VM1502-PA-VSVA2197
VM1802-PA-VSVA2197
VE1752-PA-VSVA2197
VC1502-PA-VSVA2197
VC1702-PA-VSVA2197
VC1802-PA-VSVA2197
VC1902-PA-VSVA2197

LOADSLAMMER
TRUST AND VERIFY

Xilinx Power Test Adaptor (PTA) - to test power delivery network (PDN) to Versal ACAP VSVA2197 series FPGAs

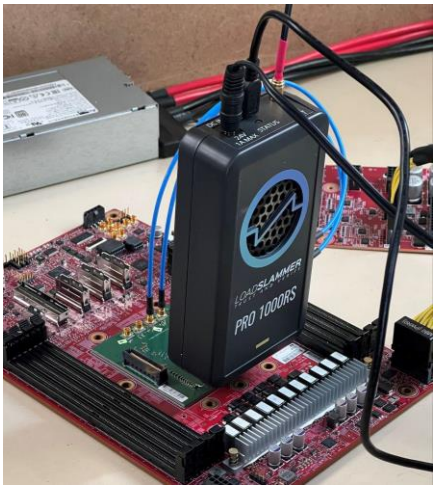
ProGrAnalog Corp.
08/18/2023
Rev 3.2

Features

- Set of 3 Xilinx Power Test Adaptors (PTA) for PDN testing AMD Xilinx Versal ACAP AI VSVA2197 series FPGAs
- Options available for VM1502, VM1802, VE1752, VC1502, VC1702, VC1802, VC1902
- 6 Samtec connectors to slam: VCCINT, VCC_IO, VCC_SOC, VGTY_AVTT, VCCAUX, AVCC
- 8 SMP connectors for measuring: VCCINT_SENSE, GND_SENSE, GND, VCC_IO, VCC_SOC, VGTY_AVTT, VCCAUX, AVCC
- PTA with BGA footprint reflows onto VSVA2197 PCB pads.
- Remote Vsense on Samtec connectors and SMP mini connectors.
- Most rails can be tested with an LSP200 controller.
- VCCINT >100A support with an LSP1000RS controller.
- GUI supports transient, pulse train, impedance and 3D plots.

Typical Test Setup

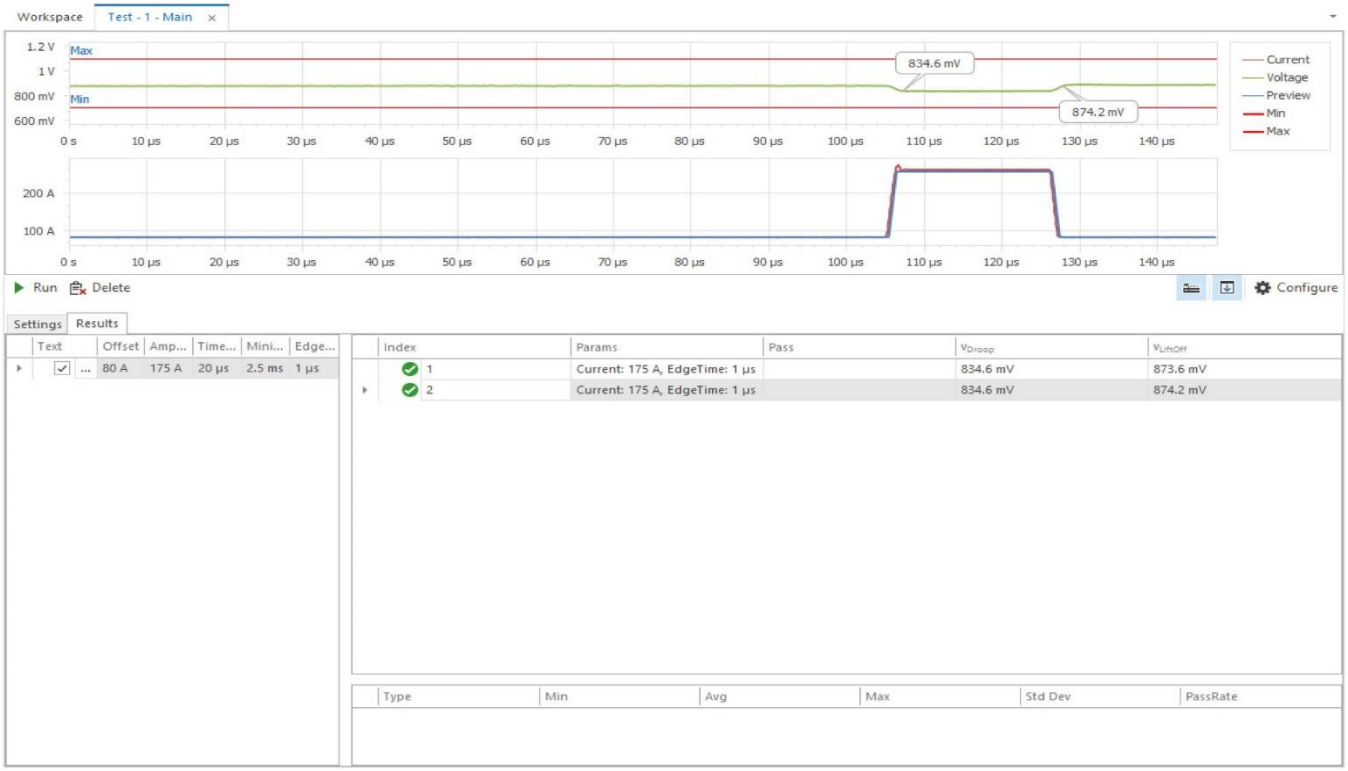
- Xilinx PTA reflowed onto the test board.
- LSP1000RS connected into VCCINT connector.



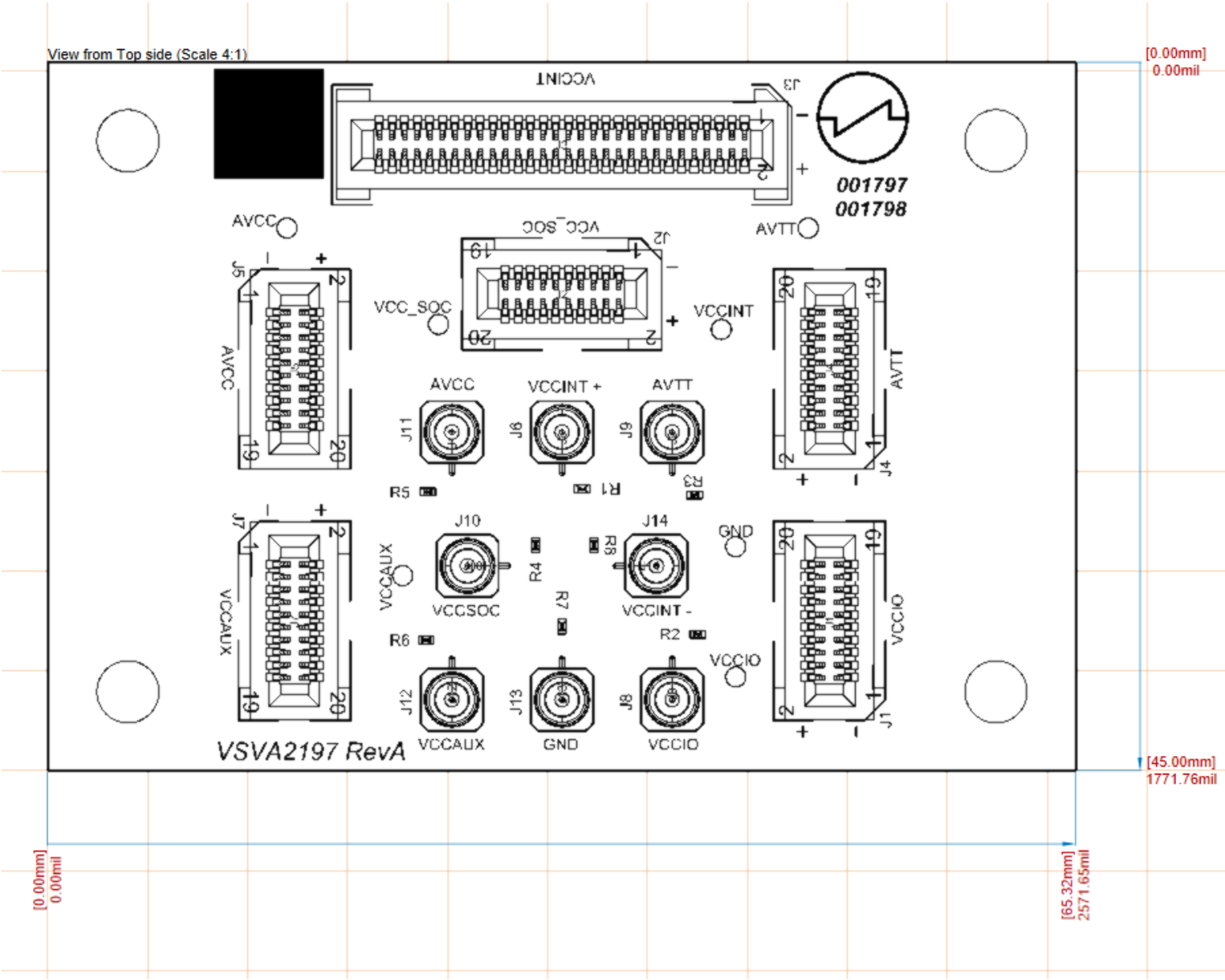
Pack of 3 -VSVA2197 Series Xilinx PTA's

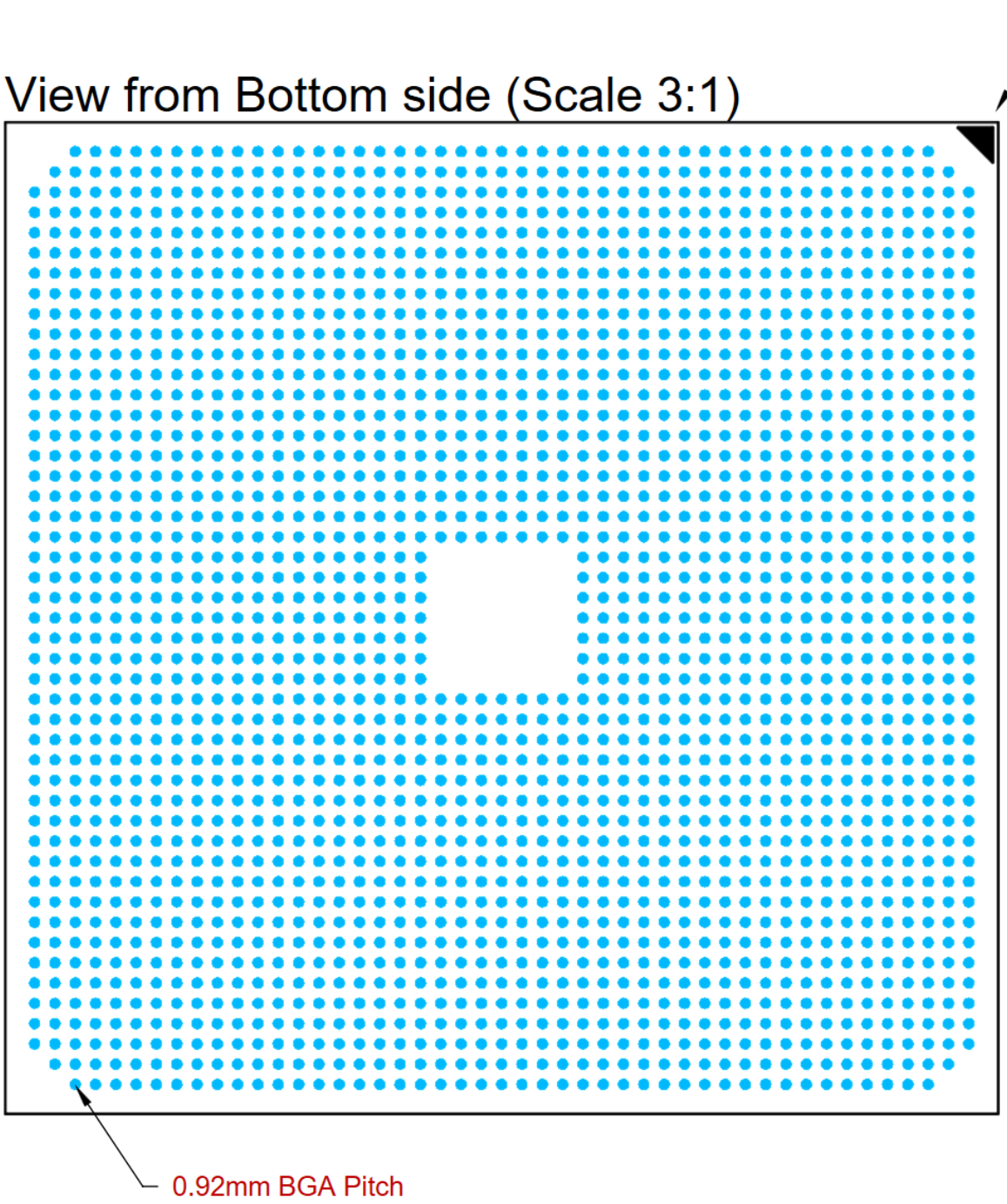
LoadSlammer GUI

Transient test



Mechanical Specs



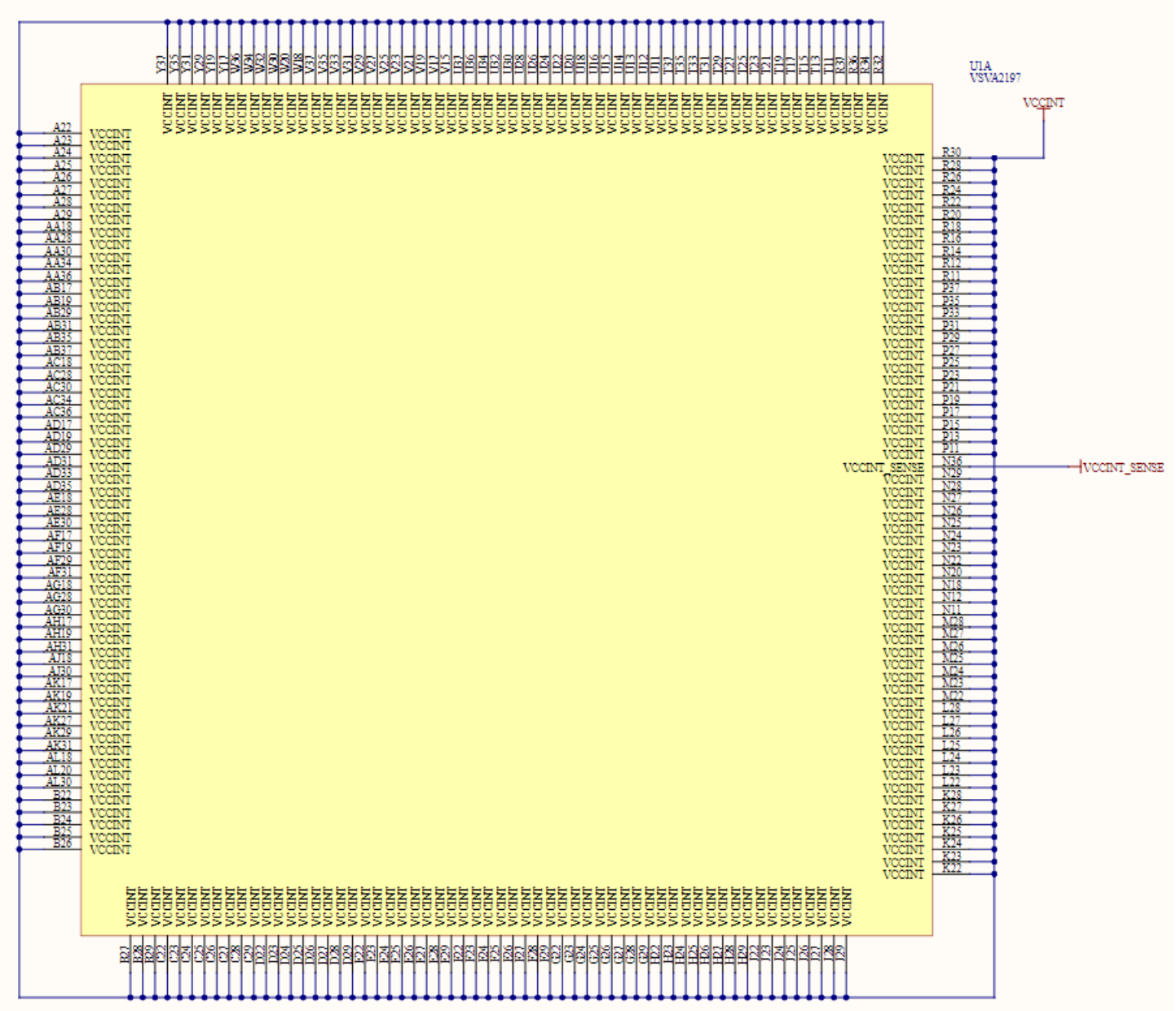


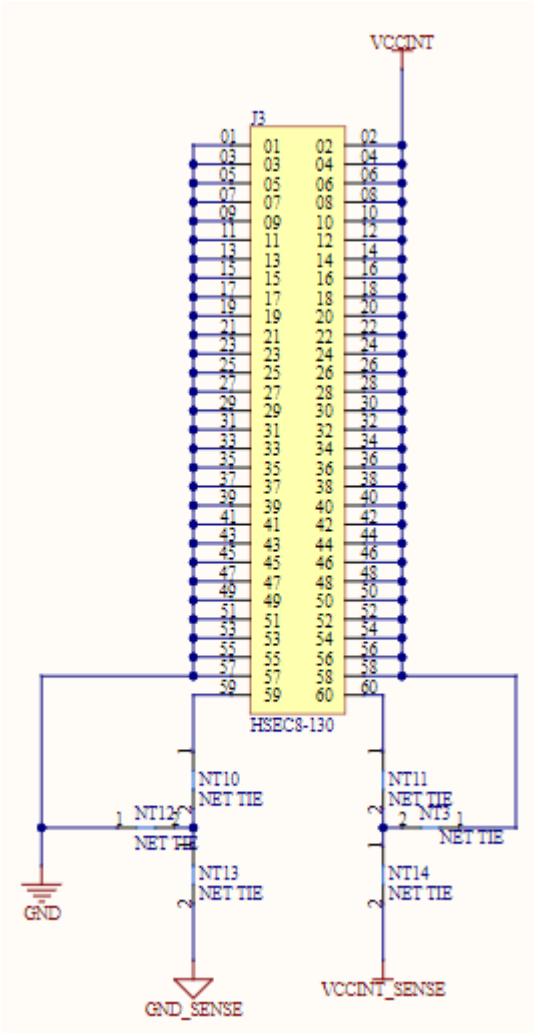
Sn96.5-Ag3.0-Cu0.5 0.6mm balls

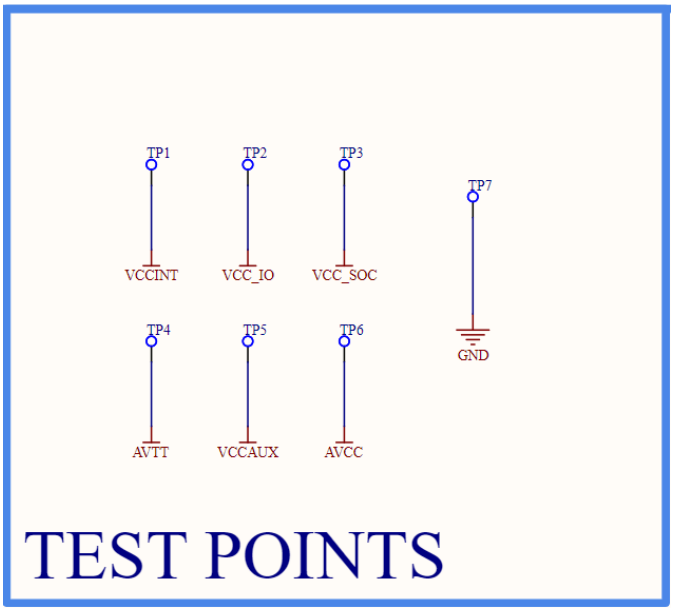
Packing Tray Specs

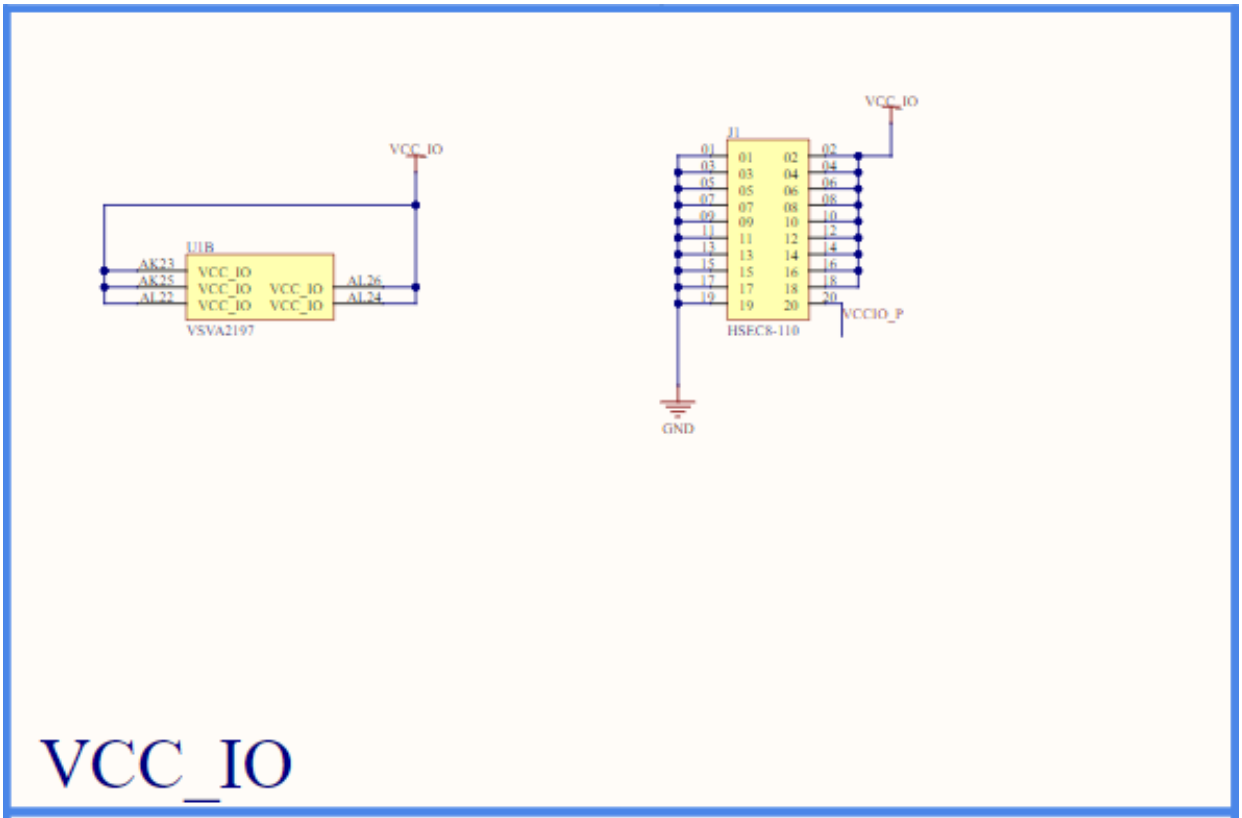
45 by 45mm package will have a 102x102x15mm tray

Schematics

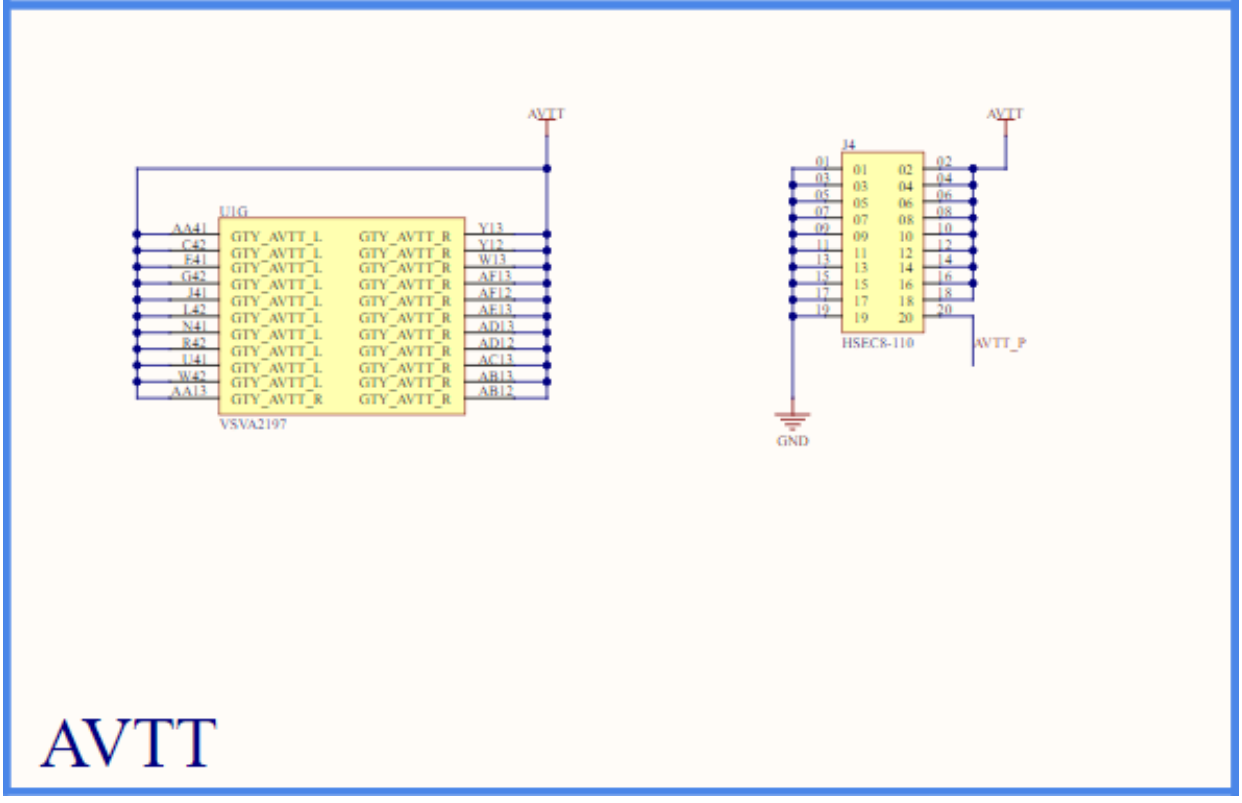



VCCINT
J3
HSEC8-130
NT10
NET TIE
NT11
NET TIE
NT12
NET TIE
NT13
NET TIE
NT14
NET TIE
NT15
NET TIE
GND
GND_SENSE
VCCINT_SENSE

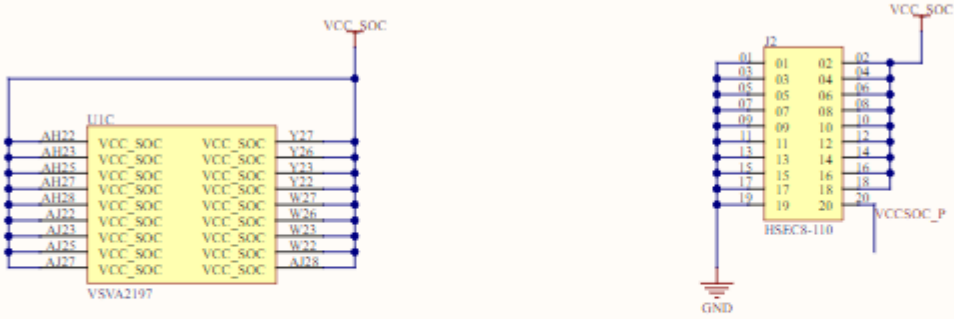

TP1
TP2
TP3
TP7
VCCINT
VCC_IO
VCC_SOC
GND
TP4
TP5
TP6
AVTT
VCCAUX
AVCC
TEST POINTS


VCC_IO
U1B
AK23
AK25
AL22
VCC_IO
VCC_IO
VCC_IO
VCC_IO
VCC_IO
AL26
AL24
VSVA2197
VCC_IO
J1
HSEC8-110
VCCIO_P
GND

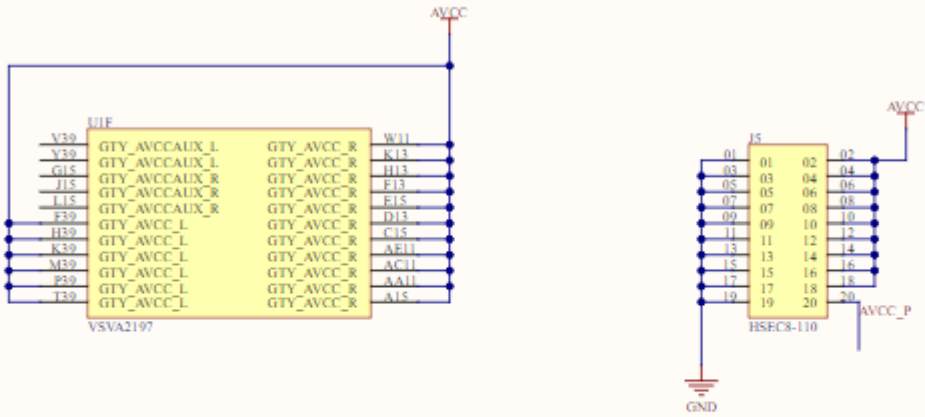
VCC_IO


AVTT
U1G
AA41
C42
F41
G42
J41
L42
N41
R42
U41
W42
AA13
GTY_AVTT_L
GTY_AVTT_R
Y13
Y12
W13
AF13
AF12
AE13
AD13
AD12
AC13
AB13
AB12
VSVA2197
AVTT
J4
HSEC8-110
AVTT_P
GND

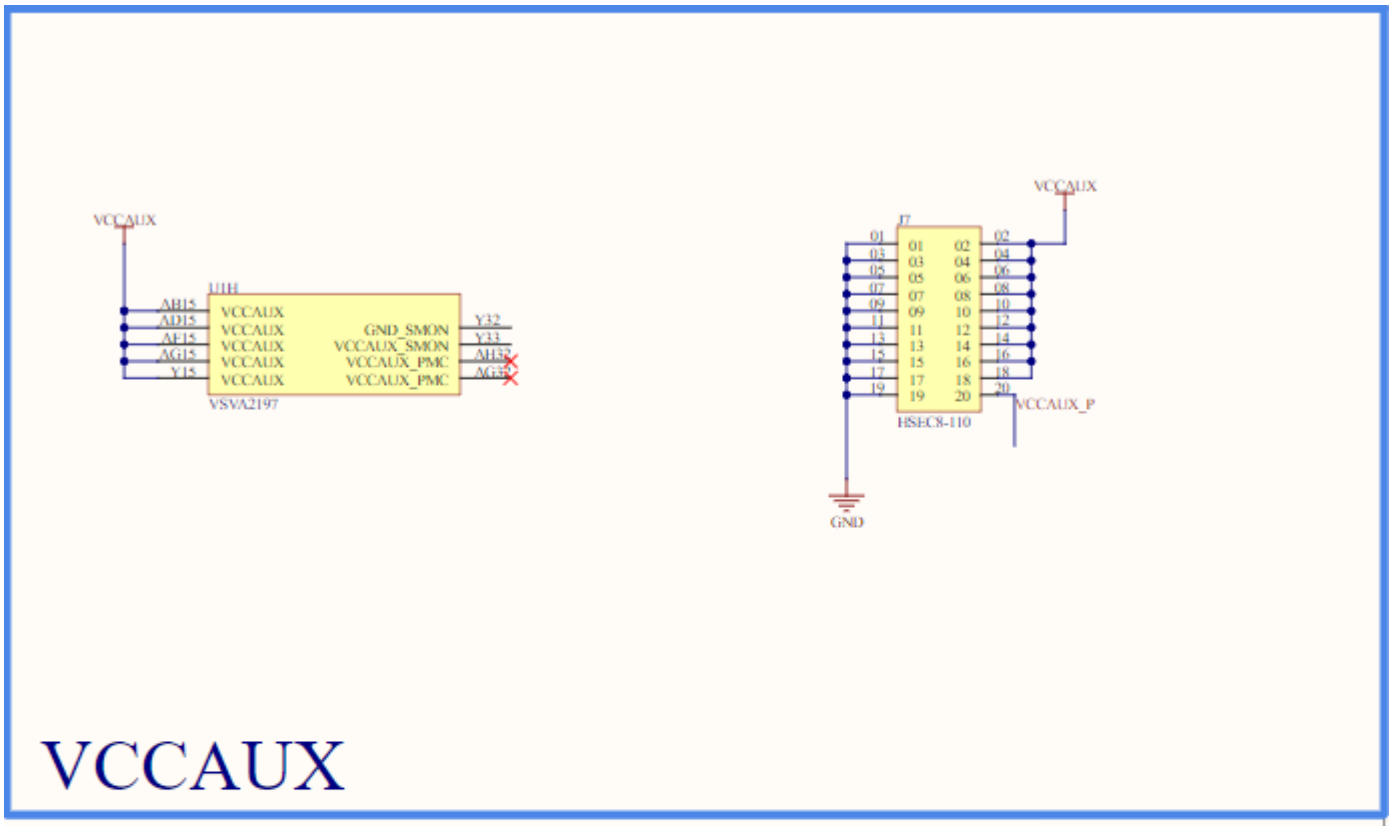
AVTT


VCC_SOC
U1C
AH22
AH23
AH25
AH27
AH28
AJ22
AJ23
AJ25
AJ27
VCC_SOC
Y27
Y26
Y23
Y22
W27
W26
W23
W22
AJ28
VSVA2197
VCC_SOC
J2
HSEC8-110
VCCSOC_P
GND

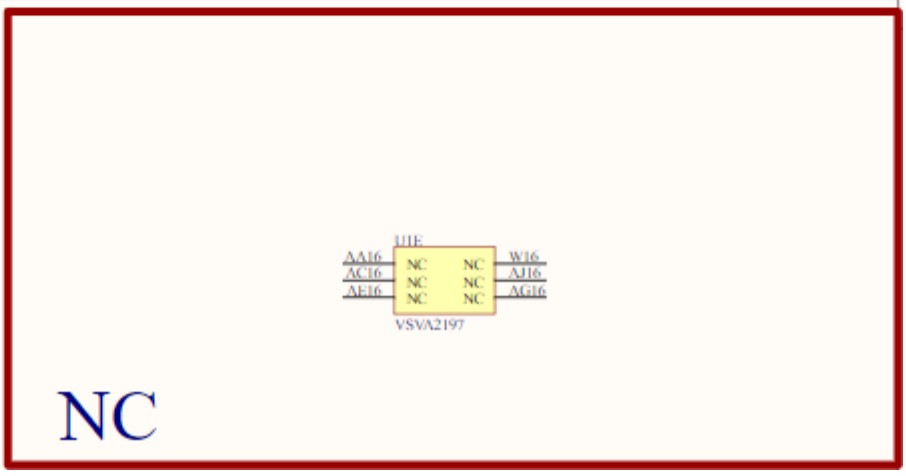
VCC_SOC


AVCC
U1F
V39
V39
G15
J15
L15
F39
H39
K39
M39
P39
T39
GTY_AVCCAUX_L
GTY_AVCCAUX_L
GTY_AVCCAUX_R
GTY_AVCCAUX_R
GTY_AVCCAUX_R
GTY_AVCC_L
GTY_AVCC_L
GTY_AVCC_L
GTY_AVCC_L
GTY_AVCC_L
GTY_AVCC_L
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
GTY_AVCC_R
W11
K13
H13
F13
E15
D13
C15
AE11
AC11
AA11
A15
VSVA2197
AVCC
J5
HSEC8-110
AVCC_P
GND

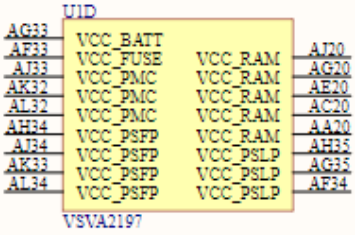
AVCC


VCCAUX
U1H
AB15
AD15
AF15
AG15
Y15
VCCAUX
VCCAUX
VCCAUX
VCCAUX
VCCAUX
GND_SMON
VCCAUX_SMON
VCCAUX_PMC
VCCAUX_PMC
Y32
Y33
AH32
AG33
VSVA2197
VCCAUX
J7
HSEC8-110
VCCAUX_P
GND
VCCAUX

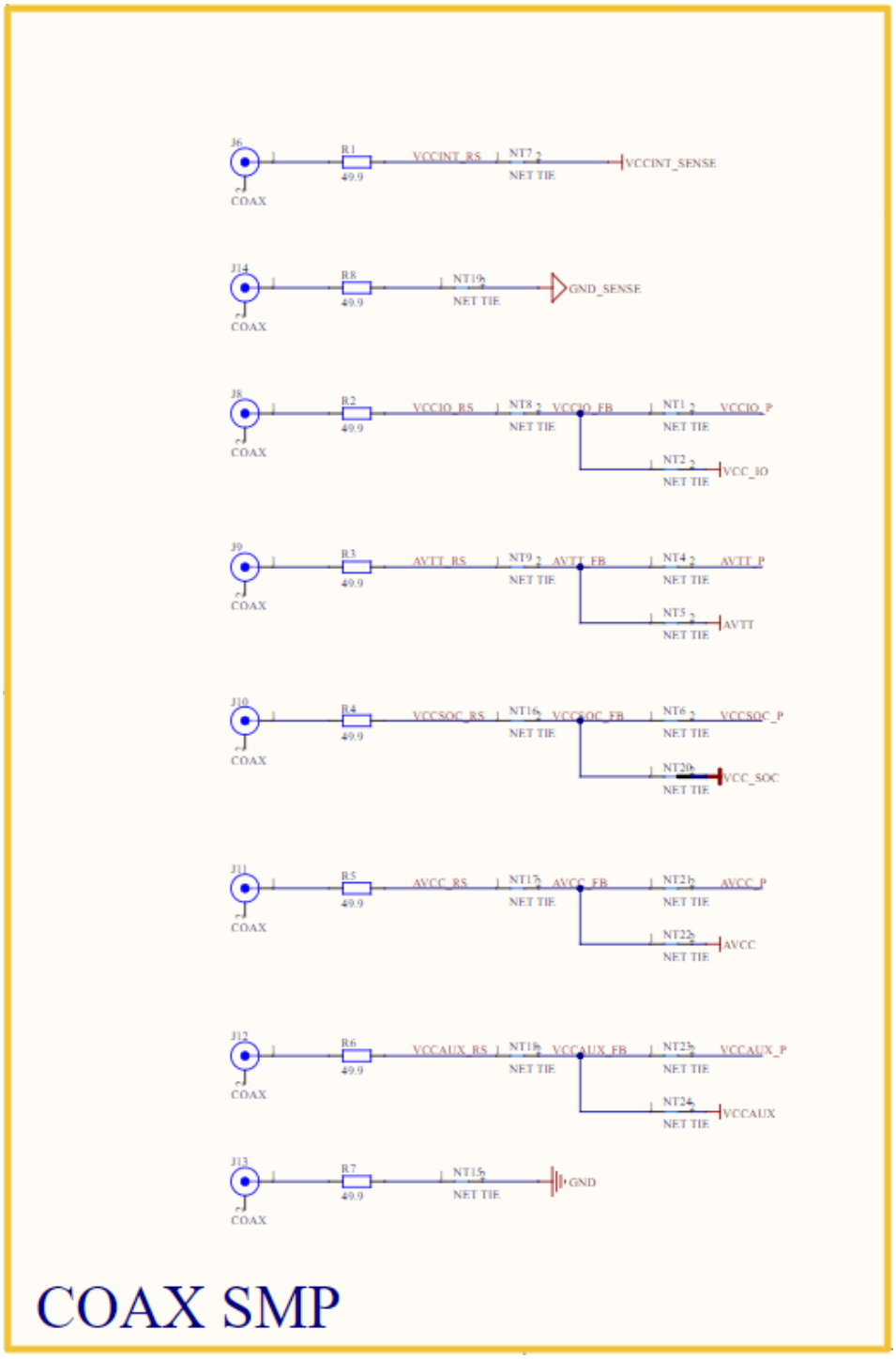
VCCAUX

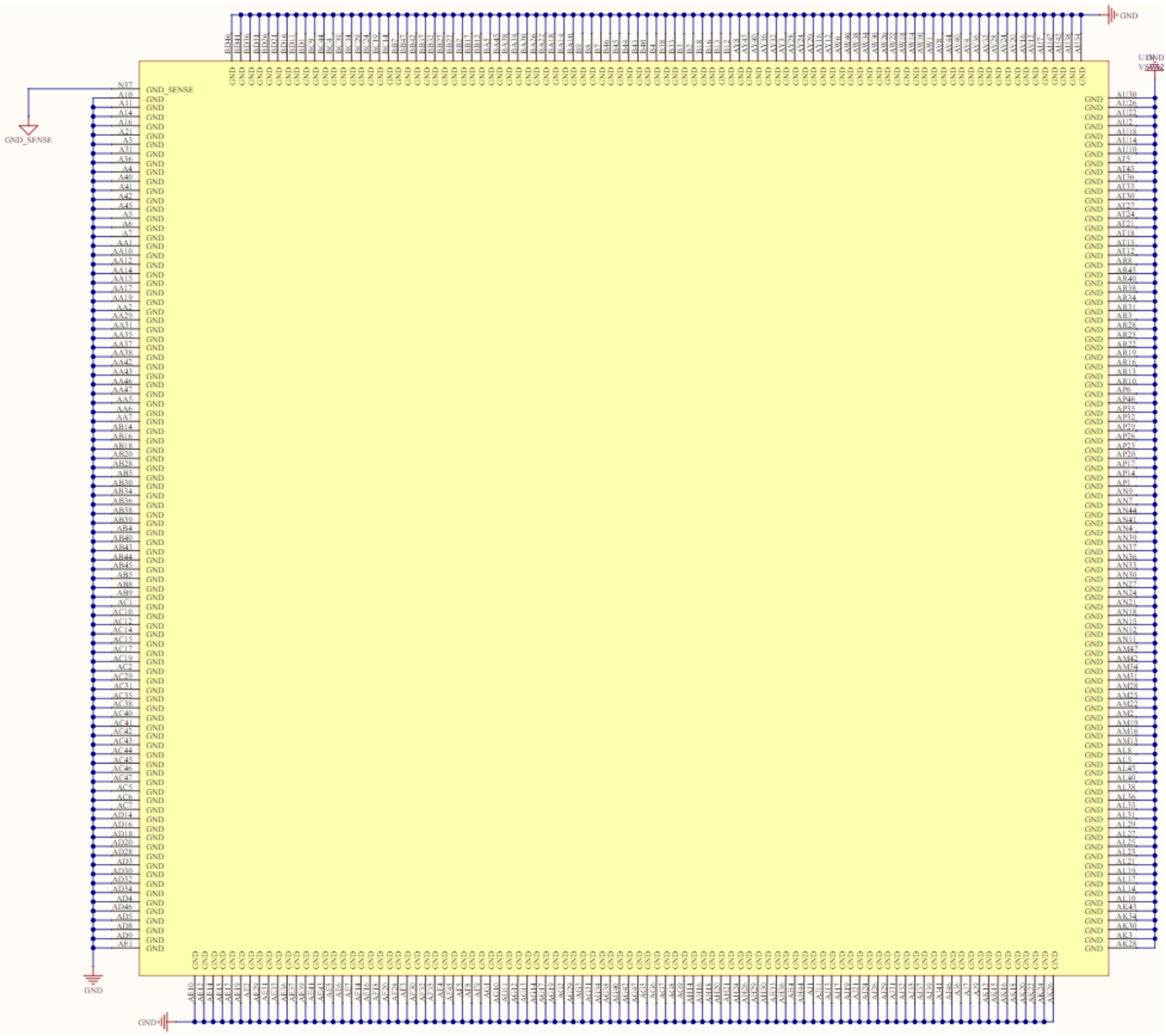

U1E
AA16
AC16
AE16
NC
NC
NC
NC
NC
NC
W16
AJ16
AG16
VSVA2197

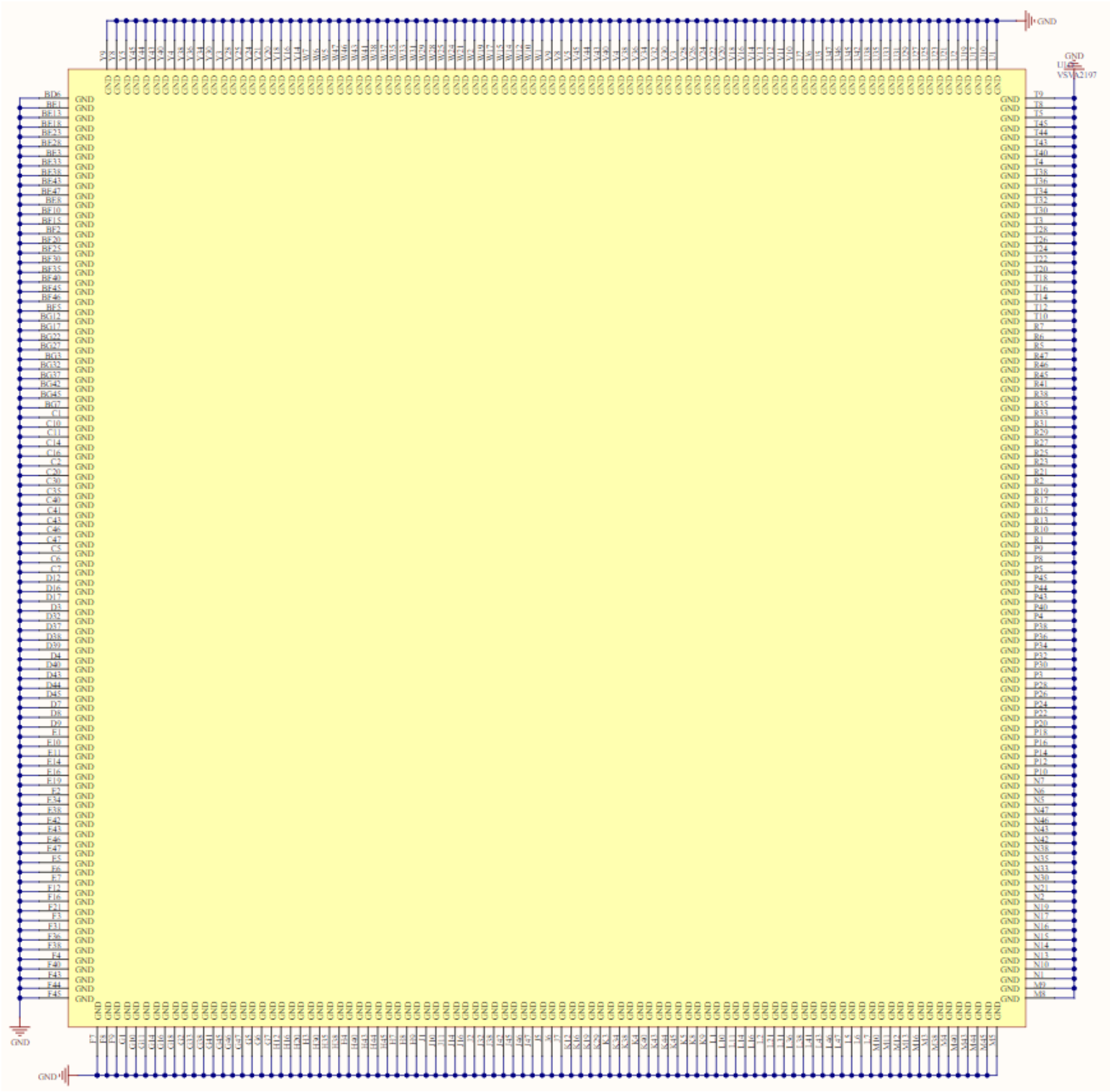
NC

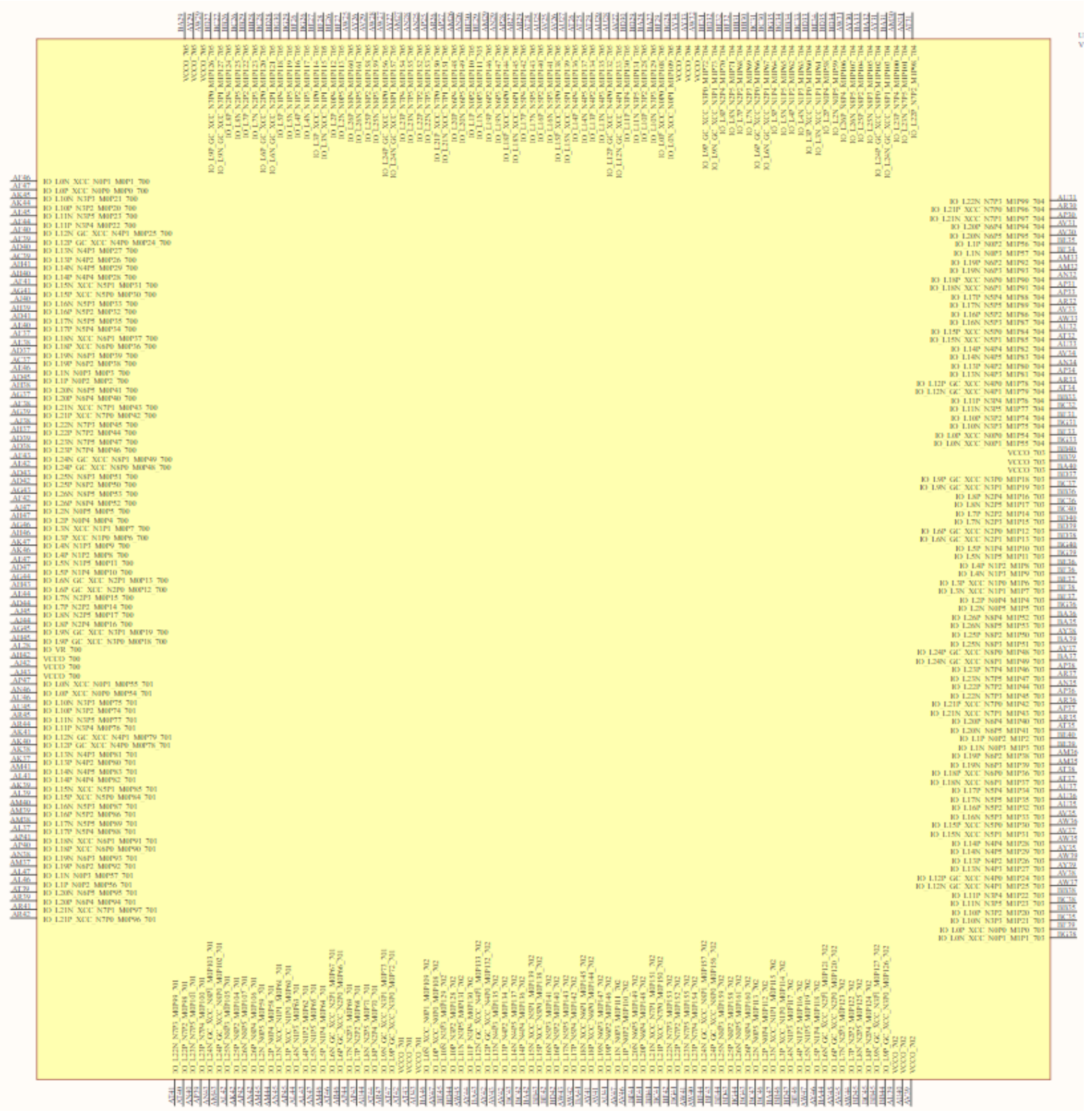

U1D
AG33
AF33
AJ33
AK32
AL32
AH34
AJ34
AK33
AL34
VCC_BATT
VCC_FUSE
VCC_PMC
VCC_PMC
VCC_PMC
VCC_PSFP
VCC_PSFP
VCC_PSFP
VCC_PSFP
VCC_RAM
VCC_RAM
VCC_RAM
VCC_RAM
VCC_RAM
VCC_PSLP
VCC_PSLP
VCC_PSLP
AJ20
AG20
AE20
AC20
AA20
AH35
AG35
AF34
VSVA2197

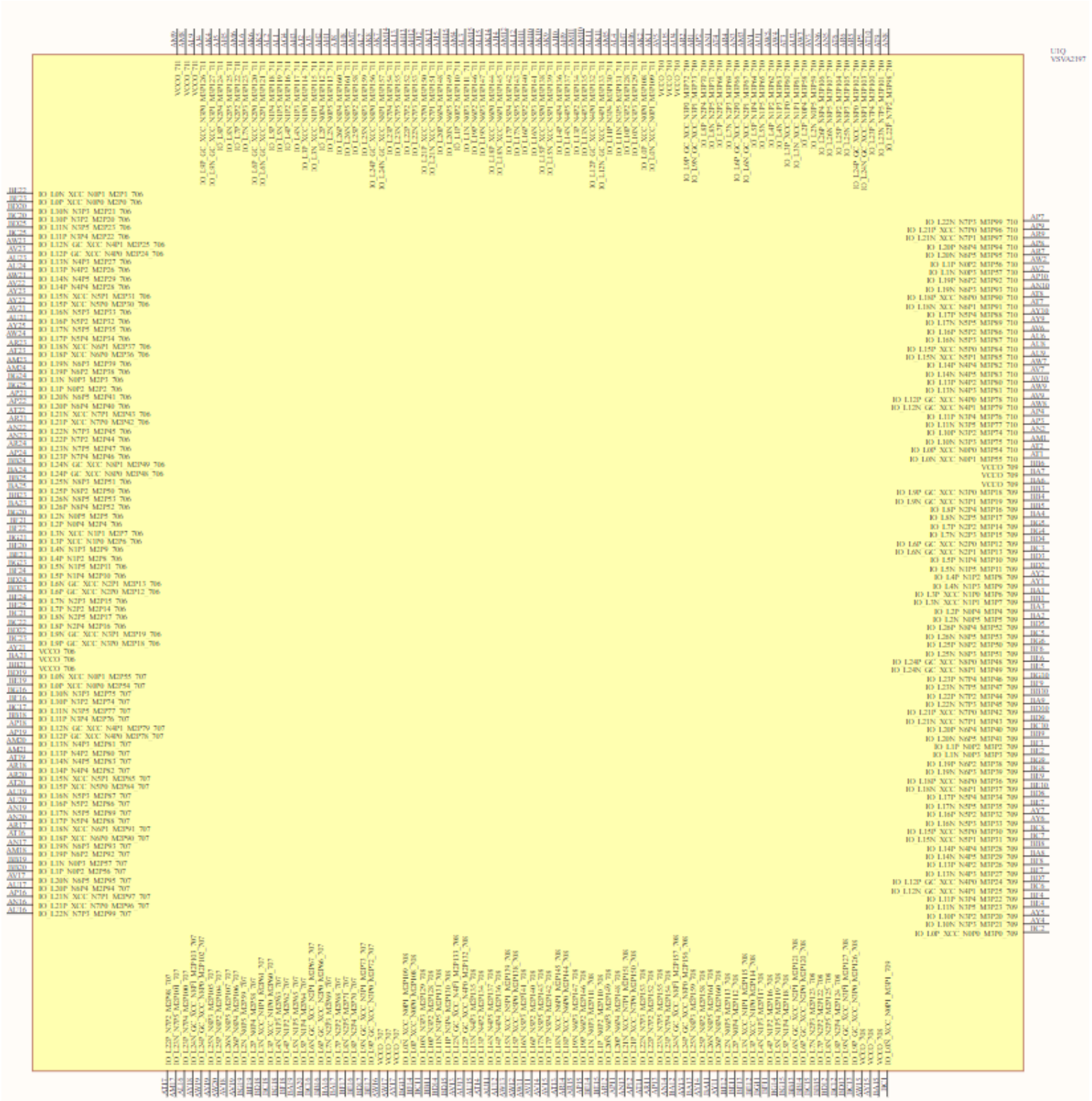
VCC MISC

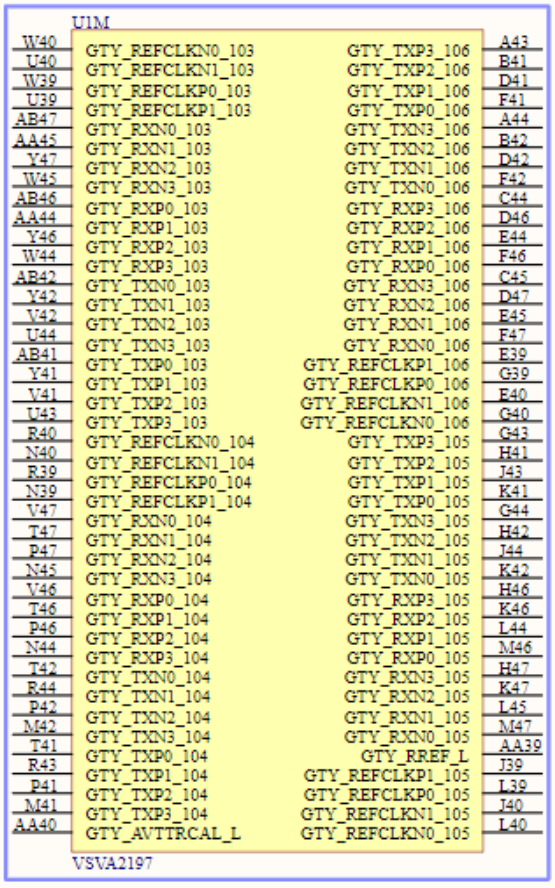

J6
COAX
R1
49.9
VCCINT_RS
NT7
NET TIE
VCCINT_SENSE
J14
COAX
R8
49.9
NT19
NET TIE
GND_SENSE
J8
COAX
R2
49.9
VCCIO_RS
NT8
NET TIE
VCCIO_FB
NT1
NET TIE
VCCIO_P
NT2
NET TIE
VCC_IO
J9
COAX
R3
49.9
AVTT_RS
NT9
NET TIE
AVTT_FB
NT4
NET TIE
AVTT_P
NT5
NET TIE
AVTT
J10
COAX
R4
49.9
VCCSOC_RS
NT16
NET TIE
VCCSOC_FB
NT6
NET TIE
VCCSOC_P
NT20
NET TIE
VCC_SOC
J11
COAX
R5
49.9
AVCC_RS
NT17
NET TIE
AVCC_FB
NT21
NET TIE
AVCC_P
NT22
NET TIE
AVCC
J12
COAX
R6
49.9
VCCAUX_RS
NT18
NET TIE
VCCAUX_FB
NT23
NET TIE
VCCAUX_P
NT24
NET TIE
VCCAUX
J13
COAX
R7
49.9
NT15
NET TIE
GND
COAX SMP

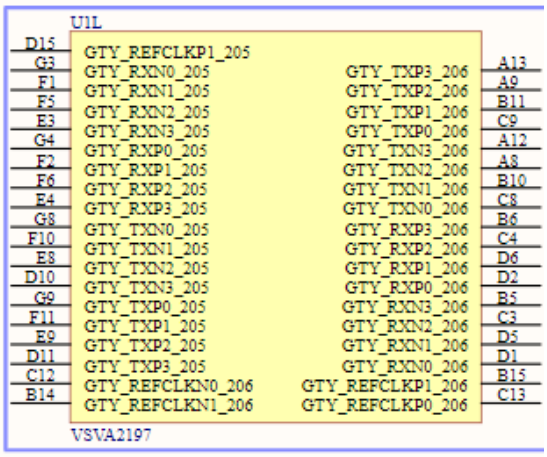

GND_SENSE
GND
VSS

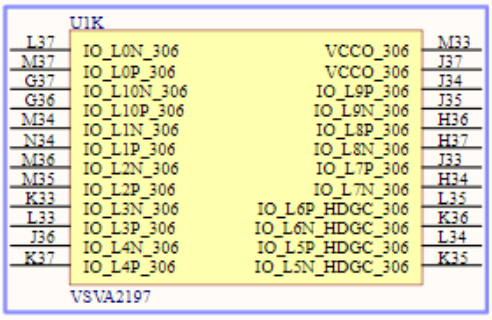

GND
U1
VSMA2197

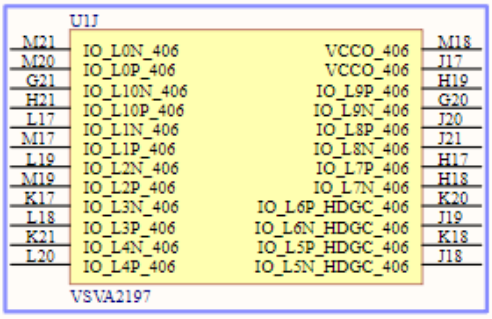


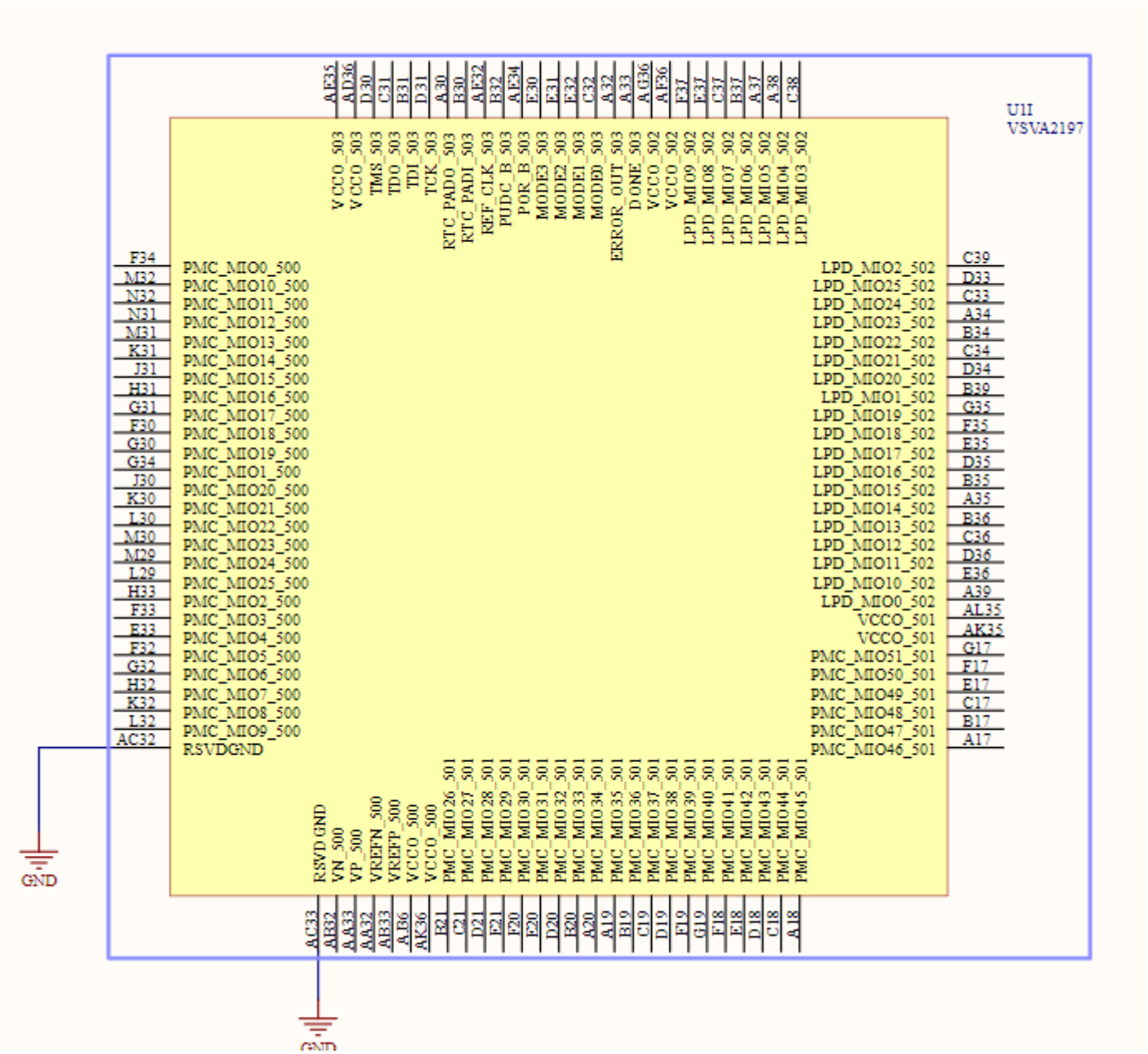



U1M
W40 GTY_REFCLKN0_103
U40 GTY_REFCLKN1_103
W39 GTY_REFCLKP0_103
U39 GTY_REFCLKP1_103
AB47 GTY_RXN0_103
AA45 GTY_RXN1_103
Y47 GTY_RXN2_103
W45 GTY_RXN3_103
AB46 GTY_RXP0_103
AA44 GTY_RXP1_103
Y46 GTY_RXP2_103
W44 GTY_RXP3_103
AB42 GTY_TXN0_103
Y42 GTY_TXN1_103
V42 GTY_TXN2_103
U44 GTY_TXN3_103
AB41 GTY_TXP0_103
Y41 GTY_TXP1_103
V41 GTY_TXP2_103
U43 GTY_TXP3_103
R40 GTY_REFCLKN0_104
N40 GTY_REFCLKN1_104
R39 GTY_REFCLKP0_104
N39 GTY_REFCLKP1_104
V47 GTY_RXN0_104
T47 GTY_RXN1_104
P47 GTY_RXN2_104
N45 GTY_RXN3_104
V46 GTY_RXP0_104
T46 GTY_RXP1_104
P46 GTY_RXP2_104
N44 GTY_RXP3_104
T42 GTY_TXN0_104
R44 GTY_TXN1_104
P42 GTY_TXN2_104
M42 GTY_TXN3_104
T41 GTY_TXP0_104
R43 GTY_TXP1_104
P41 GTY_TXP2_104
M41 GTY_TXP3_104
AA40 GTY_AVTTRCAL_L
GTY_TXP3_106 A43
GTY_TXP2_106 B41
GTY_TXP1_106 D41
GTY_TXP0_106 F41
GTY_TXN3_106 A44
GTY_TXN2_106 B42
GTY_TXN1_106 D42
GTY_TXN0_106 F42
GTY_RXP3_106 C44
GTY_RXP2_106 D46
GTY_RXP1_106 E44
GTY_RXP0_106 F46
GTY_RXN3_106 C45
GTY_RXN2_106 D47
GTY_RXN1_106 E45
GTY_RXN0_106 F47
GTY_REFCLKP1_106 E39
GTY_REFCLKP0_106 G39
GTY_REFCLKN1_106 E40
GTY_REFCLKN0_106 G40
GTY_TXP3_105 G43
GTY_TXP2_105 H41
GTY_TXP1_105 J43
GTY_TXP0_105 K41
GTY_TXN3_105 G44
GTY_TXN2_105 H42
GTY_TXN1_105 J44
GTY_TXN0_105 K42
GTY_RXP3_105 H46
GTY_RXP2_105 K46
GTY_RXP1_105 L44
GTY_RXP0_105 M46
GTY_RXN3_105 H47
GTY_RXN2_105 K47
GTY_RXN1_105 L45
GTY_RXN0_105 M47
GTY_RREF_L AA39
GTY_REFCLKP1_105 J39
GTY_REFCLKP0_105 L39
GTY_REFCLKN1_105 J40
GTY_REFCLKN0_105 L40
VSVA2197


U1L
D15
G3
F1
F5
E3
G4
F2
F6
E4
G8
F10
E8
D10
G9
F11
E9
D11
C12
B14
GTY_REFCLKP1_205
GTY_RXN0_205
GTY_RXN1_205
GTY_RXN2_205
GTY_RXN3_205
GTY_RXP0_205
GTY_RXP1_205
GTY_RXP2_205
GTY_RXP3_205
GTY_TXN0_205
GTY_TXN1_205
GTY_TXN2_205
GTY_TXN3_205
GTY_TXP0_205
GTY_TXP1_205
GTY_TXP2_205
GTY_TXP3_205
GTY_REFCLKN0_206
GTY_REFCLKN1_206
GTY_TXP3_206 A13
GTY_TXP2_206 A9
GTY_TXP1_206 B11
GTY_TXP0_206 C9
GTY_TXN3_206 A12
GTY_TXN2_206 A8
GTY_TXN1_206 B10
GTY_TXN0_206 C8
GTY_RXP3_206 B6
GTY_RXP2_206 C4
GTY_RXP1_206 D6
GTY_RXP0_206 D2
GTY_RXN3_206 B5
GTY_RXN2_206 C3
GTY_RXN1_206 D5
GTY_RXN0_206 D1
GTY_REFCLKP1_206 B15
GTY_REFCLKP0_206 C13
VSVA2197


U1K
L37
M37
G37
G36
M34
N34
M36
M35
K33
L33
J36
K37
IO_L0N_306
IO_L0P_306
IO_L10N_306
IO_L10P_306
IO_L1N_306
IO_L1P_306
IO_L2N_306
IO_L2P_306
IO_L3N_306
IO_L3P_306
IO_L4N_306
IO_L4P_306
VCCO_306
VCCO_306
IO_L9P_306
IO_L9N_306
IO_L8P_306
IO_L8N_306
IO_L7P_306
IO_L7N_306
IO_L6P_HDGC_306
IO_L6N_HDGC_306
IO_L5P_HDGC_306
IO_L5N_HDGC_306
M33
J37
J34
J35
H36
H37
J33
H34
L35
K36
L34
K35
VSVA2197


U1J
M21
M20
G21
H21
L17
M17
L19
M19
K17
L18
K21
L20
IO_L0N_406
IO_L0P_406
IO_L10N_406
IO_L10P_406
IO_L1N_406
IO_L1P_406
IO_L2N_406
IO_L2P_406
IO_L3N_406
IO_L3P_406
IO_L4N_406
IO_L4P_406
VCCO_406
VCCO_406
IO_L9P_406
IO_L9N_406
IO_L8P_406
IO_L8N_406
IO_L7P_406
IO_L7N_406
IO_L6P_HDGC_406
IO_L6N_HDGC_406
IO_L5P_HDGC_406
IO_L5N_HDGC_406
M18
J17
H19
G20
J20
J21
H17
H18
K20
J19
K18
J18
VSVA2197


U1I
VSVA2197
PMC_MIO0_500
PMC_MIO10_500
PMC_MIO11_500
PMC_MIO12_500
PMC_MIO13_500
PMC_MIO14_500
PMC_MIO15_500
PMC_MIO16_500
PMC_MIO17_500
PMC_MIO18_500
PMC_MIO19_500
PMC_MIO1_500
PMC_MIO20_500
PMC_MIO21_500
PMC_MIO22_500
PMC_MIO23_500
PMC_MIO24_500
PMC_MIO25_500
PMC_MIO2_500
PMC_MIO3_500
PMC_MIO4_500
PMC_MIO5_500
PMC_MIO6_500
PMC_MIO7_500
PMC_MIO8_500
PMC_MIO9_500
RSVDGND
LPD_MIO2_502
LPD_MIO25_502
LPD_MIO24_502
LPD_MIO23_502
LPD_MIO22_502
LPD_MIO21_502
LPD_MIO20_502
LPD_MIO1_502
LPD_MIO19_502
LPD_MIO18_502
LPD_MIO17_502
LPD_MIO16_502
LPD_MIO15_502
LPD_MIO14_502
LPD_MIO13_502
LPD_MIO12_502
LPD_MIO11_502
LPD_MIO10_502
LPD_MIO0_502
VCCO_501
VCCO_501
PMC_MIO51_501
PMC_MIO50_501
PMC_MIO49_501
PMC_MIO48_501
PMC_MIO47_501
PMC_MIO46_501
VCCO_503
VCCO_503
TMS_503
TDO_503
TDI_503
TCK_503
RTC_PADO_503
RTC_PADI_503
REF_CLK_503
PUDC_B_503
POR_B_503
MODE3_503
MODE2_503
MODE1_503
MODE0_503
ERROR_OUT_503
DONE_503
VCCO_502
VCCO_502
LPD_MIO9_502
LPD_MIO8_502
LPD_MIO7_502
LPD_MIO6_502
LPD_MIO5_502
LPD_MIO4_502
LPD_MIO3_502
RSVD GND
VN_500
VP_500
VREFN_500
VREFP_500
VCCO_500
VCCO_500
PMC_MIO26_501
PMC_MIO27_501
PMC_MIO28_501
PMC_MIO29_501
PMC_MIO30_501
PMC_MIO31_501
PMC_MIO32_501
PMC_MIO33_501
PMC_MIO34_501
PMC_MIO35_501
PMC_MIO36_501
PMC_MIO37_501
PMC_MIO38_501
PMC_MIO39_501
PMC_MIO40_501
PMC_MIO41_501
PMC_MIO42_501
PMC_MIO43_501
PMC_MIO44_501
PMC_MIO45_501
GND
GND