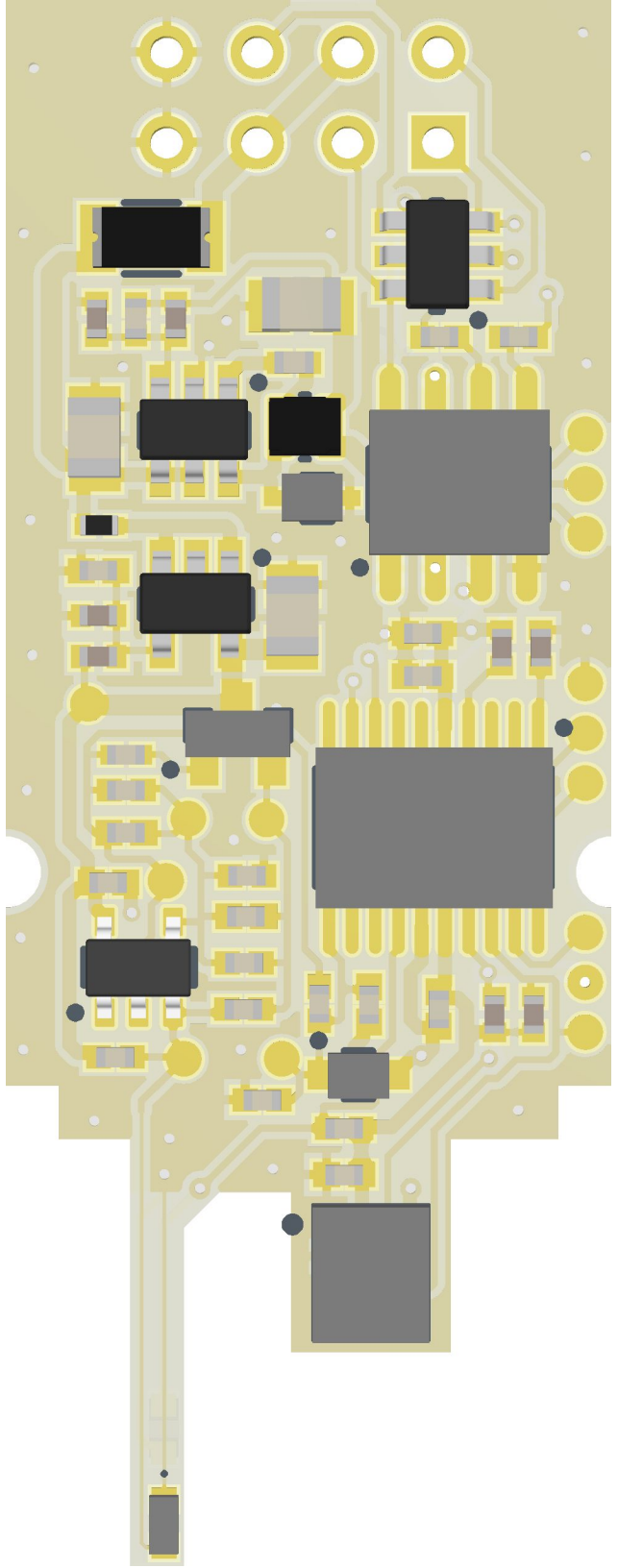
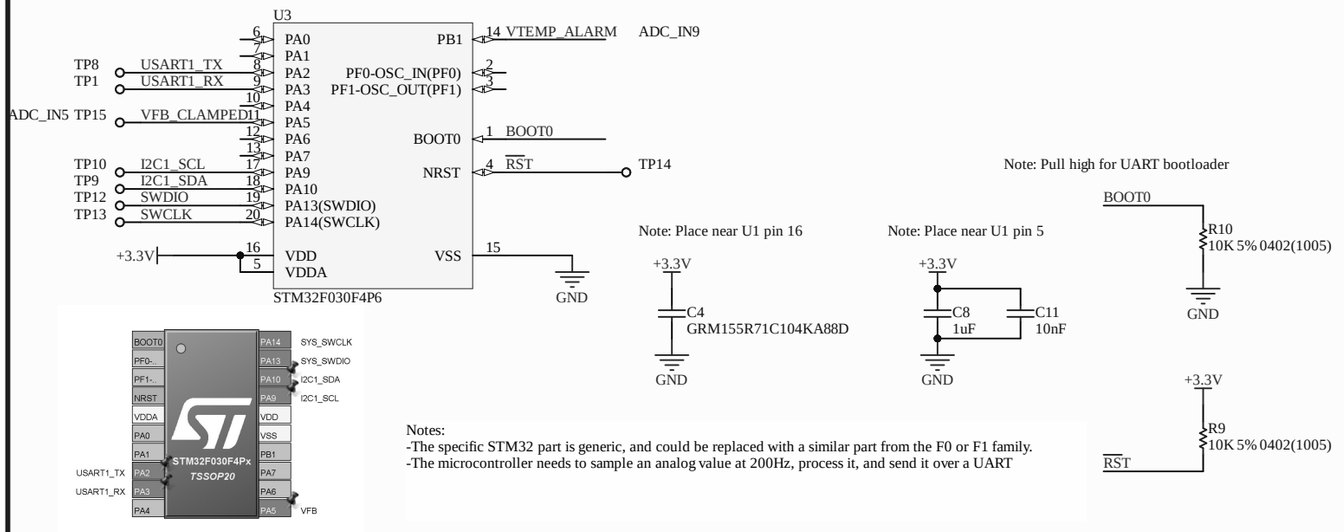
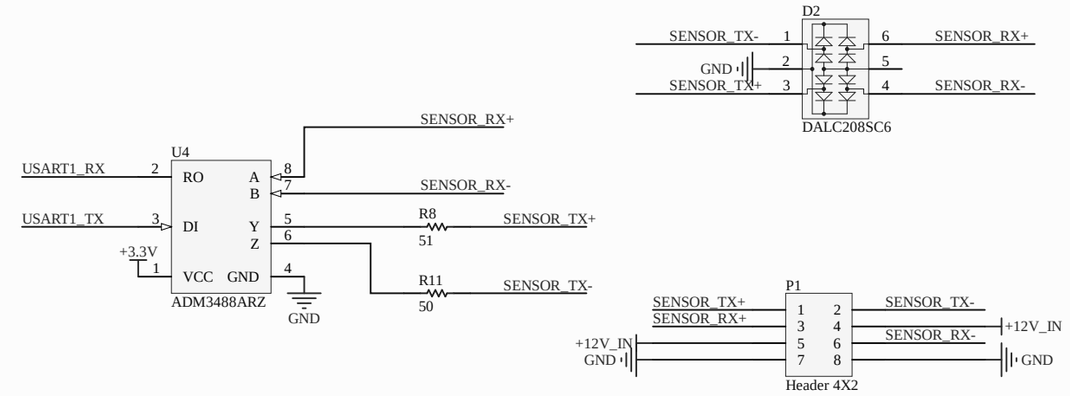


Microcontroller



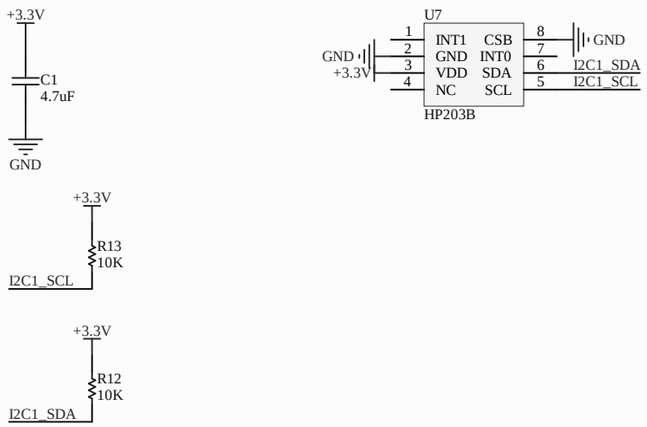
Notes:
-The specific STM32 part is generic, and could be replaced with a similar part from the F0 or F1 family.
-The microcontroller needs to sample an analog value at 200Hz, process it, and send it over a UART

Sensor board connector



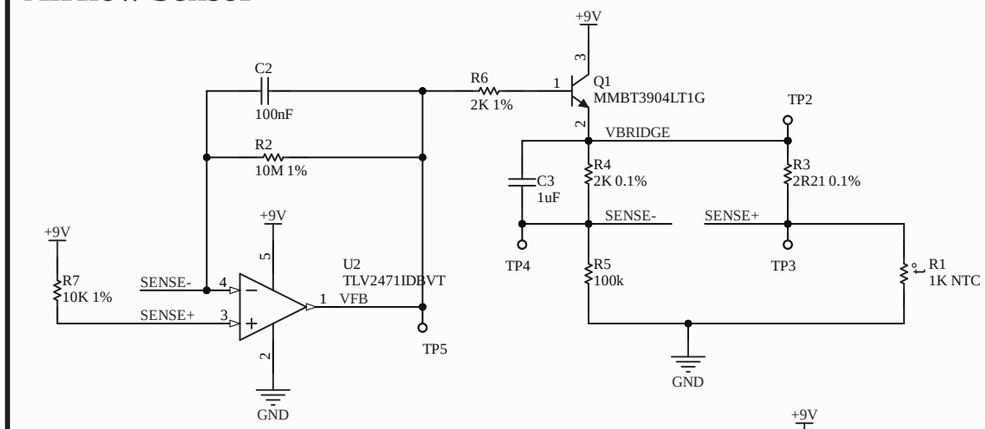
Notes:
-RJ485 Power wiring referenced from passive POE, using pinout from 802.3af Mode B
-RJ45 Data wiring referenced from DMX over Cat5
-Alternate PN for TVS: SRV05-4-P-T7, SP724AHTG, NUP4114HMR6T1G, etc

Pressure Sensor



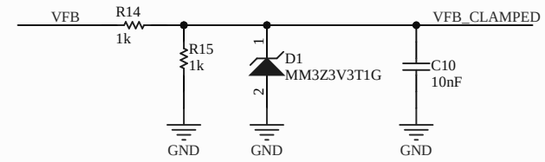
Notes:
-Maximum BIPAP output pressure is 30cm/H20 = 3 kPa
-Sensor should have ideally thousands of counts (?) of sensitivity over this range
-Sensor should withstand high Oxygen environments if possible
-Place only one sensor

Airflow Sensor



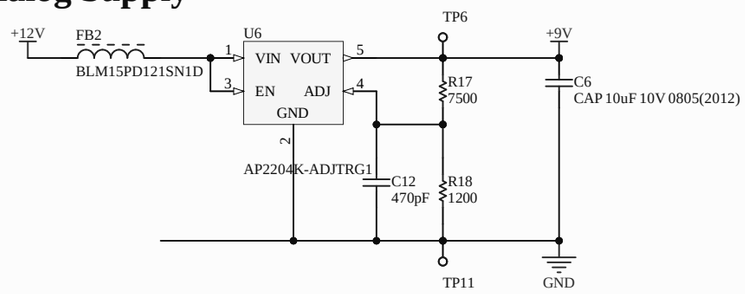
Notes:
-Air speed roughly 0 - .5m/s (could adjust by modifying the mechanical port?)
-Thermal response needs to be fast enough to detect .17-.67 Hz tidal flow
-Circuit will be exposed to Oxygen rich environment

Feedback voltage clamp, divider



Notes:
-Need a buffer here?
-need capacitor here?

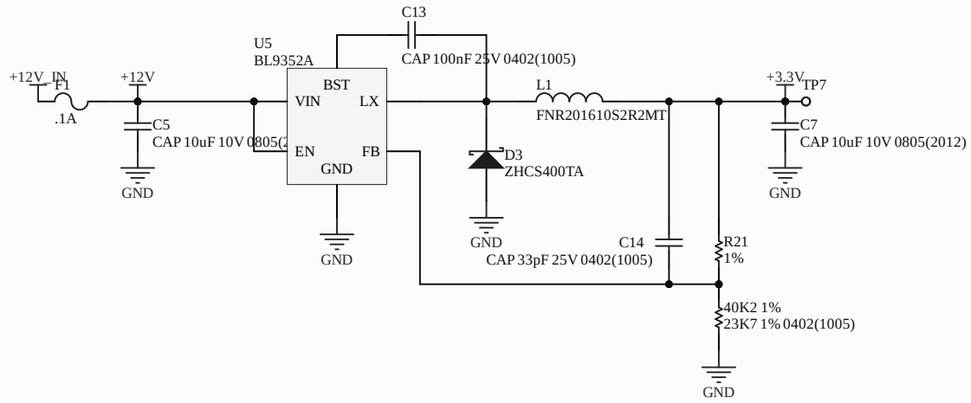
Analog Supply



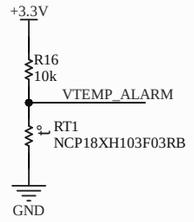
Notes:
-C5 must be replaced with a proper part- similar to 25V, 22uF
-C6 must be replaced with a proper part - similar to 25V, 22uF

R17, R18:
VOUT=VREF(1+(R17/R18)) , VREF=1.24
or: R17/RR18 = VOUT/VREF - 1
If VOUT=3.3V, pick R18=1k, then R17=

Digital Supply

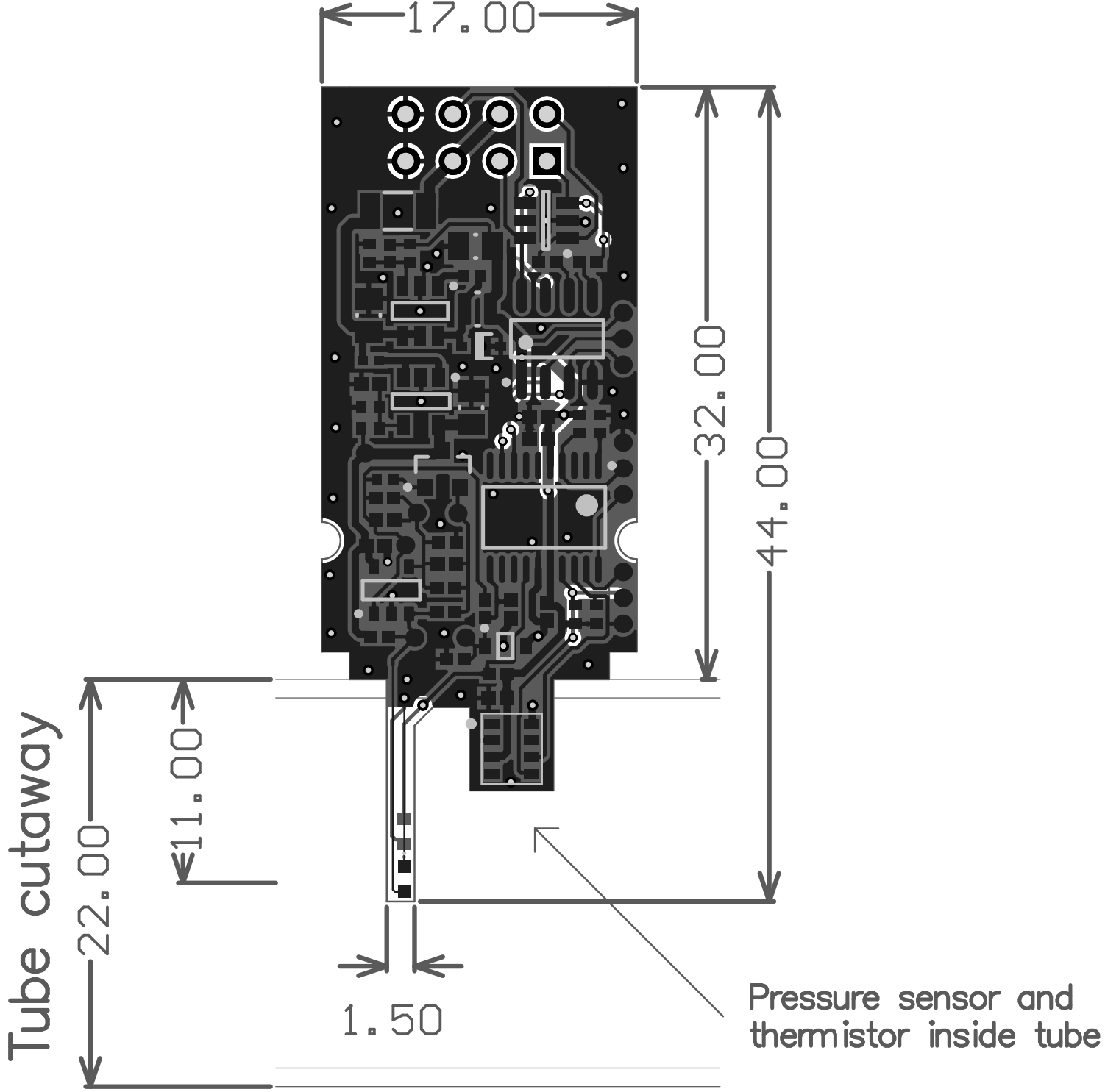


Monitor thermocouple



Title: Sensor Module		
Project: sensor_module.PrjPcb		Revision: F
Date: 4/24/2020	Time: 11:31:09 AM	Sheet 1 of 1

BLIN KIN LABS



Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0.013mm	3.8	GTS
1	Top Layer	Copper	0.036mm		GTL
	Dielectric 1	FR-4	0.502mm	4.8	
2	Bottom Layer	Copper	0.036mm		GBL
	Bottom Solder	Solder Resist	0.013mm	3.8	GBS
	Bottom Overlay				GBO
Total board thickness:			0.599mm		

Design Rules Verification Report

Filename : C:\Users\matt\Dropbox\Ventilator Project\PCB\sensor_module\pcb\sensor_mod

Warnings 0
Rule Violations 150

Warnings	
Total	0

Rule Violations	
Clearance Constraint (Gap=0.2mm) (All),(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=0.6mm) (Preferred=0.4mm) (All)	5
Power Plane Connect Rule(Relief Connect)(Expansion=0.508mm) (Conductor Width=0.254mm)	0
Hole Size Constraint (Min=0.025mm) (Max=2.54mm) (All)	0
Hole To Hole Clearance (Gap=0.254mm) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0.254mm) (All),(All)	99
Silk To Solder Mask (Clearance=0.254mm) (IsPad),(All)	42
Silk to Silk (Clearance=0.254mm) (All),(All)	4
Net Antennae (Tolerance=0mm) (All)	0
Room sensor_module (Bounding Region = (114mm, 104mm, 134mm, 150.2mm)	0
Height Constraint (Min=0mm) (Max=25.4mm) (Prefered=12.7mm) (All)	0
Total	150

Width Constraint (Min=0.2mm) (Max=0.6mm) (Preferred=0.4mm) (All)
Width Constraint: Track (3.825mm,-11.35mm)(3.825mm,0.8mm) on Top Layer Actual Width = 0.102mm, Target Width =
Width Constraint: Track (3.825mm,-11.35mm)(3.95mm,-11.475mm) on Top Layer Actual Width = 0.102mm, Target Width
Width Constraint: Track (3.95mm,-11.475mm)(4.45mm,-11.475mm) on Top Layer Actual Width = 0.102mm, Target Width
Width Constraint: Track (4.45mm,-10.125mm)(4.45mm,-1mm) on Top Layer Actual Width = 0.102mm, Target Width = 0.2mr
Width Constraint: Track (4.45mm,-10.35mm)(4.45mm,-10.125mm) on Top Layer Actual Width = 0.102mm, Target Width =

Minimum Solder Mask Sliver (Gap=0.254mm) (All),(All)
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad 40K2 1%-1(2.575mm,23.525mm) on Top Layer
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C10-1(10.2mm,4.275mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C1-1(9.01mm,-1mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C11-1(12.19mm,14.2mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C12-1(3.115mm,15.961mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.077mm < 0.254mm) Between Pad C13-1(7.65mm,21.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.077mm < 0.254mm) Between Pad C14-1(3.675mm,22.575mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C2-1(2.91mm,8.6mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.152mm < 0.254mm) Between Pad C2-2(3.89mm,8.6mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C3-1(7.24mm,6.25mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C4-1(12.15mm,3.16mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C8-1(11.21mm,13mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.137mm < 0.254mm) Between Pad C8-1(11.21mm,13mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.137mm < 0.254mm) Between Pad C8-1(11.21mm,13mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.236mm < 0.254mm) Between Pad C8-2(12.19mm,13mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.137mm < 0.254mm) Between Pad C8-2(12.19mm,13mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.138mm < 0.254mm) Between Pad C8-2(12.19mm,13mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad C9-1(3.39mm,7.2mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.027mm < 0.254mm) Between Pad C9-1(3.39mm,7.2mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.137mm < 0.254mm) Between Pad C9-1(3.39mm,7.2mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.137mm < 0.254mm) Between Pad C9-2(2.41mm,7.2mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.242mm < 0.254mm) Between Pad D1-1(8.785mm,1.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.017mm < 0.254mm) Between Pad D1-1(8.785mm,1.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad D2-1(13.25mm,23.85mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad D2-2(13.25mm,24.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad D2-4(10.95mm,25.75mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad D2-5(10.95mm,24.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad FB2-1(2.2mm,17.225mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.222mm < 0.254mm) Between Pad Q1-1(5.575mm,10.375mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad Q1-2(7.475mm,10.375mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad Q1-3(6.525mm,12.375mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R10-1(15mm,13.3mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R10-1(15mm,13.3mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.231mm < 0.254mm) Between Pad R10-1(15mm,13.3mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R10-2(15mm,14.3mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R11-1(12.65mm,22.525mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R12-1(14.8mm,4mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R12-1(14.8mm,4mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R12-2(14.8mm,3mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R13-1(13.7mm,4mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R14-1(8.8mm,3.325mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R15-1(7.675mm,1.1mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.122mm < 0.254mm) Between Pad R15-1(7.675mm,1.1mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R16-1(9.975mm,0.3mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R17-1(3.125mm,13.55mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R18-1(2.125mm,14.7mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R2-1(2.925mm,9.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.219mm < 0.254mm) Between Pad R2-1(2.925mm,9.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad R2-1(2.925mm,9.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R21-1(4.775mm,22.525mm) on Top Layer And
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad R2-2(3.875mm,9.8mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.219mm < 0.254mm) Between Pad R2-2(3.875mm,9.8mm) on Top Layer And Pad

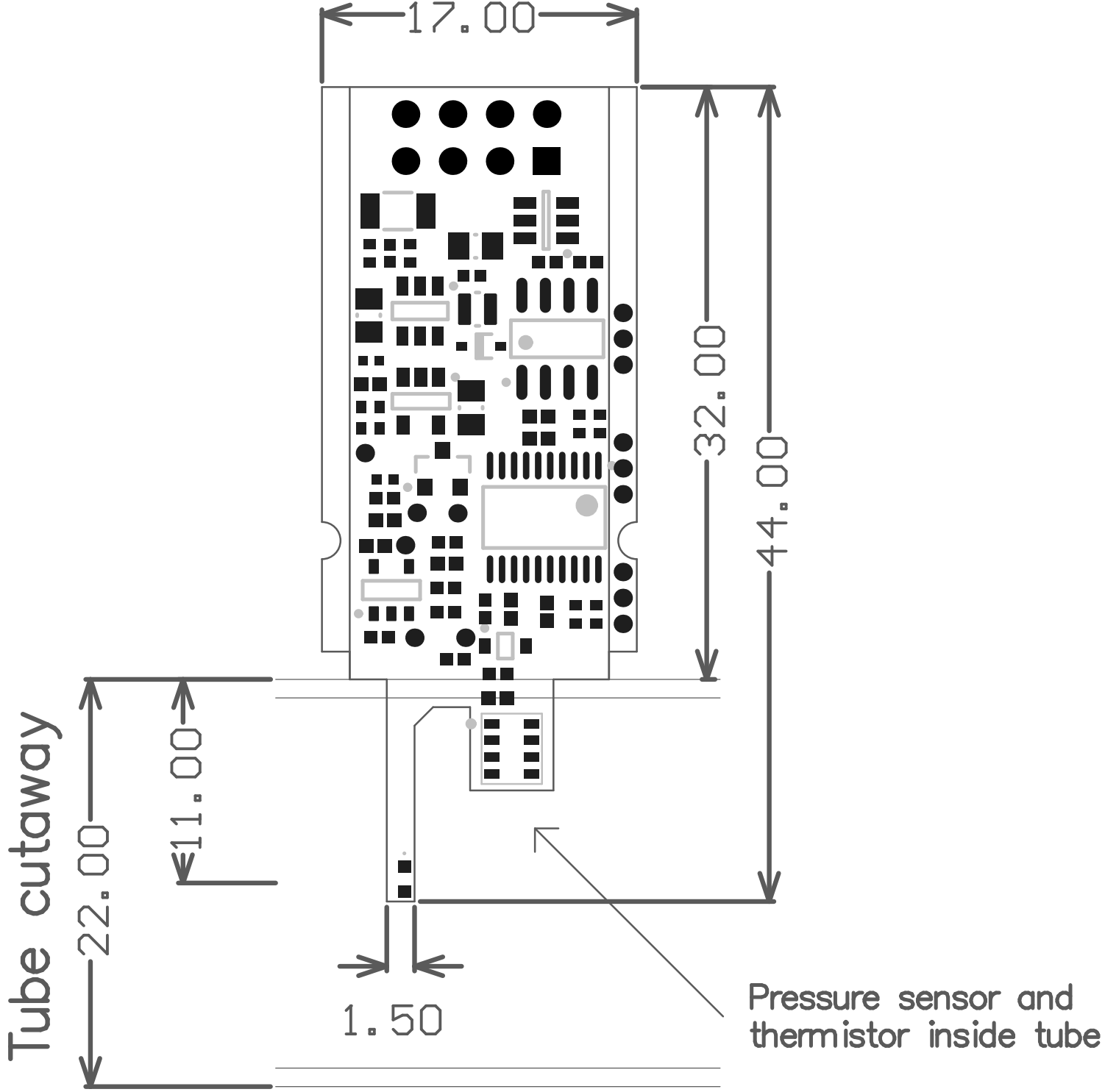
Minimum Solder Mask Sliver (Gap=0.254mm) (All),(All)
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R3-1(6.2mm,3.65mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R4-1(6.225mm,4.95mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R5-1(7.25mm,7.4mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad R6-1(3.85mm,10.8mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R7-1(2.625mm,2.3mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad R8-1(13.9mm,22.525mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.247mm < 0.254mm) Between Pad R9-1(13.9mm,14.3mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad TP10-1(16.25mm,4.4mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad TP10-1(16.25mm,4.4mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad TP1-1(16.25mm,18.4mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad TP1-1(16.25mm,18.4mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad TP11-1(16.25mm,12.8mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad TP13-1(16.25mm,10mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.2mm < 0.254mm) Between Pad TP3-1(5mm,2.25mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad TP5-1(4.5mm,7.25mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U2-1(2.8mm,3.55mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U2-2(3.75mm,3.55mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-1(14.925mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-10(9.075mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-11(9.075mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-12(9.725mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-13(10.375mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-14(11.025mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-15(11.675mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-16(12.325mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-17(12.975mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-18(13.625mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-19(14.275mm,5.95mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-2(14.275mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-3(13.625mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-4(12.975mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-5(12.325mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-6(11.675mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-7(11.025mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.254mm) Between Pad U3-8(10.375mm,11.55mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U5-1(6.25mm,21.25mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U5-2(5.3mm,21.25mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U5-4(4.35mm,18.55mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U5-5(5.3mm,18.55mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad U6-1(6.3mm,16.325mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.254mm) Between Pad U6-2(5.35mm,16.325mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U7-1(9.17mm,-2.4mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U7-2(9.17mm,-3.3mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U7-3(9.17mm,-4.2mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U7-5(11.33mm,-5.1mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U7-6(11.33mm,-4.2mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.197mm < 0.254mm) Between Pad U7-7(11.33mm,-3.3mm) on Top Layer And Pac

Silk To Solder Mask (Clearance=0.254mm) (IsPad),(All)
Silk To Solder Mask Clearance Constraint: (0.042mm < 0.254mm) Between Arc (13.25mm,23mm) on Top Overlay And Pa
Silk To Solder Mask Clearance Constraint: (0.085mm < 0.254mm) Between Arc (13.25mm,23mm) on Top Overlay And Pa
Silk To Solder Mask Clearance Constraint: (0.025mm < 0.254mm) Between Arc (15.65mm,11.55mm) on Top Overlay And Pa
Silk To Solder Mask Clearance Constraint: (0.222mm < 0.254mm) Between Arc (4.625mm,10.375mm) on Top Overlay An
Silk To Solder Mask Clearance Constraint: (0.089mm < 0.254mm) Between Arc (7.1mm,21.25mm) on Top Overlay And Pa
Silk To Solder Mask Clearance Constraint: (Collision < 0.254mm) Between Arc (7.2mm,16.325mm) on Top Overlay And Pa
Silk To Solder Mask Clearance Constraint: (0.142mm < 0.254mm) Between Arc (8.785mm,2.765mm) on Top Overlay And Pa
Silk To Solder Mask Clearance Constraint: (0.252mm < 0.254mm) Between Pad C12-1(3.115mm,15.961mm) on Top Laye
Silk To Solder Mask Clearance Constraint: (0.252mm < 0.254mm) Between Pad C12-1(3.115mm,15.961mm) on Top Laye
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C5-1(2.527mm,20.571mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.193mm < 0.254mm) Between Pad C5-1(2.527mm,20.571mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C5-2(2.527mm,18.771mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C5-2(2.527mm,18.771mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C6-1(8.05mm,15.575mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.193mm < 0.254mm) Between Pad C6-1(8.05mm,15.575mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C6-2(8.05mm,13.775mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C6-2(8.05mm,13.775mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C7-1(7.4mm,23.4mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C7-1(7.4mm,23.4mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.175mm < 0.254mm) Between Pad C7-2(9.2mm,23.4mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.193mm < 0.254mm) Between Pad C7-2(9.2mm,23.4mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.15mm < 0.254mm) Between Pad D3-1(9.655mm,18mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.155mm < 0.254mm) Between Pad F1-1(5.6mm,25.3mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.155mm < 0.254mm) Between Pad F1-1(5.6mm,25.3mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.155mm < 0.254mm) Between Pad F1-2(2.6mm,25.3mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.155mm < 0.254mm) Between Pad F1-2(2.6mm,25.3mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.241mm < 0.254mm) Between Pad L1-1(7.7mm,20mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.233mm < 0.254mm) Between Pad L1-1(7.7mm,20mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.196mm < 0.254mm) Between Pad L1-2(9.1mm,20mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.196mm < 0.254mm) Between Pad L1-2(9.1mm,20mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.25mm < 0.254mm) Between Pad U7-1(9.17mm,-2.4mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-1(9.17mm,-2.4mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-2(9.17mm,-3.3mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-3(9.17mm,-4.2mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.25mm < 0.254mm) Between Pad U7-4(9.17mm,-5.1mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-4(9.17mm,-5.1mm) on Top Layer And Trac
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-5(11.33mm,-5.1mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.25mm < 0.254mm) Between Pad U7-5(11.33mm,-5.1mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-6(11.33mm,-4.2mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-7(11.33mm,-3.3mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.1mm < 0.254mm) Between Pad U7-8(11.33mm,-2.4mm) on Top Layer An
Silk To Solder Mask Clearance Constraint: (0.25mm < 0.254mm) Between Pad U7-8(11.33mm,-2.4mm) on Top Layer An

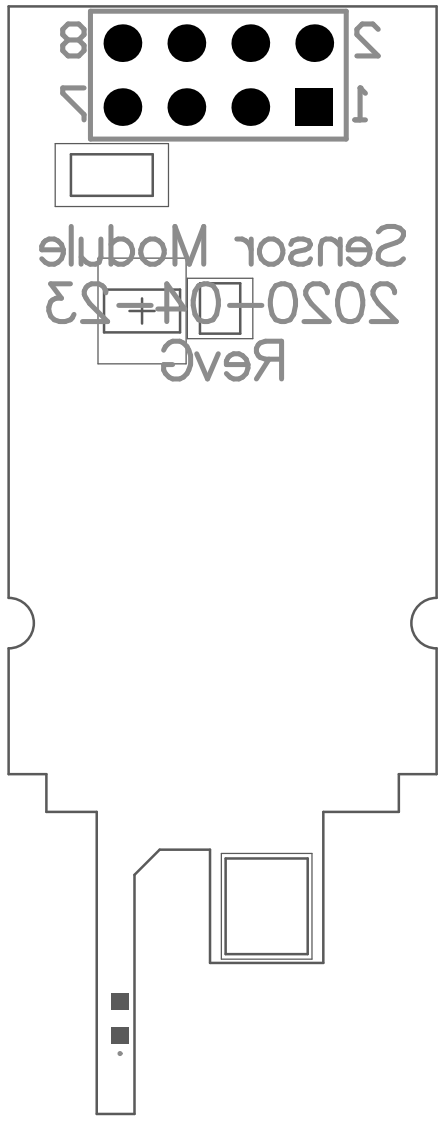
Silk to Silk (Clearance=0.254mm) (All),(All)
Silk To Silk Clearance Constraint: (0.137mm < 0.254mm) Between Text "1" (14.172mm,27.492mm) on Bottom Overlay An
Silk To Silk Clearance Constraint: (0.222mm < 0.254mm) Between Text "2" (14.68mm,30.032mm) on Bottom Overlay An
Silk To Silk Clearance Constraint: (0.052mm < 0.254mm) Between Text "7" (2.996mm,27.492mm) on Bottom Overlay An
Silk To Silk Clearance Constraint: (0.052mm < 0.254mm) Between Text "8" (2.996mm,30.032mm) on Bottom Overlay An

Electrical Rules Check Report

Class	Document	Message
Error	sensor_module.SchDoc	+9V contains Output Pin and Power Pin objects (Pin U6-5, Pin U2-5).
Warning	sensor_module.SchDoc	Net BOOT0 has no driving source (Pin R10-1, Pin U3-1)
Warning	sensor_module.SchDoc	Net NetC12_1 has no driving source (Pin C12-1, Pin R17-1, Pin R18-2, Pin U6-4)
Warning	sensor_module.SchDoc	Net NetFB2_2 has no driving source (Pin FB2-2, Pin U6-1, Pin U6-3)
Warning	sensor_module.SchDoc	Net SENSE+ has no driving source (Pin R1-2, Pin R3-1, Pin R7-2, Pin TP3-1, Pin U2-3)
Warning	sensor_module.SchDoc	Net SENSE- has no driving source (Pin C2-2, Pin C3-2, Pin R2-2, Pin R4-1, Pin R5-2, Pin TP4-1, Pin U2-4)
Warning	sensor_module.SchDoc	Net SENSOR_RX+ has no driving source (Pin D2-6, Pin P1-3, Pin U4-8)
Warning	sensor_module.SchDoc	Net SENSOR_RX- has no driving source (Pin D2-4, Pin P1-6, Pin U4-7)



Layer	Name	Material	Thickness	Constant	Gerber
	Top Overlay				GTO
	Top Solder	Solder Resist	0.013mm	3.8	GTS
1	Top Layer	Copper	0.036mm		GTL
	Dielectric 1	FR-4	0.502mm	4.8	
2	Bottom Layer	Copper	0.036mm		GBL
	Bottom Solder	Solder Resist	0.013mm	3.8	GBS
	Bottom Overlay				GBO
Total board thickness:			0.599mm		


8
2
7
1
Sensor Module
2020-04-23
RevG