

Product Document

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TMF8806 Daughter Card

Title		TMF8806 Daughter Card	
Size	Number	Revision	
A	DC-TMF8806-01	A	
Date:	3/13/2024	Sheet 1 of	3
File:	\\..\Title Page.SchDoc	Drawn By:	J.Dolic

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TMF8806 Daughter Card

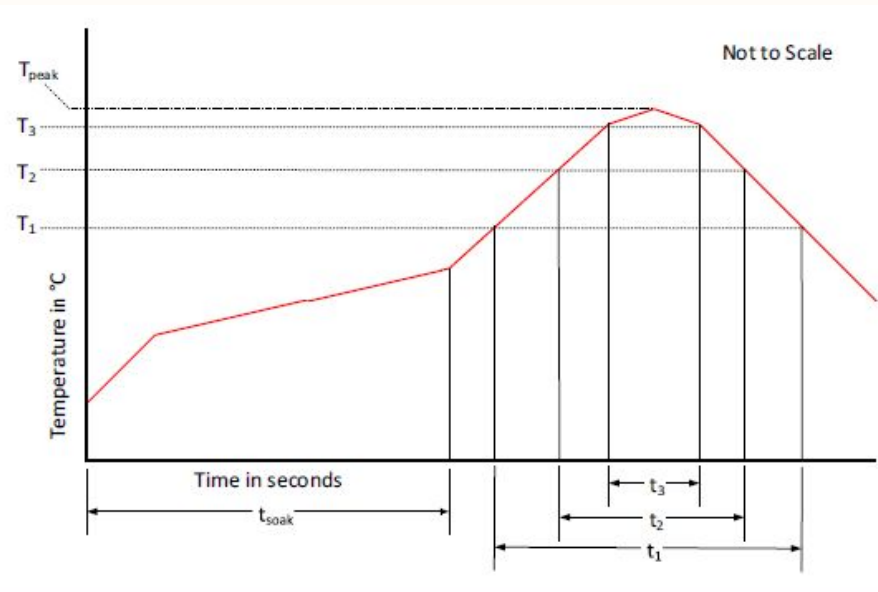
Table of Contents

- Sheet 1: Title Page
- Sheet 2: Project Page (This page)
- Sheet 3: Schematics

Revision History

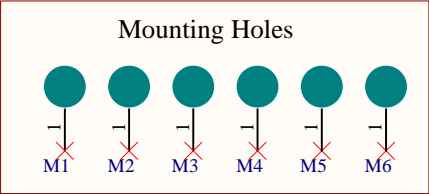
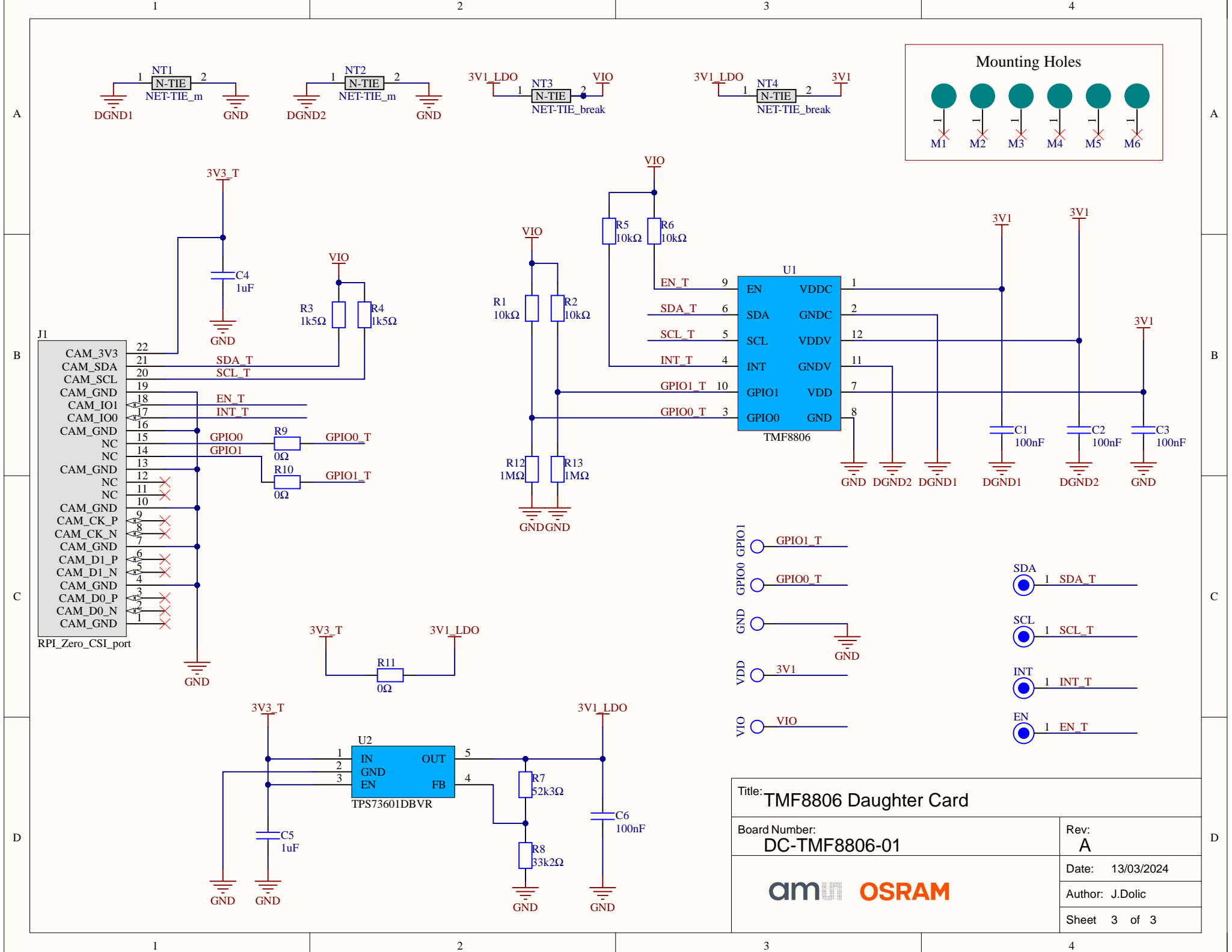
Version: A J.Dolic
Initial Release

Suggested Board Reflow Profile



Parameter	Reference	Device
Average temperature gradient in preheating		2.5 °C/sec
Soak time	t_{soak}	2 to 3 minutes
Time above 217 °C (T1)	t_1	Max 60 sec
Time above 230 °C (T2)	t_2	Max 50 sec
Time above $T_{peak} - 10$ °C (T3)	t_3	Max 10 sec
Peak temperature in reflow	T_{peak}	260 °C
Temperature gradient in cooling		Max -5 °C/sec

Title			TMF8806 Daughter Card		
Size	Number	Revision			
A	DC-TMF8806-01	A			
Date:	3/13/2024	Sheet 2 of	3		
File:	\\...\Project Page.SchDoc	Drawn By:	J.Dolic		



Title: TMF8806 Daughter Card	
Board Number: DC-TMF8806-01	Rev: A
Date: 13/03/2024	
Author: J.Dolic	
Sheet 3 of 3	



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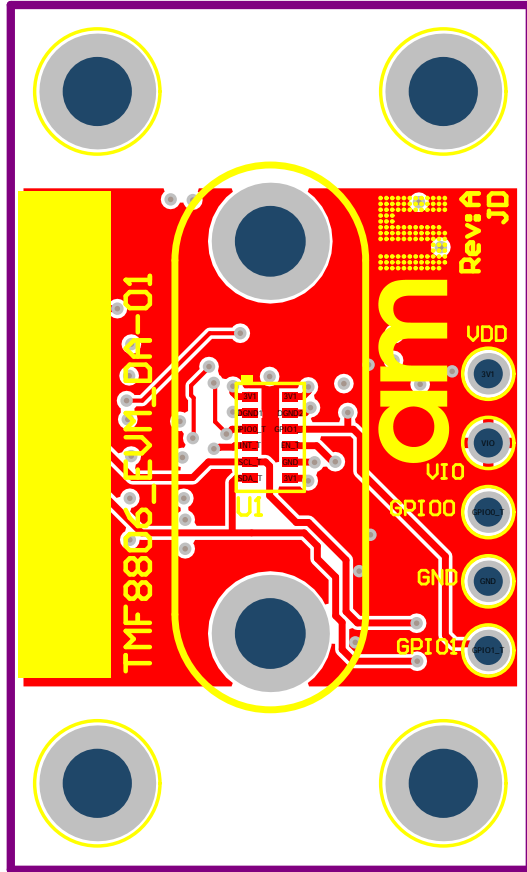
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Board Details

- 1. Board Size: 750mil x 1250mil +/- 10%
- 2. Board Thickness: 62mil +/- 10%
- 3. Board material: FR4 with 0.5oz Copper
- 4. Component count: 42
- 5. Pad Count: 106
- 6. Hole Count: 57
- 7. Soldermask Color: Black
- 8. Silkscreen Color: White
- 9. No Silkscreen over exposed copper.
- 10. PCB Manufacturer not to add any additional silkscreen
- 11. Fabricate to IPC-600 Class 1 unless otherwise specified
- 12. RoHS compliant
- 13. There are two score marks on this board.



Layers Currently On

Title_Block		
Title	TMF8806 Daughter Card	
Number	DC-TMF8806-01	Rev A
Print Name	Top Layer	
Variant: [No Variations]	Print Date: 13/03/2024	
File: PCB.PcbDoc	Drawn By: J.Dolic	

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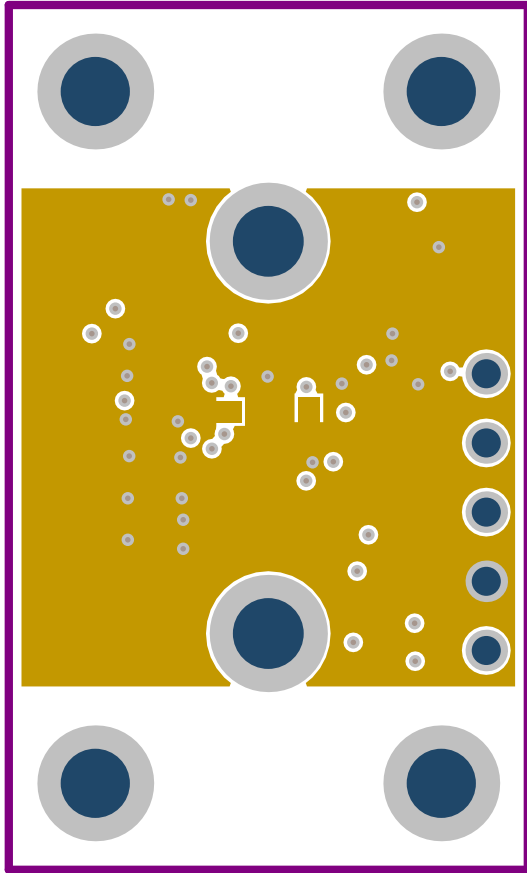
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Layers Currently On

Title_Block		
Title TMF8806 Daughter Card		
Number DC-TMF8806-01	Rev A	
Print Name Mid1 Layer - GND		
Variant: [No Variations]	Print Date: 13/03/2024	
File: PCB.PcbDoc	Drawn By: J.Dolic	

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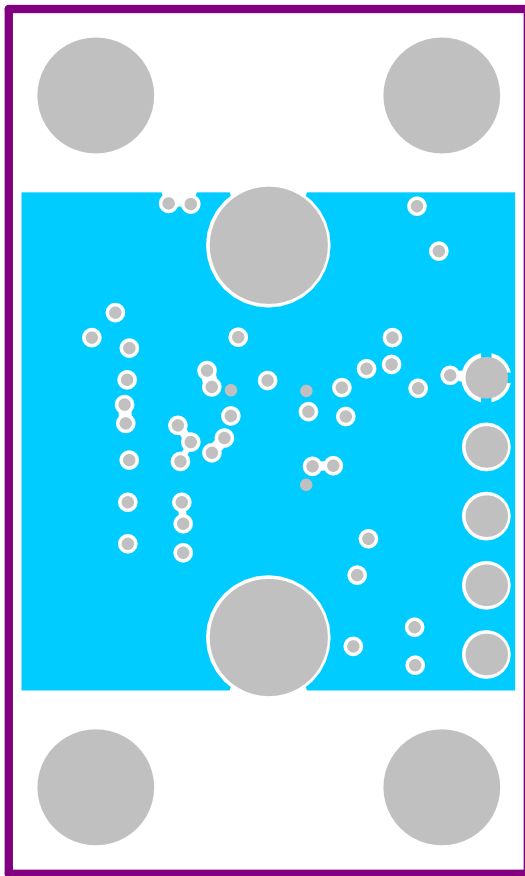
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Board Details

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Layers Currently On

Title_Block		
Title TMF8806 Daughter Card		
Number DC-TMF8806-01	Rev A	
Print Name Mid2 Layer - PWR		
Variant: [No Variations]		Print Date: 13/03/2024
File: PCB.PcbDoc		Drawn By: J.Dolic

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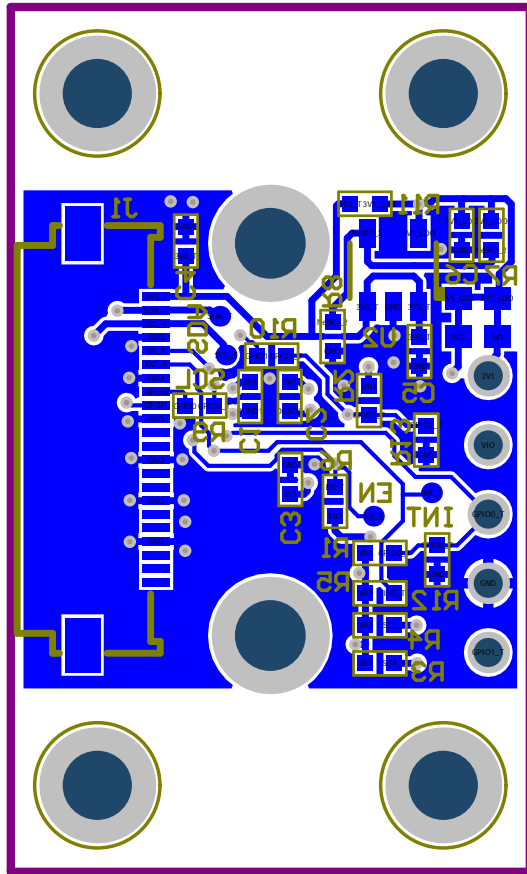
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Layers Currently On

Title_Block		
Title TMF8806 Daughter Card		
Number DC-TMF8806-01	Rev A	
Print Name Bottom Layer		
Variant: [No Variations]	Print Date: 13/03/2024	
File: PCB.PcbDoc	Drawn By: J.Dolic	

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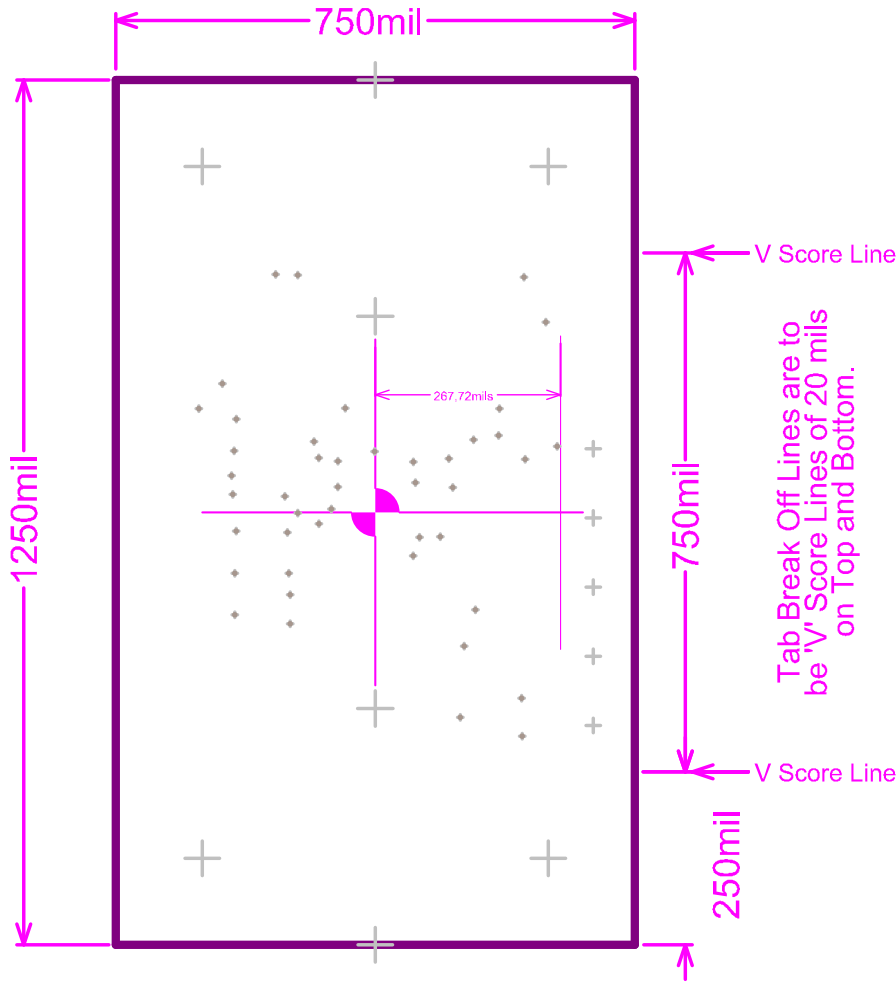
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Layers Currently On

Title_Block	
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Title TMF8806 Daughter Card	
Number DC-TMF8806-01	Rev A
Print Name Board Dimensions	
Variant: [No Variations]	Print Date: 13/03/2024
File: PCB.PcbDoc	Drawn By: J.Dolic

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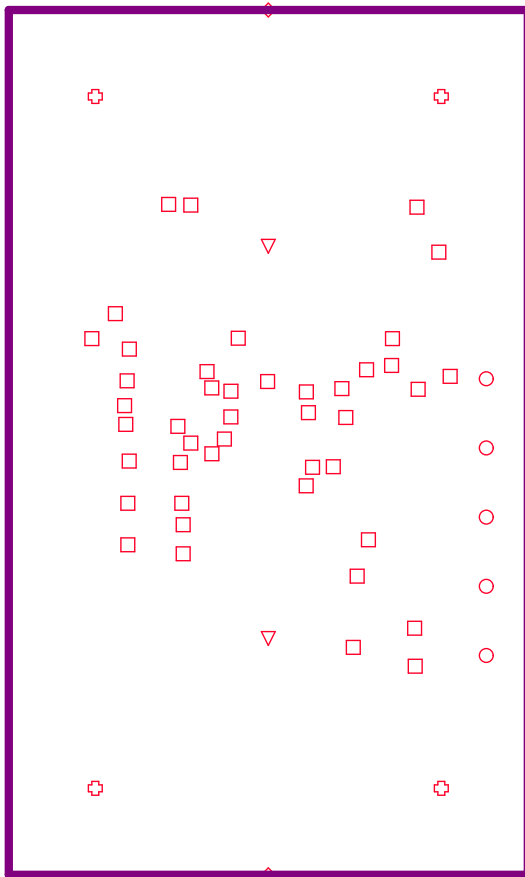
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Symbol	Count	Hole Size	Plated	Hole Type	Drill Layer Pair	Via/Pad	Pad Shape	Technology
◇	2	100,00mil (2,540mm)	NPTH	Round	TOP - BOTTOM	Pad	Rounded	c0hn254
▽	2	102,36mil (2,600mm)	PTH	Round	TOP - BOTTOM	Pad	Rounded	c430h260m440p0
⊕	4	100,00mil (2,540mm)	PTH	Round	TOP - BOTTOM	Pad	Rounded	c425h254m435p0
○	5	42,00mil (1,067mm)	PTH	Round	TOP - BOTTOM	Pad	Rounded	c152h107
□	44	8,00mil (0,203mm)	PTH	Round	TOP - BOTTOM	Via	Rounded	v46h20
	57 Total							

Layers Currently On

Title_Block	
Title TMF8806 Daughter Card	
Number DC-TMF8806-01	Rev A
Print Name Drill Drawing	
Variant: [No Variations]	Print Date: 13/03/2024
File: PCB.PcbDoc	Drawn By: J.Dolic

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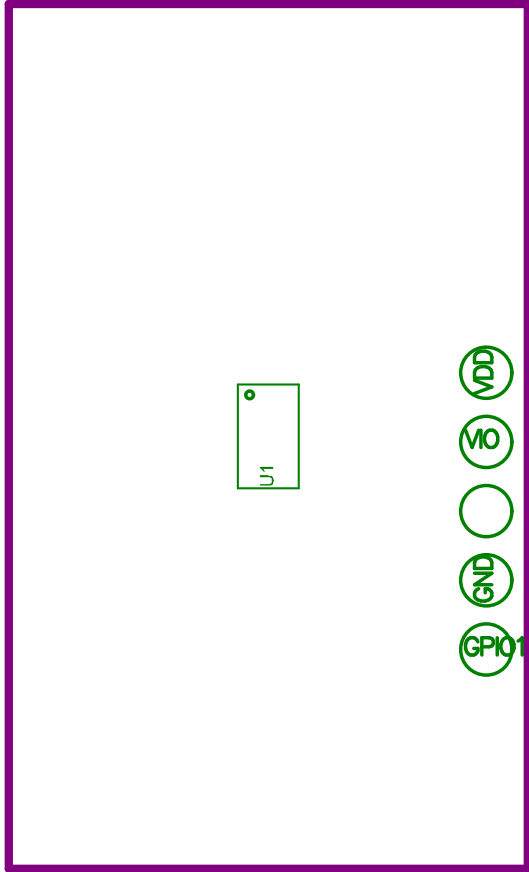
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Board Details

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Layers Currently On

Title_Block		
Title TMF8806 Daughter Card		
Number DC-TMF8806-01	Rev A	
Print Name TOP Assembly		
Variant: [No Variations]		Print Date: 13/03/2024
File: PCB.PcbDoc		Drawn By: J.Dolic

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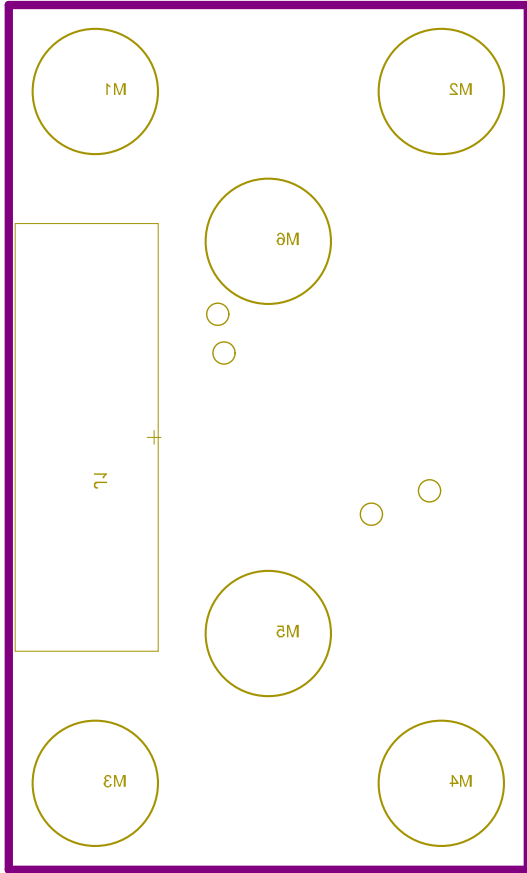
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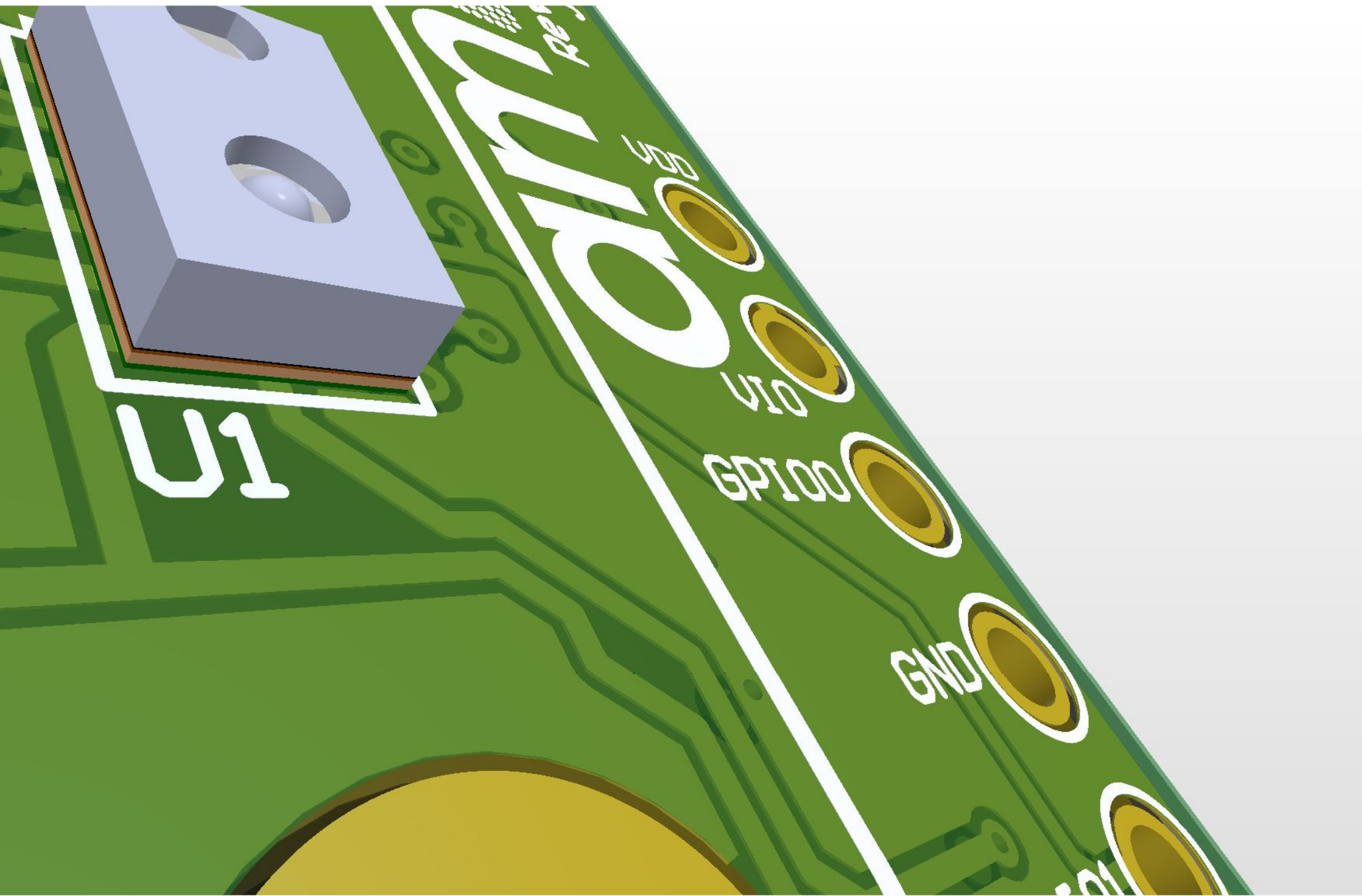
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Layers Currently On

Title_Block		
Title TMF8806 Daughter Card		
Number DC-TMF8806-01		Rev A
Print Name BOTTOM Assembly Mirrored		
Variant: [No Variations]		Print Date: 13/03/2024
File: PCB.PcbDoc		Drawn By: J.Dolic



Design Rules Verification Report

Filename : \\fsup04\cnc_prodmgmt\OSL\11_HW_Application_PS\Maxwell\Hardware\DC-TMF8

Warnings 0
Rule Violations 0

Warnings	
Total	0

Rule Violations	
Clearance Constraint (Gap=0.127mm) (All),(All)	0
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Short-Circuit Constraint (Allowed=Yes) (IsTextInverted),(All)	0
Un-Routed Net Constraint (All)	0
Width Constraint (Min=0.125mm) (Max=10mm) (Preferred=0.3mm) (All)	0
Power Plane Connect Rule(Relief Connect)(Expansion=0.4mm) (Conductor Width=0.15mm) (Air Gap=0.15mm)	0
Minimum Annular Ring (Minimum=0.127mm) (All)	0
Hole Size Constraint (Min=0.152mm) (Max=5.9mm) (All)	0
Hole To Hole Clearance (Gap=0.3mm) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0.025mm) (All),(All)	0
Silk To Solder Mask (Clearance=0mm) (IsPad),(All)	0
Silk to Silk (Clearance=0mm) (All),(All)	0
Net Antennae (Tolerance=0.508mm) (All)	0
Height Constraint (Min=0mm) (Max=25.4mm) (Preferred=12.7mm) (All)	0
Total	0

Electrical Rules Check Report

Class	Document	Message
		Successful Compile for DC-TMF8806-01.PrjPcb

Index	Designator	Comment	Description	Quantity	Manufacturer	Manufacturer Part Number	Supplier	Supplier Part Number
1, 2, 3, 6	C1, C2, C3, C6	100nF	Multilayer Ceramic Capacitor, 0.1 uF, 25 V, ± 10%, X7R, 0402 [1005 Metric]	4	Murata	GRM155R71E104KE14D	Arrow Electronics	GRM155R71E104KE14D
4, 5	C4, C5	1uF	0402 1 uF 6.3 V ±20 % Tolerance X5R Surface Mount Multilayer Ceramic Capacitor	2	Kyocera AVX	04026D105MAT2A	Arrow Electronics	04026D105MAT2A
7	J1	RPL_Zero_CS_Lport	CONN FFC/FPC BOTTOM 22P .5MM R/A	1	Molex	505110-2291	Digi-Key	WM1128BCT-ND
8, 9	M5, M6	Mounting Hole	Mounting nut M1.6 thread, Mounting nut M1.6 thread	2	PennEngineering	SMTSO-M1.6-1ET	Mouser	153-SMTSO-M1.6-1ET
10, 13, 14	R1, R5, R6	10kΩ	SMD Chip Resistor, 10 kOhm, ± 5%, 63 mW, 0402 [1005 Metric], Thick Film, General Purpose	3	Vishay Dale	CRCW040210KQJNED	Mouser	71-CRCW0402-10K-E3
11, 12	R3, R4	1k5Ω	SMD Chip Resistor, 1.5 kOhm, ± 1%, 63 mW, 0402 [1005 Metric], Thick Film, General Purpose	2	Vishay	CRCW04021K50FKED	Arrow Electronics	CRCW04021K50FKED
15	R7	52k3Ω	SMD Chip Resistor, 52.3 kOhm, ± 1%, 63 mW, 0402 [1005 Metric], Thick Film, General Purpose	1	Vishay	CRCW040252K3FKED	Mouser	71-CRCW0402-52.3K-E3
16	R8	33k2Ω	SMD Chip Resistor, 33.2 kOhm, ± 1%, 63 mW, 0402 [1005 Metric], Thick Film, General Purpose	1	Vishay	CRCW040233K2FKED	Mouser	71-CRCW0402-33.2K-E3
17, 18	R9, R10	0Ω	Res Thick Film 0402 0 Ohm Conformal Coated Pad SMD Automotive T/R	2	Vishay Dale	RCS04020000Z0ED	Digi-Key	541-2877-1-ND
19	R13	1MΩ	Res Thick Film 0402 1M Ohm 1% 0.125W(1/8 W) ±100ppm/C Pad SMD T/R Automotive AEC-Q200	1	Vishay Dale	RCC04021M00FKED	Arrow Electronics	RCC04021M00FKED
20	U1	TOF	TOF	1	ams AG			
21	U2	TPS73601DBVR	Adj Low Dropout Regulator	1	TI	TPS73601DBVR	DigiKey	296-18255-1-ND

