














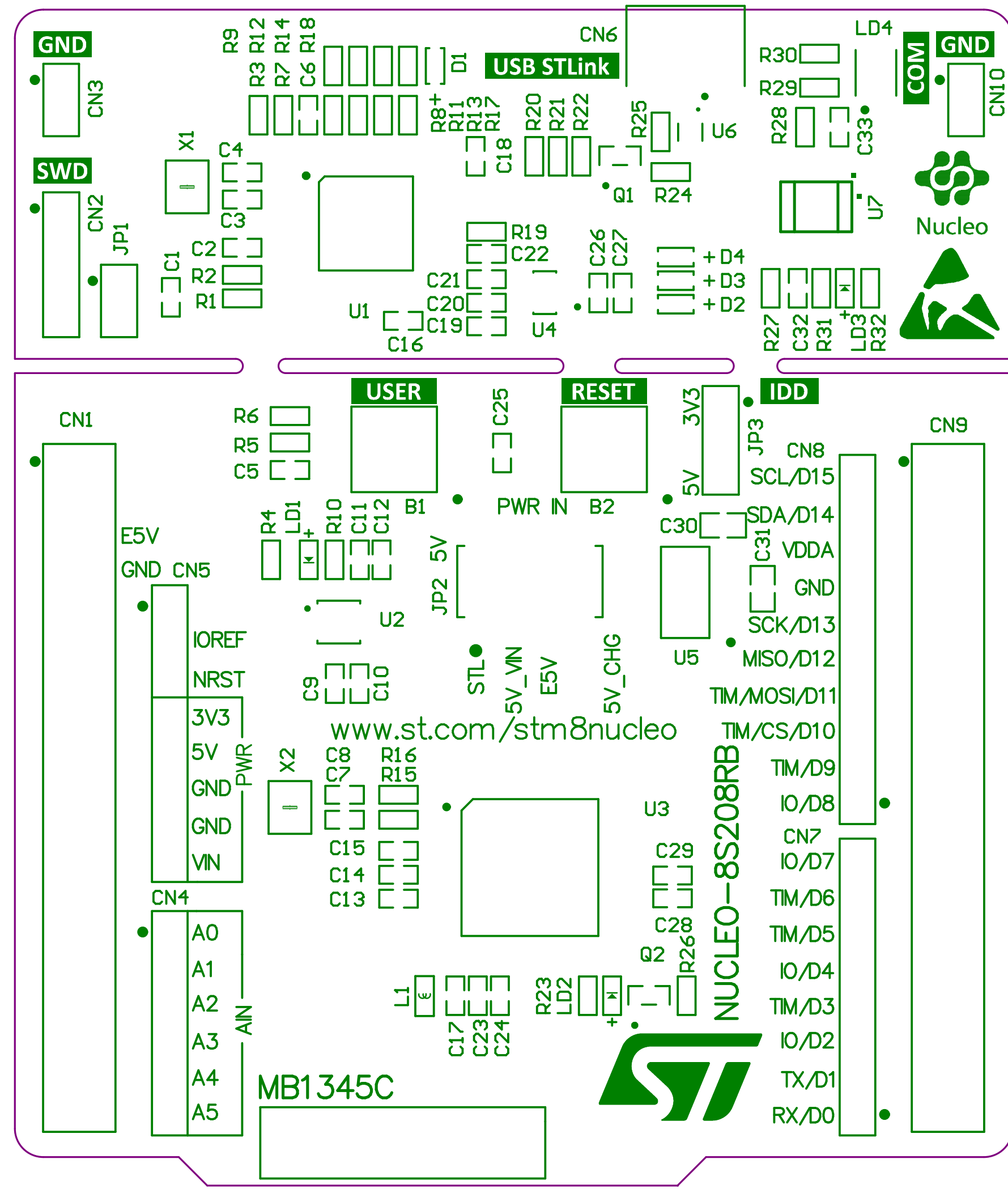


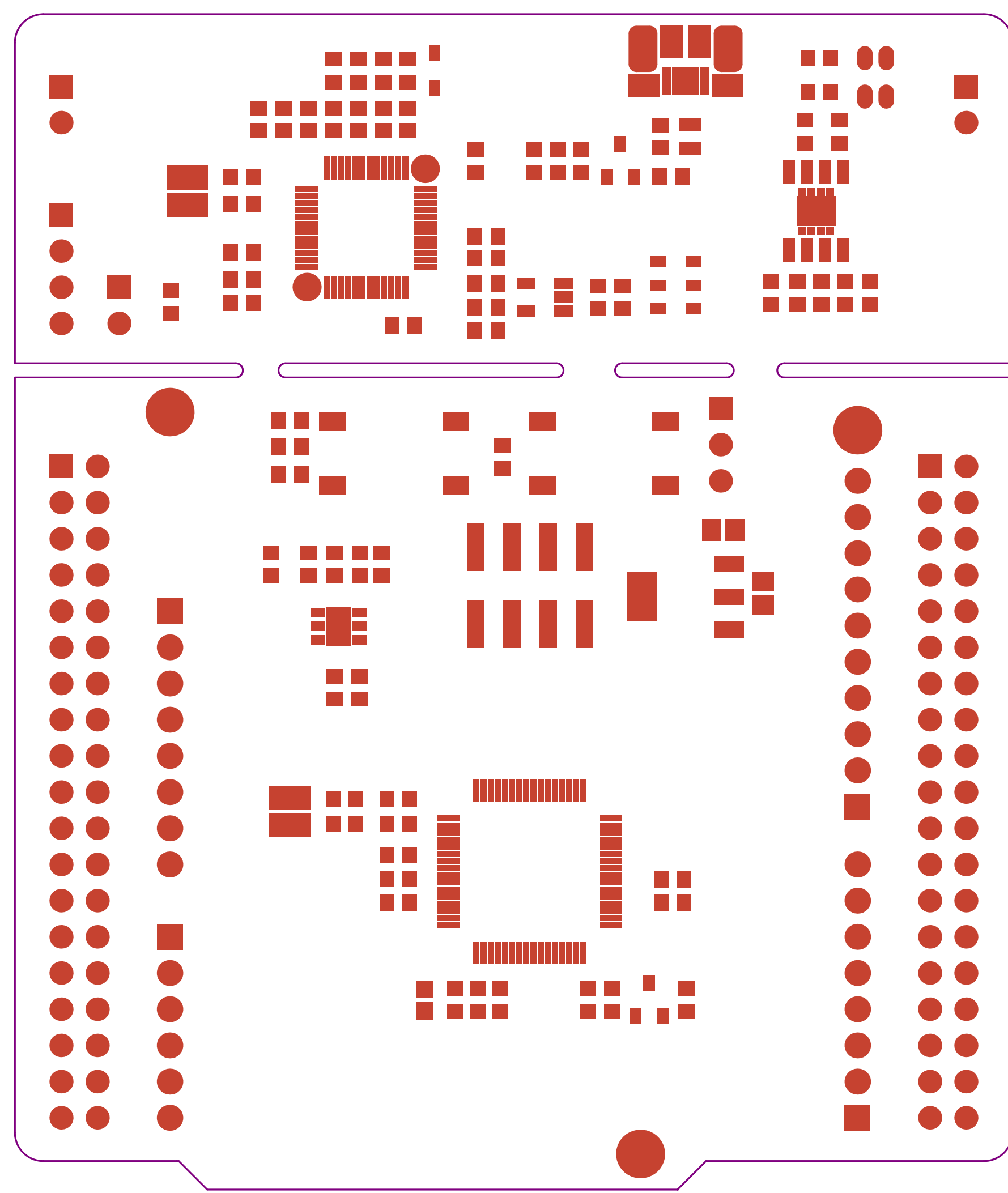
# Board Stack Report

Stack Up		Layer Stack			
Layer	Board Layer Stack	Name	Material	Thickness	Constant
1		Top Paste			
2		Top Overlay			
3	  	Top Solder	Solder Resist	0,015mm	3,5
4	  	Top Layer	Copper	0,035mm	
5		Dielectric 1	FR-4	1,500mm	4,8
6	  	Bottom Layer	Copper	0,035mm	
7		Bottom Solder	Solder Resist	0,015mm	3,5
8		Bottom Overlay			
9		Bottom Paste			
	Height : 1,600mm				



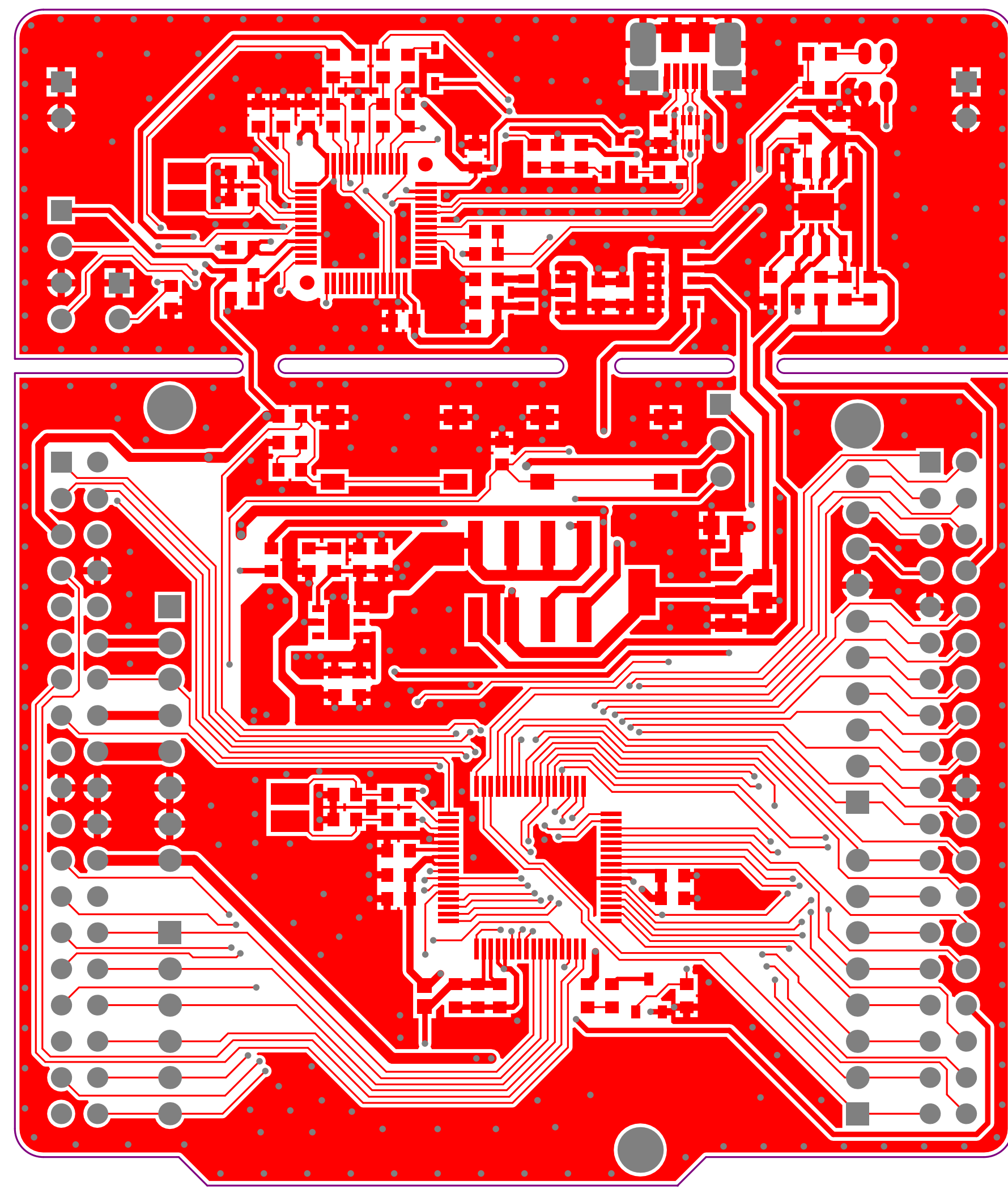
Top Overlay

.GTO



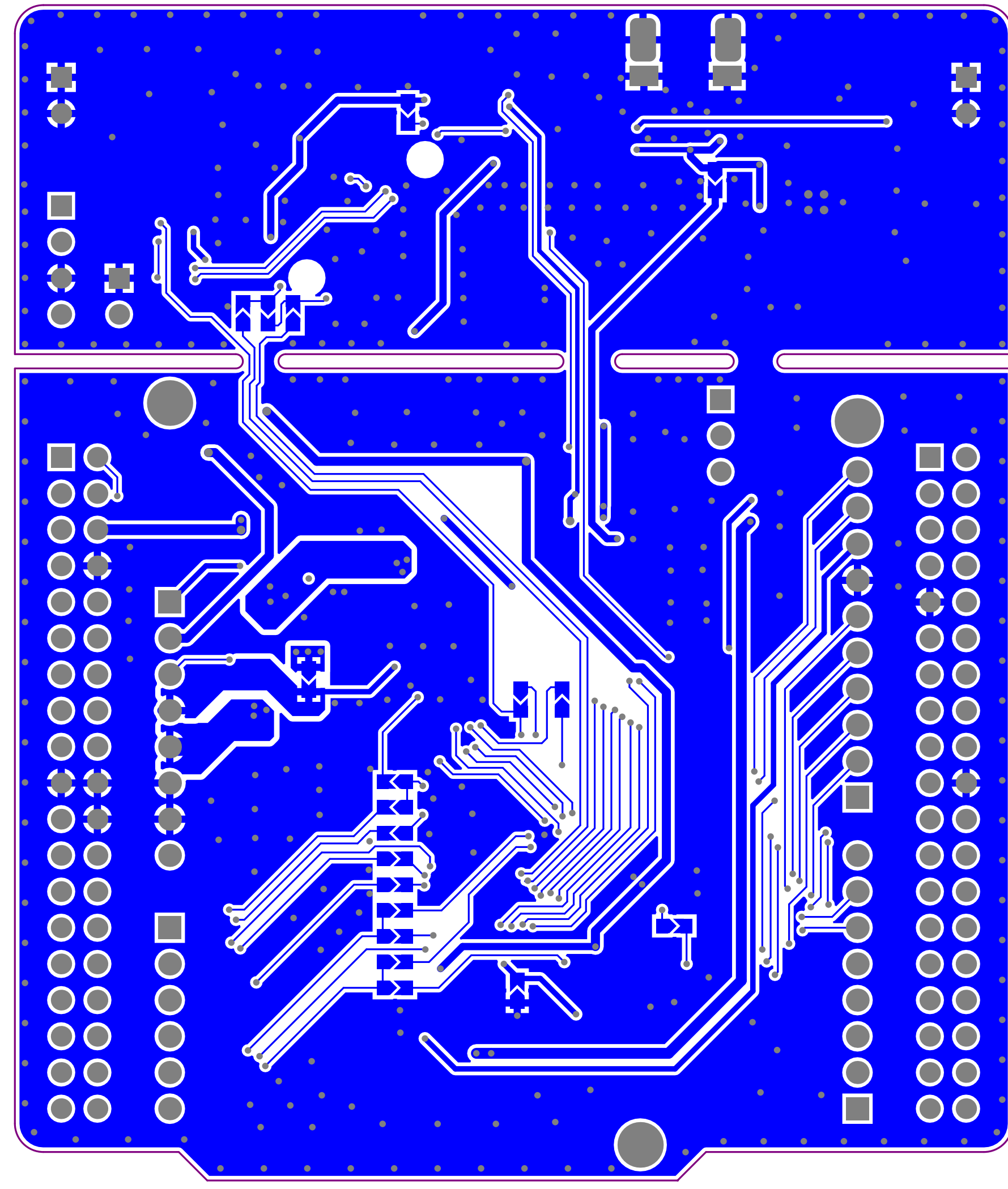
Top Solder

.GTS

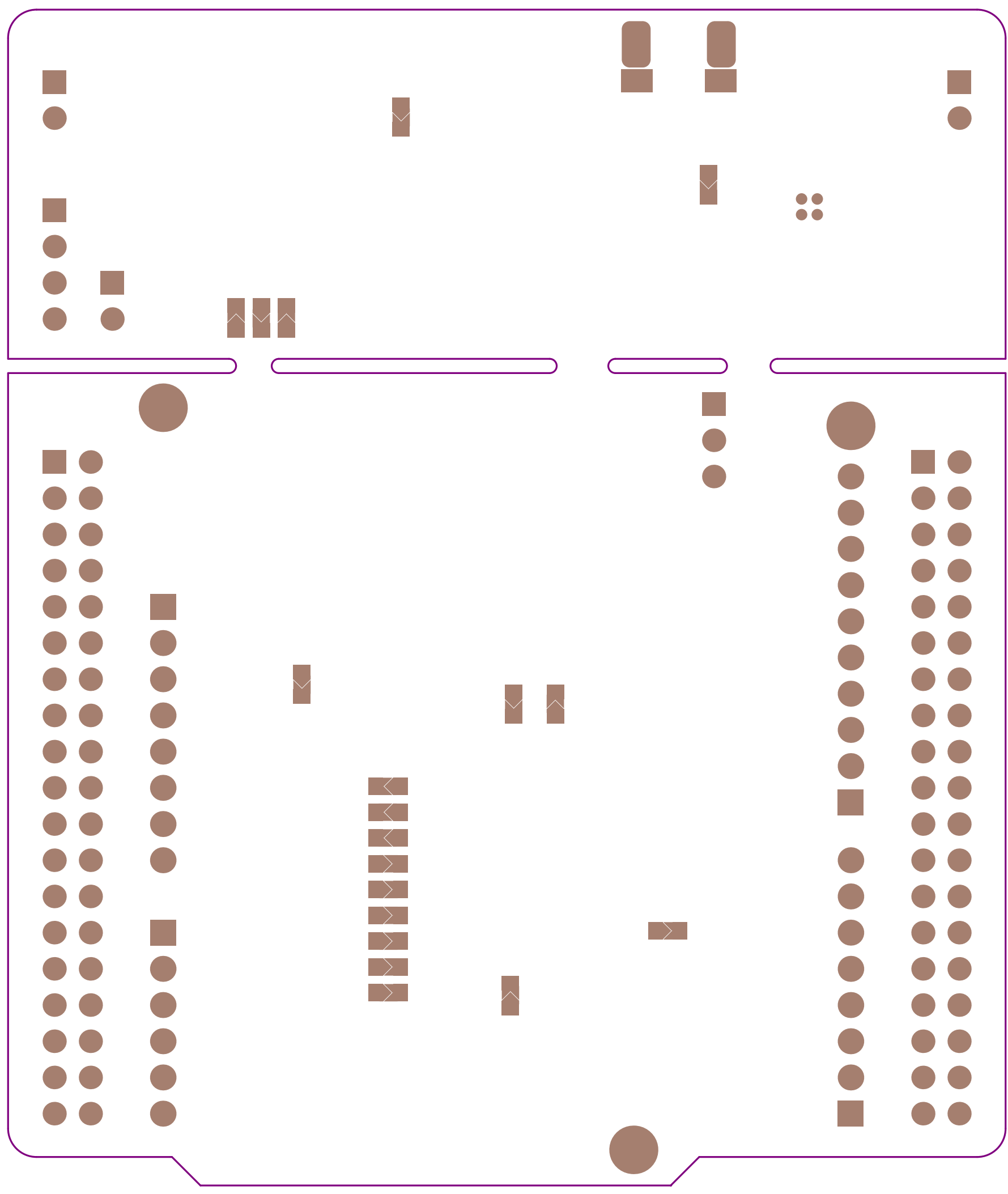


Top Layer

.GTL



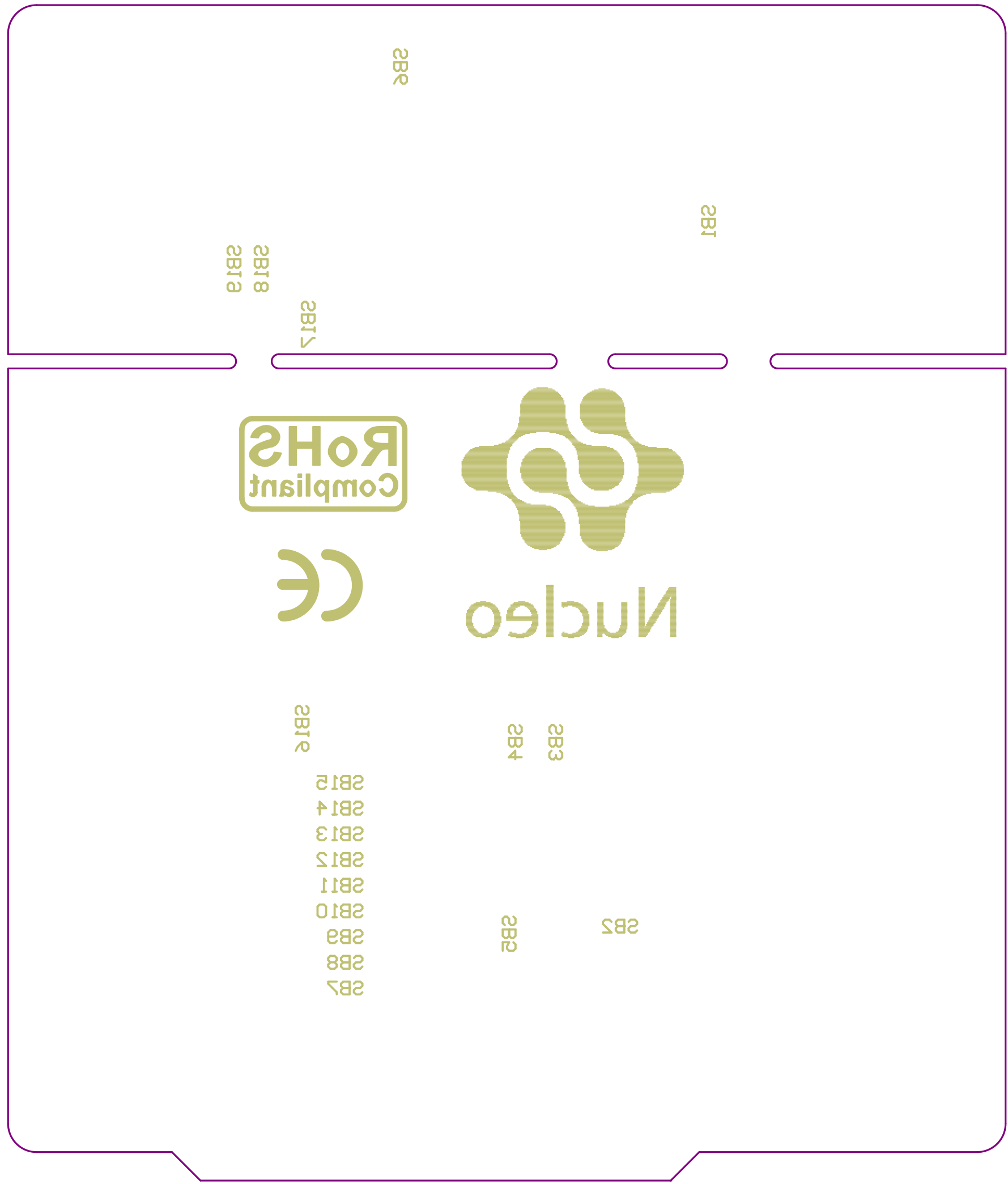
Bottom Layer  
.GBL



Bottom Solver

.GB2





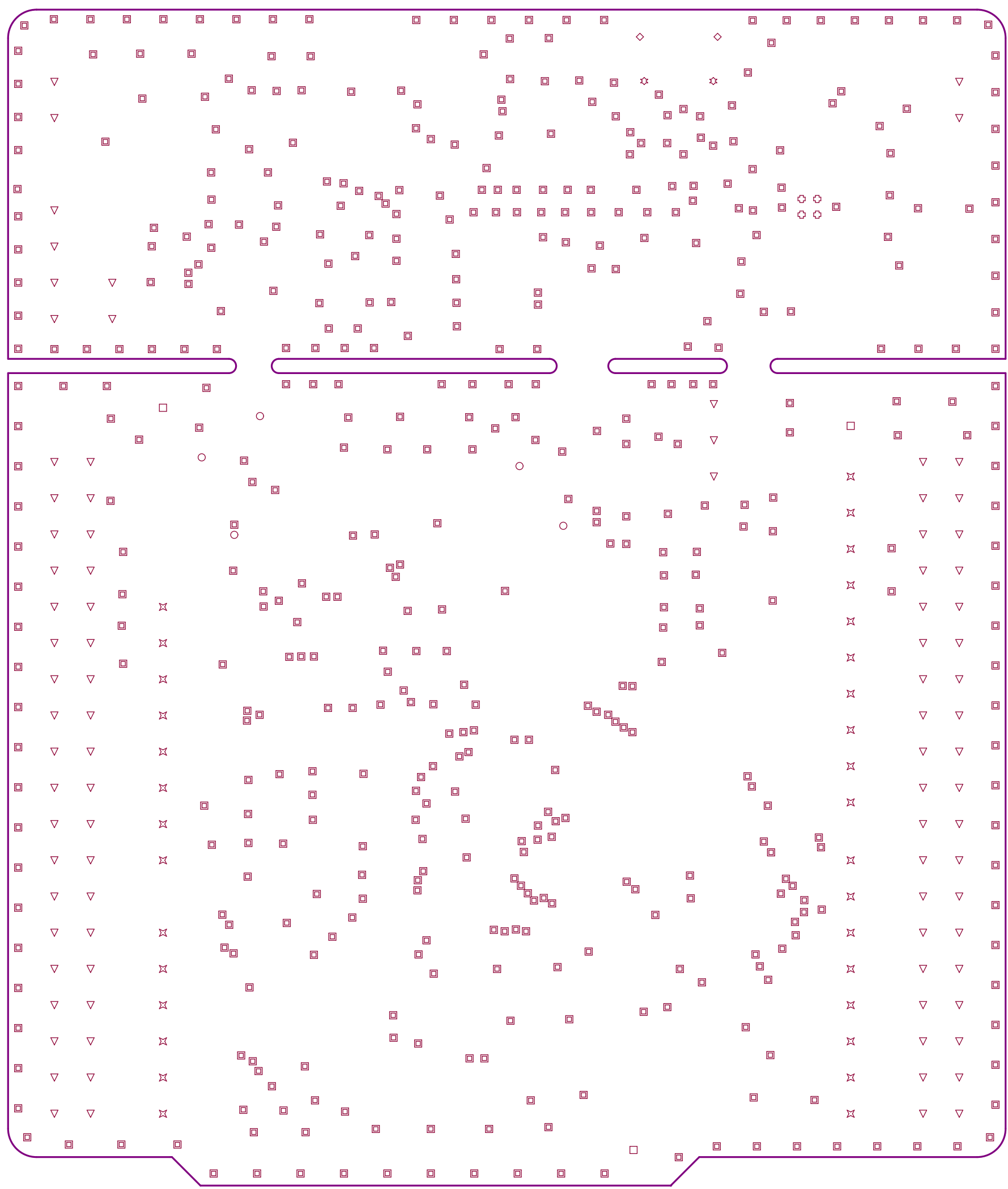
Bottom Overview

GBO

LAYERS LAMINATION & IMPENDANCE CONTROL

LAYERS STACKUP	IMPEDANCE						
	LAYER	MATERIAL	THICKNESS	LAYER TYPE	SINGLE 50ohm+/-10% Line width(mil)	DIFFERENCE 90ohm+/-10% Line width/Space(mil)	DIFFERENCE 100ohm+/-10% Line width/Space(mil)
	TOP	COPPER	1 OZ	ROUTING	5mil	mil	mil
	PREPREG	FR4	4.3mil				
BOTTOM	PREPREG	FR4	4.3mil				
	BOTTOM	COPPER	1 OZ	PLANE	5mil		

THE TOTAL THICKNESS: 1.6MM+/-10%



Drill Drawing

.DRL

Symbol	Count	Hole Size	Plated	Hole Type	Hole Length
⊕	4	7,87mil (0,200mm)	PTH	Round	-
■	508	10,00mil (0,254mm)	PTH	Round	-
○	5	12,00mil (0,305mm)	PTH	Round	-
✱	2	23,62mil (0,600mm)	PTH	Slot	41,34mil (1,050mm)
◇	2	23,62mil (0,600mm)	PTH	Slot	47,24mil (1,200mm)
▽	89	37,40mil (0,950mm)	PTH	Round	-
⌘	32	40,16mil (1,020mm)	PTH	Round	-
□	3	125,98mil (3,200mm)	NPTH	Round	-
645 Total					

Slot definitions : Routed Path Length = Calculated from tool start centre position to tool end centre position.  
Hole Length = Routed Path Length + Tool Size = Slot length as defined in the PCB layout

REVISIONS

REV	ACTION	DATE	AUTH
A	First release	2017/05/25	Amy Kuang
C	second release	2017/09/05	Amy Kuang

NOTE

1. ACCEPTABILITY:  
PRINTED WIRING BOARD SHALL MEET THE REQUIREMENTS OF IPC- 6012C CLASS 2.
2. MATERIAL:  
GLASS EPOXY FR-4 FIRE RETARDANT AND UL 94V-0 RATING MATERIAL SHOULD MEET IPC-4101C
3. FABRICATION REQUIREMENTS:  
A). FAB TO MEET THE REQUIREMENTS PER IPC-A-600, CLASS 2  
B). ALL ARTWORK OR ELECTRONIC DATA MAY BE ADJUSTED BY THE BOARD MANUFACTURER TO COMPENSATE FOR MANUFACTURING PROCESS TOLERANCES, ADDITION OF FILLETS TEARDROPS AT LINE / PAD INTERFACE IS PREFERRED. THIEVING IS ALLOWED TO COMPENSATE FOR HIGH COPPER DENSITY AREAS  
C). FABRICATE ACCORDING TO THE FILES PART NO: 1001001000656\_STM8S\_GERBER\_RevC FILE FOR MANUFACTURING  
D). SOLDER MASK COLOR: WHITE,SILKSCREEN COLOR: BLUE INK PANTONE 2955  
E). FINISH: ENIG
4. FABRICATION TOLERANCE:  
A). WIRE WIDTH TOLERANCE: INTERNAL CONTROL STANDARD +/-20%  
B). PTH DIAMETER TOLERANCE: +/-0.076mm,NPTH DIAMETER TOLERANCE: +/-0.05mm  
C). ALL OUTER LAYER PADS REQUIRE +/-0.05mm TOLERANCE.  
D). LAYER REGISTRATION BETWEEN ADJACENT LAYER: MAXIMUM 150um, THE INTERLAYER DIELECTRIC THICKNESS TOLERANCE: +/-15%  
E). THICKNESS IS LESS THAN 1mm: PCB TO A TOLERANCE OF +/-0.1mm,THICKNESS IS GREATER THAN OR EQUAL TO 1mm: PCB TO A TOLERANCE OF +/-10%
5. SOLDER MASK:  
A). MATERIALS IN ACCORDANCE WITH IPC-SM-840E CLASS T STANDARDS AND ROHS REQUIREMENTS  
B). SOLDER MASK BOTH PRIMARY AND SECONDARY SIDES, THE ADHESION OF SOLDER MASK MEET THE REQUIREMENTS OF IPC-A-600F LEVEL 2  
C). SOLDER MASK COVERAGE ON THE MIDDLE OF THE COPPER WIRE: MINIMUM 10um,EDGE COVERAGE OF THE COPPER WIRE: MINIMUM 4um, SOLDER MASK MISREGISTRATION: MAXIM 2.5mil  
D). ALL HOLES WITH SOLDER MASK COVERED IN THE GERBER SHOULD BE PULGED  
E). SOLDER MASK BRIDGE BETWEEN PADS SHOULD BE MINIMUM 0.10mm
6. FINISH:  
A). ENIG, GOLD THICKNESS IS 0.05 um ~0.23um,NICKEL THICKNESS IS 3 um ~6 um.  
B). OSP, THE OSP COATING THICKNESS IS 0.2 um ~0.5um.  
C). LF HASL, Sn THICKNESS IS 1 um ~40um .
7. SILKSCREEN:  
A). PRIMARY AND SECONDARY SIDES USING A GLOSSY , NON-CONDUCTIVE, RoHS COMPLIANT, EPOXY BASED INK  
B). NO SILKSCREEN ALLOWED ON PADS OR IN HOLES  
C). MANUFACTUREERS CAN ADD SYMBOL IN SILKSCREEN LAYER OR SOLDER MASK LAYER, ALLOW TO INCREASE SYMBOL :ASSEMBLY REF , DATE CODE, LEAD-FREE SYMBOL, UL FILE NUMBER,UL TYPE, UL SYMBOL AND FIRE RATING,NO LIST DOES NOT ALLOW TO INCREASE.
8. BOW AND TWIST:  
MAX BOW & TWIST OF PCB SHALL NOT EXCEED 0.75% OF MAXIMUM DIMENSION, MEASUREMENT METHOD IN 2.4.22 OF IPC-TM-650 IS FOR REFERENCE
9. MEASUREMENTS:  
INTERPRET ALL DIMENSIONS AND TOLERANCES PER IPC-D-300G, CLASS B AND ALL DIMENSIONS ARE METRIC, DIMENSIONS ARE AFTER ETCHING AND PLATING.
- 10.ENVIRONMENTAL:  
THE PCB SUPPLIER SHALL PROVIDE A SIGNED CERTIFICATE OF COMPLIANCE BY AUTHORIZED QA REPRESENTATIVE. THE BASE MATERIAL OF PCB SHALL NOT CONTAIN THE BANNED SUBSTANCES LISTED IN THE CERTIFICATE OF COMPLIANCE.

Embest Technology co.,Ltd.

TITLE: STM8S	
PART NUMBER: 1001001000656	ELEC ENGR: Andy Meng
ADD: www.embest-tech.com	REV: C
	DATE: 2017/09/05