280031-010 X4M02

PCBA Manufacturing Documentation

X4 Radar Module

By Novelda AS
2017–12–15

Document description

This document decribes the assembly specifications for the current PCBA.

Contents of this document

- Notes to manufacturer
- BOM-changes
- Schematic prints
- Assembly Drawings
- PCB Dimensions
- Testpoints placement

Notes to manufacturer

No notes.

BOM-changes

Revision 10

- Based on BOM from revision 8
- A1 changed to X4M02 PCB Rev 10
- Removed Y301
- Removed C327
- Changed C326 to 100n, 0402, 10%, 10V, X5R
- Added oscillator U303 - 12MHz CMOS MEMS, Manufacturer: Microchip Technology, MPN: DSC6003JI2A-012.0000
- Added shield box S1
- Change U200 to X4 Radar IC rev.2, Manufacturer: Novelda, MPN: 200260-002

Revision 9

- Based on BOM from revision 6.
- Added shield box S1

Revision 8

- A1 changed to X4M02 PCB Rev8.
- Added resistor R6 - 0R, 0603, 1%, 100mW
- Added resistor R305 - 2R2, 0402, 1%, 63mW
- Added inductor L300 - 10u, 0805, 20%, 60mA, 650mOhm, MPN: CK2125100M-T, Manufacturer: Taiyo Yuden
- Added capacitor C331 - 4u7, 0603, 10%, 10V, X5R
- Added capacitors C332 and C333 - 1u, 0402, 10%, 10V, X5R
- Added capacitors C334, C336, C338, C339 and C340 - 100n, 0402, 10%, 10V, X5R
- Added capacitor C335 - 100n, 0603, 10%, 16V, X7R
- Added capacitor C337 - 2u2, 0402, 20%, 6V3, X5R

Revision 7

- Will not be manufactured.

Revision 6

- A1 changed to X4M02 PCB Rev6.
- Changed U301 to MCU with 2MB flash. MPN: ATSAMS70Q21A-CN.

Revision 5

- A1 changed to X4M02 PCB Rev5.

Revision 4

- A1 changed to X4M02 PCB Rev4.

Revision 3

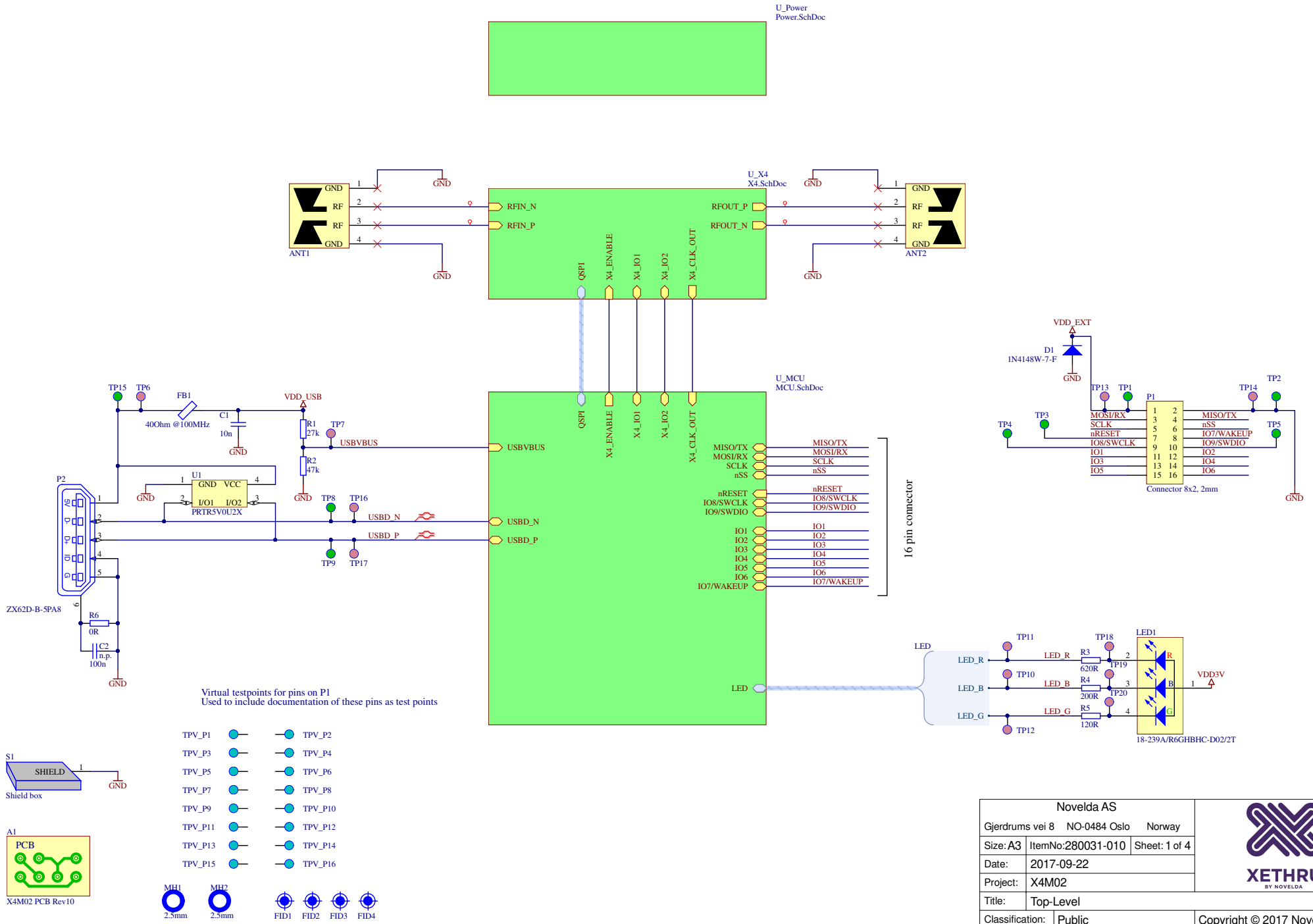
- A1 changed to X4M02 PCB Rev3.

Revision 2

- A1 changed to X4M02 PCB Rev2.
- Add R304. 100k, 0402, 1%

Revision 1

- Initial prototype.



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Gjerdrums vei 8 NO-0484 Oslo Norway		
Size: A3	ItemNo:280031-010	Sheet: 1 of 4
Date:	2017-09-22	
Project:	X4M02	
Title:	Top-Level	
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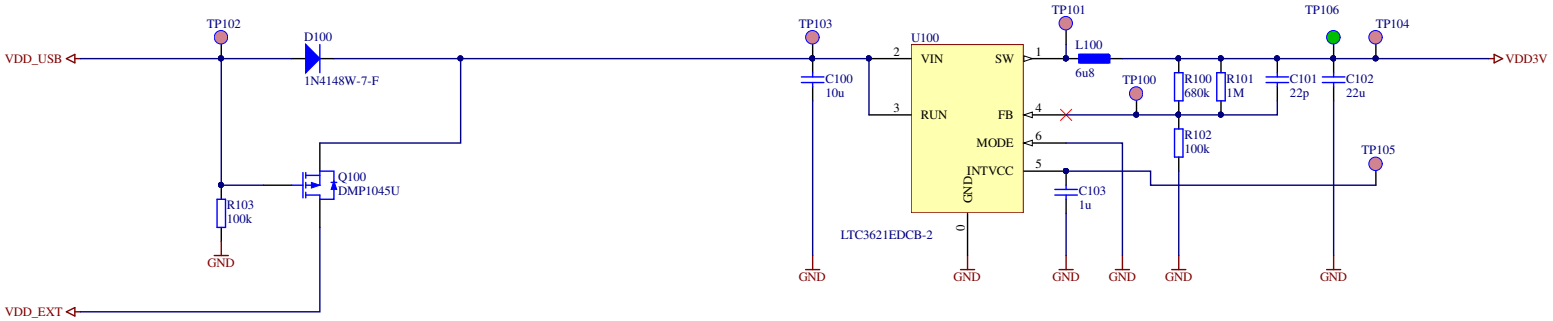

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Date:	2017-09-22		
Project:	X4M02		
Title:	Power		
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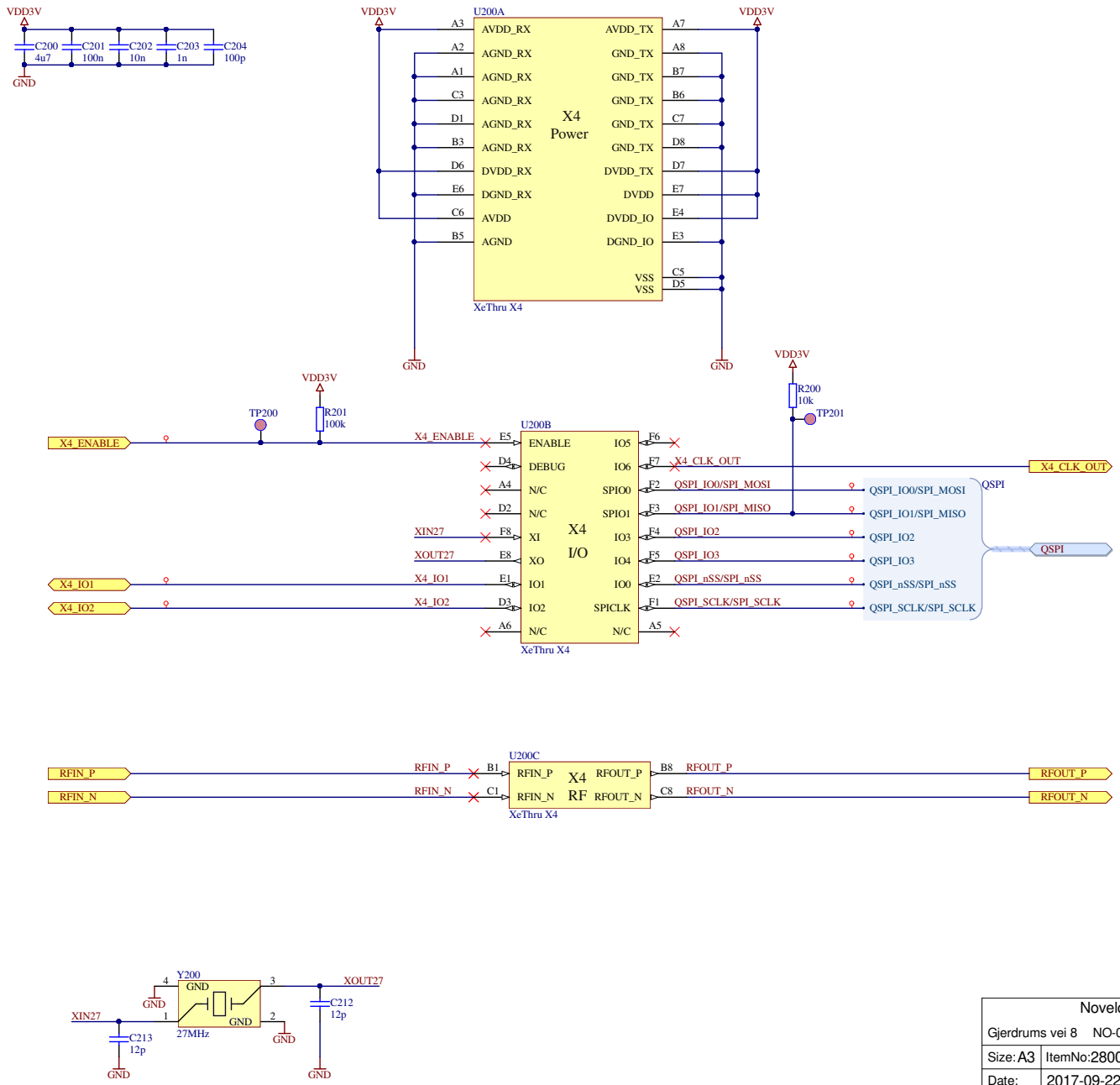

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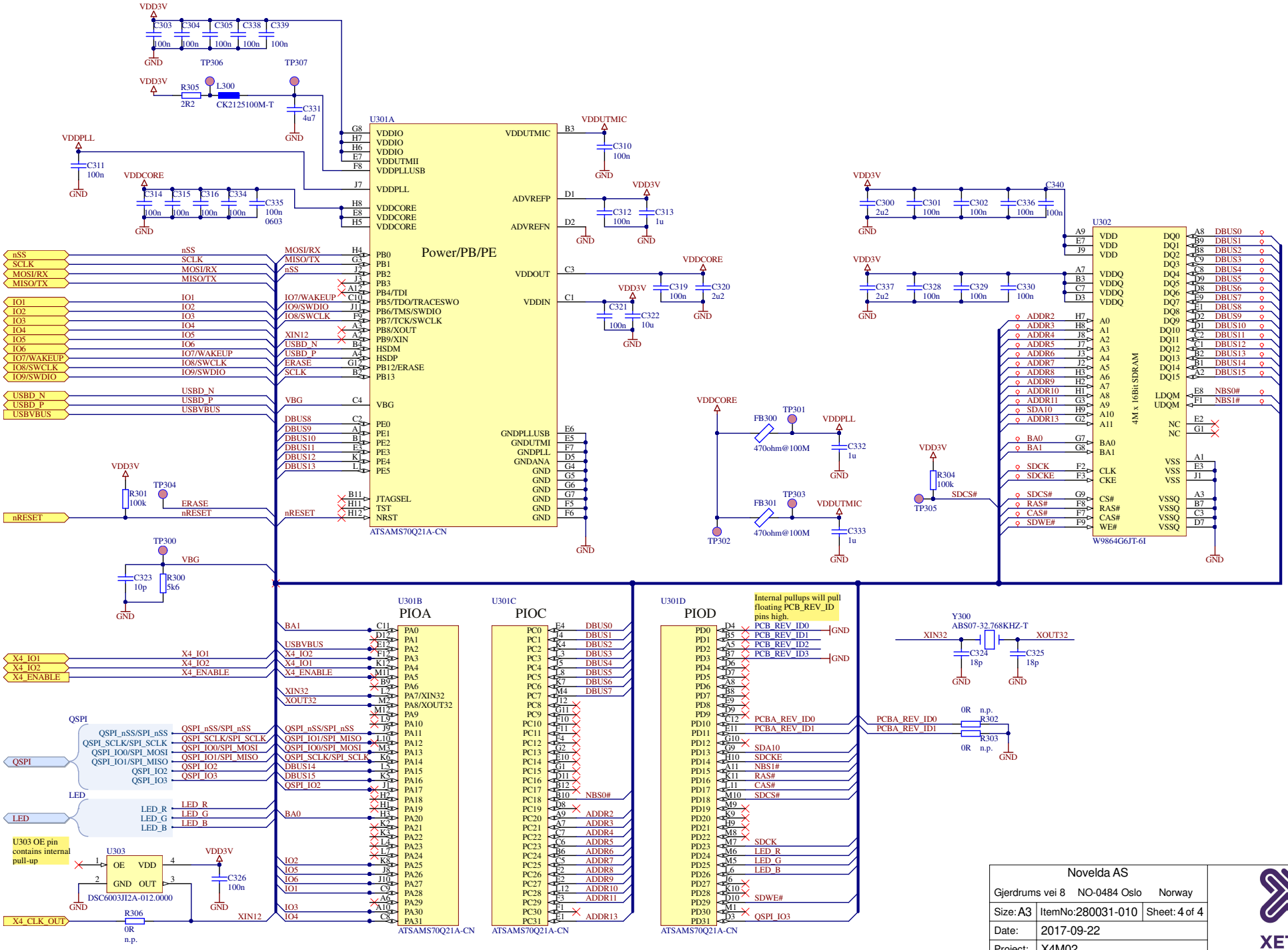
U301A
Power/PB/PE
ATSAMS70Q21A-CN
U301B
PIOA
U301C
PIOC
U301D
PIOD
U302
W9864G6JT-6I
4M x 16Bit SDRAM
U303
DSC6003JI2A-012.0000
Internal pullups will pull floating PCB_REV_ID pins high.
Y300
ABS07-32.768KHZ-T
U303 OE pin contains internal pull-up
QSPI
LED
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Size: A3
ItemNo:280031-010
Sheet: 4 of 4
Date: 2017-09-22
Project: X4M02
Title: MCU
Classification: Public
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XETHRU
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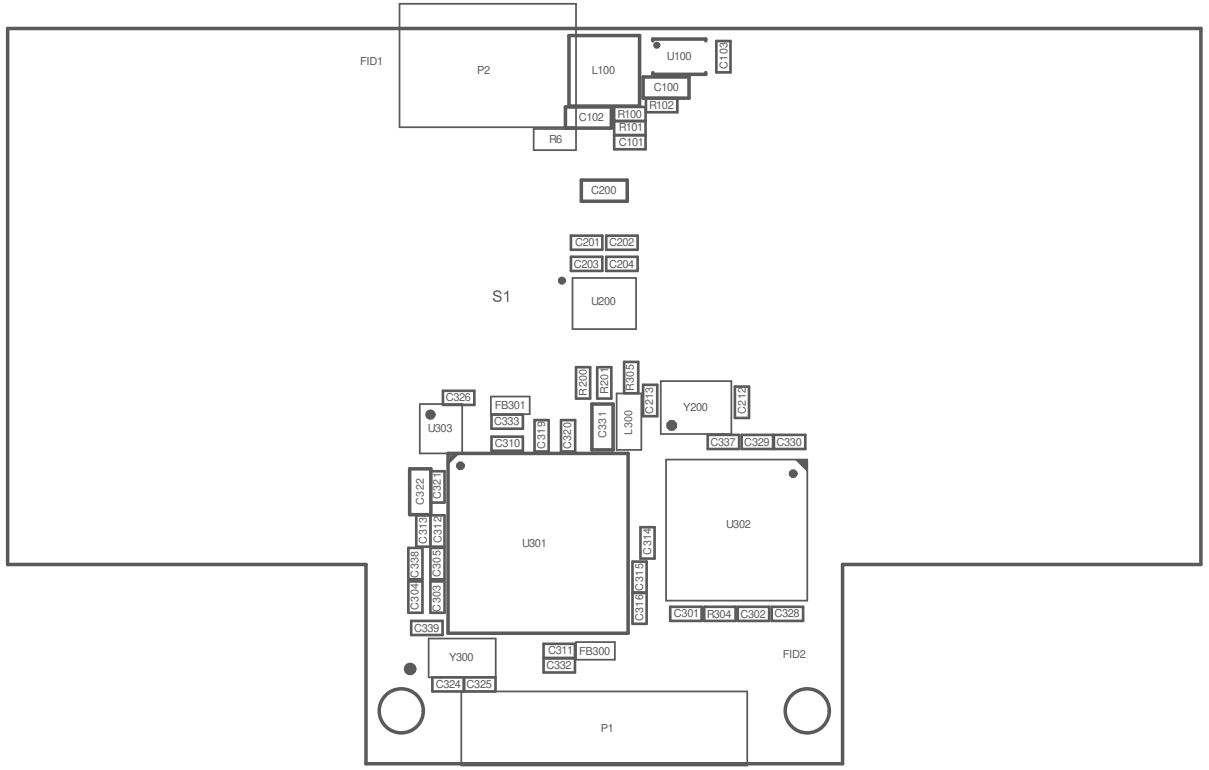

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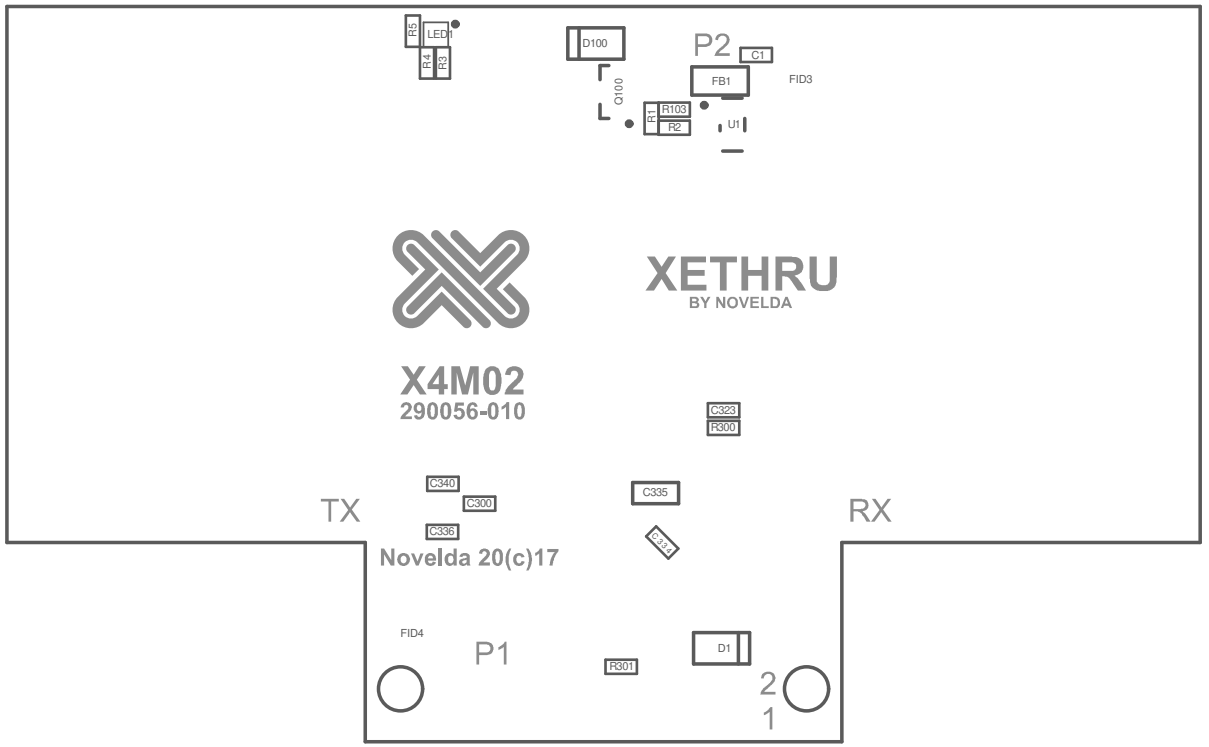
Project	X4M02
Layer	Top Designator and Assembly
Classification	Public
Copyright (c) Novelda 2017	



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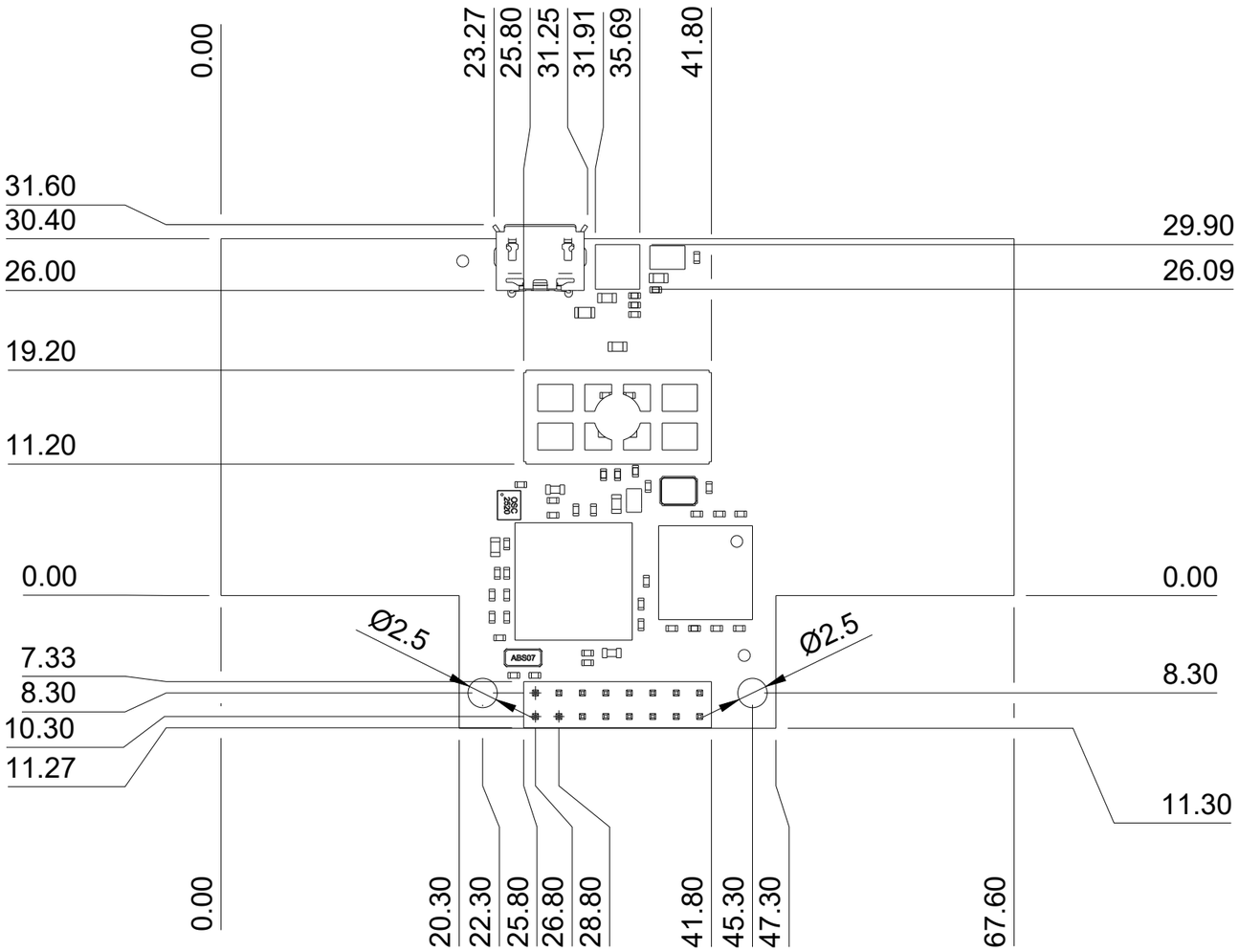
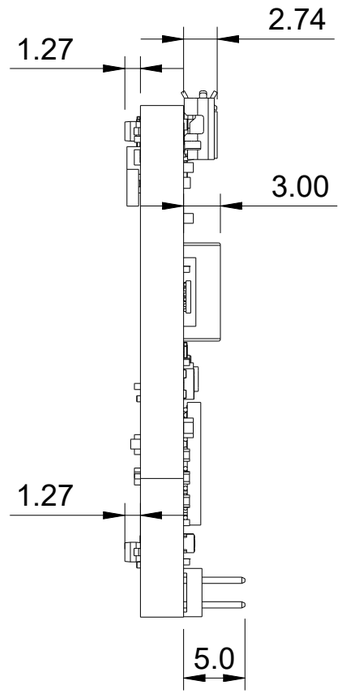
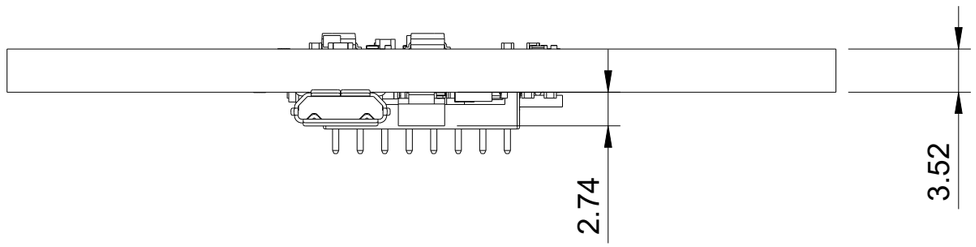
Project	X4M02
Layer	Bottom Designator and Assembly Bottom Overlay
Classification	Public
Copyright	(c) Novelda 2017







All dimensions are in mm

Dept.	Technical reference	Created by	Approved by
		Carl Inge Eckhoff Wisland 15.12.2017	
		Document type: Dimensions	Document status: Public
		Title: PCBA_Dimensions	DWG No.
			Rev.: 10.2 / Date of issue: 2017-12-15 / Sheet: 1/1

XETHRU
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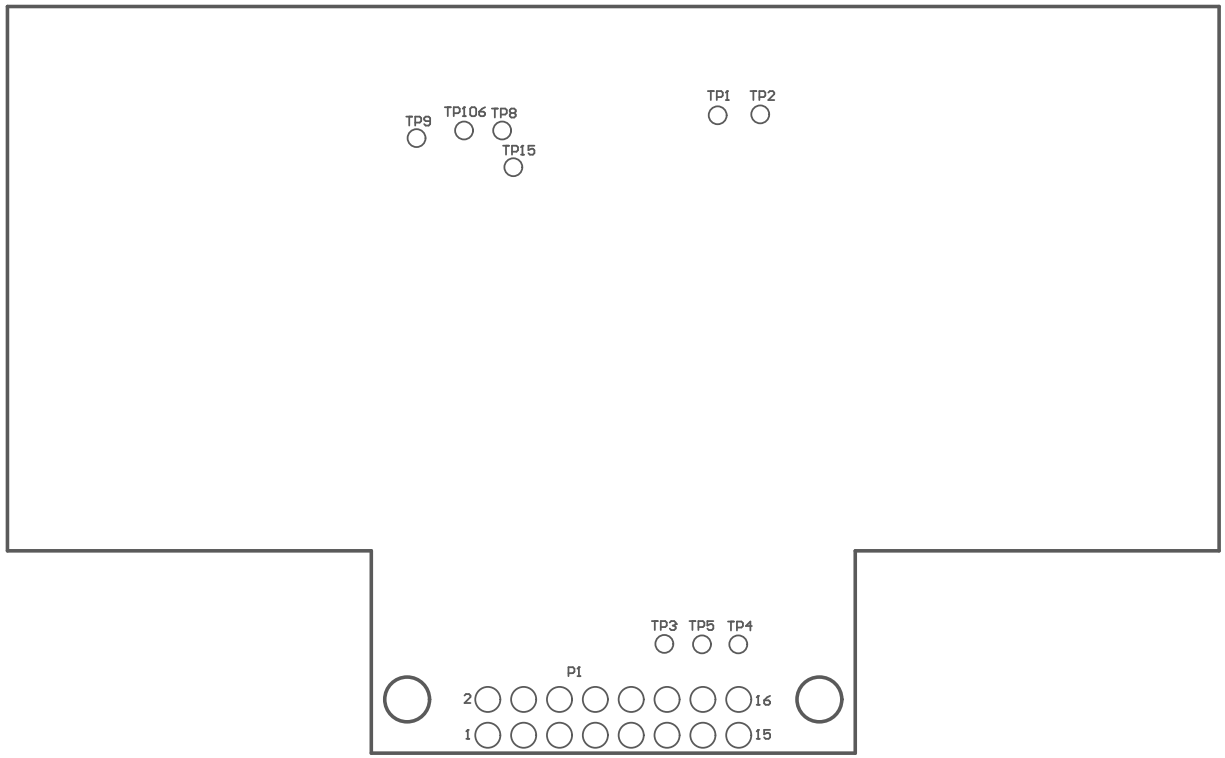

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Project	X4M02
Layer	Testpoints Top
Classification	Public
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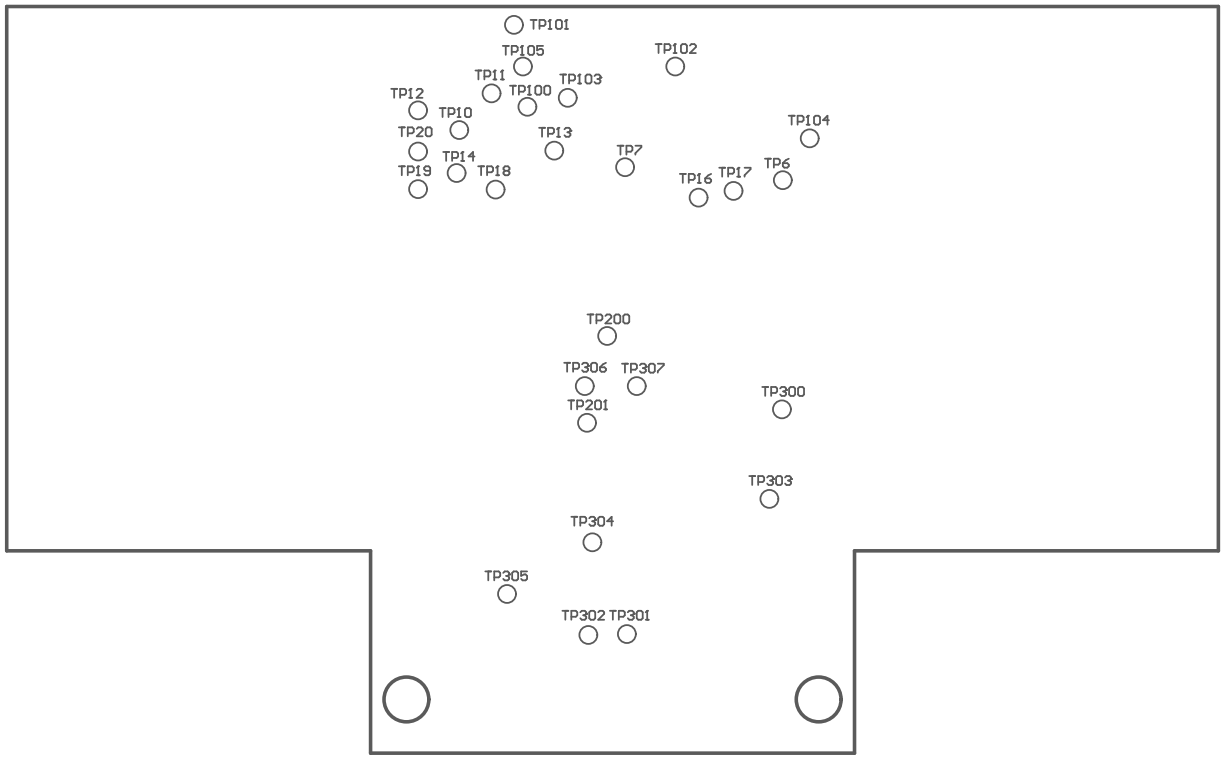

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Project	X4M02
Layer	Testpoints Bottom
Classification	Public