

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



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

Workspace
Test - 1 x


Available Tests

Name: Test - 1
Rail: None

Transient Test
Transient load step with adjustable rise times, current, and pulse width.

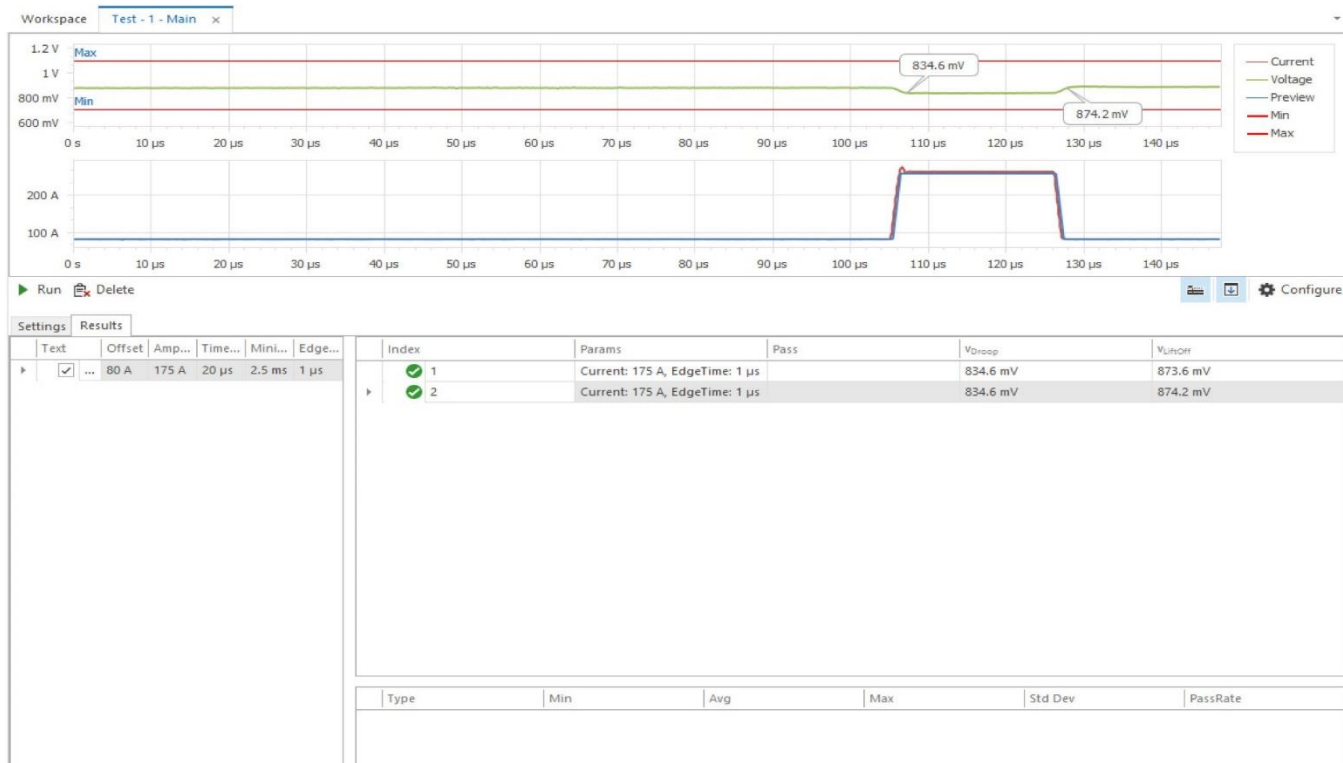
Pulse Train
Repeating load steps with a configurable frequency and duty cycle.

Impedance (Z)
Large signal output impedance with adjustable current amplitude and offset.

DC Load
DC Load with timer.

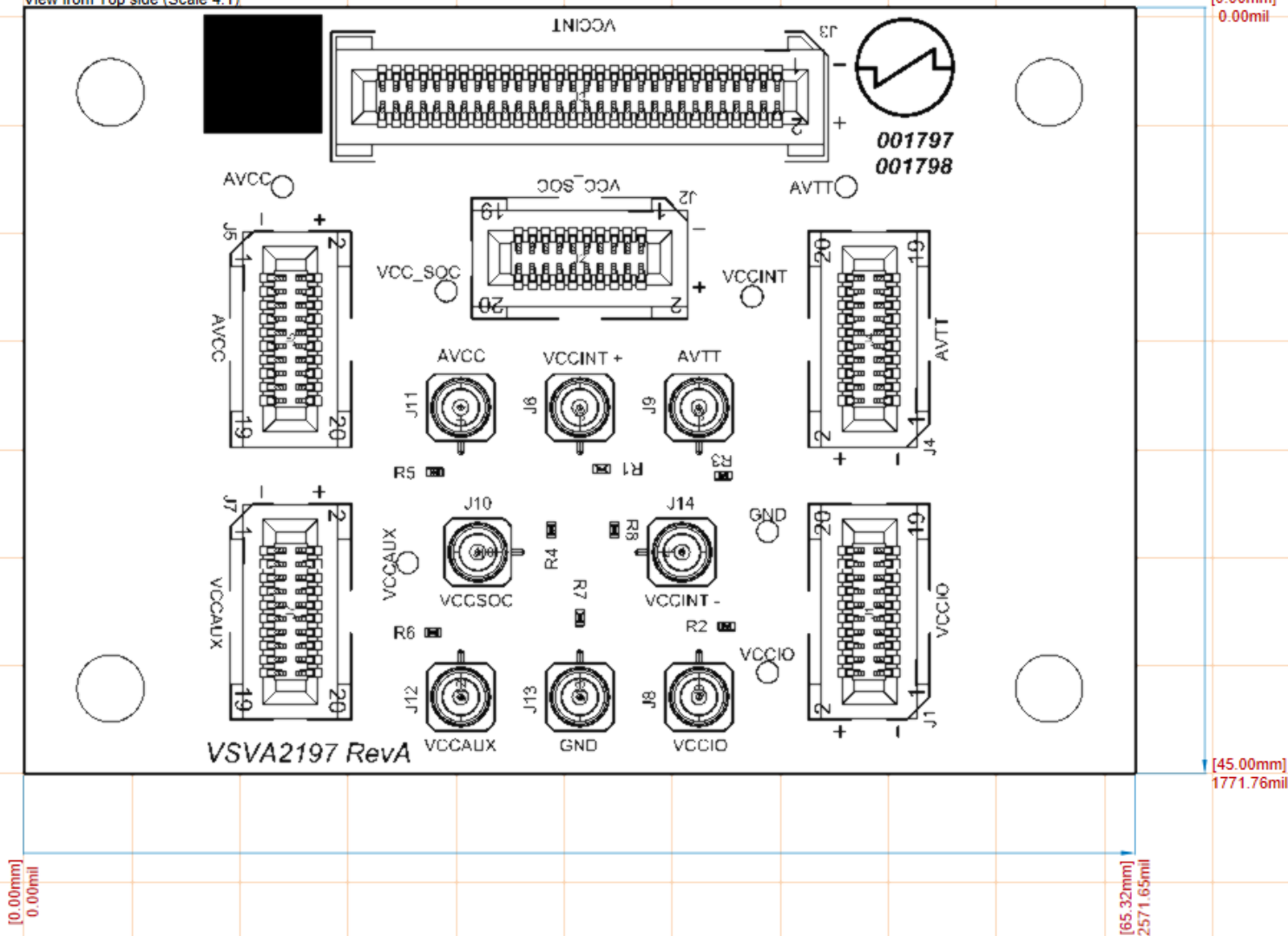
Delay
Timed delay.

Transient test



Mechanical Specs

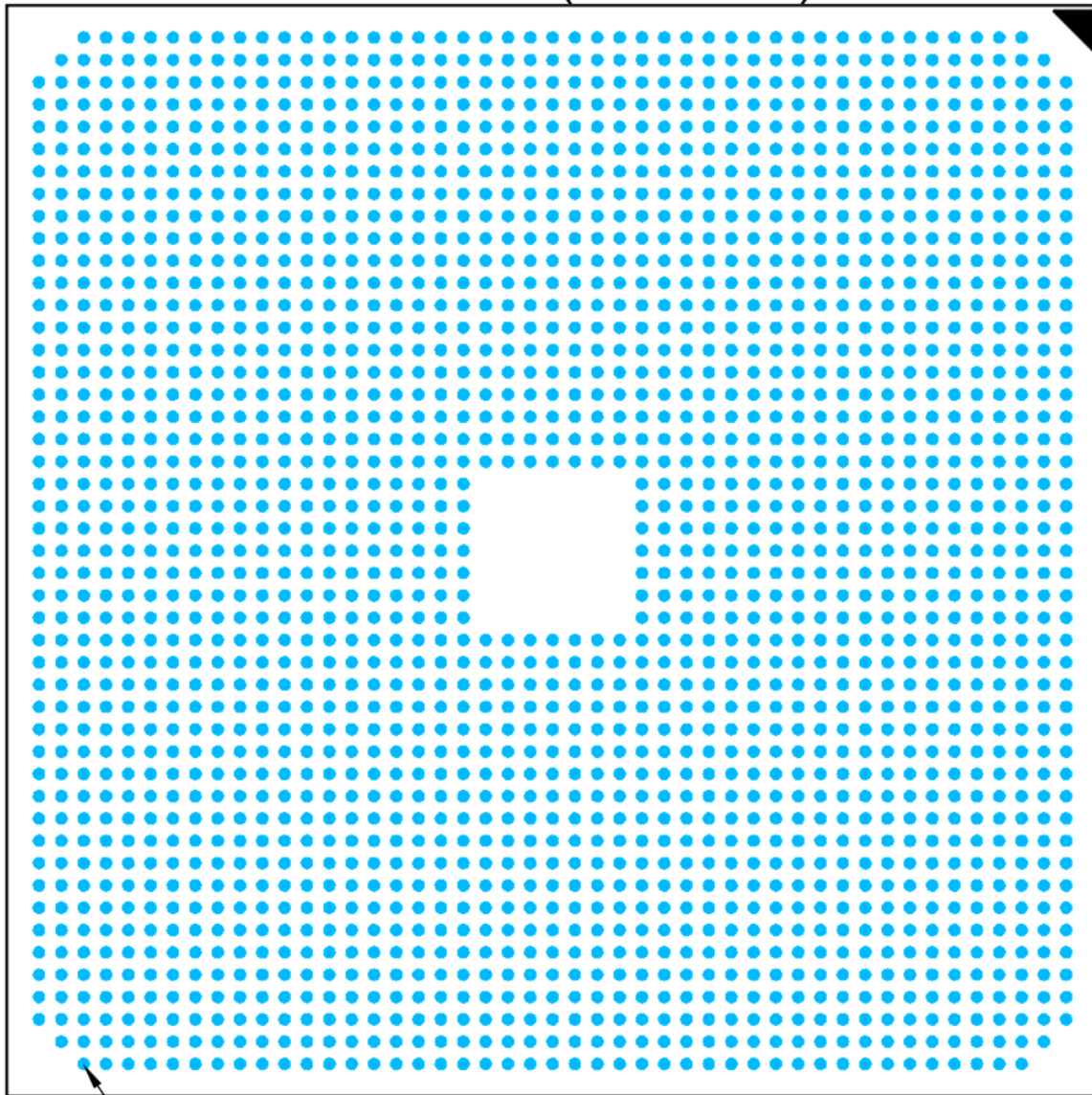
View from Top side (Scale 4:1)





Pin 1 I.D.

View from Bottom side (Scale 3:1)



0.92mm BGA Pitch

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



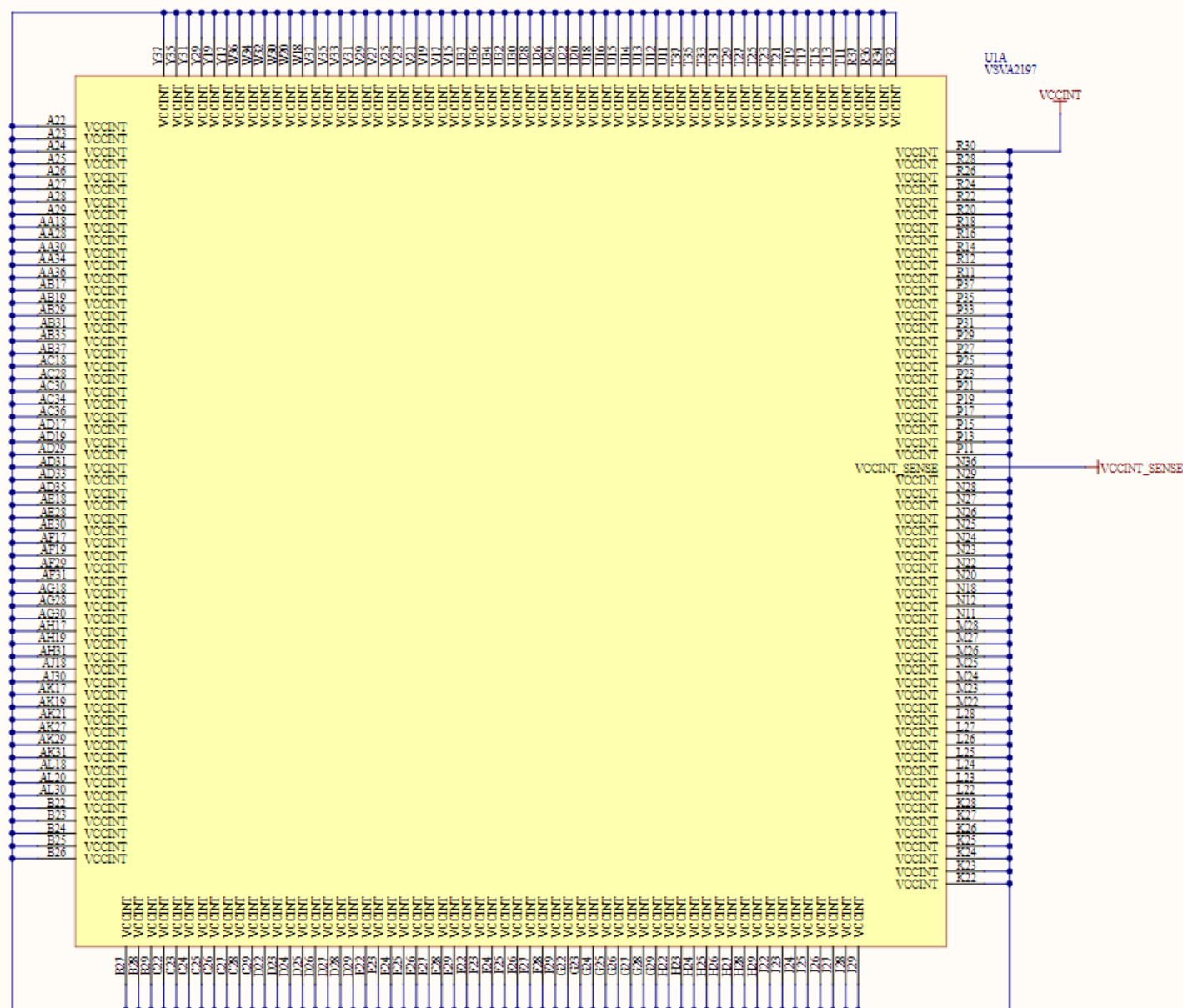
Packing Tray Specs

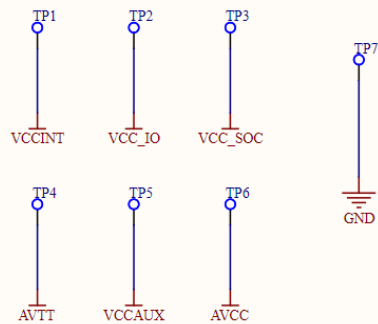
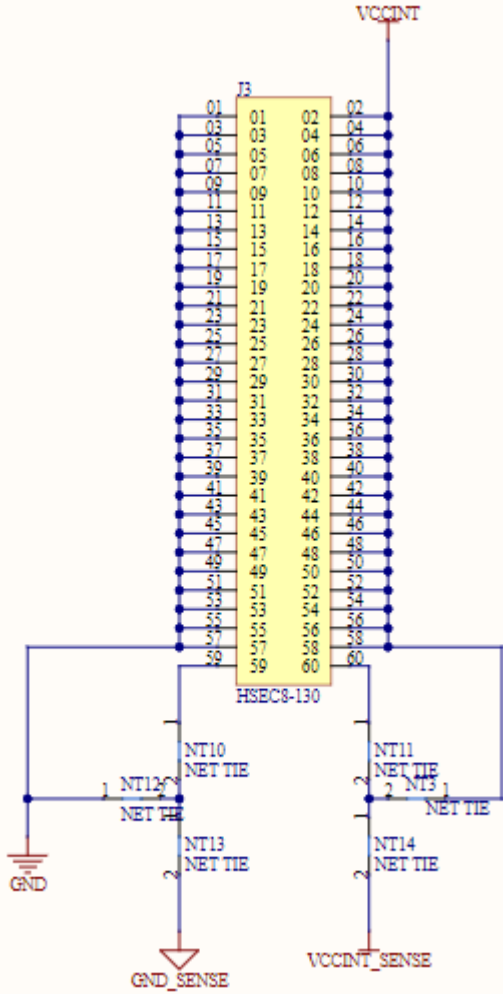
45 by 45mm package will have a 102x102x15mm tray

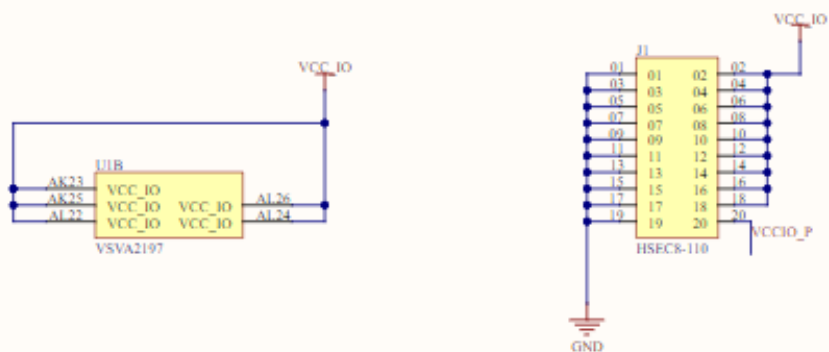
A1 top left corner



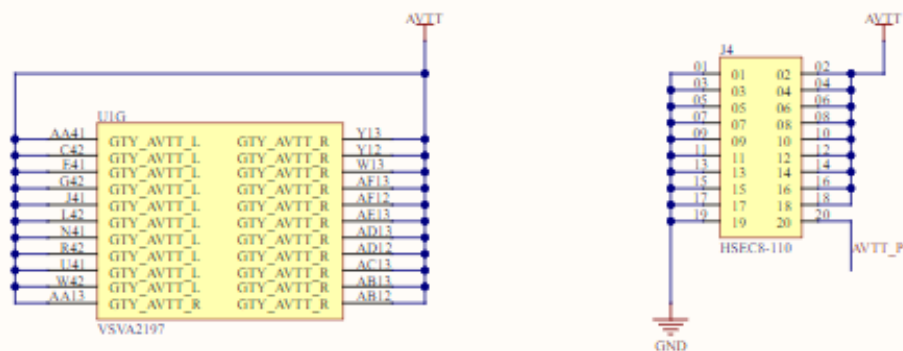
Schematics



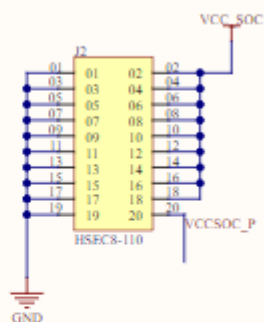
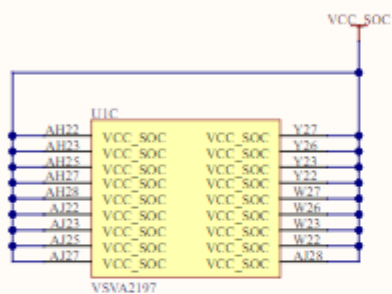




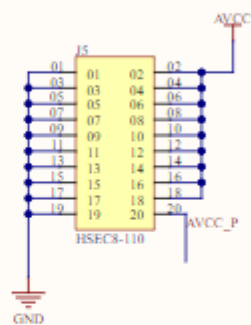
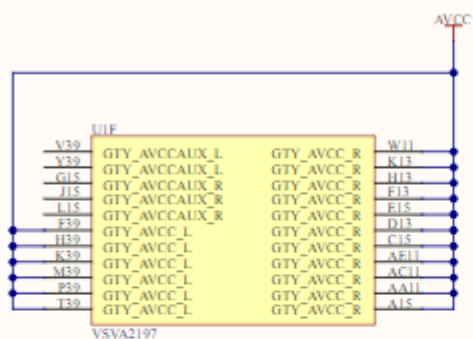
VCC_IO



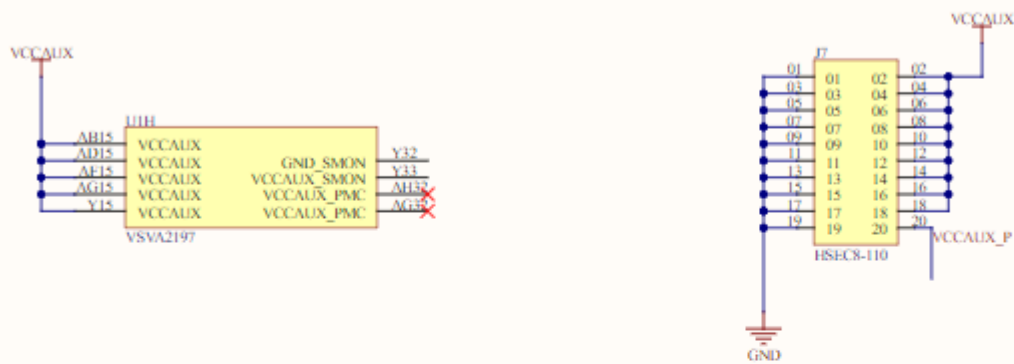
AVTT



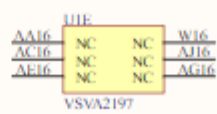
VCC_SOC



AVCC



VCCAUX



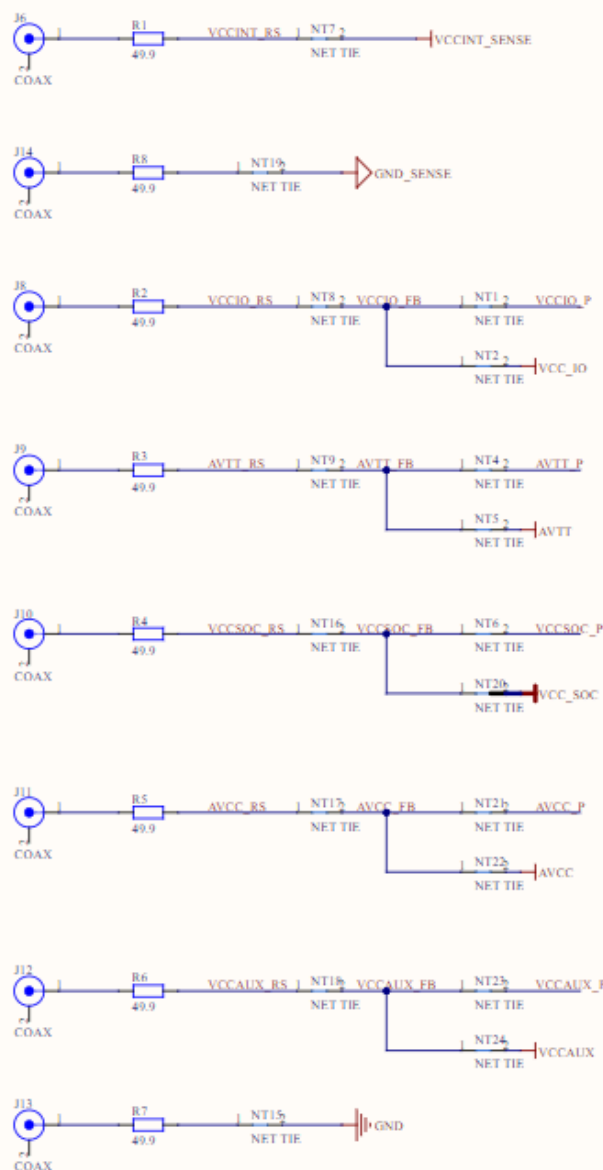
NC

UID

AG33	VCC_BATT		AJ20
AF33	VCC_FUSE	VCC_RAM	AG10
AJ33	VCC_PMC	VCC_RAM	AG10
AK32	VCC_PMC	VCC_RAM	AE20
AL32	VCC_PMC	VCC_RAM	AC20
AH34	VCC_PSF	VCC_RAM	AA20
AJ34	VCC_PSF	VCC_PSLP	AH35
AK33	VCC_PSF	VCC_PSLP	AG35
AL34	VCC_PSF	VCC_PSLP	AF34

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VCC MISC



COAX SMP



[illegible]



UIM			
W40	GTY_REFCLKN0_103	GTY_TXP3_106	A43
U40	GTY_REFCLKN1_103	GTY_TXP2_106	B41
W39	GTY_REFCLKP0_103	GTY_TXP1_106	D41
U39	GTY_REFCLKP1_103	GTY_TXP0_106	F41
AB47	GTY_RXN0_103	GTY_TXN3_106	A44
AA45	GTY_RXN1_103	GTY_TXN2_106	B42
Y47	GTY_RXN2_103	GTY_TXN1_106	D42
W45	GTY_RXN3_103	GTY_TXN0_106	F42
AB46	GTY_RXP0_103	GTY_RXP3_106	C44
AA44	GTY_RXP1_103	GTY_RXP2_106	D46
Y46	GTY_RXP2_103	GTY_RXP1_106	E44
W44	GTY_RXP3_103	GTY_RXP0_106	F46
AB42	GTY_TXN0_103	GTY_RXN3_106	C45
Y42	GTY_TXN1_103	GTY_RXN2_106	D47
W42	GTY_TXN2_103	GTY_RXN1_106	E45
U44	GTY_TXN3_103	GTY_RXN0_106	F47
AB41	GTY_TXP0_103	GTY_REFCLKP1_106	E39
Y41	GTY_TXP1_103	GTY_REFCLKP0_106	G39
W41	GTY_TXP2_103	GTY_REFCLKN1_106	F40
U43	GTY_TXP3_103	GTY_REFCLKN0_106	G40
R40	GTY_REFCLKN0_104	GTY_TXP3_105	G43
N40	GTY_REFCLKN1_104	GTY_TXP2_105	H41
R39	GTY_REFCLKP0_104	GTY_TXP1_105	J43
N39	GTY_REFCLKP1_104	GTY_TXP0_105	K41
W47	GTY_RXN0_104	GTY_TXN3_105	G44
T47	GTY_RXN1_104	GTY_TXN2_105	H42
P47	GTY_RXN2_104	GTY_TXN1_105	J44
N45	GTY_RXN3_104	GTY_TXN0_105	K42
V46	GTY_RXP0_104	GTY_RXP3_105	H46
T46	GTY_RXP1_104	GTY_RXP2_105	K46
P46	GTY_RXP2_104	GTY_RXP1_105	L44
N44	GTY_RXP3_104	GTY_RXP0_105	M46
T42	GTY_TXN0_104	GTY_RXN3_105	H47
R44	GTY_TXN1_104	GTY_RXN2_105	K47
P42	GTY_TXN2_104	GTY_RXN1_105	L45
M42	GTY_TXN3_104	GTY_RXN0_105	M47
T41	GTY_TXP0_104	GTY_REFCLKP1_105	AA39
R43	GTY_TXP1_104	GTY_REFCLKP0_105	J39
P41	GTY_TXP2_104	GTY_REFCLKN1_105	L39
M41	GTY_TXP3_104	GTY_REFCLKN0_105	J40
AA40	GTY_AVTTICAL_L		L40

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

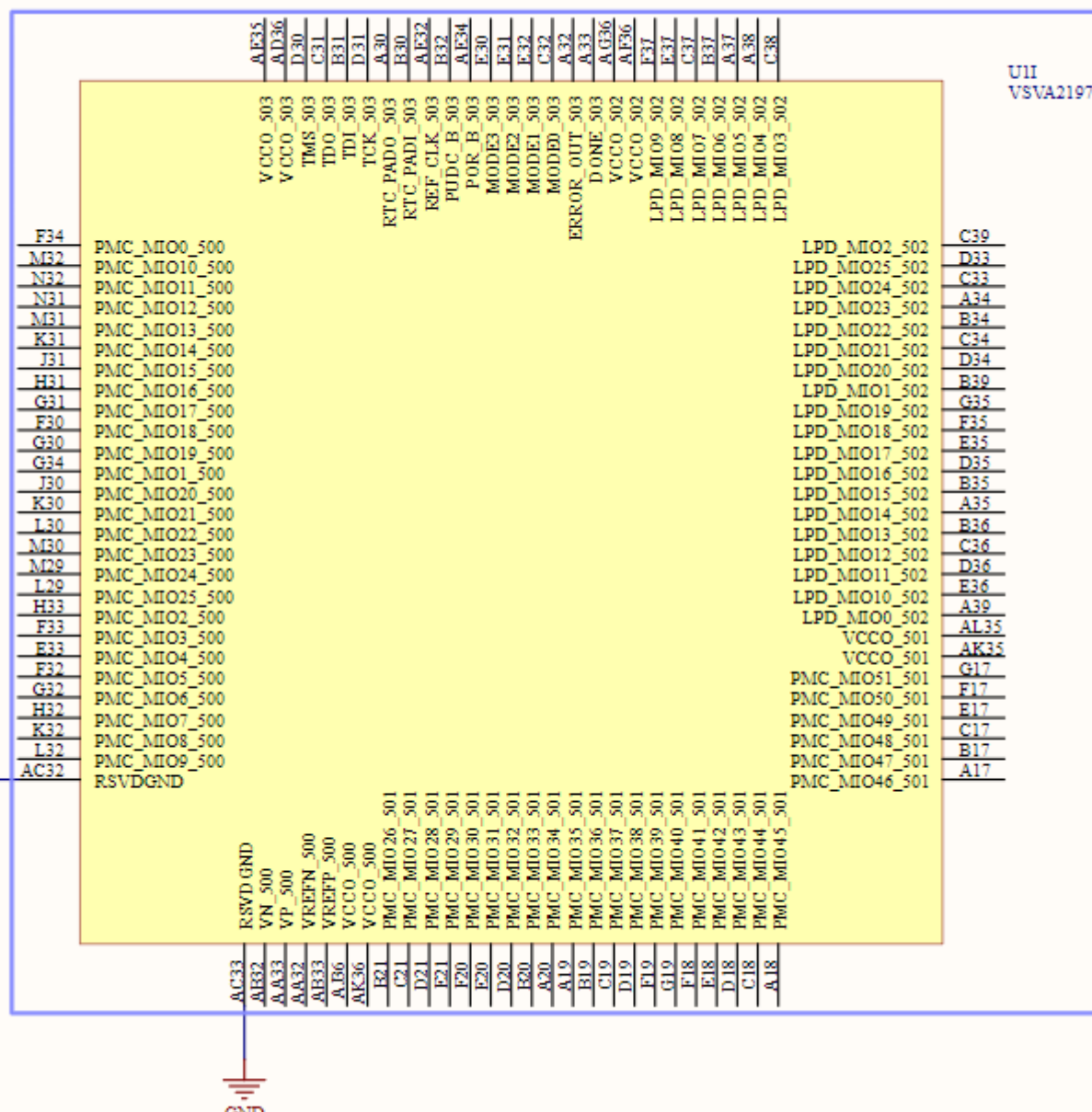
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U1K			
L37	IO_L0N_306	VCCO_306	M33
M37	IO_L0P_306	VCCO_306	J37
G37	IO_L10N_306	IO_L9P_306	J34
G36	IO_L10P_306	IO_L9N_306	J35
M34	IO_L1N_306	IO_L8P_306	H36
N34	IO_L1P_306	IO_L8N_306	H37
M36	IO_L2N_306	IO_L7P_306	J33
M35	IO_L2P_306	IO_L7N_306	H34
K33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

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

VSVA2197



Availability

Xilinx part number	ProGrAnalog part number
VM1502-VSVA2197	PA-KIT-VM1502-VSVA2197
VM1802-VSVA2197	PA-KIT- VM1802-VSVA2197
VE1752-VSVA2197	PA-KIT- VE1752-VSVA2197
VC1502-VSVA2197	PA-KIT- VC1502-VSVA2197
VC1702-VSVA2197	PA-KIT- VC1702-VSVA2197
VC1802-VSVA2197	PA-KIT- VC1802-VSVA2197
VC1902-VSVA2197	PA-KIT- VC1902-VSVA2197

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