

Product Document

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TMF882x sensor shield

TMF882x sensor shield

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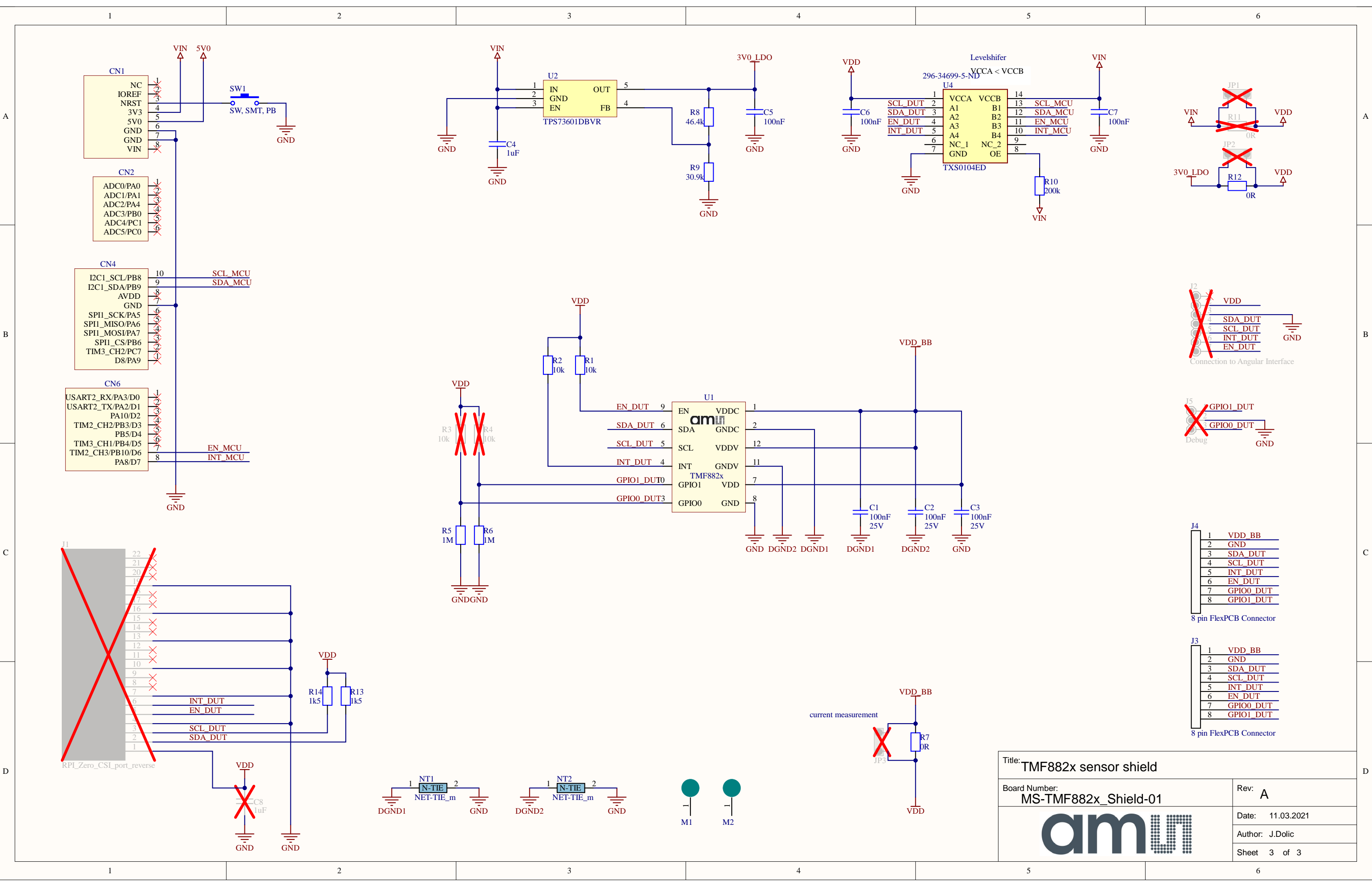
BOM

- Sheet 12: Bill of Materials

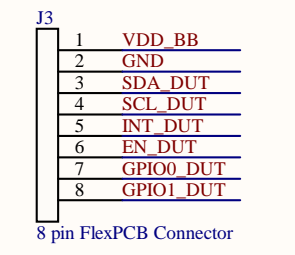
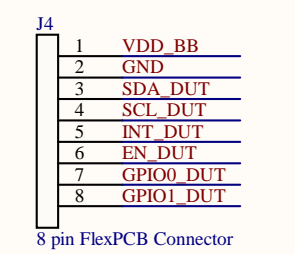
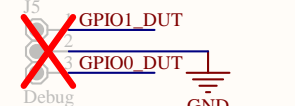
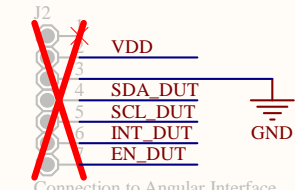
3D PDF

- Sheet 13: 3d PDF of Board

Title: TMF882x sensor shield	
Board Number: MS-TMF882x_Shield-01	Rev: A
	Date: 11.03.2021
	Author: J.Dolic
	Sheet 2 of 3



Title: TMF882x sensor shield	
Board Number: MS-TMF882x_Shield-01	Rev: A
	
Date: 11.03.2021	Author: J.Dolic
Sheet 3 of 3	

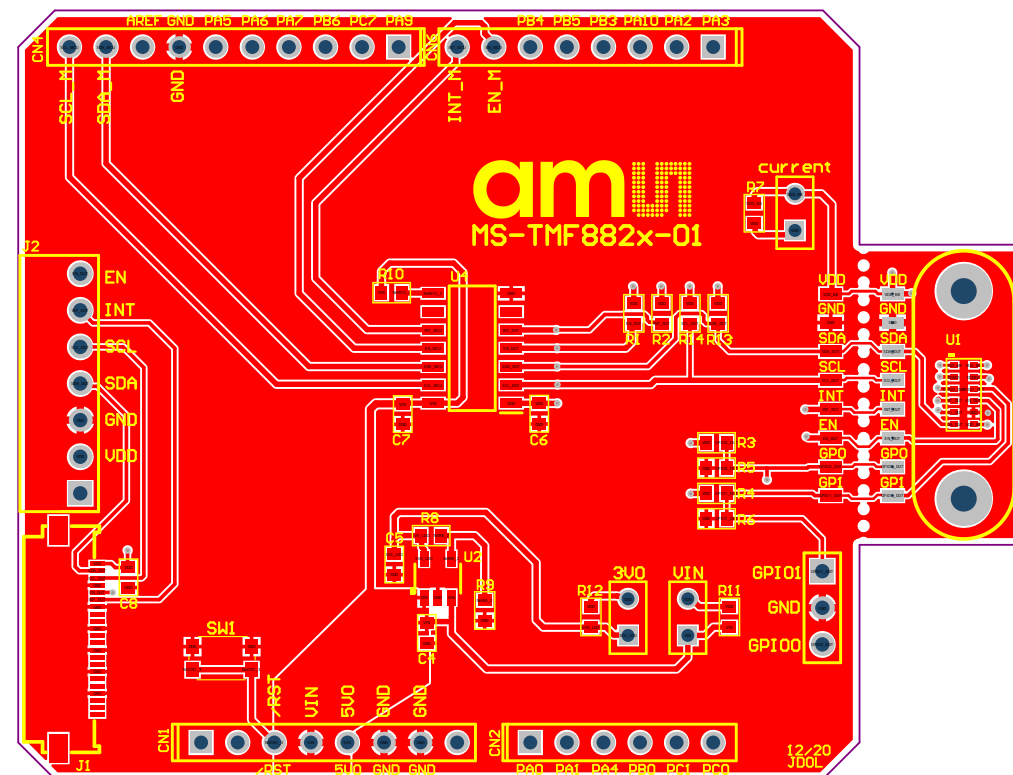


Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0,40mil	3,5	GTS
1	TOP	Copper	0,70mil		GTL
	Dielectric1	FR-4	8,00mil	4,5	
2	MID1	Copper	1,40mil		G1
	Dielectric2	FR-4	41,00mil	4,5	
3	MID2	Copper	1,40mil		G2
	Dielectric3	FR-4	8,00mil	4,5	
4	BOTTOM	Copper	0,70mil		GBL
	Bottom Solder	Solder Resist	0,40mil	3,5	GBS
	Bottom Overlay				GBO

Total board thickness: 62,00mil

Board Details

- Board Size: 2309.27 mils x 2100 mils
- Board Thickness: 62.00 mil
- Board Material: FR-4
- Board Finish: ENIG
- Component count: 43
- Pad Count: 191
- Hole Count: 103
- Soldermask Color: Black
- Silkscreen Color: White
- No Silkscreen over exposed copper.
- Dimensions shown are in mils unless marked.
- No additional silkscreen to be added.
- Boards Shall be fabricated to IPC-600 Class 1
- The PCB assembly shall be ROHS compliant.



Layers Currently On

TOP	Board Outline Layer Stack
Title_Block	
Multi-Layer	
Top Overlay	

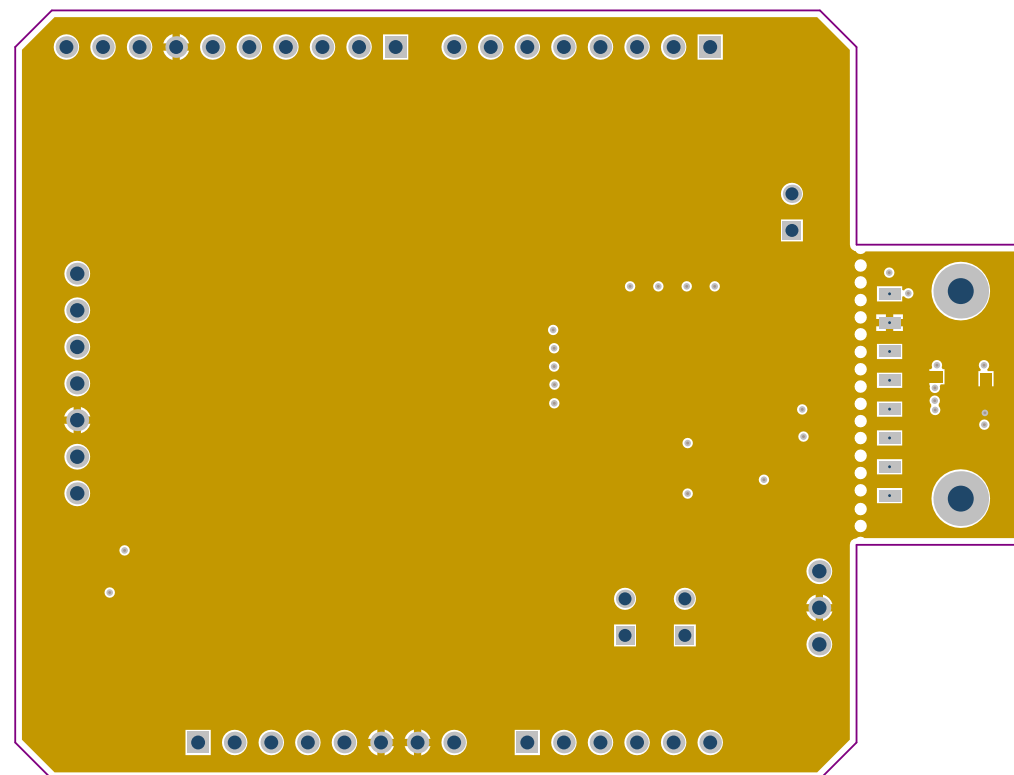
Title TMF882x sensor shield	
Number MS-TMF882x_Shield-01	Rev A
Print Name Top Layer	
Variant: [No Variations]	Print Date: 11.03.2021
Drawn By: J.Dolic	

Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0,40mil	3,5	GTS
1	TOP	Copper	0,70mil		GTL
	Dielectric1	FR-4	8,00mil	4,5	
2	MID1	Copper	1,40mil		G1
	Dielectric2	FR-4	41,00mil	4,5	
3	MID2	Copper	1,40mil		G2
	Dielectric3	FR-4	8,00mil	4,5	
4	BOTTOM	Copper	0,70mil		GBL
	Bottom Solder	Solder Resist	0,40mil	3,5	GBS
	Bottom Overlay				GBO

Total board thickness: 62,00mil

Board Details

- Board Size: 2309.27 mils x 2100 mils
- Board Thickness: 62.00 mil
- Board Material: FR-4
- Board Finish: ENIG
- Component count: 43
- Pad Count: 191
- Hole Count: 103
- Soldermask Color: Black
- Silkscreen Color: White
- No Silkscreen over exposed copper.
- Dimensions shown are in mils unless marked.
- No additional silkscreen to be added.
- Boards Shall be fabricated to IPC-600 Class 1
- The PCB assembly shall be ROHS compliant.



Layers Currently On

MID1	Board Outline Layer Stack
Title_Block	
Multi-Layer	

Title TMF882x sensor shield	
Number MS-TMF882x_Shield-01	Rev A
Print Name Mid1 Layer - GND	
Variant: [No Variations]	Print Date: 11.03.2021
Drawn By: J.Dolic	

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Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0,40mil	3,5	GTS
1	TOP	Copper	0,70mil		GTL
	Dielectric1	FR-4	8,00mil	4,5	
2	MID1	Copper	1,40mil		G1
	Dielectric2	FR-4	41,00mil	4,5	
3	MID2	Copper	1,40mil		G2
	Dielectric3	FR-4	8,00mil	4,5	
4	BOTTOM	Copper	0,70mil		GBL
	Bottom Solder	Solder Resist	0,40mil	3,5	GBS
	Bottom Overlay				GBO

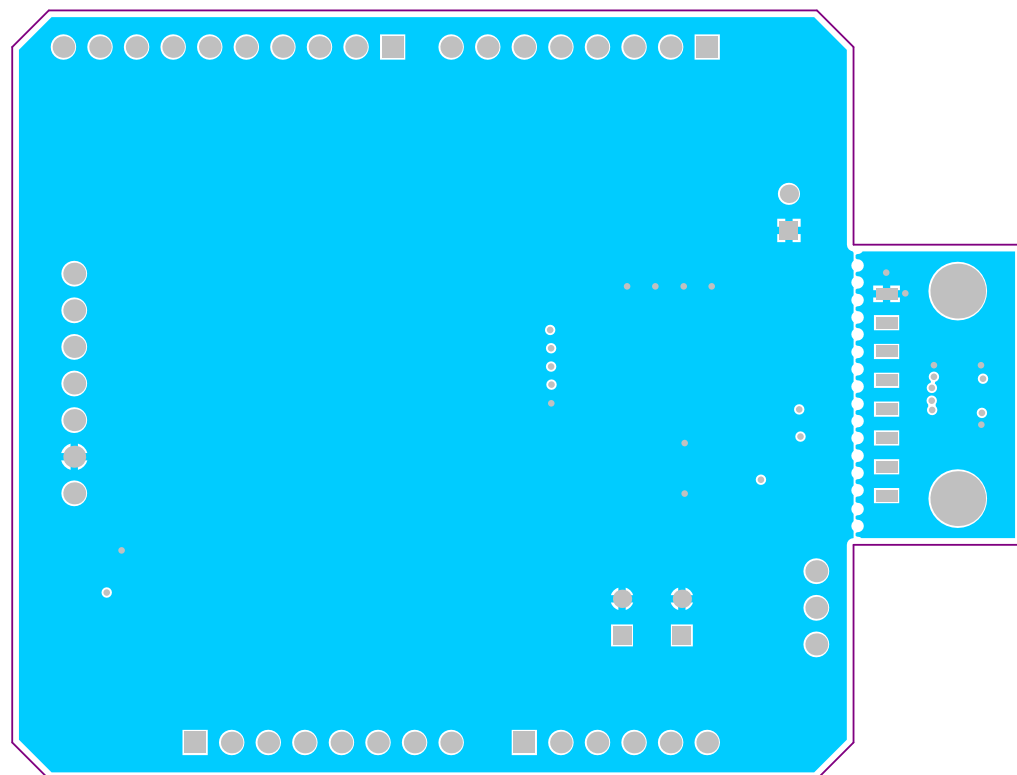
Total board thickness: 62,00mil

Board Details

- Board Size: 2309.27 mils x 2100 mils
- Board Thickness: 62.00 mil
- Board Material: FR-4
- Board Finish: ENIG
- Component count: 43
- Pad Count: 191
- Hole Count: 103
- Soldermask Color: Black
- Silkscreen Color: White
- No Silkscreen over exposed copper.
- Dimensions shown are in mils unless marked.
- No additional silkscreen to be added.
- Boards Shall be fabricated to IPC-600 Class 1
- The PCB assembly shall be ROHS compliant.

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Layers Currently On

Title_Block	MID2
Multi-Layer	Board Outline
	Layer Stack

D

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Title		TMF882x sensor shield	
Number	MS-TMF882x_Shield-01	Rev	A
Print Name			
Mid2 Layer - PWR			
Variant: [No Variations]		Print Date: 11.03.2021	
Drawn By: J.Dolic			

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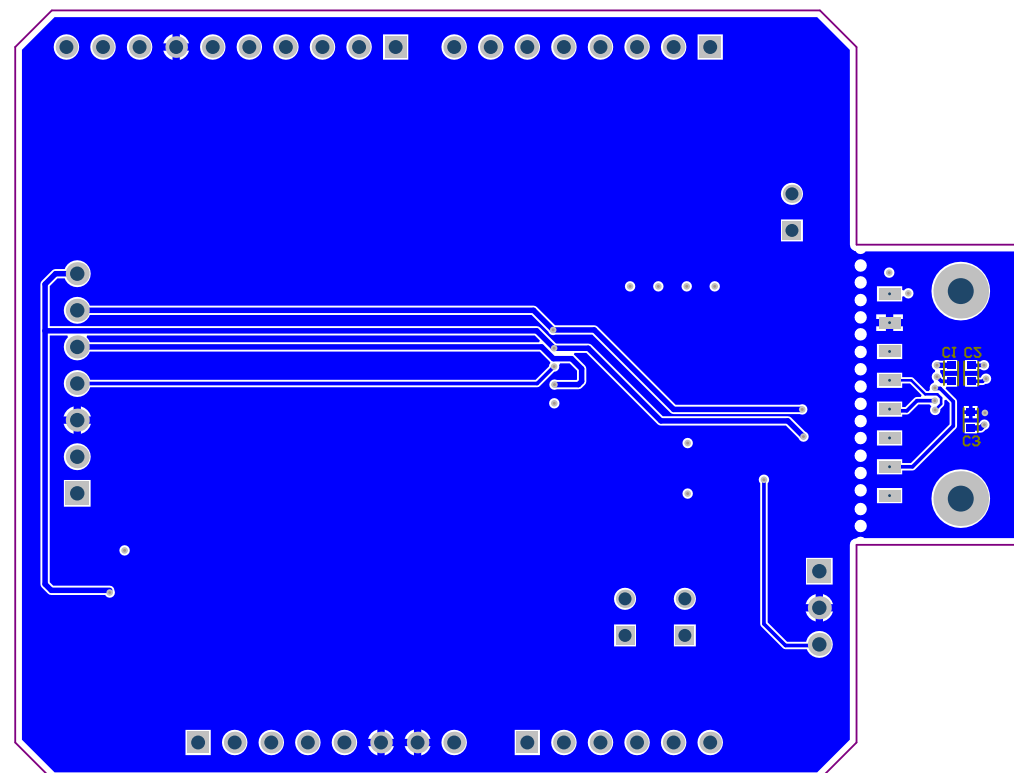
4

Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0,40mil	3,5	GTS
1	TOP	Copper	0,70mil		GTL
	Dielectric1	FR-4	8,00mil	4,5	
2	MID1	Copper	1,40mil		G1
	Dielectric2	FR-4	41,00mil	4,5	
3	MID2	Copper	1,40mil		G2
	Dielectric3	FR-4	8,00mil	4,5	
4	BOTTOM	Copper	0,70mil		GBL
	Bottom Solder	Solder Resist	0,40mil	3,5	GBS
	Bottom Overlay				GBO

Total board thickness: 62,00mil

Board Details

- Board Size: 2309.27 mils x 2100 mils
- Board Thickness: 62.00 mil
- Board Material: FR-4
- Board Finish: ENIG
- Component count: 43
- Pad Count: 191
- Hole Count: 103
- Soldermask Color: Black
- Silkscreen Color: White
- No Silkscreen over exposed copper.
- Dimensions shown are in mils unless marked.
- No additional silkscreen to be added.
- Boards Shall be fabricated to IPC-600 Class 1
- The PCB assembly shall be ROHS compliant.



Layers Currently On

	BOTTOM
Title_Block	Board Outline
Multi-Layer	Layer Stack
	Bottom Overlay

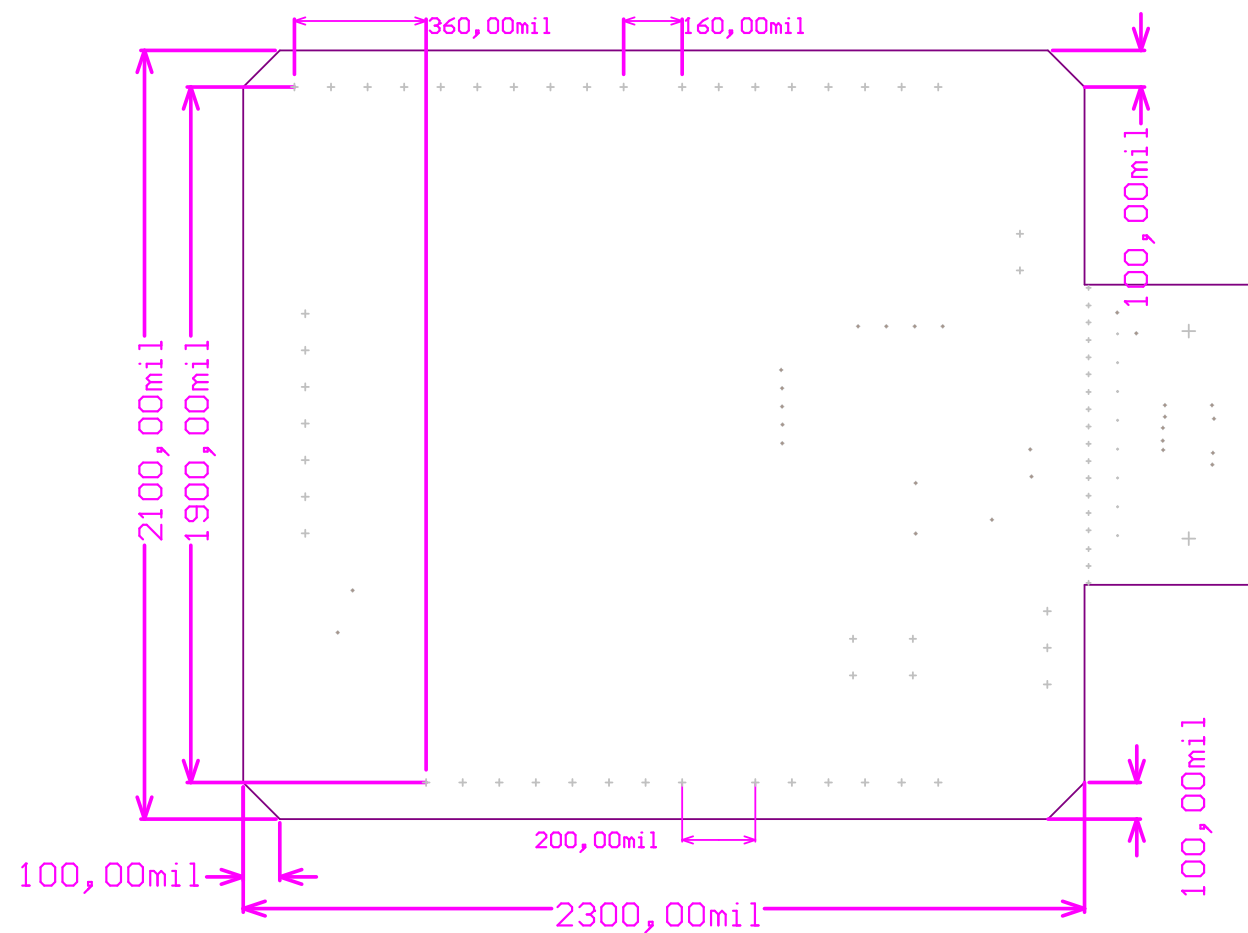
Title	TMF882x sensor shield	
Number	MS-TMF882x_Shield-01	Rev A
Print Name	Bottom Layer	
Variant: [No Variations]	Print Date: 11.03.2021	
	Drawn By: J.Dolic	

Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0,40mil	3,5	GTS
1	TOP	Copper	0,70mil		GTL
	Dielectric1	FR-4	8,00mil	4,5	
2	MID1	Copper	1,40mil		G1
	Dielectric2	FR-4	41,00mil	4,5	
3	MID2	Copper	1,40mil		G2
	Dielectric3	FR-4	8,00mil	4,5	
4	BOTTOM	Copper	0,70mil		GBL
	Bottom Solder	Solder Resist	0,40mil	3,5	GBS
	Bottom Overlay				GBO

Total board thickness: 62,00mil

Board Details

- Board Size: 2309.27 mils x 2100 mils
- Board Thickness: 62.00 mil
- Board Material: FR-4
- Board Finish: ENIG
- Component count: 43
- Pad Count: 191
- Hole Count: 103
- Soldermask Color: Black
- Silkscreen Color: White
- No Silkscreen over exposed copper.
- Dimensions shown are in mils unless marked.
- No additional silkscreen to be added.
- Boards Shall be fabricated to IPC-600 Class 1
- The PCB assembly shall be ROHS compliant.



Layers Currently On

Dimensions	Board Outline
Title_Block	Layer Stack
Multi-Layer	Drill Guide
	Keep-Out Layer

Title TMF882x sensor shield	
Number MS-TMF882x_Shield-01	Rev A
Print Name Board Dimensions	
Variant: [No Variations]	Print Date: 11.03.2021
Drawn By: J.Dolic	

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Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0,40mil	3,5	GTS
1	TOP	Copper	0,70mil		GTL
	Dielectric1	FR-4	8,00mil	4,5	
2	MID1	Copper	1,40mil		G1
	Dielectric2	FR-4	41,00mil	4,5	
3	MID2	Copper	1,40mil		G2
	Dielectric3	FR-4	8,00mil	4,5	
4	BOTTOM	Copper	0,70mil		GBL
	Bottom Solder	Solder Resist	0,40mil	3,5	GBS
	Bottom Overlay				GBO

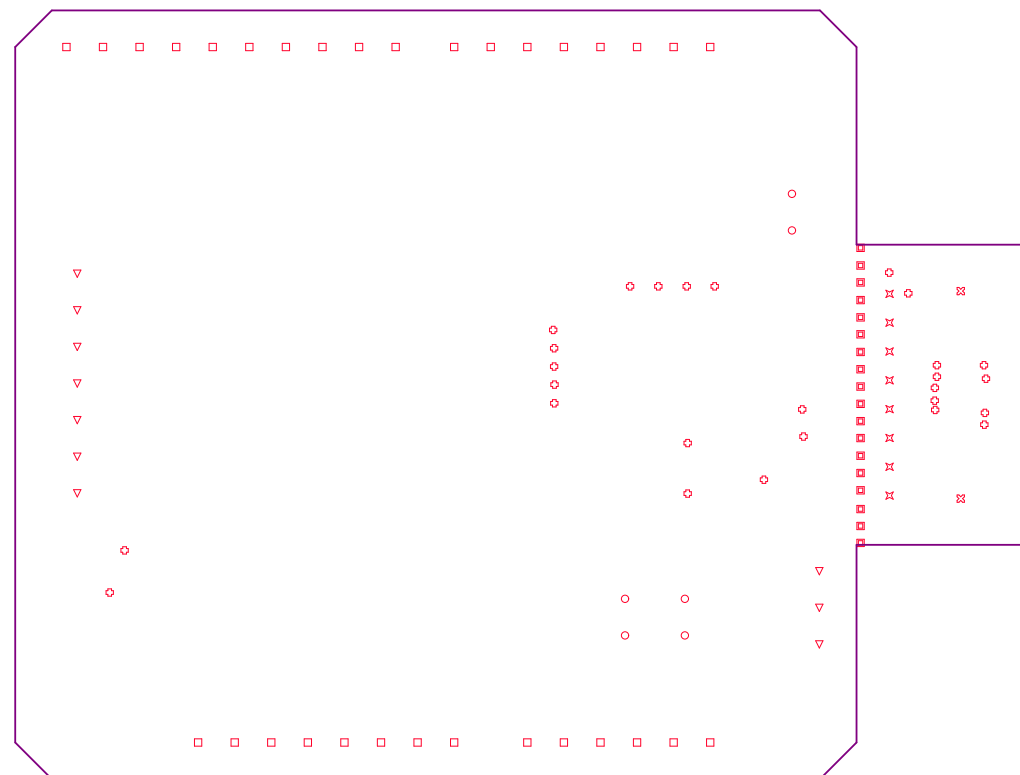
Total board thickness: 62,00mil

Board Details

- Board Size: 2309.27 mils x 2100 mils
- Board Thickness: 62.00 mil
- Board Material: FR-4
- Board Finish: ENIG
- Component count: 43
- Pad Count: 191
- Hole Count: 103
- Soldermask Color: Black
- Silkscreen Color: White
- No Silkscreen over exposed copper.
- Dimensions shown are in mils unless marked.
- No additional silkscreen to be added.
- Boards Shall be fabricated to IPC-600 Class 1
- The PCB assembly shall be ROHS compliant.

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Layers Currently On

Title_Block Drill Drawing	Board Outline Layer Stack
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D

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Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad	Pad Shape
⊗	2	1,800mm <70,87mil>	PTH	Round	TOP - BOTTOM	Pad	Rounded
○	6	0,900mm <35,43mil>	PTH	Round	TOP - BOTTOM	Pad	<Mixed>
⊗	8	0,200mm <7,87mil>	PTH	Round	TOP - BOTTOM	Pad	Rectangle
▽	10	1,000mm <39,37mil>	PTH	Round	TOP - BOTTOM	Pad	Rounded
⊞	18	0,600mm <23,62mil>	NPTH	Round	TOP - BOTTOM	Pad	Rounded
⊕	27	0,203mm <8,00mil>	PTH	Round	TOP - BOTTOM	Via	Rounded
□	32	0,965mm <38,00mil>	PTH	Round	TOP - BOTTOM	Pad	<Mixed>
	103 Total						

Title TMF882x sensor shield	
Number MS-TMF882x_Shield-01	Rev A
Print Name Drill Drawing	
Variant: [No Variations]	Print Date: 11.03.2021
Drawn By: J.Dolic	

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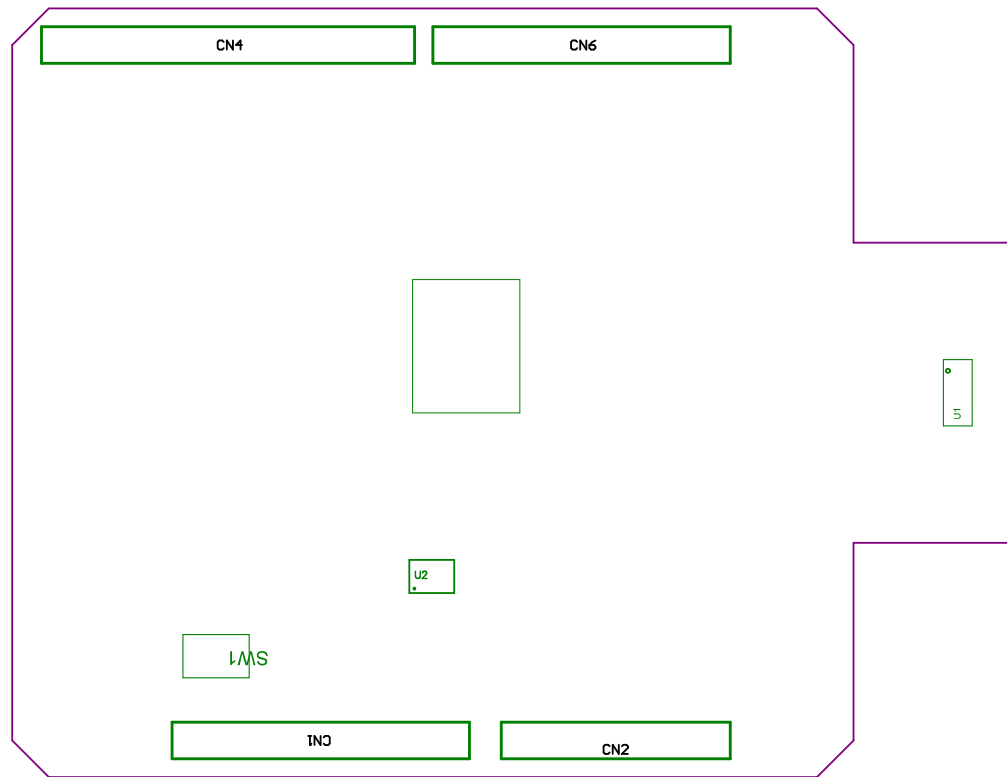
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Layers Currently On

Title_Block	Board Outline
Multi-Layer	
Top Designator	

Title	TMF882x sensor shield	
Number	MS-TMF882x_Shield-01	Rev A
Print Name	TOP Assembly	
Variant: Default Build	Print Date: 11.03.2021	
	Drawn By: J.Dolic	

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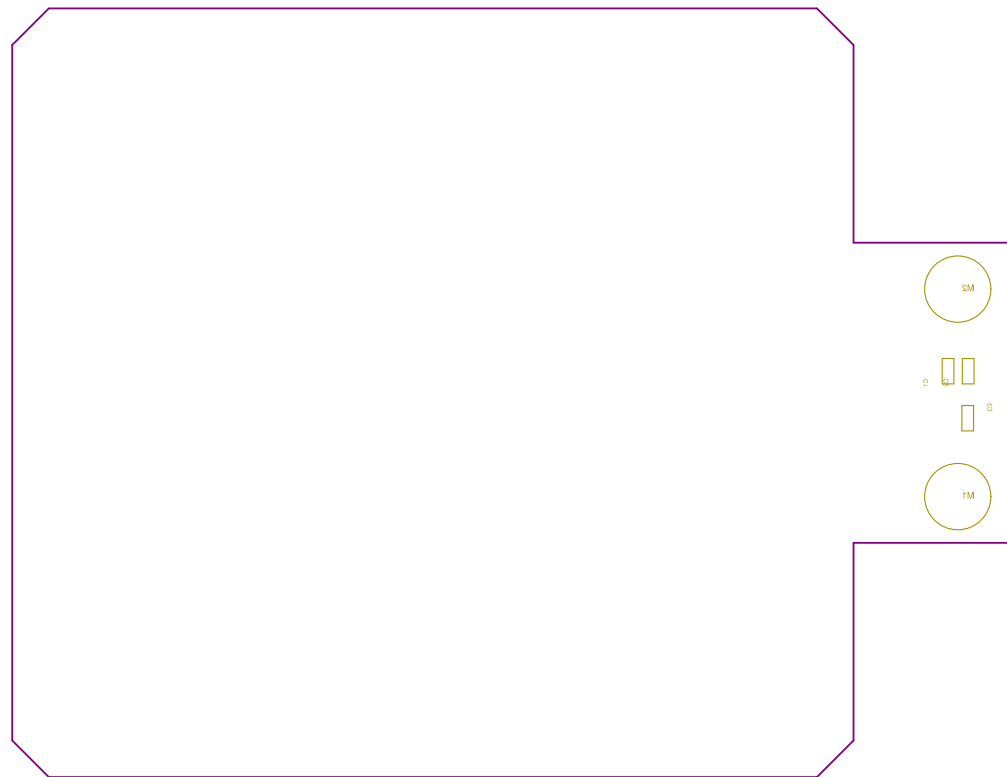
B

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D



Layers Currently On

Title_Block	Board Outline
Multi-Layer	Bottom Designator

Title		TMF882x sensor shield	
Number		MS-TMF882x_Shield-01	Rev A
Print Name			
BOTTOM Assembly			
Variant: Default Build		Print Date: 11.03.2021	
Drawn By: J.Dolic			

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Fab Notes:

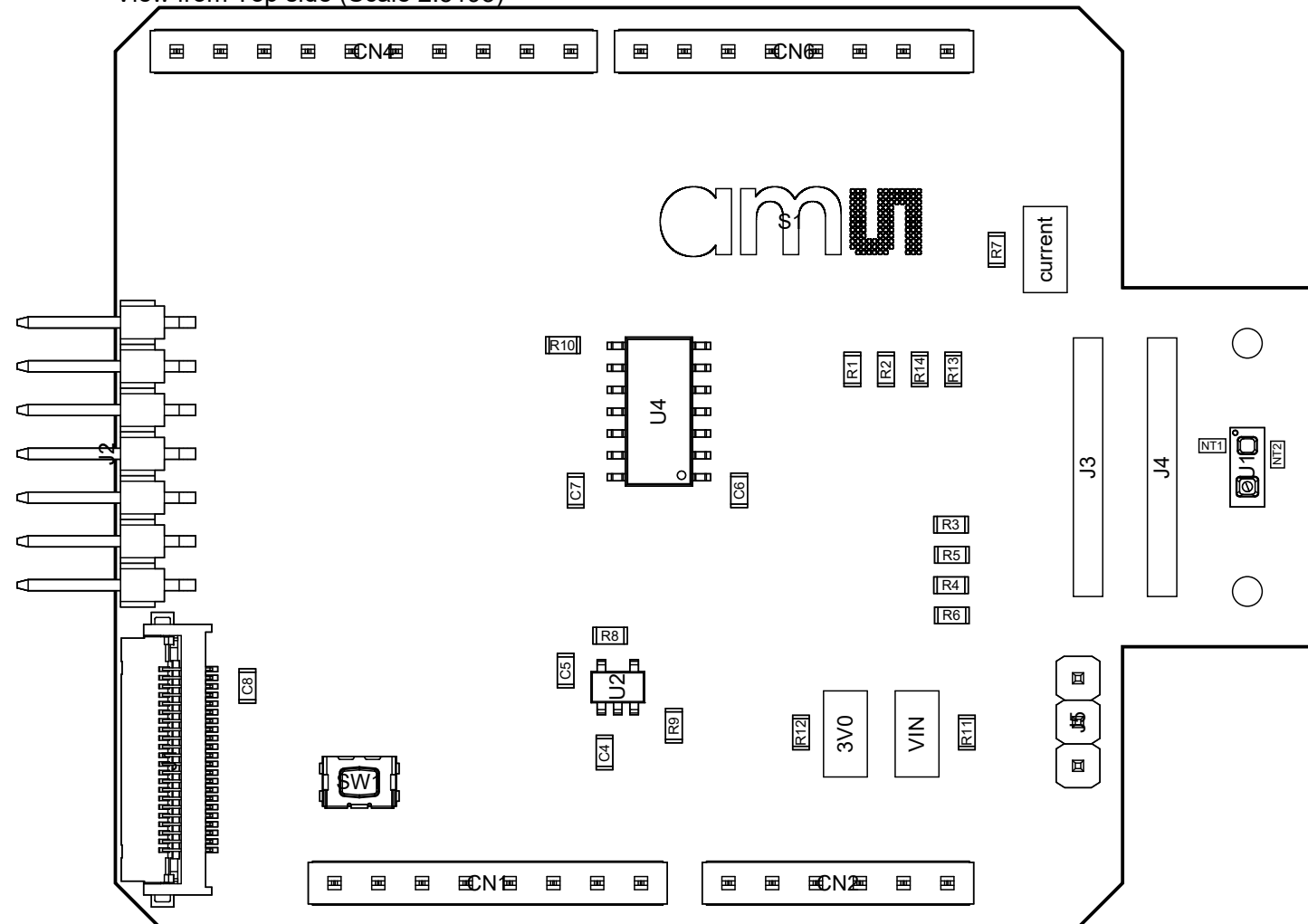
1. Board Size: 2309.27 mils x 2100 mils
2. Board Thickness: 62.00 mil
3. Board Material: FR-4
4. Board Finish: ENIG
5. Component count: 43
6. Pad Count: 191
7. Hole Count: 103
8. Soldermask Color: Black
9. Silkscreen Color: White
10. No Silkscreen over exposed copper.
11. Dimensions shown are in mm unless marked.
12. No additional silkscreen to be added.
13. Boards Shall be fabricated to IPC-600 Class 1
14. The PCB assembly shall be ROHS compliant.


Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
Surface Material	Top Overlay			Legend	GTO
Copper	Top Solder	0.01mm	Solder Resist	Solder Mask	GTS
Core	TOP	0.20mm	FR-4	Dielectric	GTL
Copper	MID1	0.04mm		Signal	G1
Prepreg		1.04mm	FR-4	Dielectric	
Copper	MID2	0.04mm		Signal	G2
Core		0.20mm	FR-4	Dielectric	
Copper	BOTTOM	0.02mm		Signal	GBL
Surface Material	Bottom Solder	0.01mm	Solder Resist	Solder Mask	GBS
Surface Material	Bottom Overlay			Legend	GBO

Total thickness: 1.57mm

View from Top side (Scale 2.5193)



Title:	TMF882x sensor shield New Text	
Board Number:	MS-TMF882x_Shield-01	
	Date:	11.03.2021
	Engineer:	J.Dolic New

Bill of Materials

TMF882x sensor shield



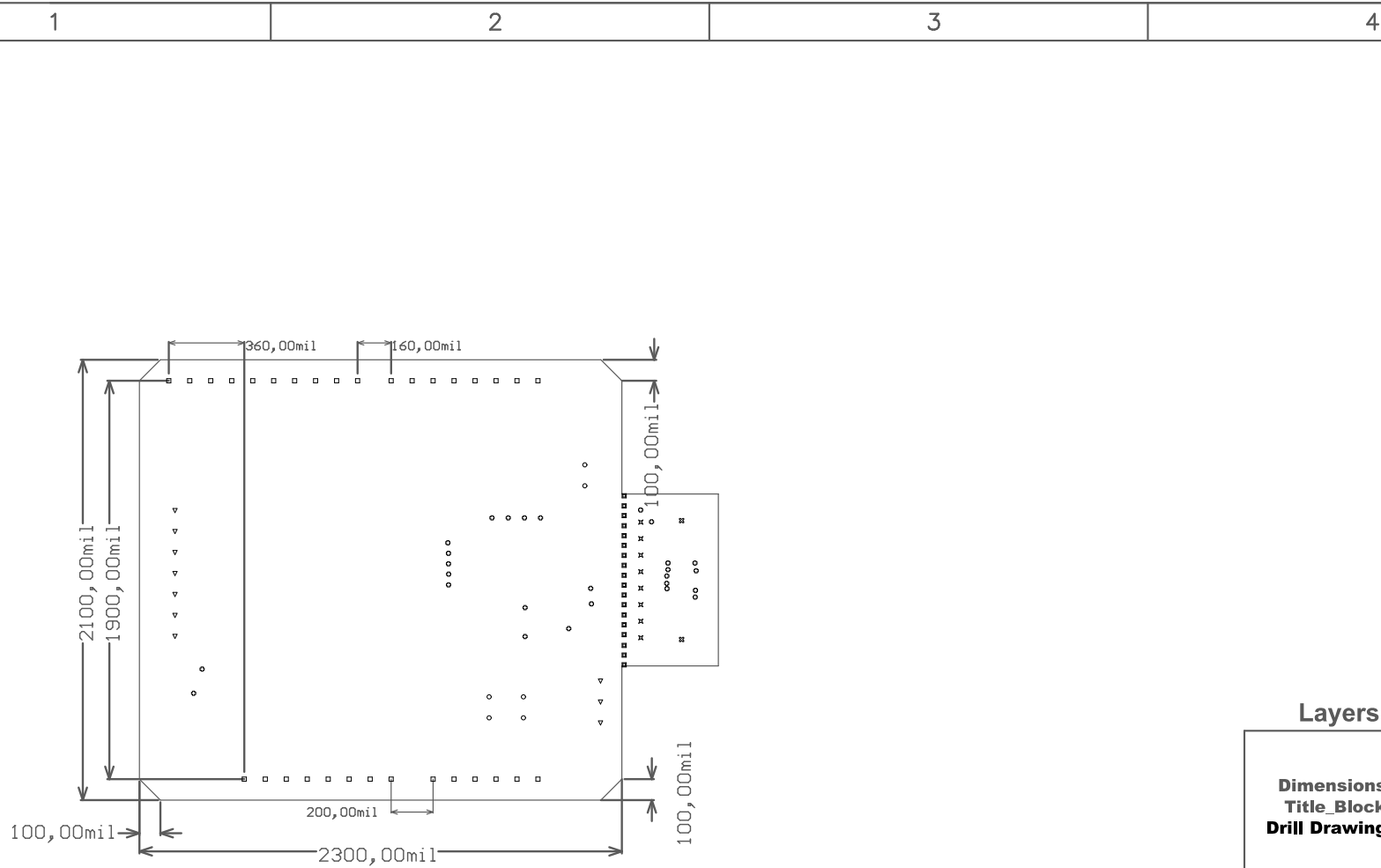
Source Data From: MS-TMF882x_Shield-01.PrjPcb
 Project: MS-TMF882x_Shield-01.PrjPcb
 Variant: Default Build

Creation Date: 11.03.2021 15:52

Print Date: 11-Mar-21 3:52:17 PM

Designator	Comment	Manufacturer	Manufacturer Part Number	Description	Name Error:	Quantity
C1, C2, C3	0.1uF,6V3, 0402, 10%	Murata	GRM155R71E104KE14D	Cap Ceramic 0.1uF 25V X7R 10% SMD 0402 125C Paper T/R, GRM155R71E104KE14D		3
C4	1uF	Murata	GRM188R71A105KA61D	CAP CER 1UF 10V X7R 0603		1
C5, C6, C7	0.1uF	Murata	GRM188R72A104KA35D	Multilayer Ceramic Capacitors MLCC - SMD/SMT 0.1uF 6.3Volts X7R 10%		3
CN1, CN6	8Pin Arduino Conn	Samtec	SSQ-108-04-G-S	Conn Socket Strip SKT 8 POS 2.54mm Solder ST Thru-Hole		2
CN2	6Pin Arduino Conn	Samtec	SSQ-106-04-G-S	Conn Socket Strip SKT 6 POS 2.54mm Solder ST Thru-Hole		1
CN4	10Pin Arduino Conn	Samtec	SSQ-110-04-G-S	Conn Socket Strip SKT 10 POS 2.54mm Solder ST Thru-Hole		1
M1, M2	Mounting Hole	PennEngineering	SMTSO-M1.6-1ET	Mounting nut M1.6 thread, Mounting nut M1.6 thread		2
R1, R2	10k	Vishay	CRCW060310K0FKEA	VISHAY - CRCW060310K0FKEA - SMD Chip Resistor, 0603 [1608 Metric], 10 kohm, CRCW e3 Series, 75 V, Thick Film, 100 mW		2
R5, R6	1M	Vishay Dale	CRCW06031M00FKEAHP	VISHAY - CRCW06031M00FKEAHP - RES, AEC-Q200, THICK FILM, 1M, 0603		2
R7, R12	0R	Multicomp	MC0.063W06030R	MULTICOMP MC0063W06030R Chip SMD Resistor, MC Series, 0.063 W, 50 V, 0603 [1608 Metric]		2
R8	46.4k	Multicomp	MC0.063W06031%46K4FR	RESISTOR, 46K4, 0.063W, 1%, 0603, REEL		1
R9	30.9k	Vishay	CRCW060330K9FKEA	RES SMD 30.9K OHM 1% 1/10W 0603		1
R10	200k	Vishay	CRCW0201200KFNEED	Res Thick Film 0201 200K Ohm 1% 1/20W ±200ppm/°C Molded SMD SMD Paper T/R		1
R13, R14	1k5	Vishay	CRCW06031K50FKEA	Res Thick Film 0603 1.5K Ohm 1% 0.1W(1/10W) ±100ppm/C Pad SMD Automotive T/R		2
SW1	SW, SMT, PB	ITT / C&K Components	KMR221GLFS	SW, SMT, PB, KMR221GLFS		1
U1	TOF	ams AG	TMF882x	TOF TMF882x		1
U2	TPS73601DBVR	TI	TPS73601DBVR	Adj Low Dropout Regulator		1
U4	TXS0104ED	Texas Instruments	TXS0104ED	TEXAS INSTRUMENTS - TXS0104ED - Voltage Level Translator, Bidirectional, 4 Input, 1 mA, 165 ns, 24 Mbps, 1.65 V to 3.6 V, SOIC-14		1
						28

Approved	Notes
	Parts with alternate marked as YES may be replaced by an equivalent with preapproval from AMS. Parts from ams AG will be consigned



Layers Currently On

Dimensions Title_Block Drill Drawing	Board Outline
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Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad	Pad Shape
⊗	2	1,800mm <70,87mil>	PTH	Round	TOP - BOTTOM	Pad	Rounded
○	6	0,900mm <35,43mil>	PTH	Round	TOP - BOTTOM	Pad	<Mixed>
⊗	8	0,200mm <7,87mil>	PTH	Round	TOP - BOTTOM	Pad	Rectangle
▽	10	1,000mm <39,37mil>	PTH	Round	TOP - BOTTOM	Pad	Rounded
⊗	18	0,600mm <23,62mil>	NPTH	Round	TOP - BOTTOM	Pad	Rounded
⊕	27	0,203mm <8,00mil>	PTH	Round	TOP - BOTTOM	Via	Rounded
□	32	0,965mm <38,00mil>	PTH	Round	TOP - BOTTOM	Pad	<Mixed>
	103 Total						

Title TMF882x sensor shield	
Number MS-TMF882x_Shield-01	Rev A
Print Name Drill Drawing For (BOTTOM,TOP)	
Variant: [No Variations]	Print Date: 11.03.2021
Drawn By: J.Dolic	

