STMod+ Environmental Sensors

MB1542B

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Legend

General comment such as function title, configuration, ...

Text to be added to silkscreen.

Warning text.

Notes to generate the board layout.

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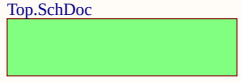
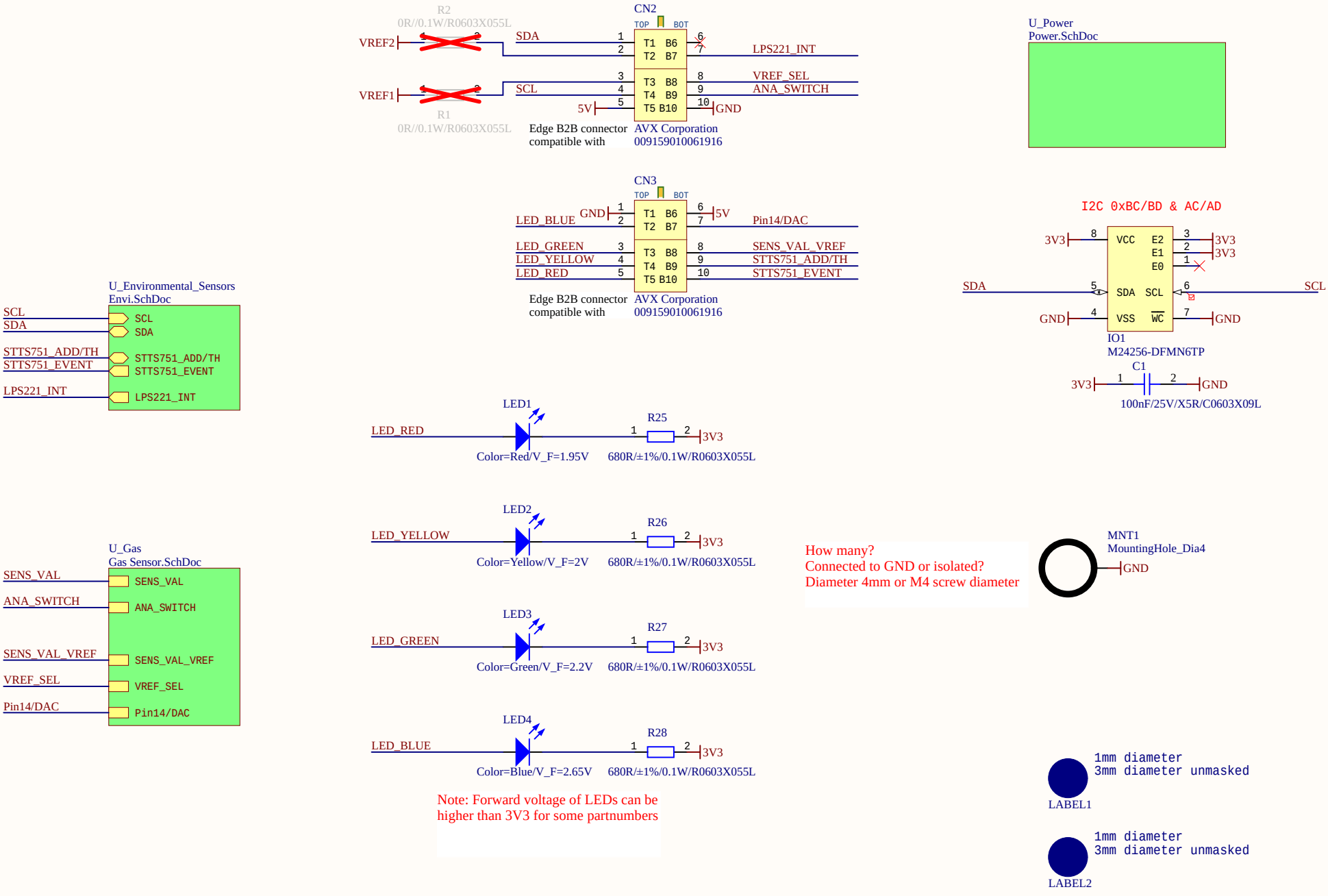
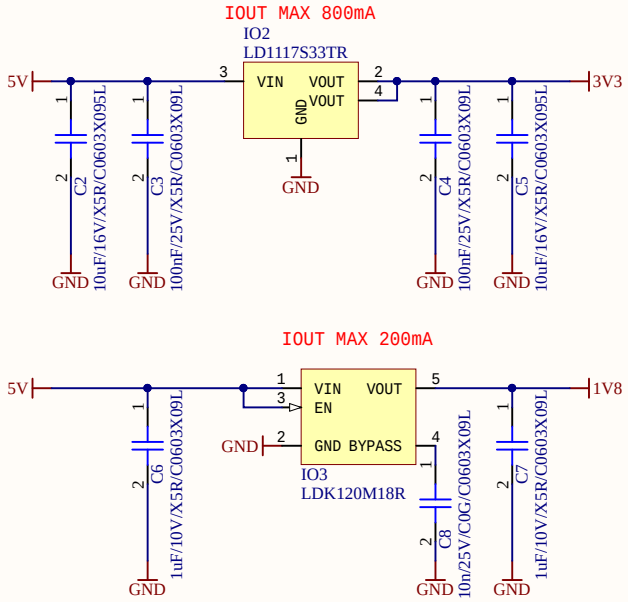
U_Top
Top.SchDoc



Title: **Project overview**			
Project: **STMod+ Environmental Sensors**			
Variant: Default			
Revision: A-01		Reference: MB1542B	
Size: A4	Date: 20-SEP-19	Sheet: 1 of 5	

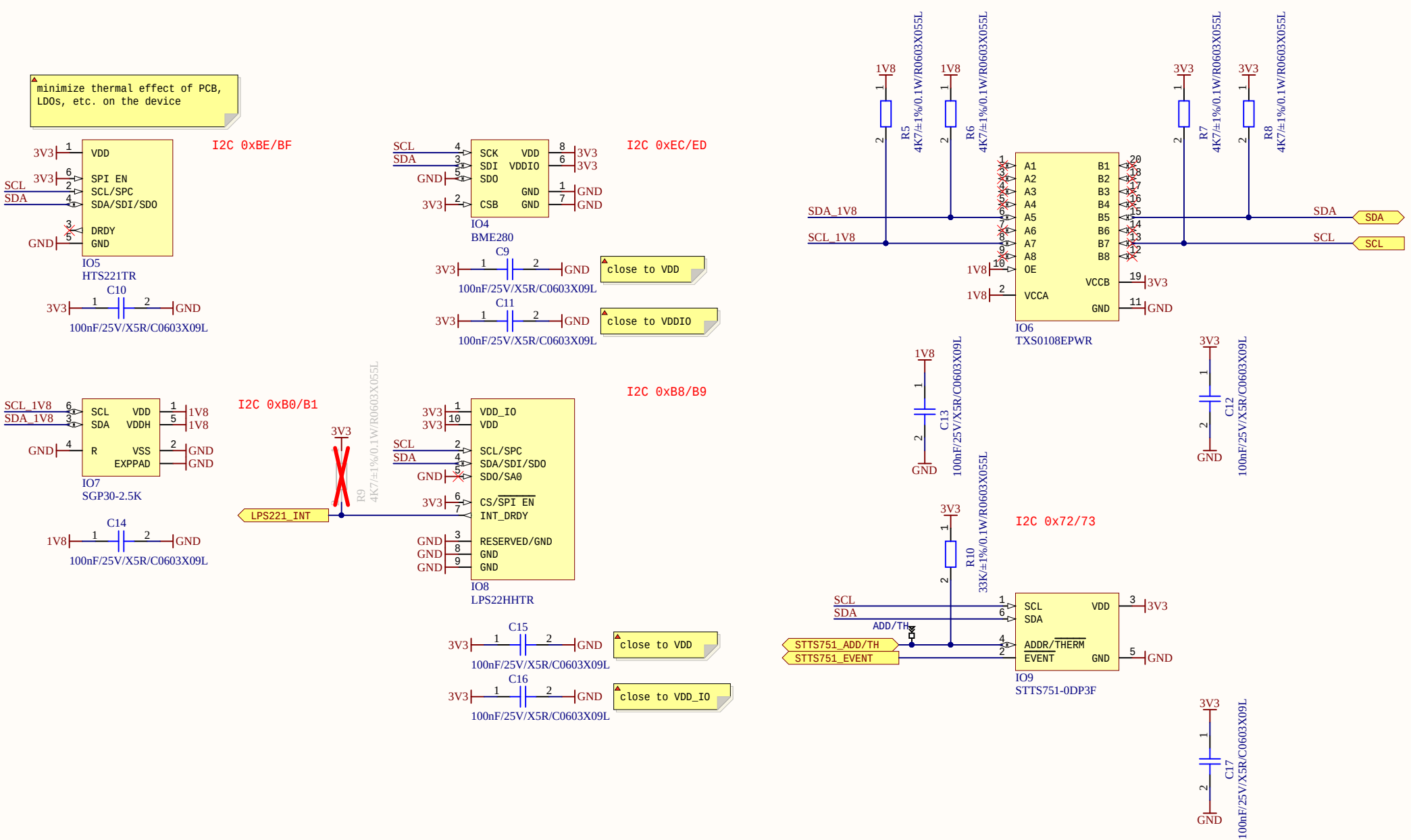
life.augmented


R2
0R//0.1W/R0603X055L
VREF2
VREF1
R1
0R//0.1W/R0603X055L
CN2
TOP
BOT
SDA
SCL
5V
T1 B6
T2 B7
T3 B8
T4 B9
T5 B10
GND
LPS221_INT
VREF_SEL
ANA_SWITCH
Edge B2B connector
compatible with
AVX Corporation
009159010061916
U_Power
Power.SchDoc
CN3
LED_BLUE
LED_GREEN
LED_YELLOW
LED_RED
Pin14/DAC
SENS_VAL_VREF
STTS751_ADD/TH
STTS751_EVENT
I2C 0xBC/BD & AC/AD
3V3
VCC
E2
E1
E0
SDA
SCL
VSS
WC
IO1
M24256-DFMN6TP
C1
100nF/25V/X5R/C0603X09L
U_Environmental_Sensors
Envi.SchDoc
SCL
SDA
STTS751_ADD/TH
STTS751_EVENT
LPS221_INT
LED1
LED2
LED3
LED4
R25
R26
R27
R28
Color=Red/V_F=1.95V
Color=Yellow/V_F=2V
Color=Green/V_F=2.2V
Color=Blue/V_F=2.65V
680R/±1%/0.1W/R0603X055L
U_Gas
Gas Sensor.SchDoc
SENS_VAL
ANA_SWITCH
SENS_VAL_VREF
VREF_SEL
Pin14/DAC
How many?
Connected to GND or isolated?
Diameter 4mm or M4 screw diameter
MNT1
MountingHole_Dia4
Note: Forward voltage of LEDs can be
higher than 3V3 for some partnumbers
1mm diameter
3mm diameter unmasked
LABEL1
LABEL2
Title: MB1542_TOP
Project: STMod+ Environmental Sensors
Variant: Default
Revision: A-01
Reference: MB1542B
Size: A4
Date: 20-SEP-19
Sheet: 2 of 5
life.augmented



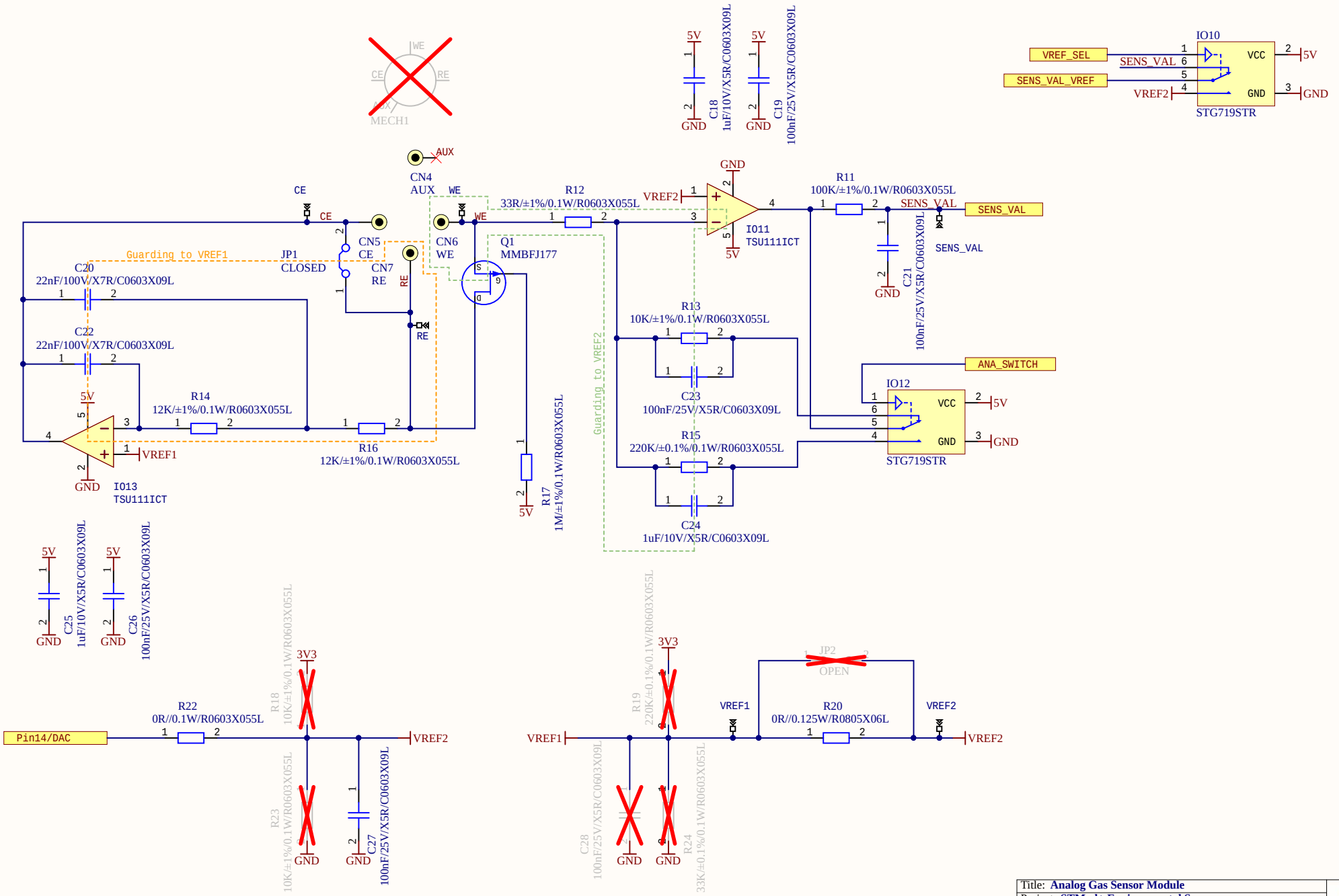
Title: **Power Supply Module**		
Project: **STMod+ Environmental Sensors**		
Variant: Default		
Revision: A-01		Reference: MB1542B
Size: A4	Date: 20-SEP-19	Sheet: 3 of 5

life.augmented



Title: **Environmental Sensors Module**		
Project: **STMod+ Environmental Sensors**		
Variant: Default		
Revision: A-01		Reference: MB1542B
Size: A4	Date: 20-SEP-19	Sheet: 4 of 5

life.augmented



Title: **Analog Gas Sensor Module**		
Project: **STMod+ Environmental Sensors**		
Variant: Default		
Revision: A-01		Reference: MB1542B
Size: A4	Date: 20-SEP-19	Sheet: 5 of 5

life.augmented

Design Rules Verification Report

Filename : C:\Users\coppervia\Documents\AD_Projects\MB1542B\MB1542B.PcbDoc

Warnings 0
Rule Violations 0

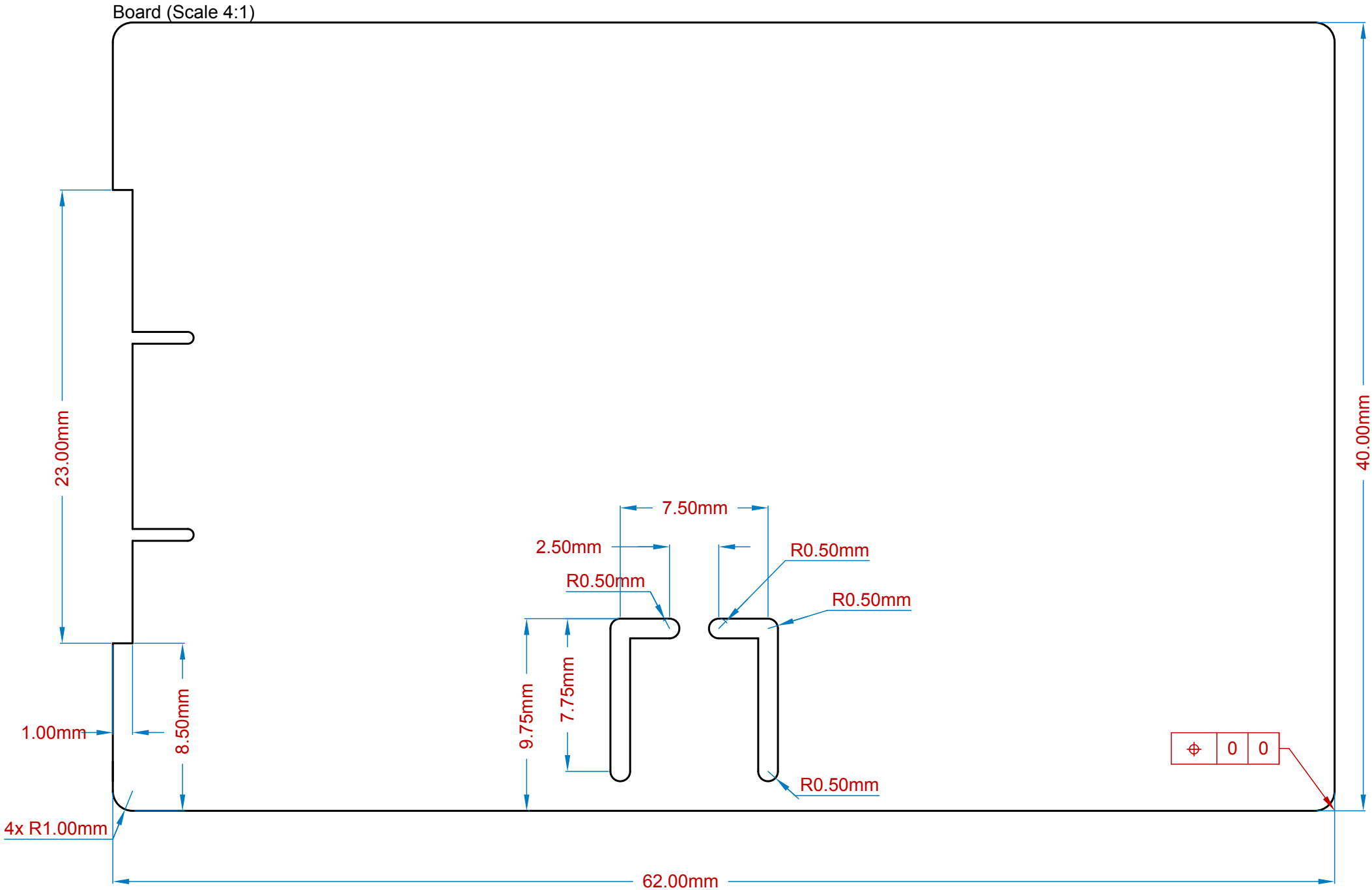
Warnings	
Total	0

Rule Violations	
Clearance Constraint (Gap=0.25mm) (All),(All)	0
Clearance Constraint (Gap=0.25mm) (Disabled)(InNet('GND') And OnLayer('Top Layer')),(All)	0
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Un-Routed Net Constraint ((All))	0
Modified Polygon (Allow modified: No), (Allow shelved: No)	0
Width Constraint (Min=0.2mm) (Max=1mm) (Preferred=0.25mm) (All)	0
Routing Layers(All)	0
Routing Via (MinHoleWidth=0.3mm) (MaxHoleWidth=0.3mm) (PreferredHoleWidth=0.3mm) (MinWidth=0.8mm)	0
Differential Pairs Uncoupled Length using the Gap Constraints (Min=0.254mm) (Max=0.254mm) (Prefered=0.254mm)	0
Power Plane Connect Rule(Relief Connect)(Expansion=0.508mm) (Conductor Width=0.21mm) (Air Gap=0.21mm)	0
Acute Angle Constraint (Minimum=60.000) (All)	0
Hole Size Constraint (Min=0.025mm) (Max=10mm) (All)	0
Pads and Vias to follow the Drill pairs settings	0
Hole To Hole Clearance (Gap=0.254mm) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0.1mm) (IsPad),(IsVia)	0
Silk To Solder Mask (Clearance=0.2mm) (IsPad),(All)	0
Silk to Silk (Clearance=0.2mm) (All),(All)	0
Net Antennae (Tolerance=0mm) (All)	0
Board Clearance Constraint (Gap=0mm) (All)	0
Board Clearance Constraint (Gap=0mm) (HasFootprint('AVX-009159010061916_DEVICE'))	0
Room U_Top (Bounding Region = (0.1mm, 41.875mm, 43.375mm, 111.475mm) (InComponentClass('U_Top'))	0
Room U_Environmental_Sensors (Bounding Region = (2.3mm, 40.5mm, 28.475mm, 91.975mm)	0
Room U_Power (Bounding Region = (8.65mm, 50.825mm, 44.3mm, 97.775mm) (InComponentClass('U_Power'))	0
Room U_Gas (Bounding Region = (12.15mm, 44.275mm, 37.5mm, 91.85mm) (InComponentClass('U_Gas'))	0
Component Clearance Constraint (Horizontal Gap = -2mm, Vertical Gap = Infinite)	0
Component Clearance Constraint (Horizontal Gap = 0.254mm, Vertical Gap = 0.254mm) (All),(All)	0
Component Clearance Constraint (Horizontal Gap = -2mm, Vertical Gap = Infinite)	0
Height Constraint (Min=0mm) (Max=25.4mm) (Prefered=12.7mm) (All)	0
Total	0

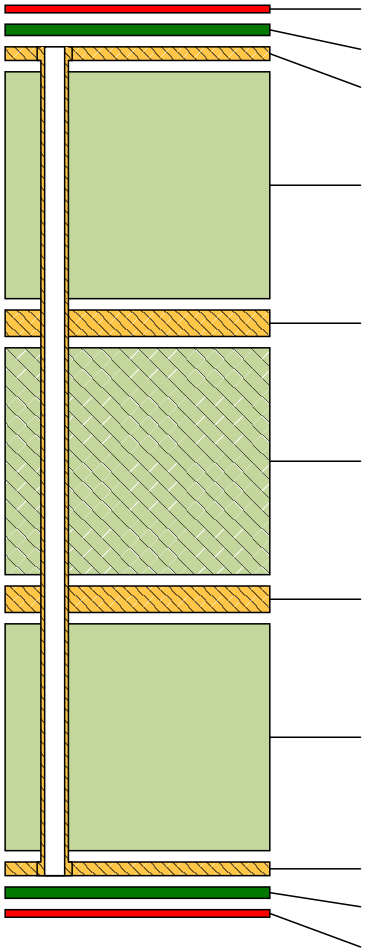
Electrical Rules Check Report

Class	Document	Message
Suppressed No Report	Envi.SchDoc	GND contains IO Pin and Power Pin objects (Pin IO4-1,Pin IO7-2,Pin IO9-5,Pin IO5-5,Pin IO4-5,Pin IO4-7,Pin IO8-8,Pin IO8-9,Pin IO6-11) (Suppressed)
Suppressed No Report	Envi.SchDoc	GND contains IO Pin and Power Pin objects (Pin MNT1-1,Pin IO2-1,Pin IO4-1,Pin IO3-2,Pin IO13-2,Pin IO11-2,Pin IO7-2,Pin IO12-3,Pin IO10-3,Pin IO1-4,Pin IO4-5,Pin IO5-5,Pin IO9-5,Pin IO4-7,Pin IO8-8,Pin IO8-9,Pin IO6-11) (Suppressed)
Suppressed No Report	Envi.SchDoc	SCL contains IO Pin and Input Port objects (Pin IO6-13,Port SCL) (Suppressed)

No differences were detected.


Board (Scale 4:1)
23.00mm
40.00mm
7.50mm
2.50mm
R0.50mm
R0.50mm
R0.50mm
9.75mm
7.75mm
1.00mm
8.50mm
R0.50mm
4x R1.00mm
62.00mm
0
0

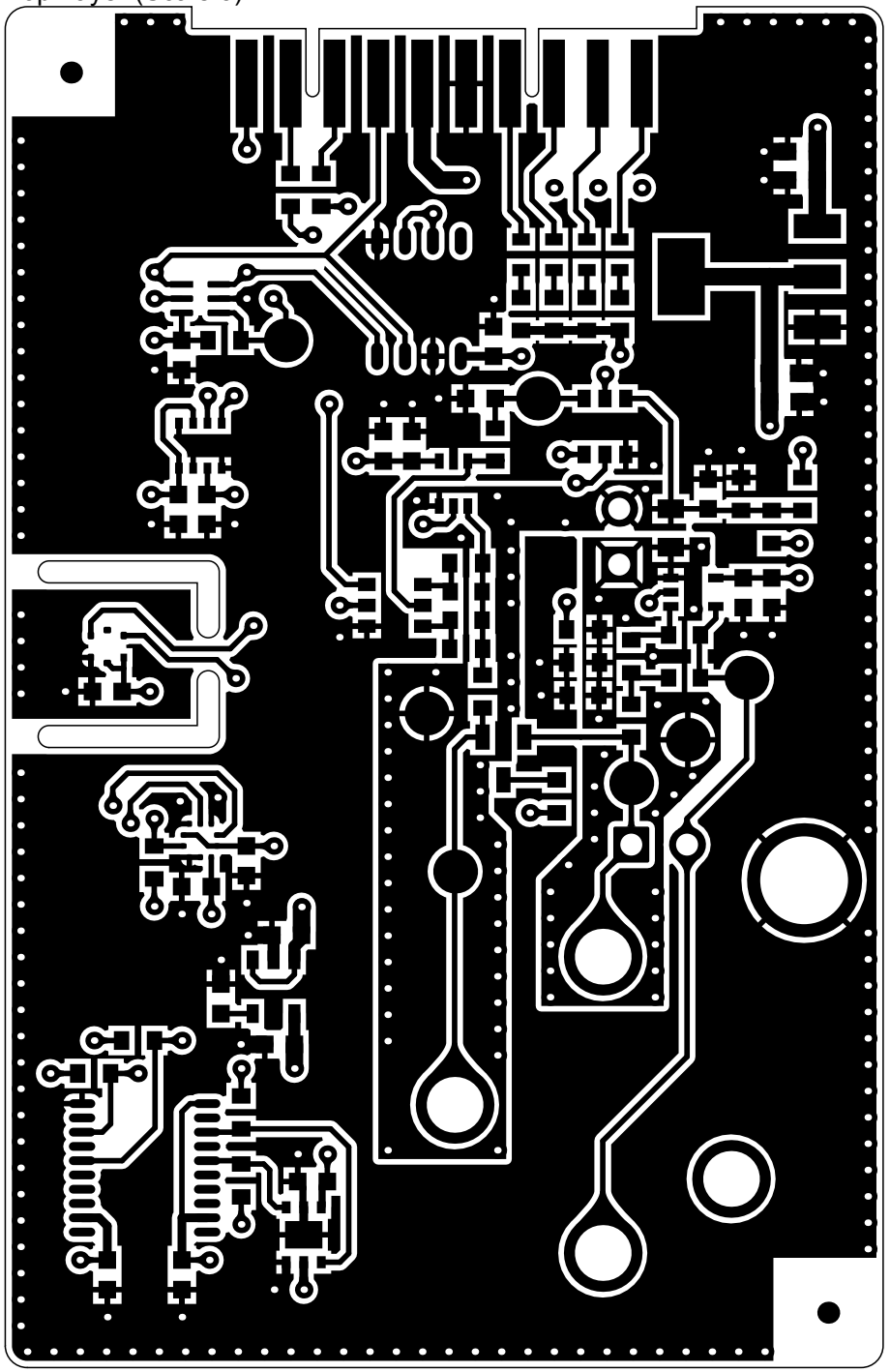
Layer Stack Legend



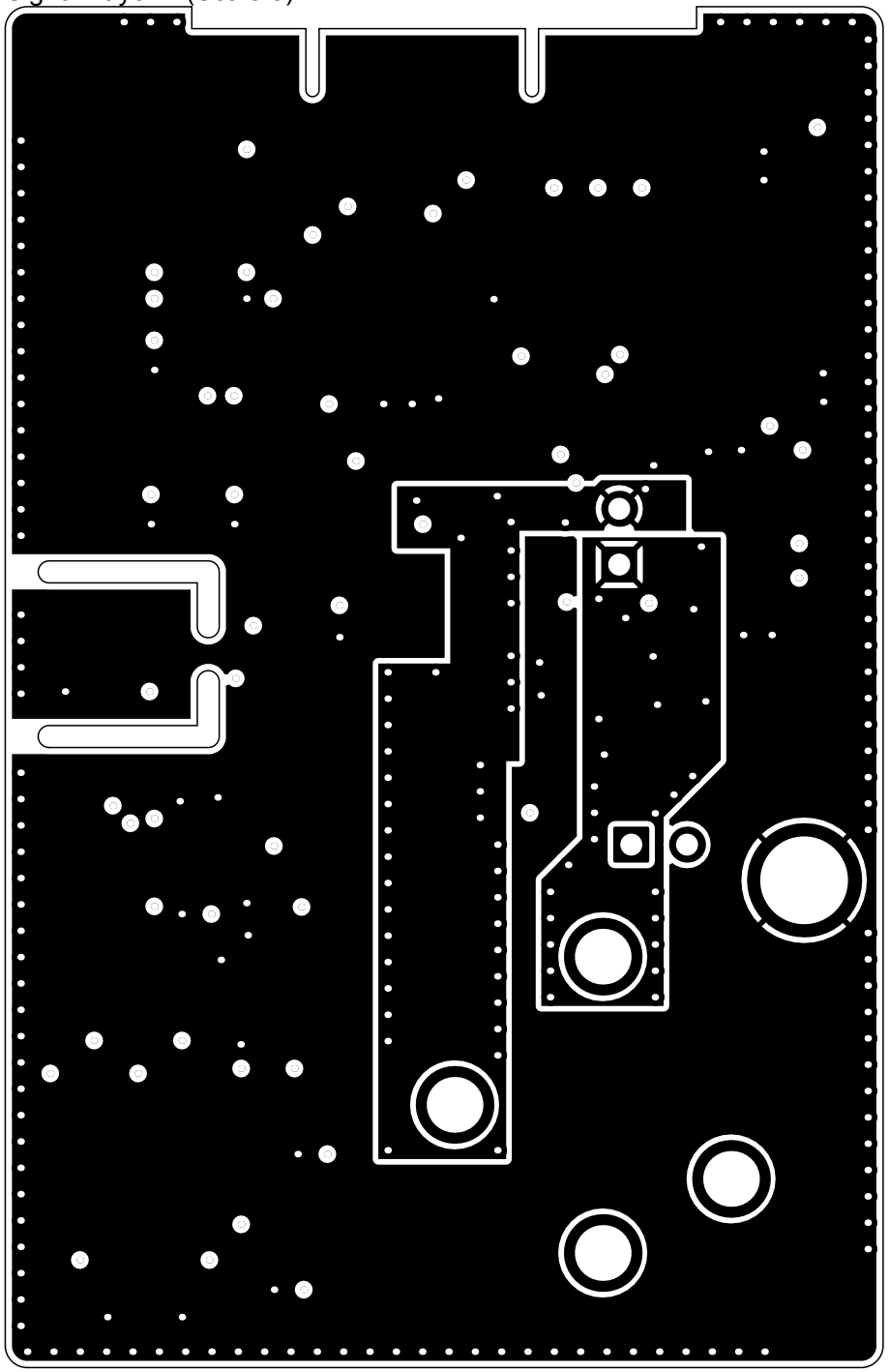
Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
Surface Material	Top Solder	0.015mm	Solder Resist	Solder Mask	GTS
CF-003	Top Layer	0.018mm		Signal	GTL
Prepreg		*0.387mm*	*FR-4*	*Dielectric*	
CF-004	Signal Layer 1	0.035mm		Signal	G1
		0.713mm	*FR-4*	*Dielectric*	
CF-004	Signal Layer 2	0.035mm		Signal	G2
Prepreg		*0.387mm*	*FR-4*	*Dielectric*	
CF-003	Bottom Layer	0.018mm		Signal	GBL
Surface Material	Bottom Solder	0.015mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

Total thickness: 1.623mm

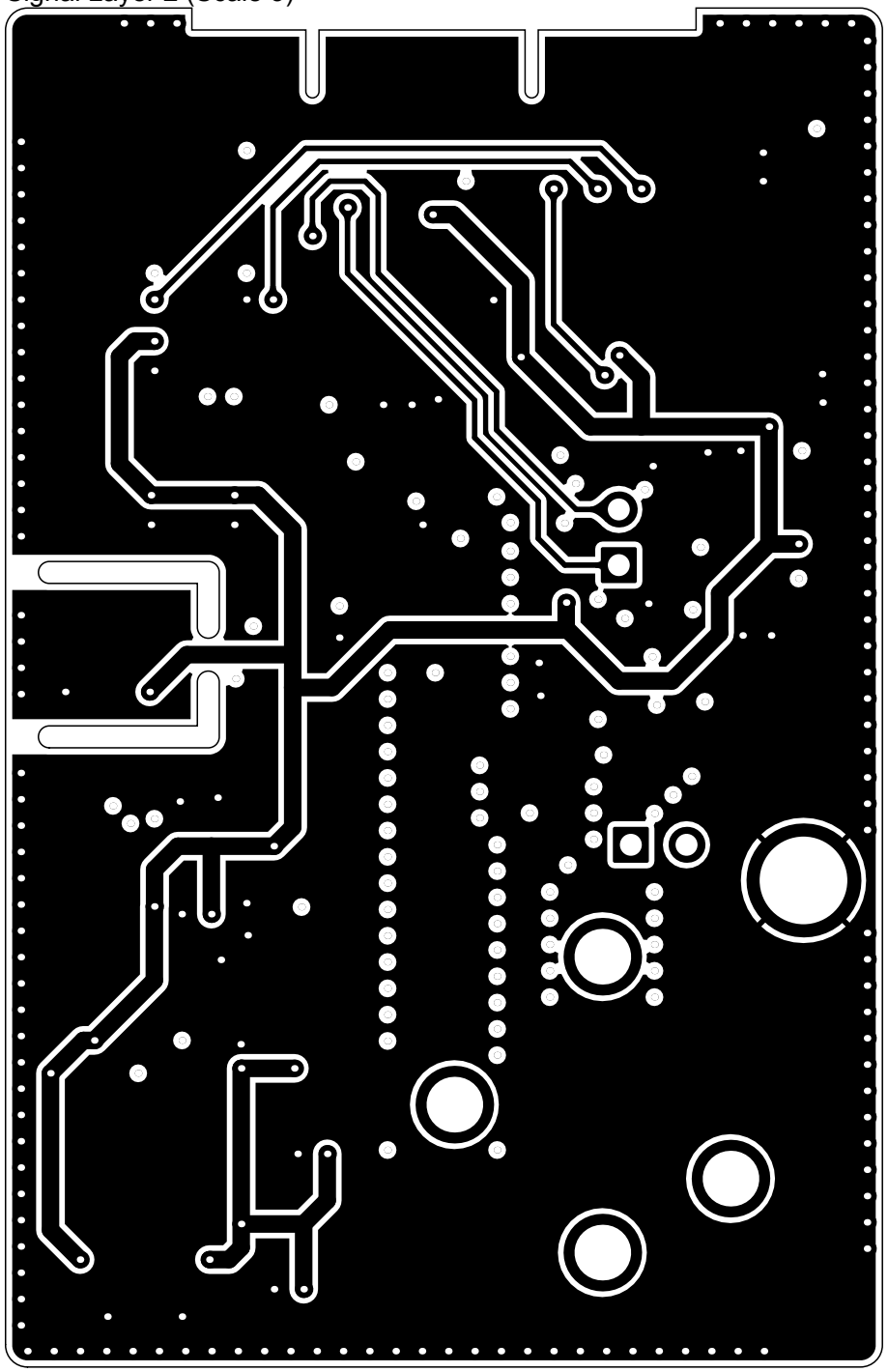
Top Layer (Scale 3)



Signal Layer 1 (Scale 3)



Signal Layer 2 (Scale 3)



Bottom Layer (Scale 3)