TCS3410
h306_DA TCS3410
h3061a0_DA TCS3410 PCB
Variant standard

TCS3410

h3061a0_DA TCS3410 PCB

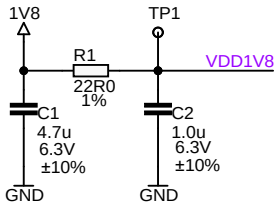
Table of Contents

Revision History

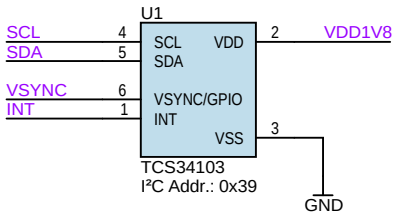
Rev 1.0.0: Initial Release Release Date: 21/12/2023

Design Changes

Place filter close to U1

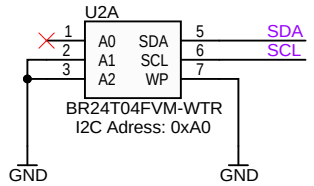


Sensor

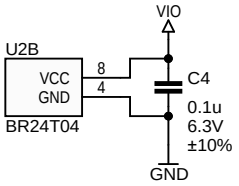


Photodiode array centered on PCB.

EEPROM 4kbit



EEPROM will not work, if I2C is 1V2 compliant

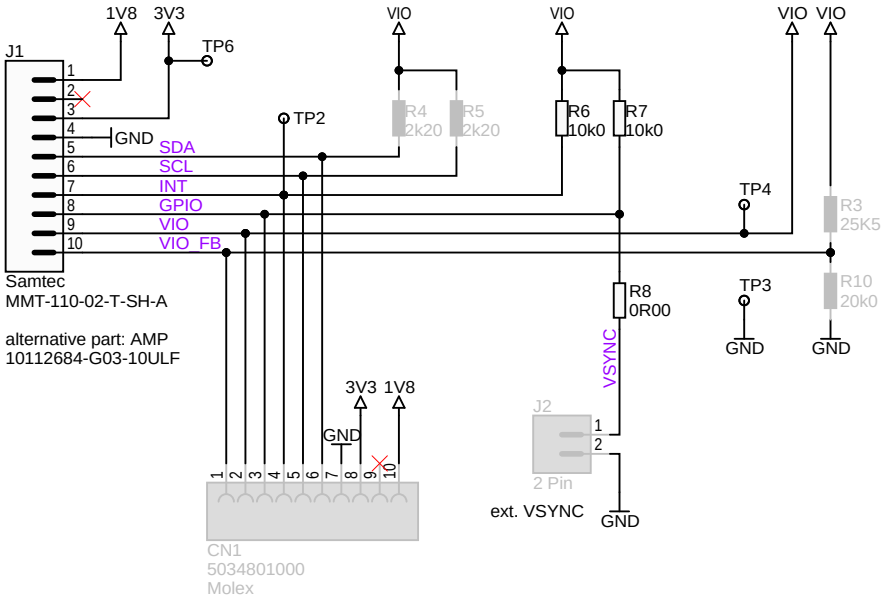


note:

SDA/SCL pull-ups are populated on EVM

Default VIO = 1V8

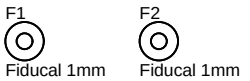
interface for 10pin EVM Board



Adjust VIO with R3, R10:

For devices with 3.3V tolerant I2C levels only the lower R (below R10) could be populated with 20kOhm. EEPROM VCC connected to VIO

For devices with 1.2V tolerant I2C levels only the upper R (below R3) could be populated with 25.5kOhm. EEPROM VCC connected to 1V8



Mounting Holes (2.54mm)

OSRAM

Product: TCS3410	Variant standard
PCB Name: h3061a_DA TCS3410 PCB.PcbDoc	Rev 1.0.0
Application Engineer: M.Kleiner	Release Date: 21.12.2023
Sheet Name: h3061a0_DA TCS3410 PCB_scm_01.SchDoc	
Page Size: A4	Last Save Date / Time: 19.03.2024 / 18:25:05
Project: h306_DA TCS3410	Sheet 3 of 3

Bill of Materials

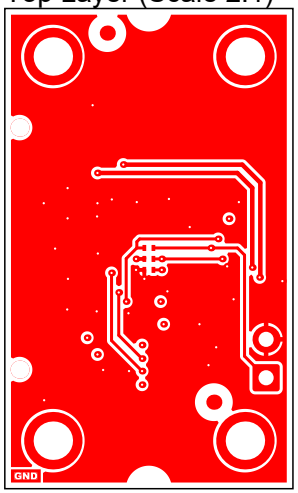
Variant standard

Company: ams-OSRAM AG
Application Engineer: M.Kleiner
Product Number: TCS3410
ARS Project Name: h306_DA TCS3410
Boardtype & Version: h3061a0_DA TCS3410 PCB
Release Date: 21.12.2023
Revision: Rev 1.0.0

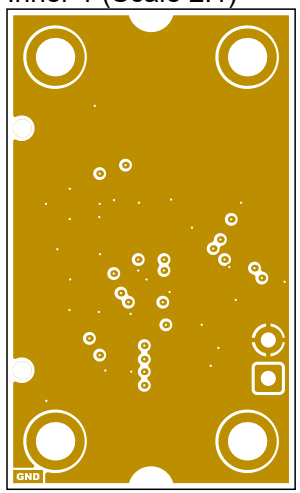
remarks: Components with designator R or C are exempted for procurement in the manufacturer.
Only design and electronic parameters must be the same or better.

Line #	Designator	Description	Manufacturer 1	Manufacturer Part Number 1	Quantity
1	C1	4.7 µF ±10% 6.3V Ceramic Capacitor X5R 0402 (1005 Metric)	TDK	C1005X5R0J475K050BC	1
2	C2	1.0 µF ±10% 6.3V Ceramic Capacitor X5R 0402 (1005 Metric)	Kyocera AVX	04026D105MAT2A	1
3	C4	0.1 µF ±10% 6.3V Ceramic Capacitor X5R 0402 (1005 Metric)	Kyocera AVX	04026D104KAT2A/10K	1
4	J1	10 Positions Header Surface Mount, Right Angle 10 position 0.079" (2.00mm) alternate Part: AMP - 10112684-G03-10ULF / Mouser - 649-10112684G0310ULF	Samtec	MMT-110-02-T-SH-A	1
5	R1	RES SMD 22R0 1% 0.063W 1005	any		1
6	R6, R7	RES SMD 10k0 1% 0.063W 1005	any		2
7	R8	RES SMD 0R00 1005	any		1
8	U1	Universal Ambient Light RGB Sensor with Selective Flicker Detection for Use Behind OLED Displays or Auxiliary to Camera	Osram	TCS34103M	1
9	U2	EEPROM Memory IC 4Kb (512 x 8) I²C 8-MSOP	Rohm	BR24T04FVM-WTR	1

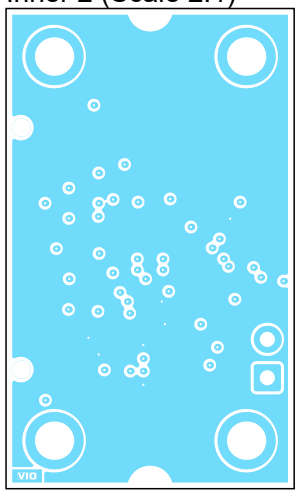
Top Layer (Scale 2:1)



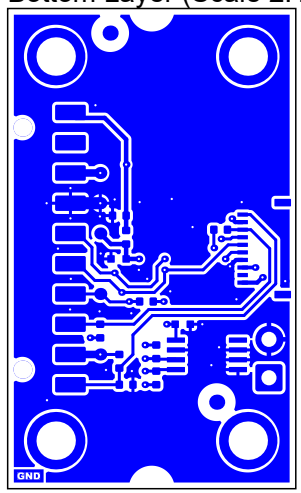
Inner 1 (Scale 2:1)



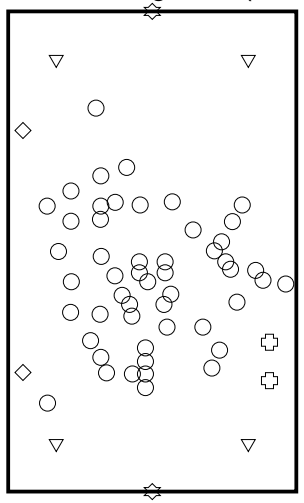
Inner 2 (Scale 2:1)



Bottom Layer (Scale 2:1)

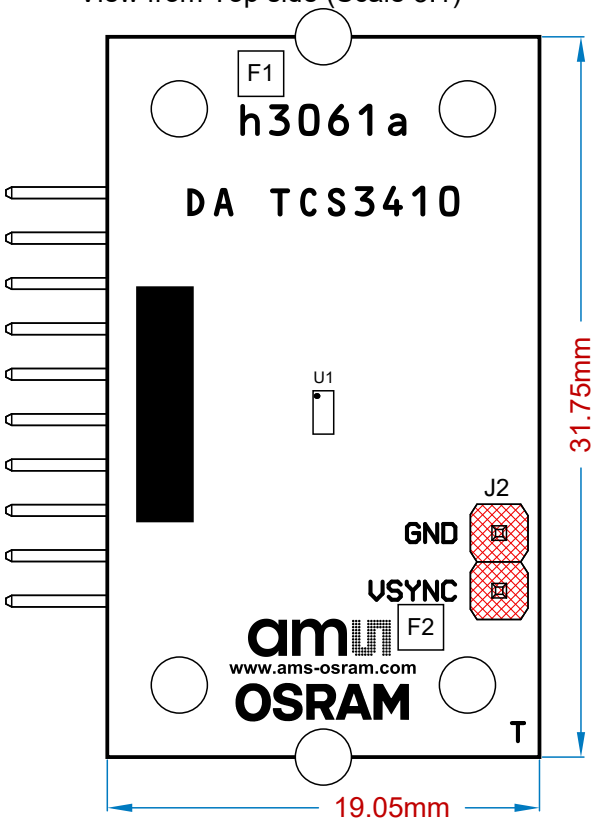


Drill Drawing View (Scale 2:1)

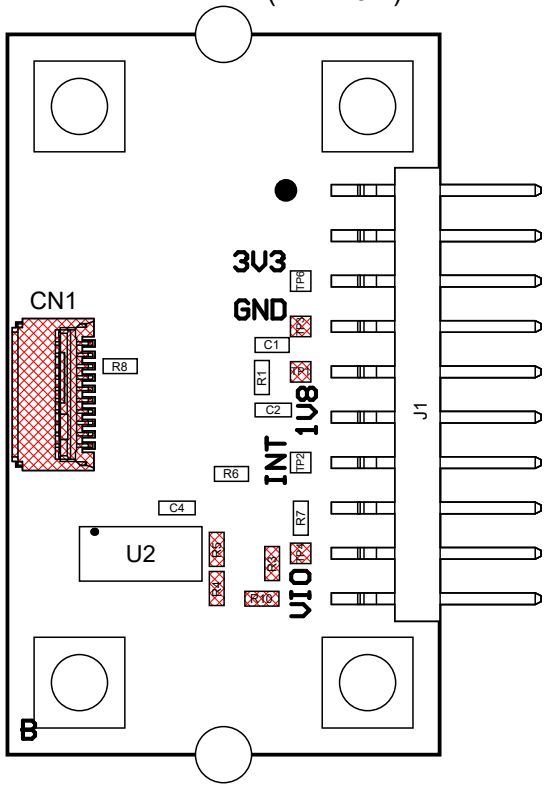


1. 1.55mm ±10% 4-Layer FR4 (MLL4)
2. Board Size: 19.05mm x 31.75mm
3. manufactured with IPC Class 2; Tenting Via IPC-4761 Typ 1b
4. Technology: 150µm TrackWith/ TrackTrack
   smallest drill: 150µm
5. Prepreg and Core Tickness is free to defined
6. outline is milled and v-cutted possible
7. finished surface is ENIG
8. Silkscreen color is white and made in high resuluion (more than 200µm)
9. Soldermask color: black
10. check Gerber files against the IPC-D-356A.ipc netlist file

View from Top side (Scale 3:1)



View from Bottom side (Scale 3:1)



Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
○	51	0.15mm	Plated	
⌖	2	1.00mm	Plated	
◇	2	1.19mm	Non-Plated	
✡	2	2.54mm	Non-Plated	
▽	4	2.54mm	Plated	
	61 Total			

Product: TCS3410		Variant standard
PCB Name: h3061a_DA TCS3410 PCB.PcbDoc		Rev 1.0.0
Application Engineer: M.Kleiner		Release Date: 21.12.2023
Sheet Name: h3061a0_DA TCS3410 PCB.PCBDwf		
Page Size: A4	Last Save Date / Time: 19.03.2024 / 18:25	Doc. Scale: 1:1 Millimeters
Project: h306_DA TCS3410	Sheet 1 of 1	

Top Silk

h3061a

DA TCS3410

GND

VSYNC

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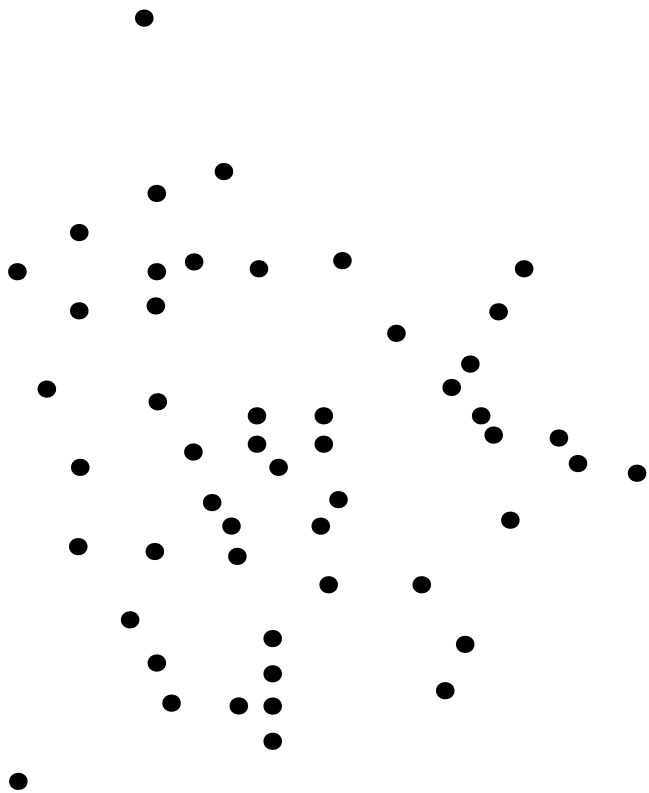
OSRAM

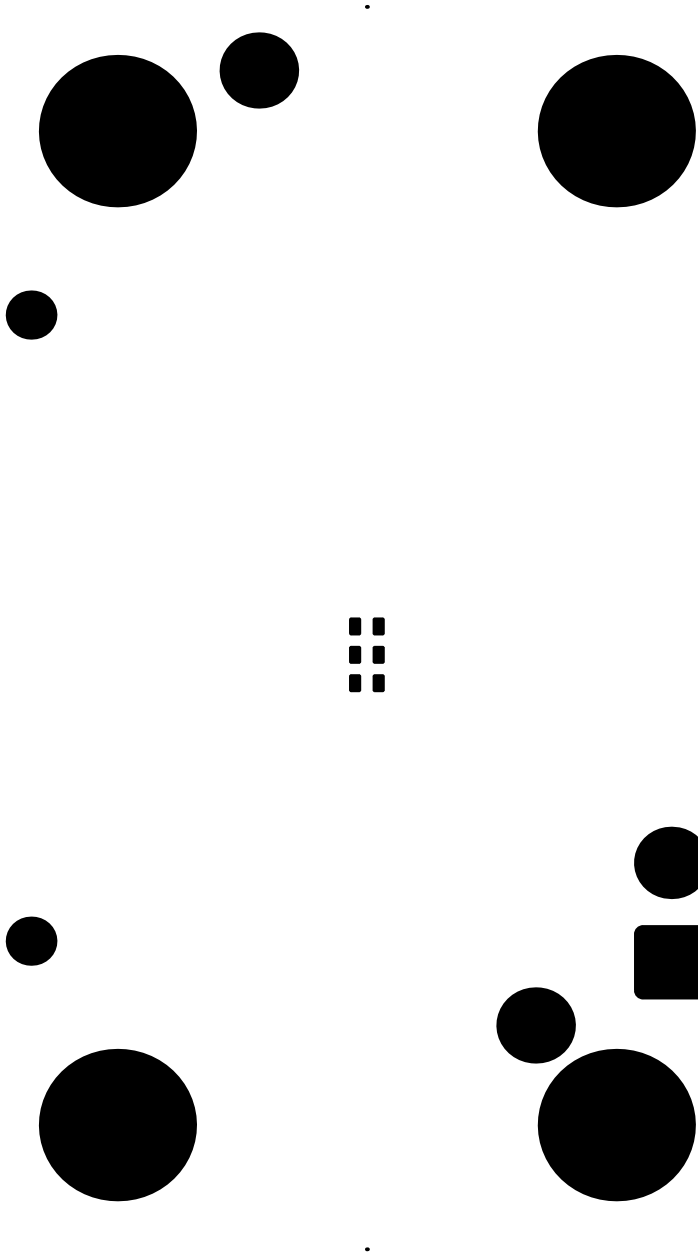
T

Top Paste

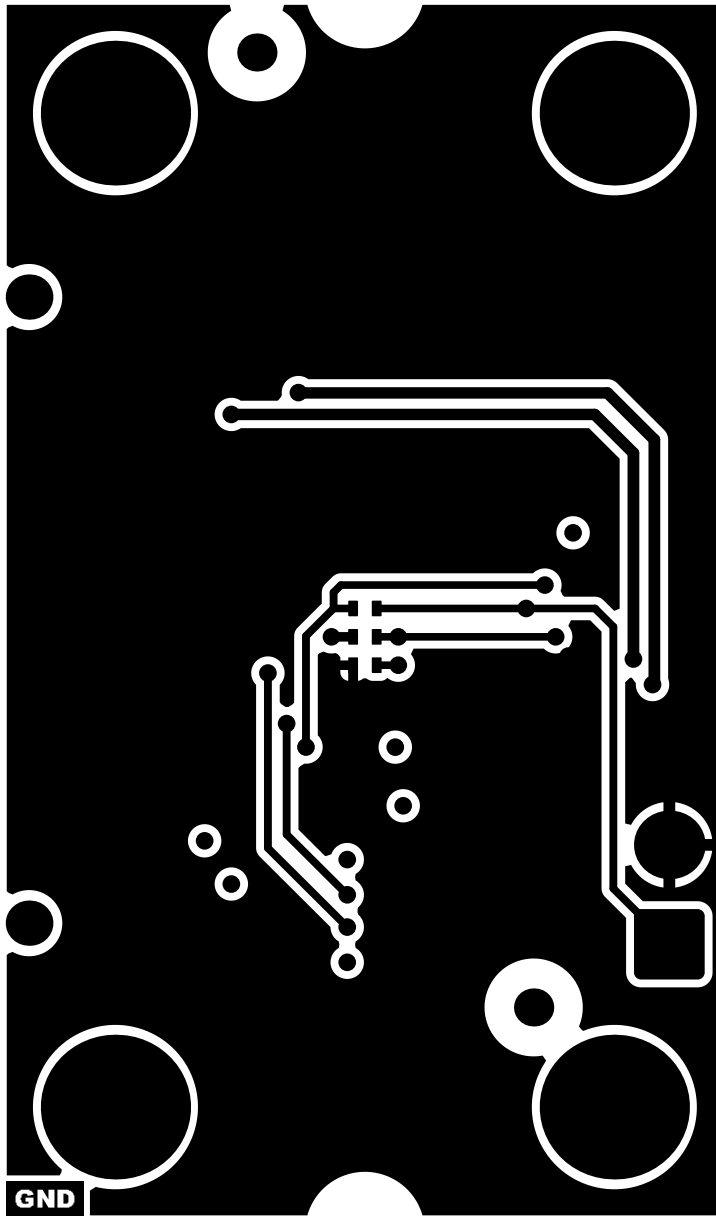
Top Tenting



Top Solder



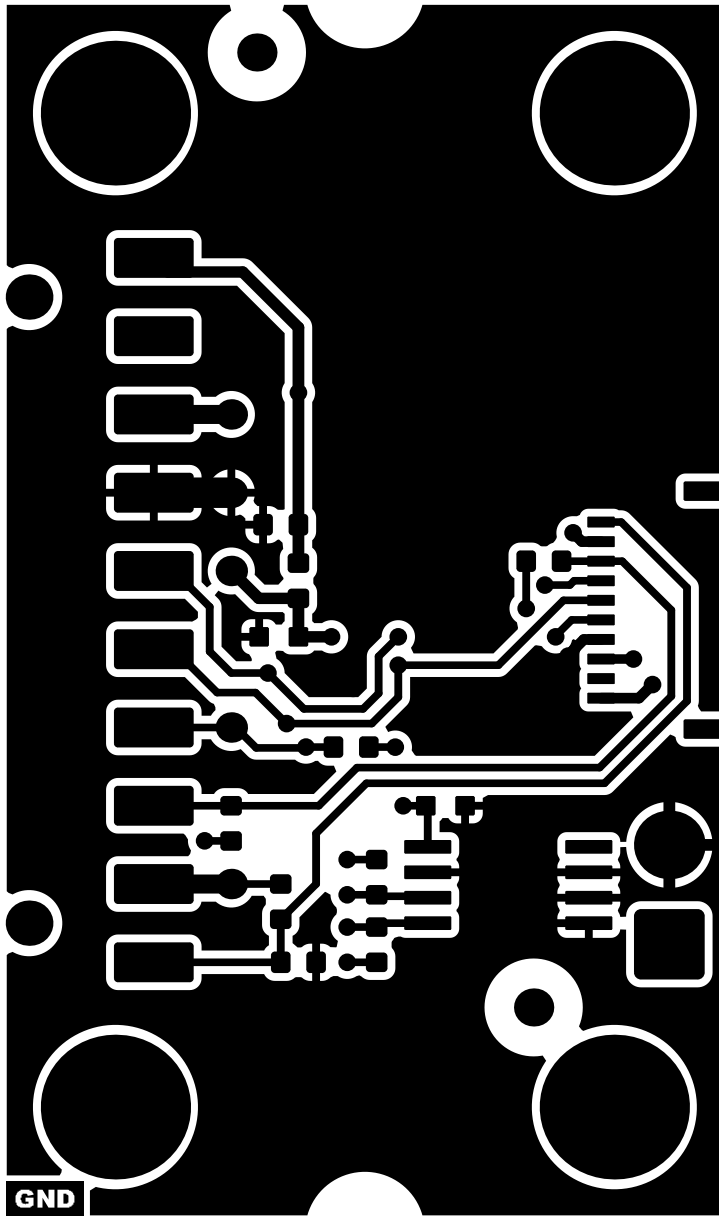
Top Layer



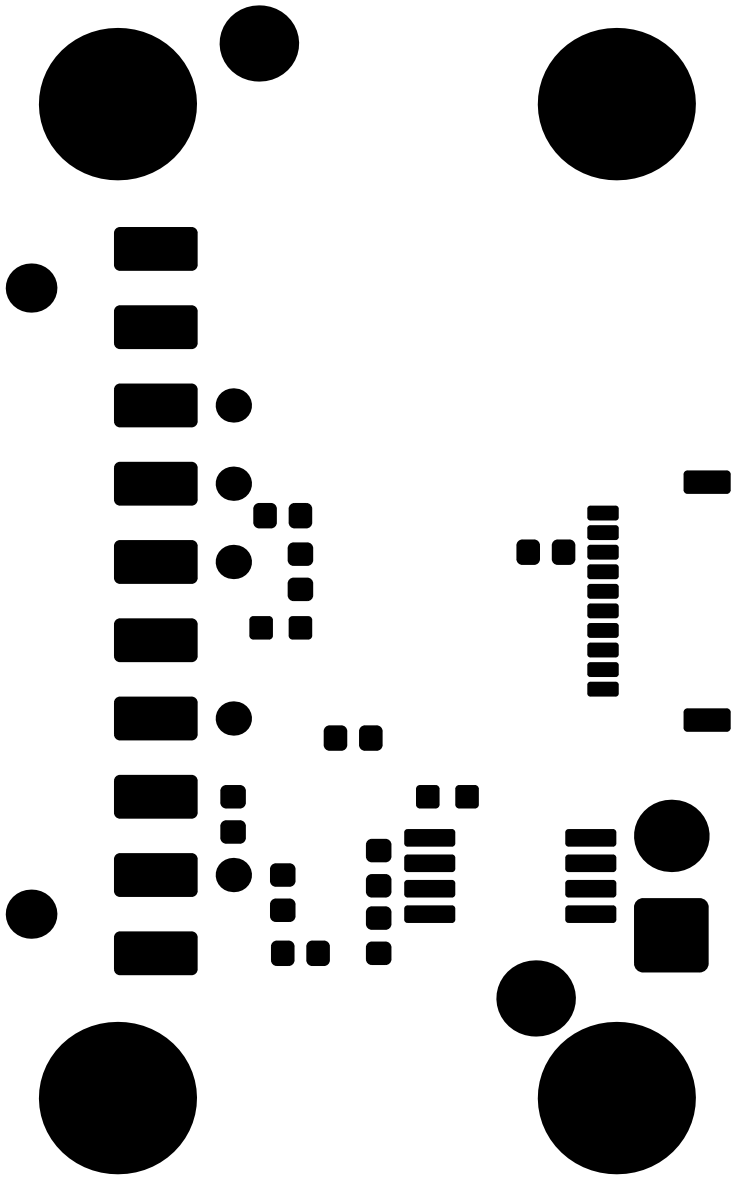
Inner 1

Inner 2

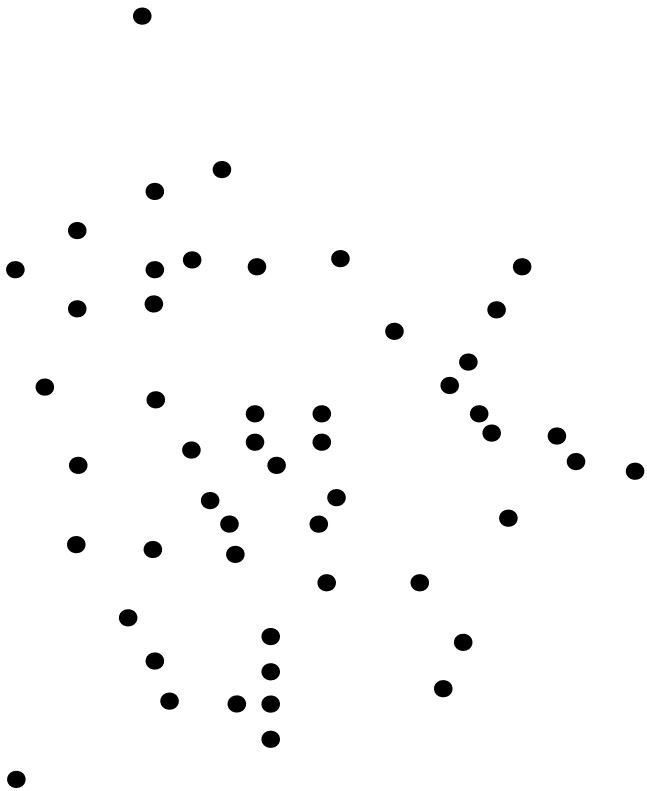
Bottom Layer



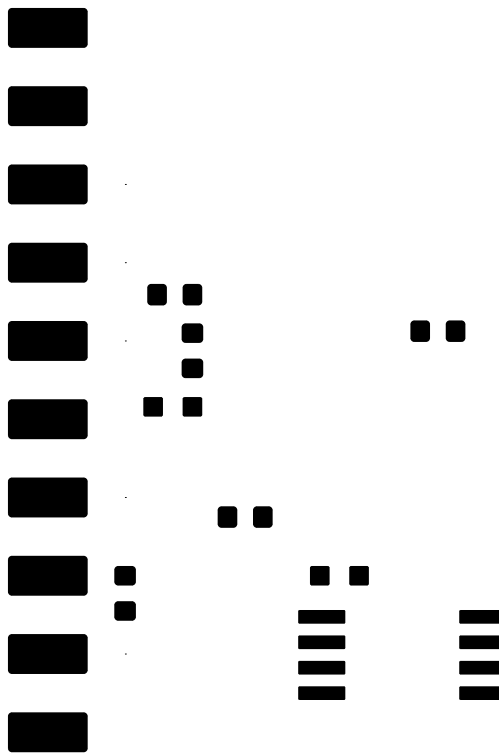
Bottom Solder



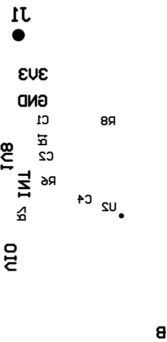
Bottom Tenting



Bottom Paste



Bottom Silk



Board Outline