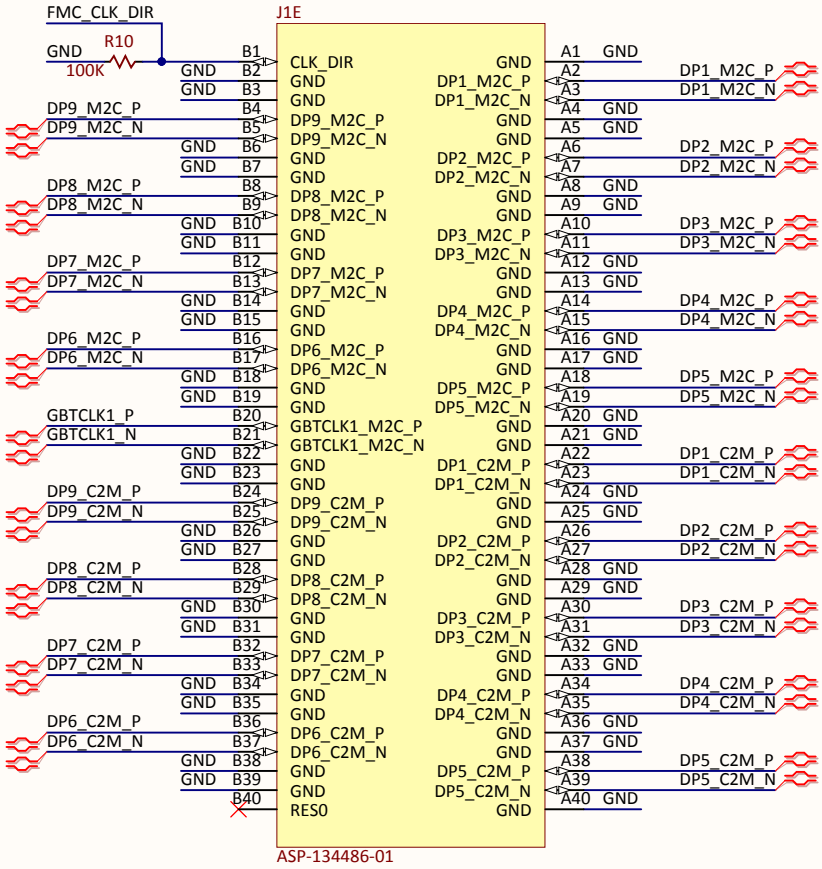
Sheet# 1 out of 22

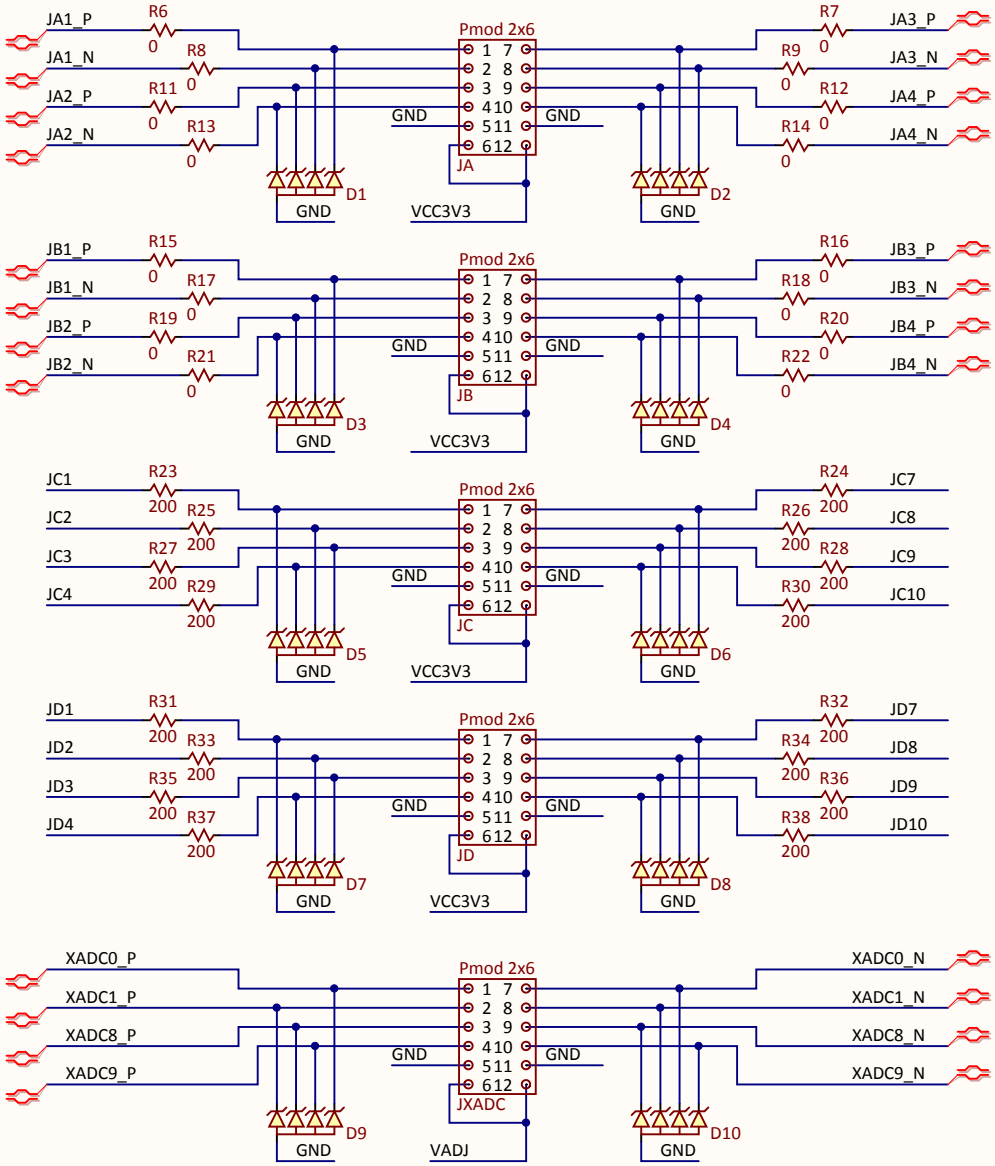
DIGILENT BEYOND THEORY

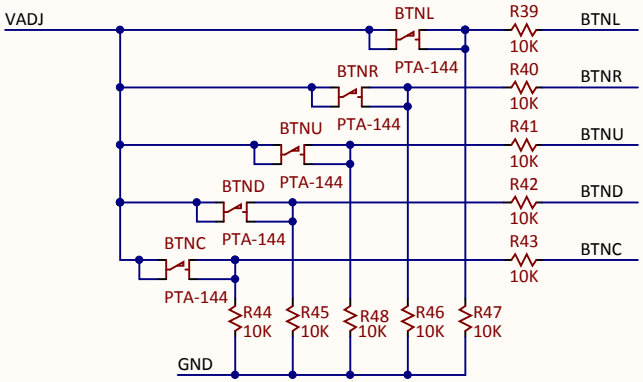


Title	Genesys 2
Rev	H.1
Copyright	2015
Circuit	FMC CONNECTOR
Doc#	500-300
Engineer	EG
Author	DL
Date	7/17/2015
Sheet#	2 out of 22

DIGILENT BEYOND THEORY

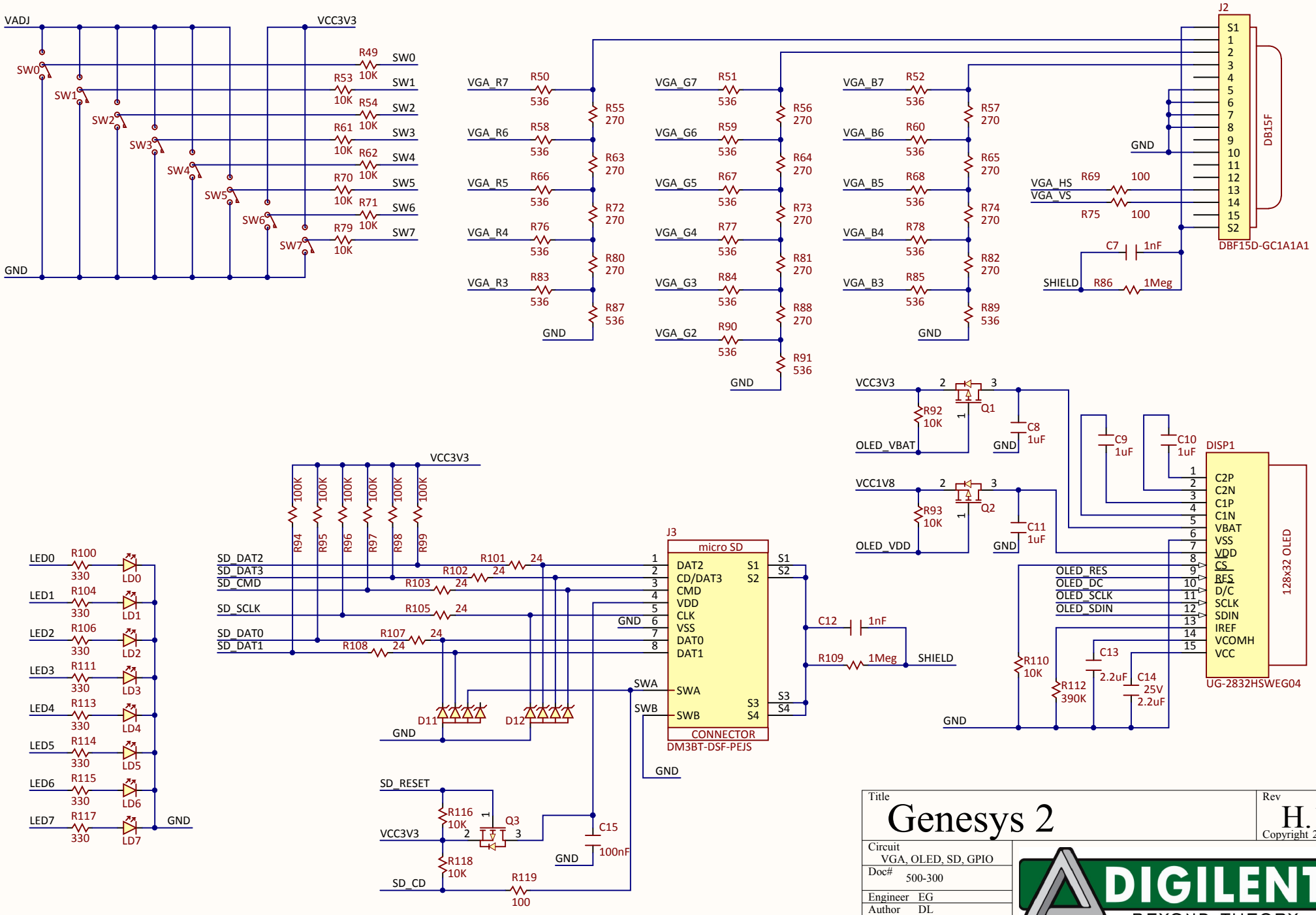






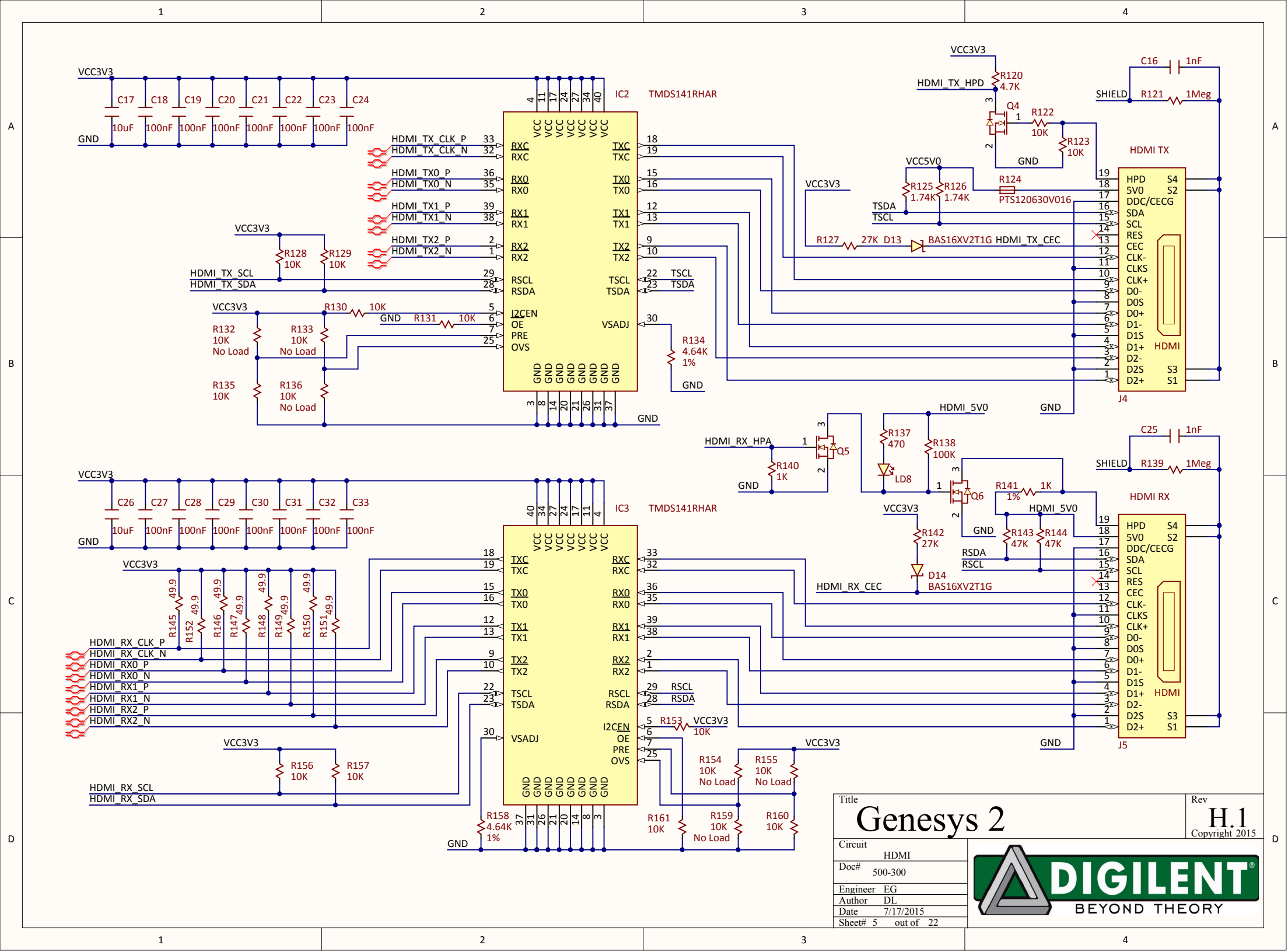
Title	Genesys 2
Rev	H.1
Copyright	2015
Circuit	FMC, PMODs, GPIO
Doc#	500-300
Engineer	EG
Author	DL
Date	7/17/2015
Sheet#	3 out of 22

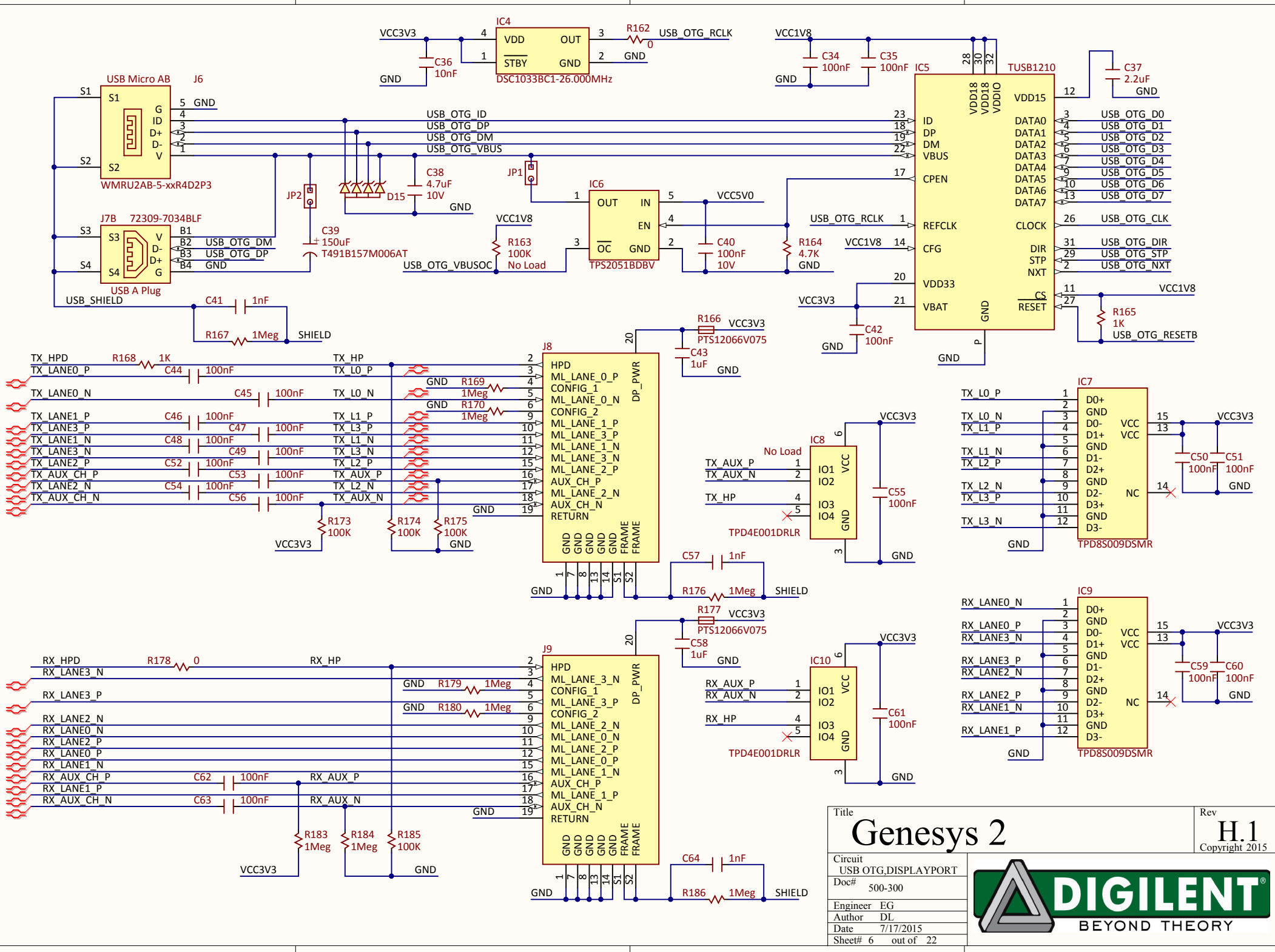
DIGILENT BEYOND THEORY

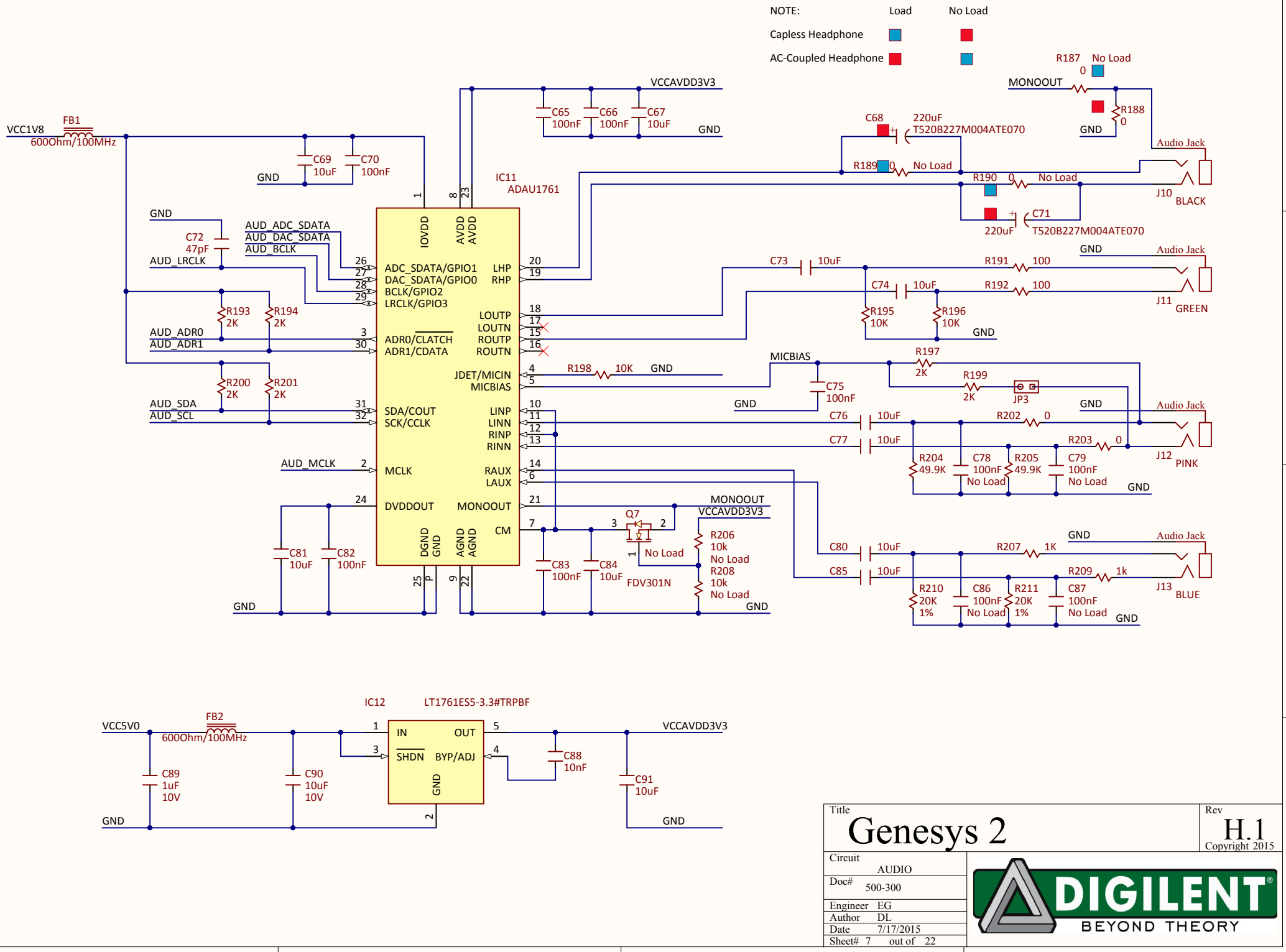


Title	Genesys 2
Rev	H.1
Copyright	2015
Circuit	VGA, OLED, SD, GPIO
Doc#	500-300
Engineer	EG
Author	DL
Date	7/17/2015
Sheet#	4 out of 22

DIGILENT BEYOND THEORY

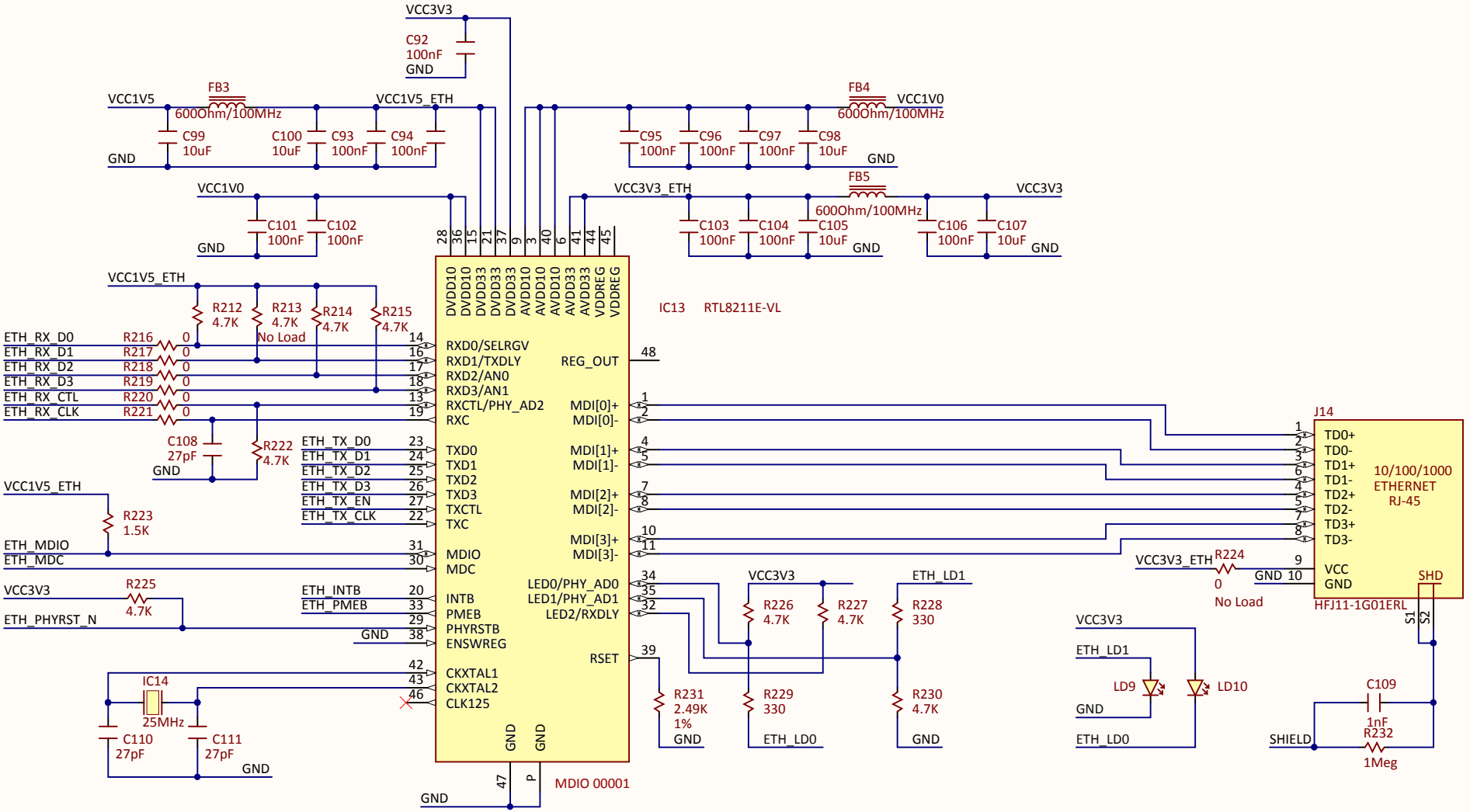

VCC3V3
C17 C18 C19 C20 C21 C22 C23 C24
10uF 100nF 100nF 100nF 100nF 100nF 100nF 100nF
GND
IC2 TMDS141RHAR
HDMI_TX_CLK_P
HDMI_TX_CLK_N
HDMI_TX0_P
HDMI_TX0_N
HDMI_TX1_P
HDMI_TX1_N
HDMI_TX2_P
HDMI_TX2_N
HDMI_TX_SCL
HDMI_TX_SDA
R128 10K
R129 10K
R130 10K
R131 10K
R132 10K No Load
R133 10K No Load
R134 4.64K 1%
R135 10K
R136 10K No Load
HDMI_TX_HPD
R120 4.7K
Q4
R122 10K
R123 10K
VCC5V0
R125 1.74K
R126 1.74K
R124 PTS120630V016
TSDA
TSCL
R127 27K
D13 BAS16XV2T1G
HDMI_TX_CEC
HDMI TX
J4
C16 1nF
SHIELD
R121 1Meg
HDMI_RX_HPA
R140 1K
Q5
R137 470
R138 100K
LD8
HDMI_5V0
Q6
R141 1K 1%
R142 27K
D14 BAS16XV2T1G
HDMI_RX_CEC
R143 47K
R144 47K
RSDA
RSCL
HDMI RX
J5
C25 1nF
R139 1Meg
C26 C27 C28 C29 C30 C31 C32 C33
10uF 100nF 100nF 100nF 100nF 100nF 100nF 100nF
IC3 TMDS141RHAR
R145 49.9
R152 49.9
R146 49.9
R147 49.9
R148 49.9
R149 49.9
R150 49.9
R151 49.9
HDMI_RX_CLK_P
HDMI_RX_CLK_N
HDMI_RX0_P
HDMI_RX0_N
HDMI_RX1_P
HDMI_RX1_N
HDMI_RX2_P
HDMI_RX2_N
R153 10K
R154 10K No Load
R155 10K No Load
R156 10K
R157 10K
HDMI_RX_SCL
HDMI_RX_SDA
R158 4.64K 1%
R161 10K
R159 10K No Load
R160 10K
Title
Genesys 2
Rev
H.1
Copyright 2015
Circuit HDMI
Doc# 500-300
Engineer EG
Author DL
Date 7/17/2015
Sheet# 5 out of 22
DIGILENT
BEYOND THEORY


IC4
VCC3V3
VDD
OUT
STBY
GND
DSC1033BC1-26.000MHz
R162
0
USB_OTG_RCLK
C36
10nF
VCC1V8
C34
100nF
C35
100nF
IC5
TUSB1210
C37
2.2uF
USB Micro AB
J6
WMRU2AB-5-xxR4D2P3
USB_OTG_ID
USB_OTG_DP
USB_OTG_DM
USB_OTG_VBUS
JP1
JP2
D15
C38
4.7uF
10V
J7B
72309-7034BLF
USB A Plug
C39
150uF
T491B157M006AT
IC6
TPS2051BDBV
VCC5V0
C40
100nF
10V
R163
100K
No Load
USB_OTG_VBUSOC
R164
4.7K
USB_SHIELD
C41
1nF
R167
1Meg
SHIELD
C42
100nF
R165
1K
USB_OTG_RESETB
R166
PTS12066V075
C43
1uF
J8
HPD
ML_LANE_0_P
CONFIG_1
ML_LANE_0_N
CONFIG_2
ML_LANE_1_P
ML_LANE_3_P
ML_LANE_1_N
ML_LANE_3_N
ML_LANE_2_P
AUX_CH_P
ML_LANE_2_N
AUX_CH_N
RETURN
DP_PWR
FRAME
TX_HPD
TX_LANE0_P
TX_LANE0_N
TX_LANE1_P
TX_LANE3_P
TX_LANE1_N
TX_LANE3_N
TX_LANE2_P
TX_AUX_CH_P
TX_LANE2_N
TX_AUX_CH_N
R168
1K
C44
C45
C46
C47
C48
C49
C52
C53
C54
C56
100nF
TX_HP
TX_L0_P
TX_L0_N
TX_L1_P
TX_L3_P
TX_L1_N
TX_L3_N
TX_L2_P
TX_AUX_P
TX_L2_N
TX_AUX_N
R169
R170
1Meg
R173
R174
R175
100K
IC8
TPD4E001DRLR
No Load
C55
IC7
TPD8S009DSMR
C50
C51
C57
1nF
R176
C64
R186
J9
RX_HPD
RX_LANE3_N
RX_LANE3_P
RX_LANE2_N
RX_LANE0_N
RX_LANE2_P
RX_LANE0_P
RX_LANE1_N
RX_AUX_CH_P
RX_LANE1_P
RX_AUX_CH_N
R178
0
C62
C63
RX_HP
RX_AUX_P
RX_AUX_N
R179
R180
R183
R184
R185
R177
C58
IC10
C61
IC9
C59
C60
Title
Genesys 2
Rev
H.1
Copyright 2015
Circuit
USB OTG,DISPLAYPORT
Doc#
500-300
Engineer EG
Author DL
Date 7/17/2015
Sheet# 6 out of 22
DIGILENT
BEYOND THEORY



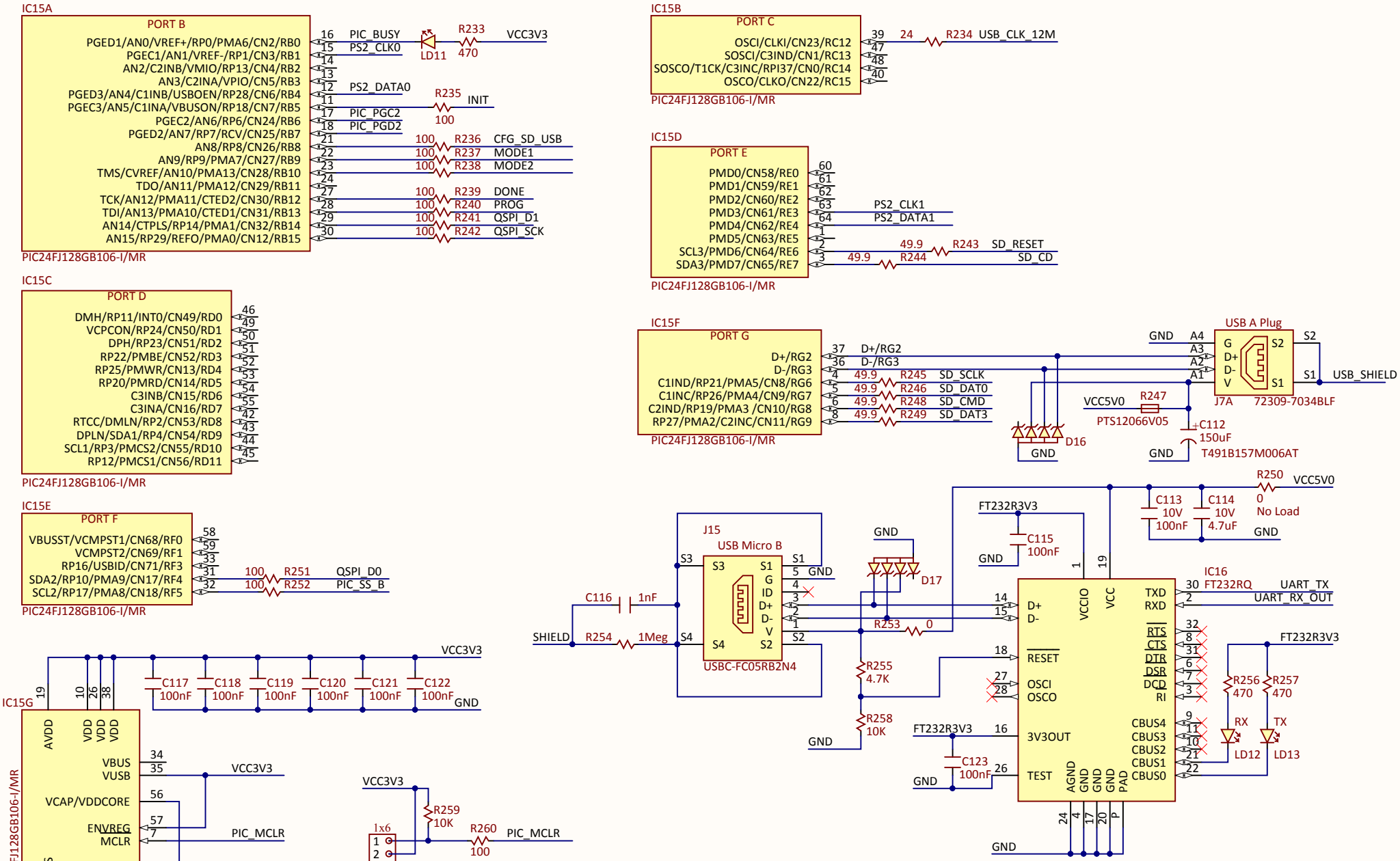
Title	Genesys 2
Rev	H.1
Copyright	2015
Circuit	AUDIO
Doc#	500-300
Engineer	EG
Author	DL
Date	7/17/2015
Sheet#	7 out of 22

DIGILENT BEYOND THEORY



Title	Genesys 2
Rev	H.1
Copyright	2015
Circuit	ETHERNET
Doc#	500-300
Engineer	EG
Author	DL
Date	7/17/2015
Sheet#	8 out of 22

DIGILENT BEYOND THEORY


IC15A
PORT B
PGED1/AN0/VREF+/RP0/PMA6/CN2/RB0
PGEC1/AN1/VREF-/RP1/CN3/RB1
AN2/C2INB/VMIO/RP13/CN4/RB2
AN3/C2INA/VPIO/CN5/RB3
PGED3/AN4/C1INB/USBOEN/RP28/CN6/RB4
PGEC3/AN5/C1INA/VBUSON/RP18/CN7/RB5
PGEC2/AN6/RP6/CN24/RB6
PGED2/AN7/RP7/RCV/CN25/RB7
AN8/RP8/CN26/RB8
AN9/RP9/PMA7/CN27/RB9
TMS/CVREF/AN10/PMA13/CN28/RB10
TDO/AN11/PMA12/CN29/RB11
TCK/AN12/PMA11/CTED2/CN30/RB12
TDI/AN13/PMA10/CTED1/CN31/RB13
AN14/CTPLS/RP14/PMA1/CN32/RB14
AN15/RP29/REFO/PMA0/CN12/RB15
PIC_BUSY
PS2_CLK0
LD11
R233
470
VCC3V3
PS2_DATA0
R235
INIT
100
PIC_PGC2
PIC_PGD2
R236 CFG_SD_USB
R237 MODE1
R238 MODE2
R239 DONE
R240 PROG
R241 QSPI_D1
R242 QSPI_SCK
PIC24FJ128GB106-I/MR
IC15B
PORT C
OSCI/CLKI/CN23/RC12
SOSCI/C3IND/CN1/RC13
SOSCO/T1CK/C3INC/RPI37/CN0/RC14
OSCO/CLKO/CN22/RC15
R234 USB_CLK_12M
PIC24FJ128GB106-I/MR
IC15D
PORT E
PMD0/CN58/RE0
PMD1/CN59/RE1
PMD2/CN60/RE2
PMD3/CN61/RE3
PMD4/CN62/RE4
PMD5/CN63/RE5
SCL3/PMD6/CN64/RE6
SDA3/PMD7/CN65/RE7
PS2_CLK1
PS2_DATA1
R243 SD_RESET
R244 SD_CD
PIC24FJ128GB106-I/MR
IC15C
PORT D
DMH/RP11/INT0/CN49/RD0
VCPCON/RP24/CN50/RD1
DPH/RP23/CN51/RD2
RP22/PMBE/CN52/RD3
RP25/PMWR/CN13/RD4
RP20/PMRD/CN14/RD5
C3INB/CN15/RD6
C3INA/CN16/RD7
RTCC/DMLN/RP2/CN53/RD8
DPLN/SDA1/RP4/CN54/RD9
SCL1/RP3/PMCS2/CN55/RD10
RP12/PMCS1/CN56/RD11
PIC24FJ128GB106-I/MR
IC15F
PORT G
D+/RG2
D-/RG3
C1IND/RP21/PMA5/CN8/RG6
C1INC/RP26/PMA4/CN9/RG7
C2IND/RP19/PMA3 /CN10/RG8
RP27/PMA2/C2INC/CN11/RG9
R245 SD_SCLK
R246 SD_DAT0
R248 SD_CMD
R249 SD_DAT3
PIC24FJ128GB106-I/MR
USB A Plug
USB_SHIELD
J7A
72309-7034BLF
VCC5V0
R247
PTS12066V05
C112
150uF
T491B157M006AT
D16
GND
IC15E
PORT F
VBUSST/VCMPST1/CN68/RF0
VCMPST2/CN69/RF1
RP16/USBID/CN71/RF3
SDA2/RP10/PMA9/CN17/RF4
SCL2/RP17/PMA8/CN18/RF5
R251 QSPI_D0
R252 PIC_SS_B
PIC24FJ128GB106-I/MR
J15
USB Micro B
USBC-FC05RB2N4
C116 1nF
R254 1Meg
SHIELD
D17
R253 0
R255 4.7K
R258 10K
R250 VCC5V0
0
No Load
C113 10V 100nF
C114 10V 4.7uF
C115 100nF
FT232R3V3
IC16
FT232RQ
UART_TX
UART_RX_OUT
RESET
OSCI
OSCO
3V3OUT
TEST
VCCIO
VCC
TXD
RXD
RTS
CTS
DTR
DSR
DCD
RI
CBUS4
CBUS3
CBUS2
CBUS1
CBUS0
R256 470
R257 470
RX
TX
LD12
LD13
C123 100nF
IC15G
PIC24FJ128GB106-I/MR
AVDD
VDD
VUSB
VCAP/VDDCORE
ENVREG
MCLR
AVSS
VSS
C117 100nF
C118 100nF
C119 100nF
C120 100nF
C121 100nF
C122 100nF
C124 10uF
C125 100nF
PIC_MCLR
R259 10K
R260 100
R261 100
R262 100
PIC_PGD2
PIC_PGC2
J16
1x6
Title
Genesys 2
Rev
H.1
Copyright 2015
Circuit
USB HID, UART
Doc#
500-300
Engineer EG
Author DL
Date 7/17/2015
Sheet# 9 out of 22
DIGILENT
BEYOND THEORY

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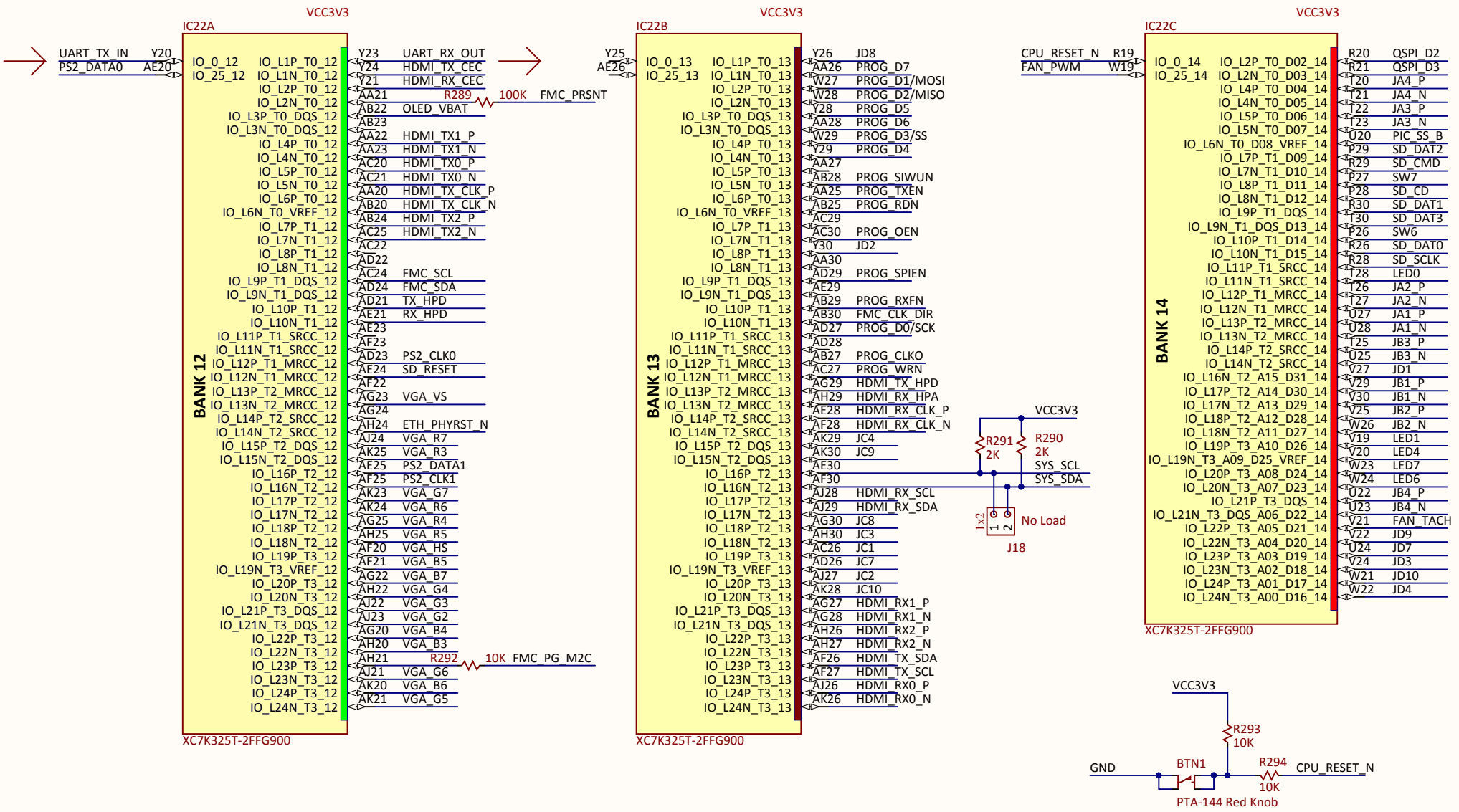
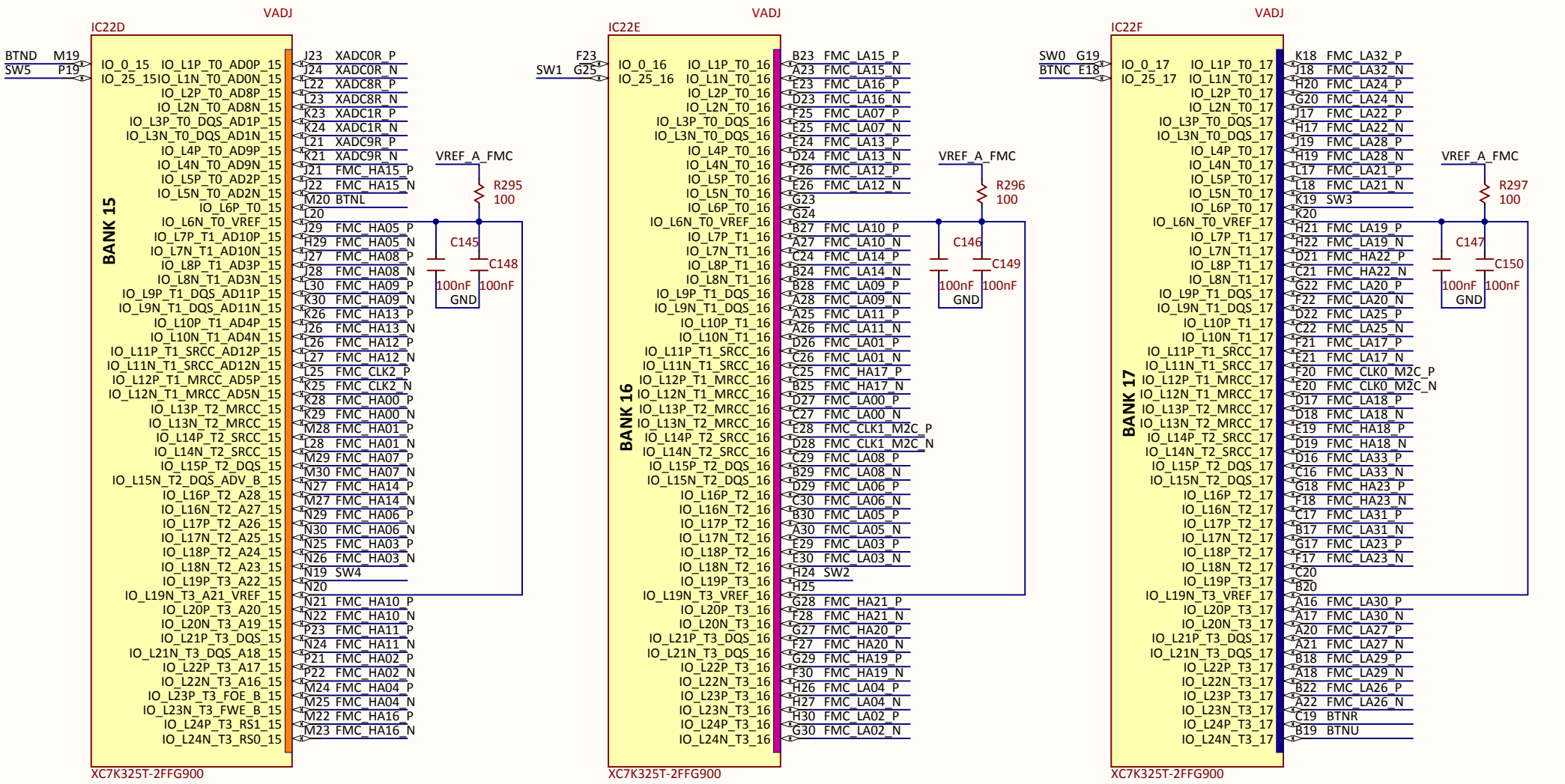


Title	Genesys 2
Rev	H.1
Copyright	2015
Circuit	FPGA BANKS
Doc#	500-300
Engineer	EG
Author	DL
Date	7/17/2015
Sheet#	11 out of 22

DIGILENT BEYOND THEORY


IC22D
VADJ
BANK 15
XC7K325T-2FFG900
BTND M19
SW5 P19
IO_0_15 IO_L1P_T0_AD0P_15
IO_25_15 IO_L1N_T0_AD0N_15
IO_L2P_T0_AD8P_15
IO_L2N_T0_AD8N_15
IO_L3P_T0_DQS_AD1P_15
IO_L3N_T0_DQS_AD1N_15
IO_L4P_T0_AD9P_15
IO_L4N_T0_AD9N_15
IO_L5P_T0_AD2P_15
IO_L5N_T0_AD2N_15
IO_L6P_T0_15
IO_L6N_T0_VREF_15
IO_L7P_T1_AD10P_15
IO_L7N_T1_AD10N_15
IO_L8P_T1_AD3P_15
IO_L8N_T1_AD3N_15
IO_L9P_T1_DQS_AD11P_15
IO_L9N_T1_DQS_AD11N_15
IO_L10P_T1_AD4P_15
IO_L10N_T1_AD4N_15
IO_L11P_T1_SRCC_AD12P_15
IO_L11N_T1_SRCC_AD12N_15
IO_L12P_T1_MRCC_AD5P_15
IO_L12N_T1_MRCC_AD5N_15
IO_L13P_T2_MRCC_15
IO_L13N_T2_MRCC_15
IO_L14P_T2_SRCC_15
IO_L14N_T2_SRCC_15
IO_L15P_T2_DQS_15
IO_L15N_T2_DQS_ADV_B_15
IO_L16P_T2_A28_15
IO_L16N_T2_A27_15
IO_L17P_T2_A26_15
IO_L17N_T2_A25_15
IO_L18P_T2_A24_15
IO_L18N_T2_A23_15
IO_L19P_T3_A22_15
IO_L19N_T3_A21_VREF_15
IO_L20P_T3_A20_15
IO_L20N_T3_A19_15
IO_L21P_T3_DQS_15
IO_L21N_T3_DQS_A18_15
IO_L22P_T3_A17_15
IO_L22N_T3_A16_15
IO_L23P_T3_FOE_B_15
IO_L23N_T3_FWE_B_15
IO_L24P_T3_RS1_15
IO_L24N_T3_RS0_15
J23 XADC0R_P
J24 XADC0R_N
L22 XADC8R_P
L23 XADC8R_N
K23 XADC1R_P
K24 XADC1R_N
L21 XADC9R_P
K21 XADC9R_N
J21 FMC_HA15_P
J22 FMC_HA15_N
M20 BTNL
L20
J29 FMC_HA05_P
H29 FMC_HA05_N
J27 FMC_HA08_P
J28 FMC_HA08_N
L30 FMC_HA09_P
K30 FMC_HA09_N
K26 FMC_HA13_P
J26 FMC_HA13_N
L26 FMC_HA12_P
L27 FMC_HA12_N
L25 FMC_CLK2_P
K25 FMC_CLK2_N
K28 FMC_HA00_P
K29 FMC_HA00_N
M28 FMC_HA01_P
L28 FMC_HA01_N
M29 FMC_HA07_P
M30 FMC_HA07_N
N27 FMC_HA14_P
M27 FMC_HA14_N
N29 FMC_HA06_P
N30 FMC_HA06_N
N25 FMC_HA03_P
N26 FMC_HA03_N
N19 SW4
N20
N21 FMC_HA10_P
N22 FMC_HA10_N
P23 FMC_HA11_P
N24 FMC_HA11_N
P21 FMC_HA02_P
P22 FMC_HA02_N
M24 FMC_HA04_P
M25 FMC_HA04_N
M22 FMC_HA16_P
M23 FMC_HA16_N
VREF_A_FMC
R295 100
C145 100nF
C148 100nF
GND
IC22E
VADJ
BANK 16
XC7K325T-2FFG900
F23 SW1 G25
IO_0_16 IO_L1P_T0_16
IO_25_16 IO_L1N_T0_16
IO_L2P_T0_16
IO_L2N_T0_16
IO_L3P_T0_DQS_16
IO_L3N_T0_DQS_16
IO_L4P_T0_16
IO_L4N_T0_16
IO_L5P_T0_16
IO_L5N_T0_16
IO_L6P_T0_16
IO_L6N_T0_VREF_16
IO_L7P_T1_16
IO_L7N_T1_16
IO_L8P_T1_16
IO_L8N_T1_16
IO_L9P_T1_DQS_16
IO_L9N_T1_DQS_16
IO_L10P_T1_16
IO_L10N_T1_16
IO_L11P_T1_SRCC_16
IO_L11N_T1_SRCC_16
IO_L12P_T1_MRCC_16
IO_L12N_T1_MRCC_16
IO_L13P_T2_MRCC_16
IO_L13N_T2_MRCC_16
IO_L14P_T2_SRCC_16
IO_L14N_T2_SRCC_16
IO_L15P_T2_DQS_16
IO_L15N_T2_DQS_16
IO_L16P_T2_16
IO_L16N_T2_16
IO_L17P_T2_16
IO_L17N_T2_16
IO_L18P_T2_16
IO_L18N_T2_16
IO_L19P_T3_16
IO_L19N_T3_VREF_16
IO_L20P_T3_16
IO_L20N_T3_16
IO_L21P_T3_DQS_16
IO_L21N_T3_DQS_16
IO_L22P_T3_16
IO_L22N_T3_16
IO_L23P_T3_16
IO_L23N_T3_16
IO_L24P_T3_16
IO_L24N_T3_16
B23 FMC_LA15_P
A23 FMC_LA15_N
E23 FMC_LA16_P
D23 FMC_LA16_N
F25 FMC_LA07_P
E25 FMC_LA07_N
E24 FMC_LA13_P
D24 FMC_LA13_N
F26 FMC_LA12_P
E26 FMC_LA12_N
G23
G24
B27 FMC_LA10_P
A27 FMC_LA10_N
C24 FMC_LA14_P
B24 FMC_LA14_N
B28 FMC_LA09_P
A28 FMC_LA09_N
A25 FMC_LA11_P
A26 FMC_LA11_N
D26 FMC_LA01_P
C26 FMC_LA01_N
C25 FMC_HA17_P
B25 FMC_HA17_N
D27 FMC_LA00_P
C27 FMC_LA00_N
E28 FMC_CLK1_M2C_P
D28 FMC_CLK1_M2C_N
C29 FMC_LA08_P
B29 FMC_LA08_N
D29 FMC_LA06_P
C30 FMC_LA06_N
B30 FMC_LA05_P
A30 FMC_LA05_N
E29 FMC_LA03_P
E30 FMC_LA03_N
H24 SW2
H25
G28 FMC_HA21_P
F28 FMC_HA21_N
G27 FMC_HA20_P
F27 FMC_HA20_N
G29 FMC_HA19_P
F30 FMC_HA19_N
H26 FMC_LA04_P
H27 FMC_LA04_N
H30 FMC_LA02_P
G30 FMC_LA02_N
VREF_A_FMC
R296 100
C146 100nF
C149 100nF
GND
IC22F
VADJ
BANK 17
XC7K325T-2FFG900
SW0 G19
BTNC E18
IO_0_17 IO_L1P_T0_17
IO_25_17 IO_L1N_T0_17
IO_L2P_T0_17
IO_L2N_T0_17
IO_L3P_T0_DQS_17
IO_L3N_T0_DQS_17
IO_L4P_T0_17
IO_L4N_T0_17
IO_L5P_T0_17
IO_L5N_T0_17
IO_L6P_T0_17
IO_L6N_T0_VREF_17
IO_L7P_T1_17
IO_L7N_T1_17
IO_L8P_T1_17
IO_L8N_T1_17
IO_L9P_T1_DQS_17
IO_L9N_T1_DQS_17
IO_L10P_T1_17
IO_L10N_T1_17
IO_L11P_T1_SRCC_17
IO_L11N_T1_SRCC_17
IO_L12P_T1_MRCC_17
IO_L12N_T1_MRCC_17
IO_L13P_T2_MRCC_17
IO_L13N_T2_MRCC_17
IO_L14P_T2_SRCC_17
IO_L14N_T2_SRCC_17
IO_L15P_T2_DQS_17
IO_L15N_T2_DQS_17
IO_L16P_T2_17
IO_L16N_T2_17
IO_L17P_T2_17
IO_L17N_T2_17
IO_L18P_T2_17
IO_L18N_T2_17
IO_L19P_T3_17
IO_L19N_T3_VREF_17
IO_L20P_T3_17
IO_L20N_T3_17
IO_L21P_T3_DQS_17
IO_L21N_T3_DQS_17
IO_L22P_T3_17
IO_L22N_T3_17
IO_L23P_T3_17
IO_L23N_T3_17
IO_L24P_T3_17
IO_L24N_T3_17
K18 FMC_LA32_P
J18 FMC_LA32_N
H20 FMC_LA24_P
G20 FMC_LA24_N
J17 FMC_LA22_P
H17 FMC_LA22_N
J19 FMC_LA28_P
H19 FMC_LA28_N
F17 FMC_LA21_P
L18 FMC_LA21_N
K19 SW3
K20
H21 FMC_LA19_P
H22 FMC_LA19_N
D21 FMC_HA22_P
C21 FMC_HA22_N
G22 FMC_LA20_P
F22 FMC_LA20_N
D22 FMC_LA25_P
C22 FMC_LA25_N
F21 FMC_LA17_P
E21 FMC_LA17_N
F20 FMC_CLK0_M2C_P
E20 FMC_CLK0_M2C_N
D17 FMC_LA18_P
D18 FMC_LA18_N
E19 FMC_HA18_P
D19 FMC_HA18_N
D16 FMC_LA33_P
C16 FMC_LA33_N
G18 FMC_HA23_P
F18 FMC_HA23_N
C17 FMC_LA31_P
B17 FMC_LA31_N
G17 FMC_LA23_P
F17 FMC_LA23_N
C20
B20
A16 FMC_LA30_P
A17 FMC_LA30_N
A20 FMC_LA27_P
A21 FMC_LA27_N
B18 FMC_LA29_P
A18 FMC_LA29_N
B22 FMC_LA26_P
A22 FMC_LA26_N
C19 BTNR
B19 BTNU
VREF_A_FMC
R297 100
C147 100nF
C150 100nF
GND
XADC0R_P
R298 100
XADC0_P
No Load C151 1nF
XADC0R_N
R300 100
XADC0_N
XADC8R_P
R302 100
XADC8_P
No Load C153 1nF
XADC8R_N
R304 100
XADC8_N
XADC1R_P
R299 100
XADC1_P
No Load C152 1nF
XADC1R_N
R301 100
XADC1_N
XADC9R_P
R303 100
XADC9_P
No Load C154 1nF
XADC9R_N
R305 100
XADC9_N
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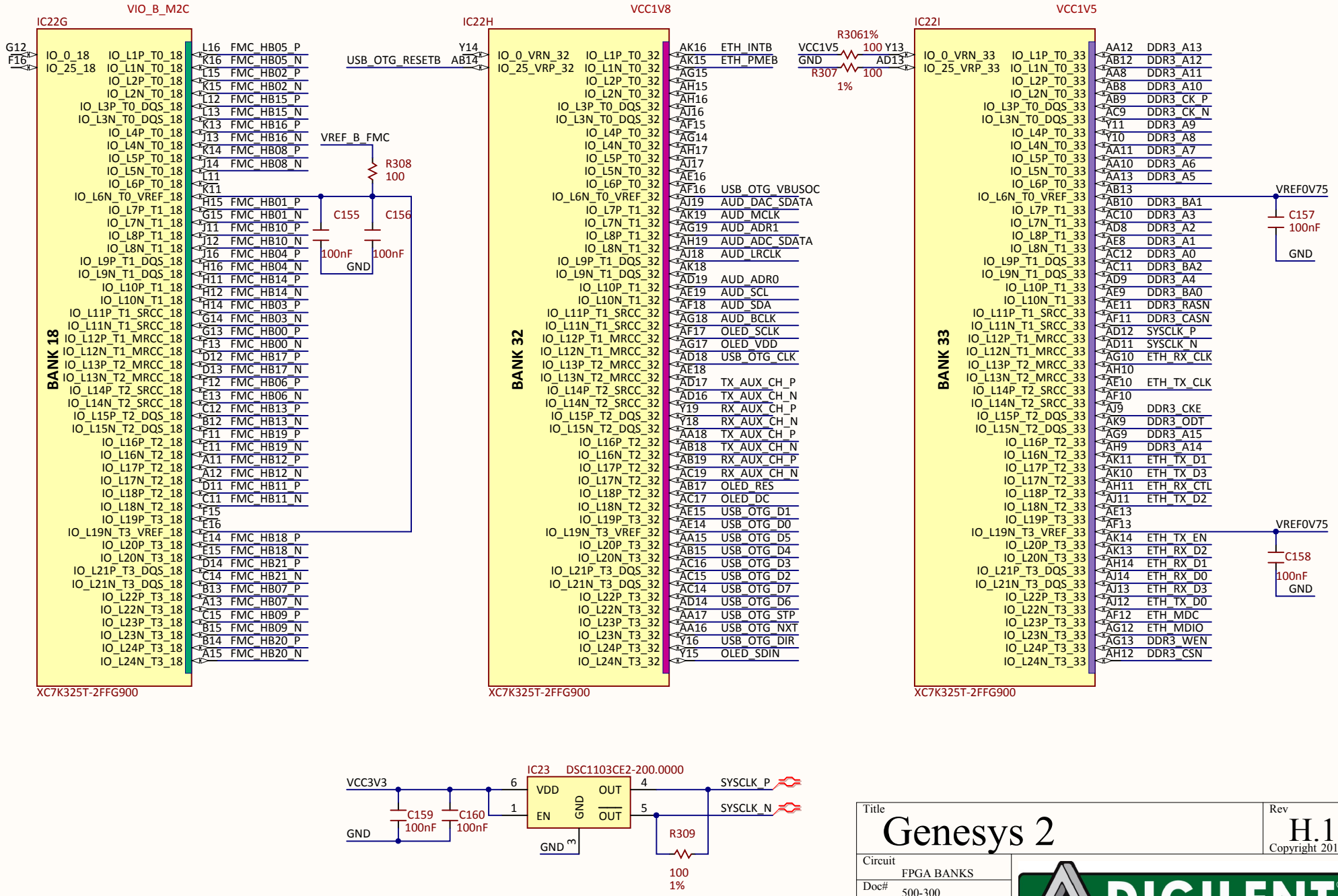

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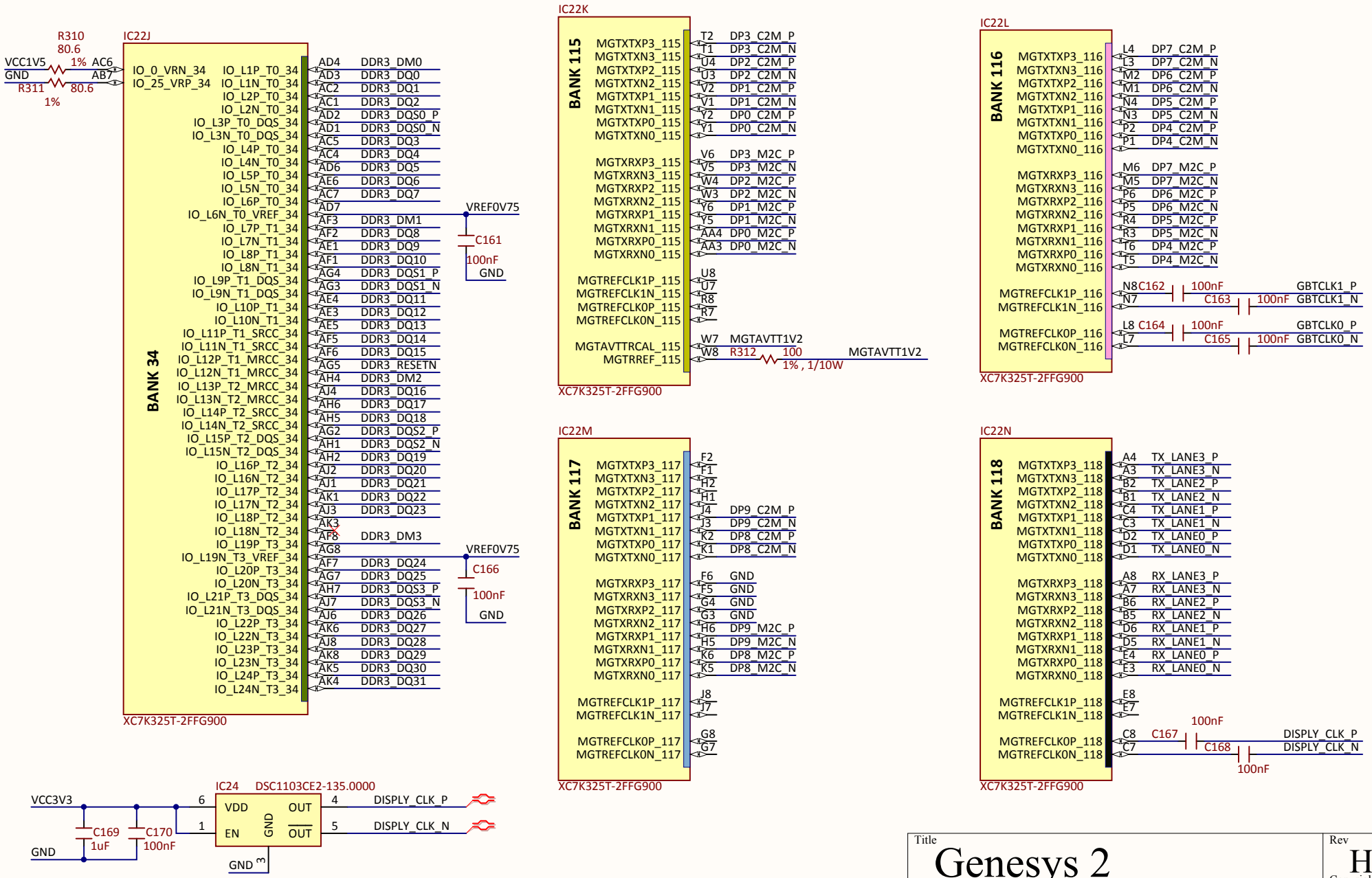

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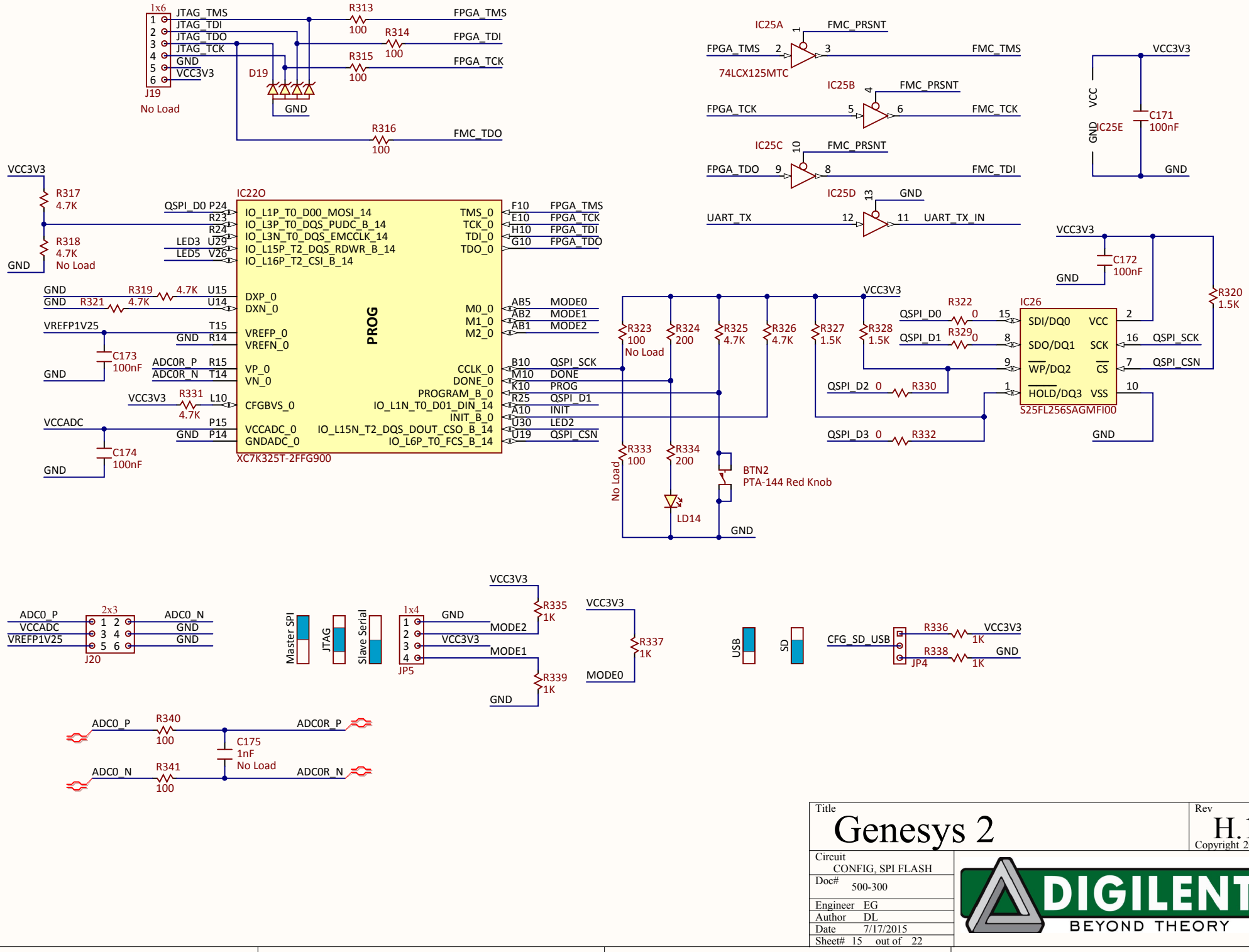
1x6
JTAG_TMS
JTAG_TDI
JTAG_TDO
JTAG_TCK
GND
VCC3V3
J19
No Load
D19
R313
100
R314
100
R315
100
R316
100
FPGA_TMS
FPGA_TDI
FPGA_TCK
FMC_TDO
IC25A
74LCX125MTC
FMC_PRSNT
FPGA_TMS
FMC_TMS
IC25B
FPGA_TCK
FMC_TCK
IC25C
FPGA_TDO
FMC_TDI
IC25D
UART_TX
UART_TX_IN
IC25E
VCC3V3
C171
100nF
C172
100nF
R317
4.7K
R318
4.7K
No Load
IC22O
XC7K325T-2FFG900
PROG
QSPI_D0 P24
LED3 U29
LED5 V26
IO_L1P_T0_D00_MOSI_14
IO_L3P_T0_DQS_PUDC_B_14
IO_L3N_T0_DQS_EMCCLK_14
IO_L15P_T2_DQS_RDWR_B_14
IO_L16P_T2_CSI_B_14
DXP_0
DXN_0
VREFP_0
VREFN_0
VP_0
VN_0
CFGBVS_0
VCCADC_0
GNDADC_0
TMS_0
TCK_0
TDI_0
TDO_0
M0_0
M1_0
M2_0
CCLK_0
DONE_0
PROGRAM_B_0
IO_L1N_T0_D01_DIN_14
INIT_B_0
IO_L15N_T2_DQS_DOUT_CSO_B_14
IO_L6P_T0_FCS_B_14
F10 FPGA_TMS
E10 FPGA_TCK
H10 FPGA_TDI
G10 FPGA_TDO
AB5 MODE0
AB2 MODE1
AB1 MODE2
B10 QSPI_SCK
M10 DONE
K10 PROG
R25 QSPI_D1
A10 INIT
U30 LED2
U19 QSPI_CSN
R319 4.7K
R321 4.7K
C173
100nF
C174
100nF
R331
4.7K
R323
100
No Load
R324
200
R325
4.7K
R326
4.7K
R327
1.5K
R328
1.5K
R329
0
R330
R332
R333
100
No Load
R334
200
LD14
BTN2
PTA-144 Red Knob
R322
0
QSPI_D0
QSPI_D1
QSPI_D2
QSPI_D3
IC26
S25FL256SAGMFI00
SDI/DQ0
SDO/DQ1
WP/DQ2
HOLD/DQ3
VCC
SCK
CS
VSS
QSPI_SCK
QSPI_CSN
R320
1.5K
2x3
J20
ADC0_P
VCCADC
VREFP1V25
ADC0_N
Master SPI
JTAG
Slave Serial
1x4
JP5
R335
1K
R337
1K
R339
1K
MODE2
MODE1
MODE0
USB
SD
CFG_SD_USB
JP4
R336
1K
R338
1K
R340
100
R341
100
C175
1nF
No Load
ADC0_P
ADC0_N
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CONFIG, SPI FLASH
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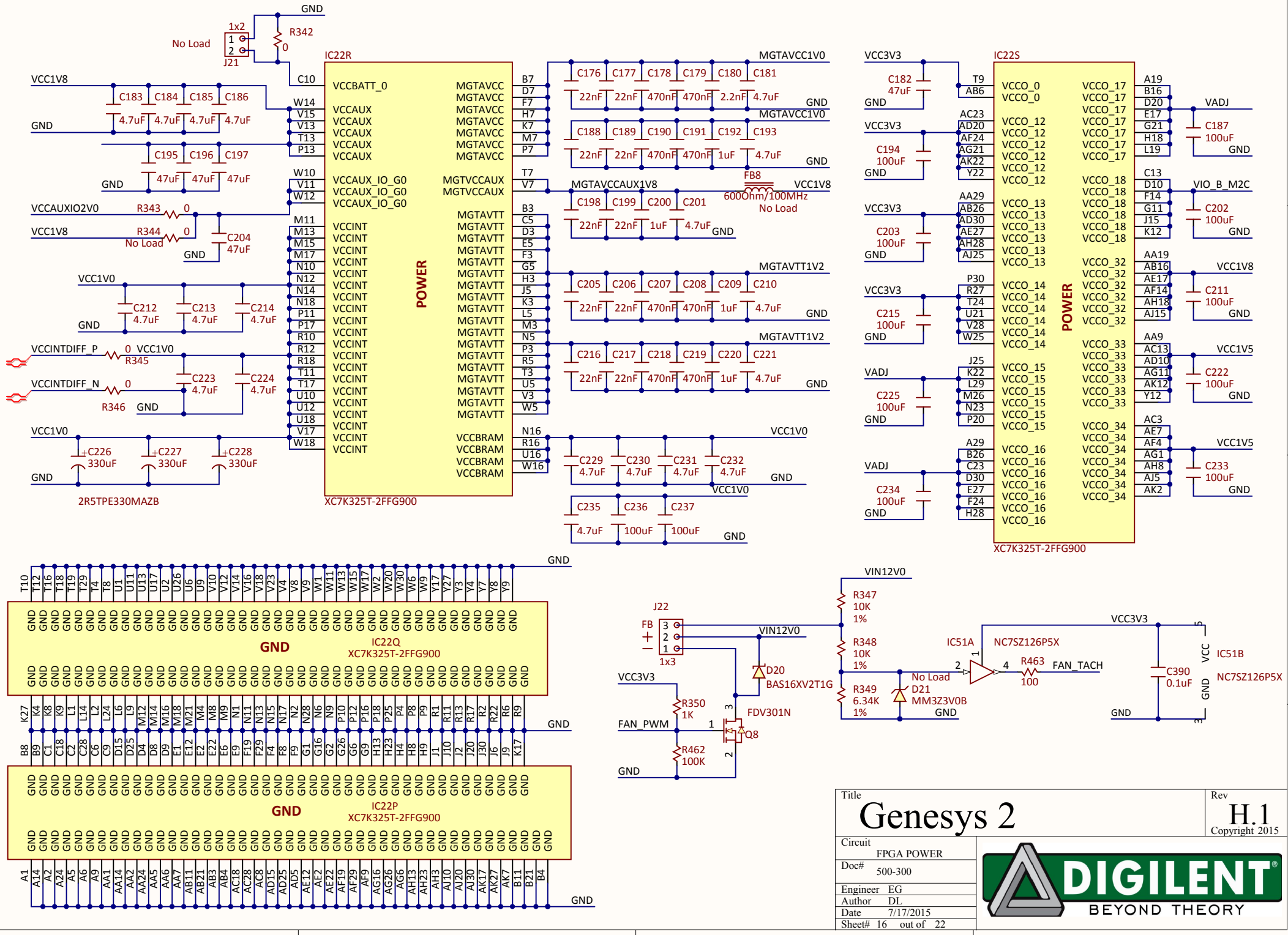
IC22R
POWER
XC7K325T-2FFG900
2R5TPE330MAZB
IC22S
POWER
XC7K325T-2FFG900
IC22Q
GND
XC7K325T-2FFG900
IC22P
GND
XC7K325T-2FFG900
J21
J22
R342
R343
R344
R345
R346
C204
C212
C213
C214
C223
C224
C226
C227
C228
C10
C176
C177
C178
C179
C180
C181
C188
C189
C190
C191
C192
C193
C198
C199
C200
C201
C205
C206
C207
C208
C209
C210
C216
C217
C218
C219
C220
C221
C229
C230
C231
C232
C235
C236
C237
FB8
600Ohm/100MHz
No Load
C182
C194
C203
C215
C225
C234
C187
C202
C211
C222
C233
C390
R347
R348
R349
R350
R462
R463
D20
BAS16XV2T1G
D21
MM3Z3V0B
Q8
FDV301N
IC51A
IC51B
NC7SZ126P5X
FAN_TACH
FAN_PWM
VIN12V0
VCC1V8
VCC1V0
VCC3V3
MGTAVCC1V0
MGTAVCCAUX1V8
MGTAVTT1V2
VADJ
VIO_B_M2C
VCC1V5
VCCINTDIFF_P
VCCINTDIFF_N
VCCAUXIO2V0
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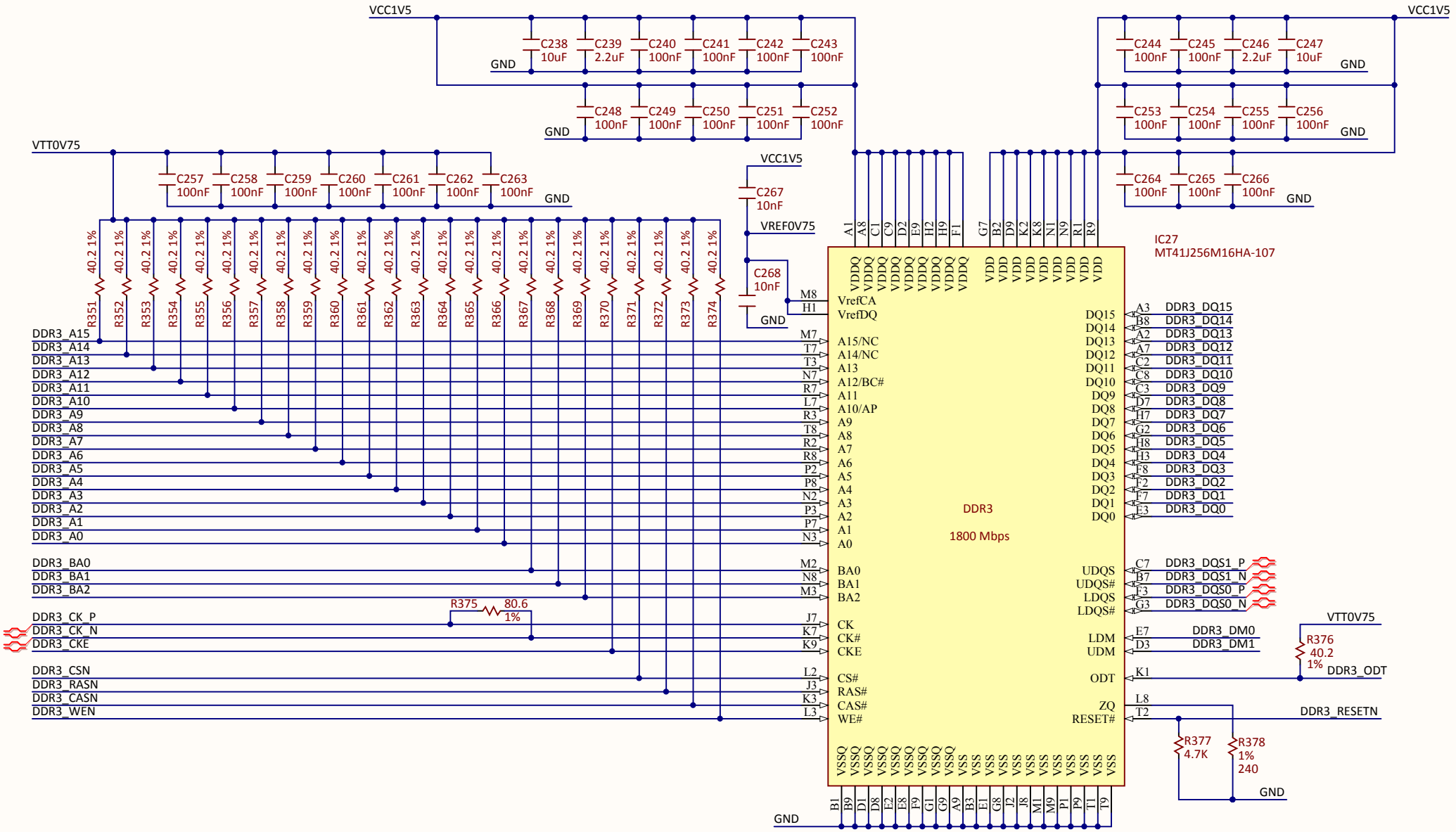

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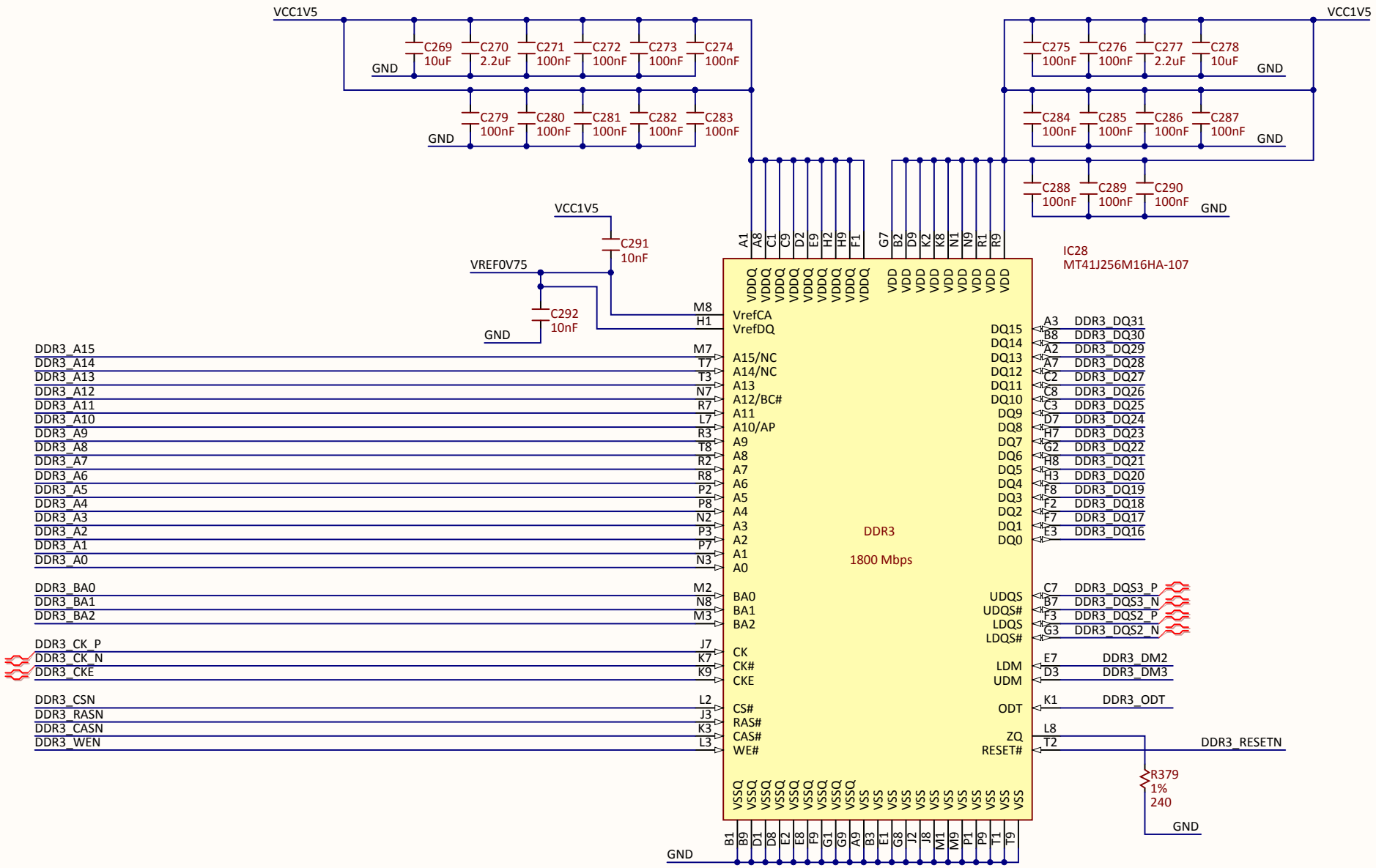

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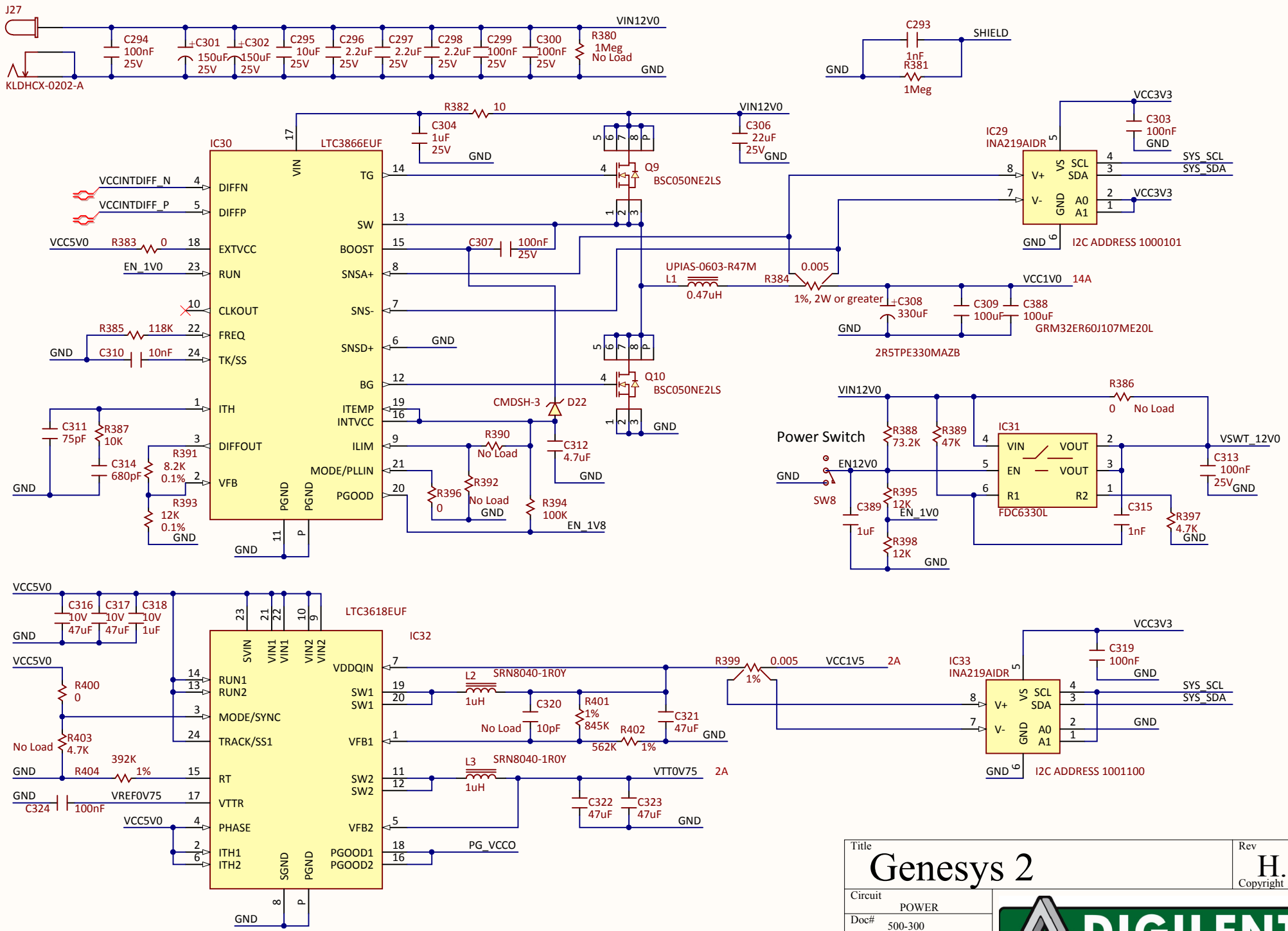
J27
KLDHCX-0202-A
C294 100nF 25V
C301 150uF 25V
C302 150uF 25V
C295 10uF 25V
C296 2.2uF 25V
C297 2.2uF 25V
C298 2.2uF 25V
C299 100nF 25V
C300 100nF 25V
R380 1Meg No Load
VIN12V0
GND
C293 1nF
R381 1Meg
SHIELD
IC30
LTC3866EUF
R382 10
C304 1uF 25V
C306 22uF 25V
VCCINTDIFF_N
VCCINTDIFF_P
VCC5V0
R383 0
EN_1V0
R385 118K
C310 10nF
TK/SS
FREQ
CLKOUT
RUN
EXTVCC
DIFFN
DIFFP
VIN
TG
SW
BOOST
SNSA+
SNS-
SNSD+
BG
ITEMP
INTVCC
ILIM
MODE/PLLIN
PGOOD
PGND
VFB
DIFFOUT
ITH
C311 75pF
R387 10K
C314 680pF
R391 8.2K 0.1%
R393 12K 0.1%
Q9 BSC050NE2LS
Q10 BSC050NE2LS
C307 100nF 25V
CMDSH-3
D22
R390 No Load
R392 No Load
R396 0
C312 4.7uF
R394 100K
EN_1V8
IC29
INA219AIDR
VCC3V3
C303 100nF
SYS_SCL
SYS_SDA
I2C ADDRESS 1000101
UPIAS-0603-R47M
L1 0.47uH
R384 0.005
1%, 2W or greater
C308 330uF
2R5TPE330MAZB
C309 100uF
C388 100uF
GRM32ER60J107ME20L
VCC1V0 14A
Power Switch
SW8
EN12V0
R388 73.2K
R389 47K
R386 0 No Load
IC31
FDC6330L
VIN
VOUT
EN
R1
R2
VSWT_12V0
C313 100nF 25V
C389 1uF
R395 12K
R398 12K
C315 1nF
R397 4.7K
IC32
LTC3618EUF
C316 10V 47uF
C317 10V 47uF
C318 10V 1uF
R400 0
R403 No Load 4.7K
R404 392K 1%
C324 100nF
VREF0V75
SVIN
VIN1
VIN2
VDDQIN
RUN1
RUN2
MODE/SYNC
TRACK/SS1
RT
VTTR
PHASE
ITH1
ITH2
SW1
SW2
VFB1
VFB2
SGND
PGOOD1
PGOOD2
L2 SRN8040-1R0Y 1uH
L3 SRN8040-1R0Y 1uH
C320 No Load 10pF
R401 1% 845K
R402 562K 1%
C321 47uF
C322 47uF
C323 47uF
VTT0V75 2A
PG_VCCO
R399 0.005 1%
VCC1V5 2A
IC33
INA219AIDR
C319 100nF
I2C ADDRESS 1001100
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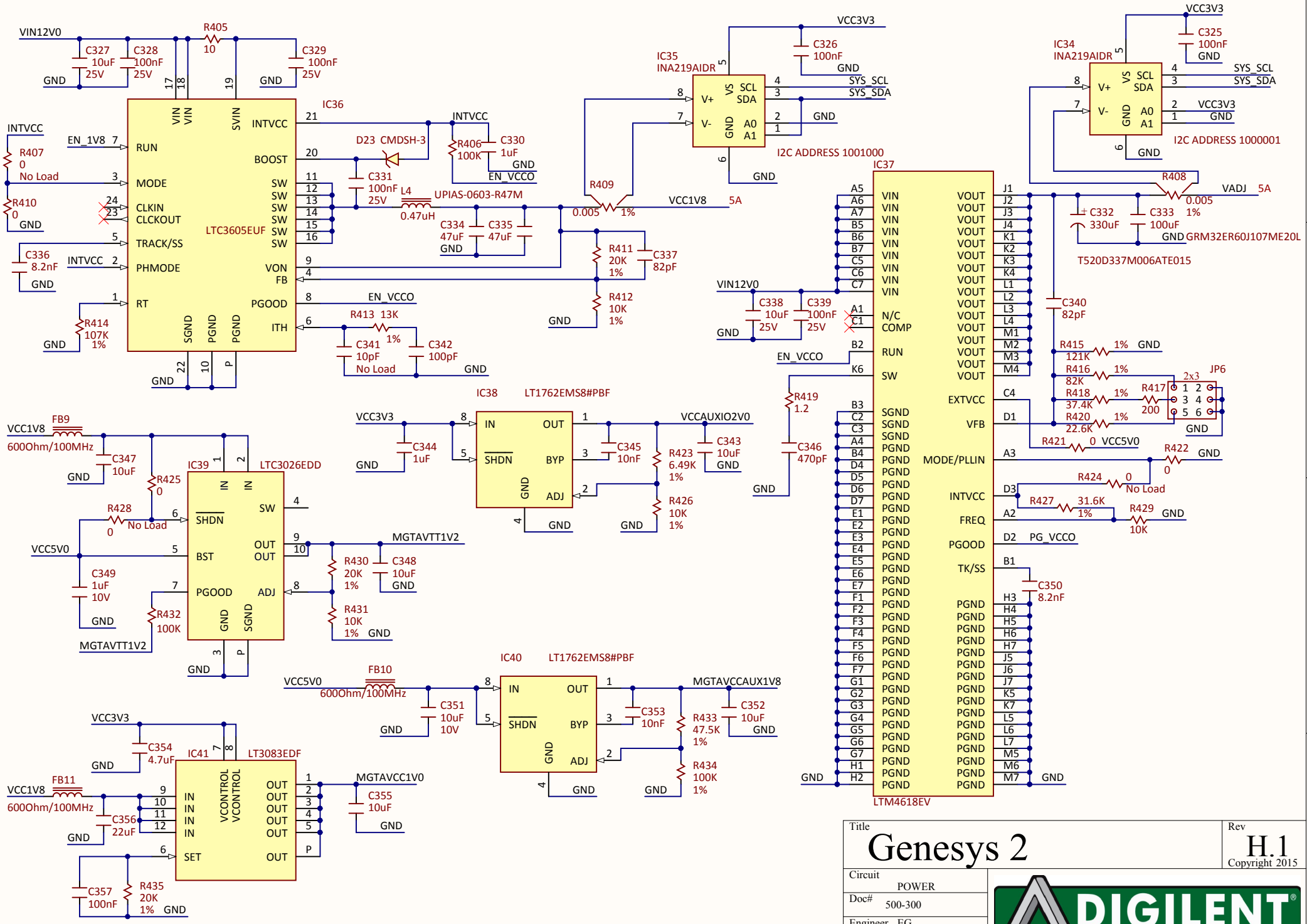
VIN12V0
R405
10
C327
10uF
25V
C328
100nF
25V
C329
100nF
25V
GND
IC36
LTC3605EUF
INTVCC
EN_1V8
RUN
MODE
CLKIN
CLCKOUT
TRACK/SS
PHMODE
RT
BOOST
SW
VON
FB
PGOOD
ITH
SVIN
VIN
SGND
PGND
R407
0
No Load
R410
0
C336
8.2nF
R414
107K
1%
D23 CMDSH-3
R406
100K
C330
1uF
EN_VCCO
C331
100nF
25V
L4
UPIAS-0603-R47M
0.47uH
C334
47uF
C335
47uF
R409
0.005
1%
VCC1V8
5A
R411
20K
1%
C337
82pF
R412
10K
1%
R413 13K
1%
C341
10pF
No Load
C342
100pF
IC35
INA219AIDR
VCC3V3
C326
100nF
SYS_SCL
SYS_SDA
I2C ADDRESS 1001000
IC34
INA219AIDR
C325
100nF
I2C ADDRESS 1000001
R408
0.005
1%
VADJ
5A
C332
330uF
C333
100uF
GRM32ER60J107ME20L
T520D337M006ATE015
IC37
LTM4618EV
VIN
VOUT
N/C
COMP
RUN
SW
EXTVCC
VFB
MODE/PLLIN
INTVCC
FREQ
PGOOD
TK/SS
C338
10uF
25V
C339
100nF
25V
C340
82pF
R415
121K
R416
82K
R417
200
R418
37.4K
R420
22.6K
JP6
2x3
R419
1.2
C346
470pF
R421
0
VCC5V0
R422
0
R424
0
No Load
R427
31.6K
1%
R429
10K
PG_VCCO
C350
8.2nF
IC38
LT1762EMS8#PBF
IN
OUT
SHDN
BYP
ADJ
C344
1uF
C345
10nF
C343
10uF
R423
6.49K
1%
R426
10K
1%
VCCAUXIO2V0
FB9
600Ohm/100MHz
C347
10uF
IC39
LTC3026EDD
R425
0
R428
0
No Load
C349
1uF
10V
R432
100K
MGTAVTT1V2
R430
20K
1%
C348
10uF
R431
10K
1%
IC40
LT1762EMS8#PBF
FB10
600Ohm/100MHz
C351
10uF
10V
C353
10nF
C352
10uF
R433
47.5K
1%
R434
100K
1%
MGTAVCCAUX1V8
IC41
LT3083EDF
VCONTROL
IN
OUT
SET
FB11
C354
4.7uF
C356
22uF
C357
100nF
R435
20K
1%
C355
10uF
MGTAVCC1V0
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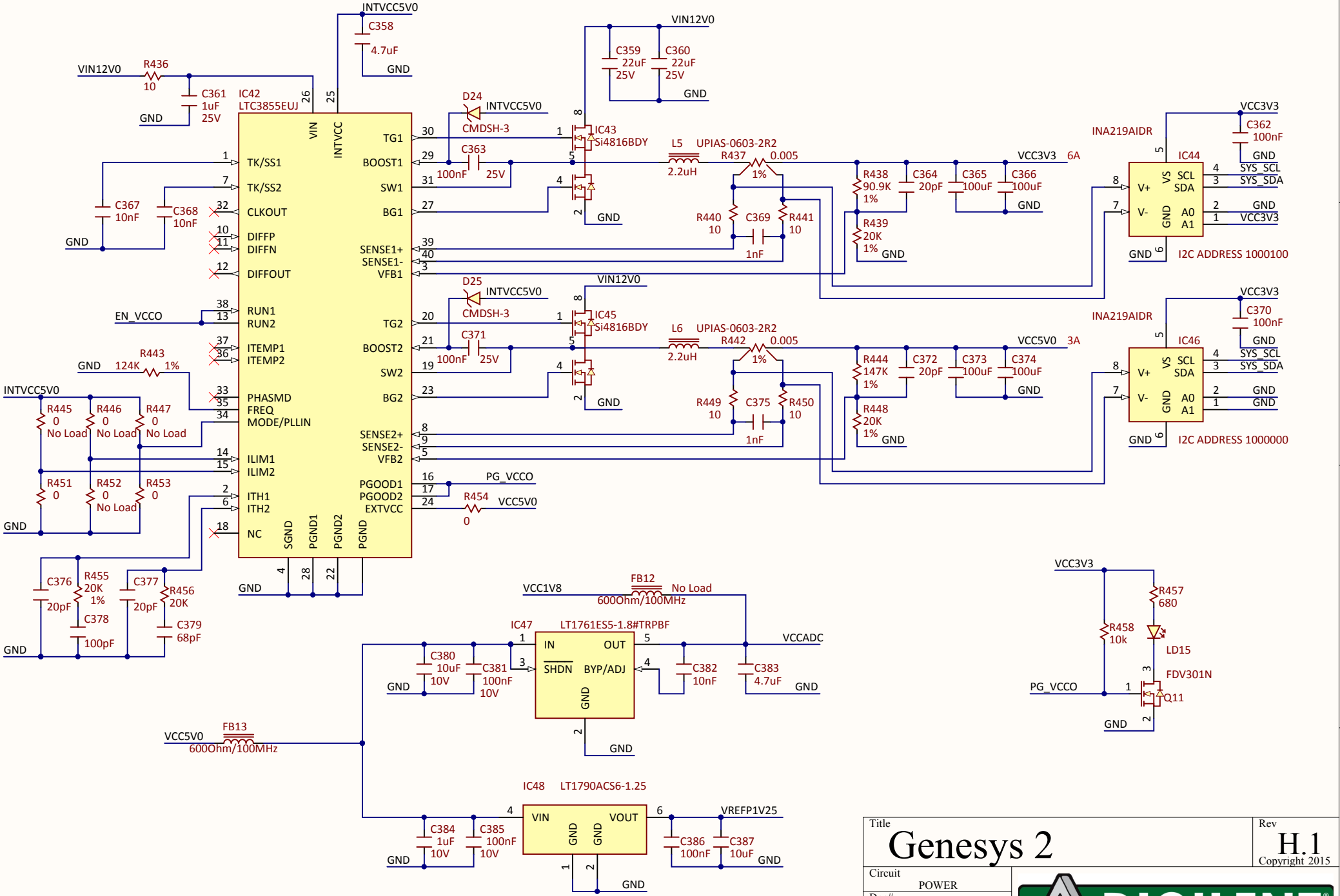

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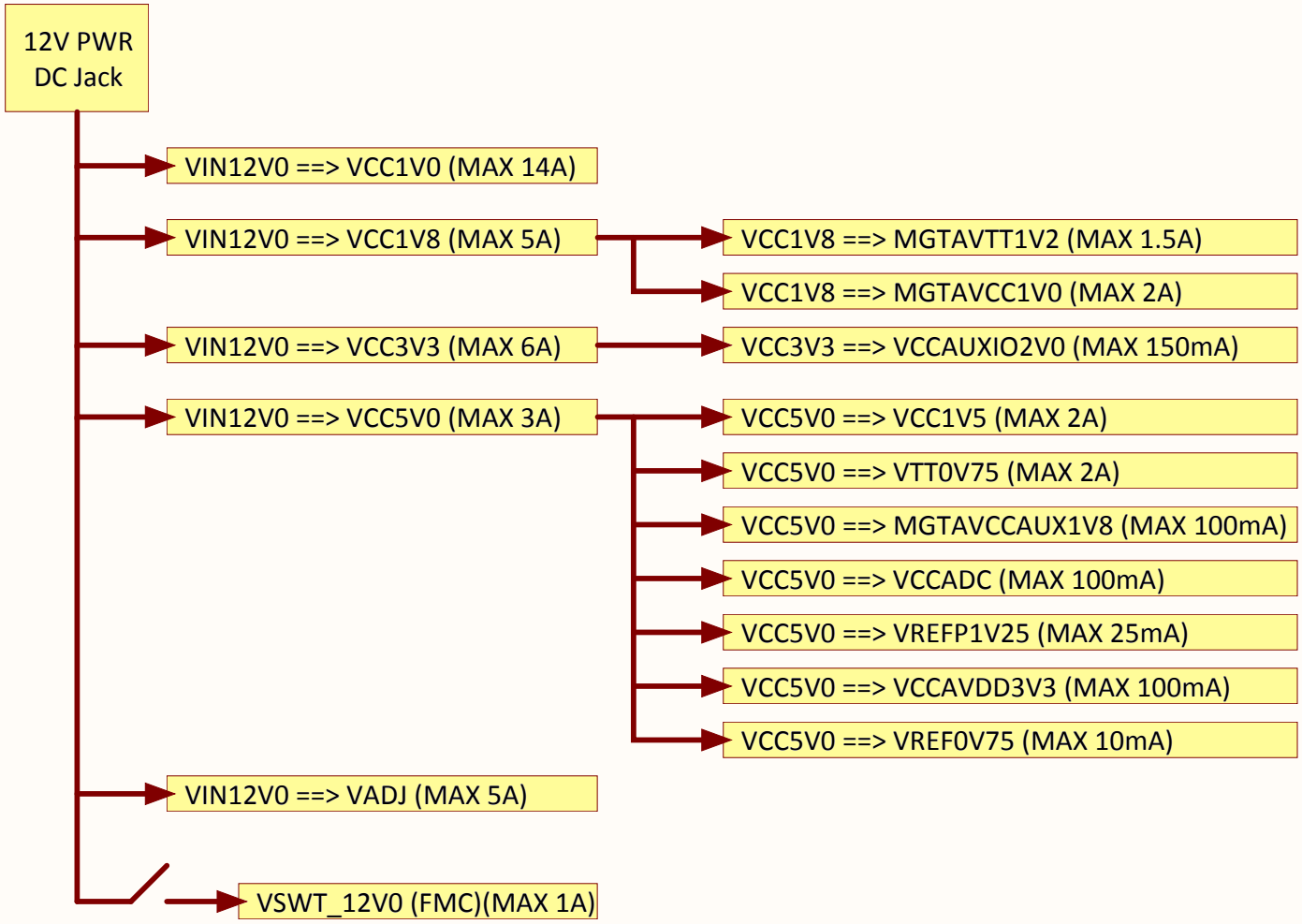

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