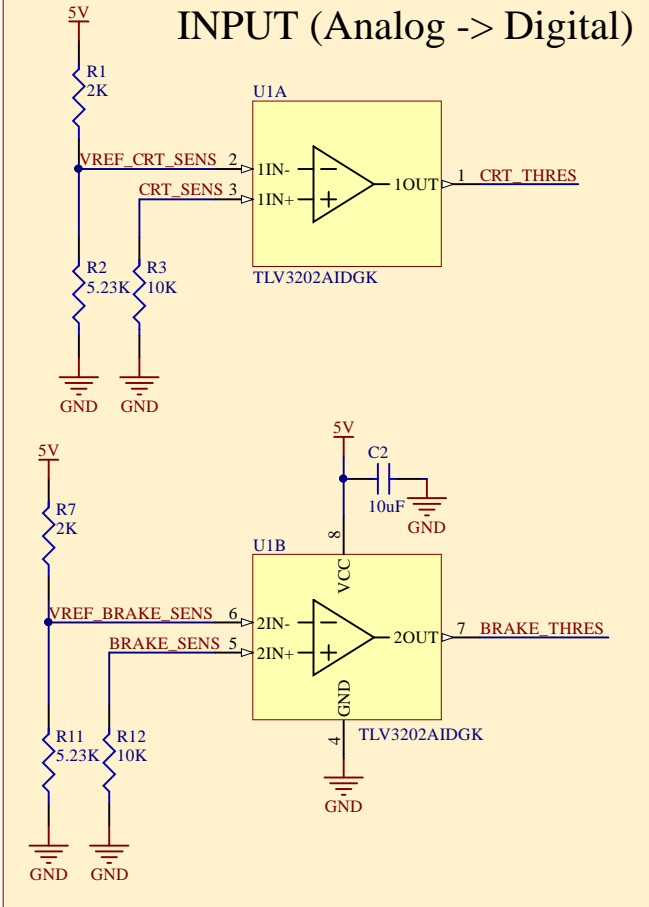
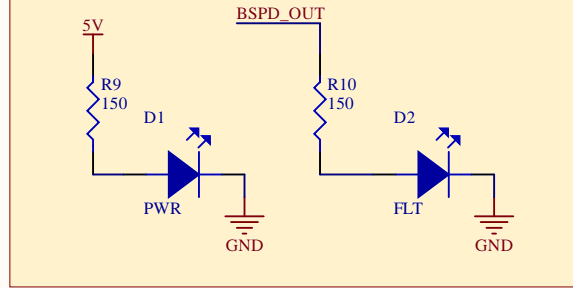


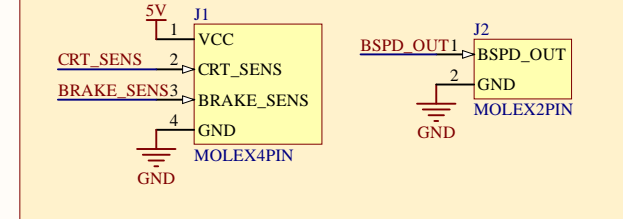
INPUT (Analog -> Digital)



LEDs

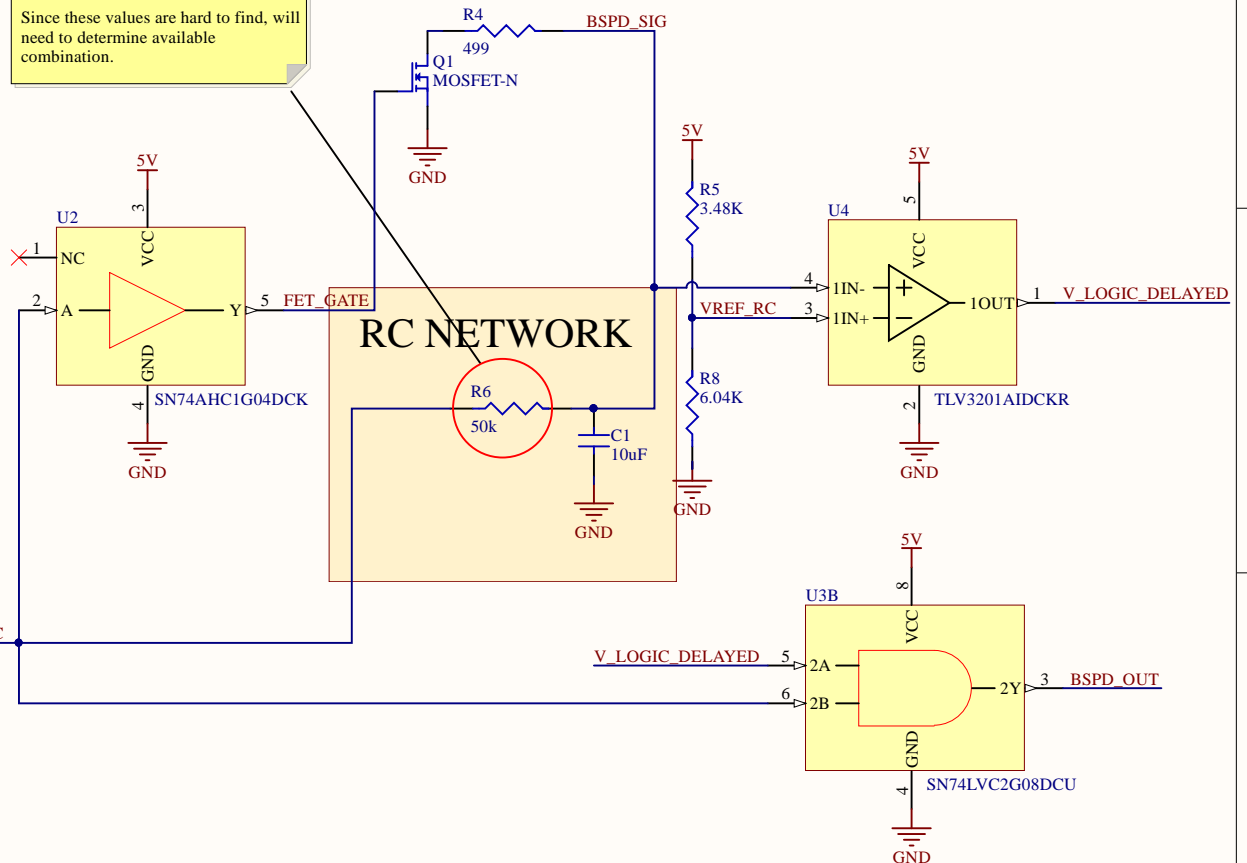


HEADERS



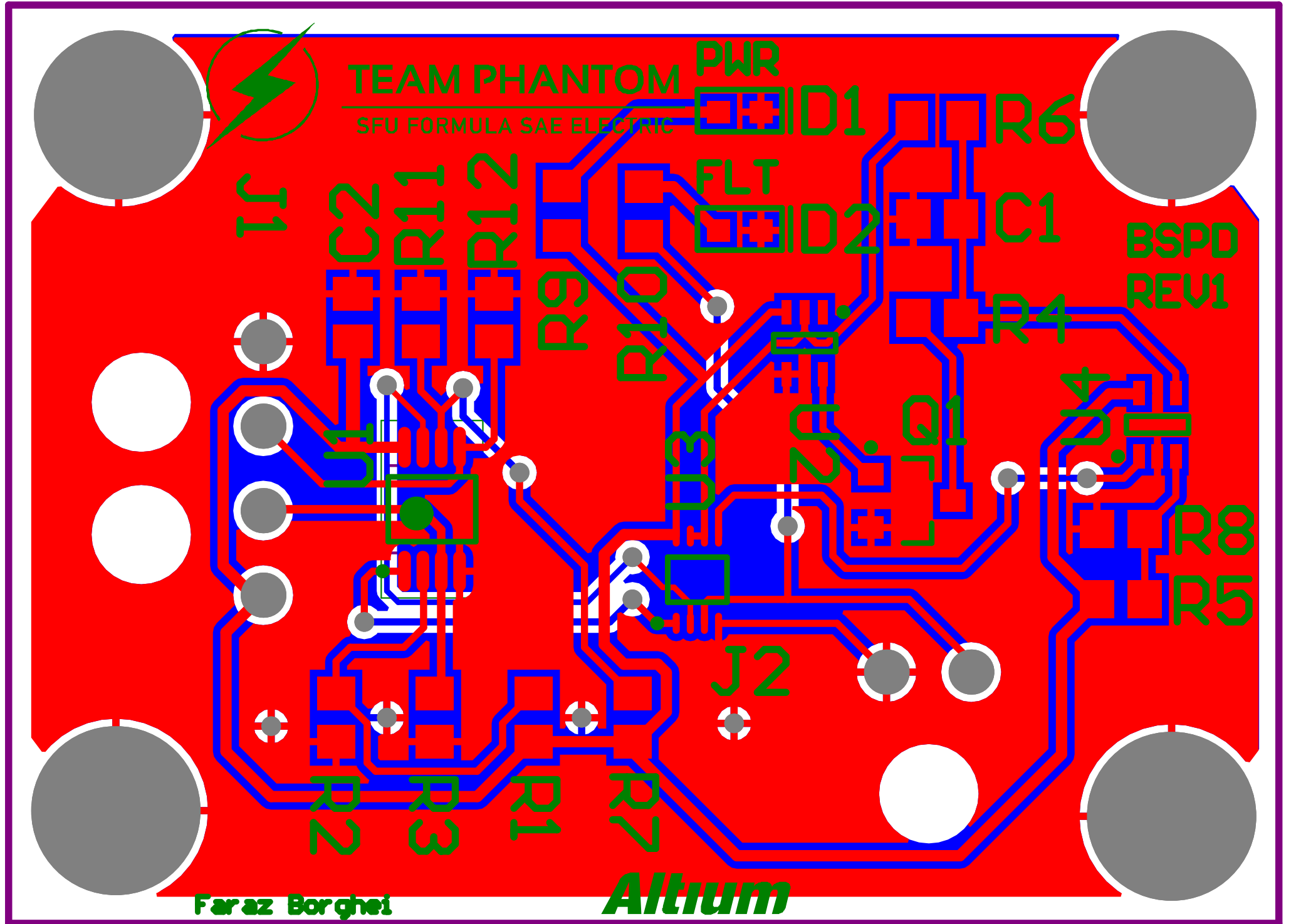
Want $\tau = 0.5s$ therefore $R \cdot C$ needs to equal 0.5.
e.x. If $C = 10\mu F$ then $R = 50k$
Since these values are hard to find, will need to determine available combination.

RC NETWORK



45 (mm)

32.6 (mm)



45 (mm)



TEAM PHANTOM
SFU FORMULA SAE ELECTRIC

PWR



D1



R6

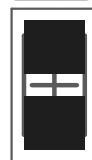
J1



C2



Q11



Q12



R9



R10

FLT

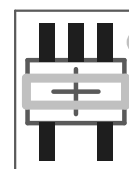


D2



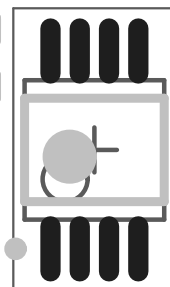
C1

BSPD
REV1

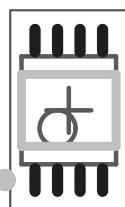


R4

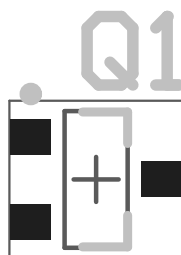
U1



U3



U2



Q1

U4



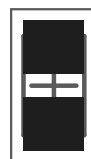
R8



R5



R2



R3



R1



R7

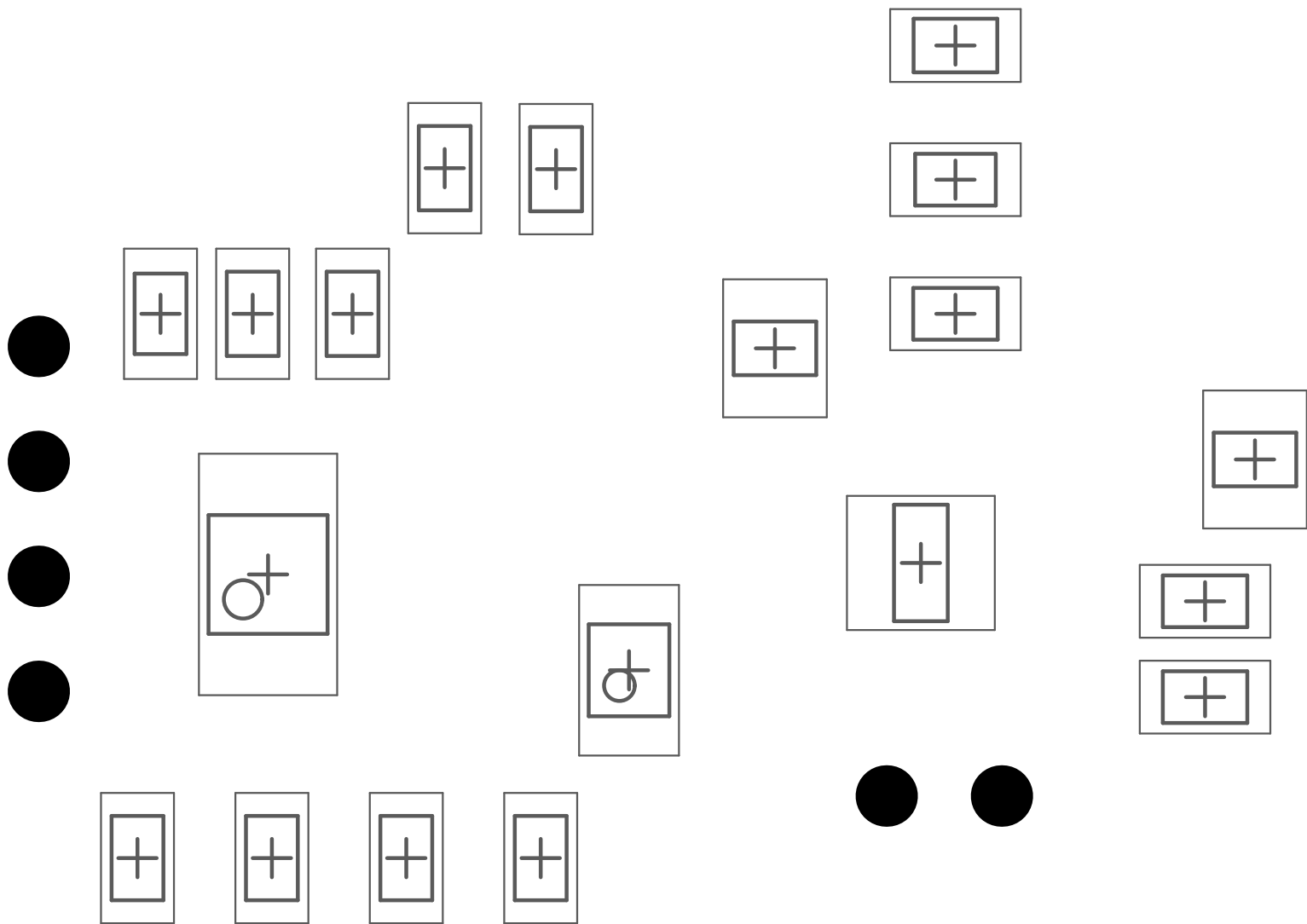
J2



Faraz Borghai

Altium

32.6 (mm)



Design Rules Verification Report

Filename : C:\Users\Faraz\Documents\SFU\Team Phantom\hardware\BSPD\BSPD.P
cbDoc

Warnings 0
Rule Violations 0
Waived Violations 10

Warnings

Total	0
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Rule Violations

Clearance Constraint (Gap=0.254mm) (All),(All)	0
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Un-Routed Net Constraint ((All))	0
Un-Connected Pin Constraint ((Disabled)(All))	0
Modified Polygon (Allow modified: No), (Allow shelved: No)	0
Width Constraint (Min=0.2mm) (Max=1mm) (Preferred=0.254mm) (All)	0
Power Plane Connect Rule(Relief Connect)(Expansion=0.508mm) (Conductor Width=0.254mm)	0
Hole Size Constraint (Min=0.025mm) (Max=5mm) (All)	0
Hole To Hole Clearance (Gap=0.254mm) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0.1mm) (All),(All)	0
Silk To Solder Mask (Clearance=0.2mm) (IsPad),(All)	0
Silk to Silk (Clearance=0.254mm) (All),(All)	0
Net Antennae (Tolerance=0mm) (All)	0
Height Constraint (Min=0mm) (Max=25.4mm) (Preferred=12.7mm) (All)	0
Total	0

Waived Violations

Minimum Solder Mask Sliver (Gap=0.1mm) (All),(All)	10
Total	10

Minimum Solder Mask Sliver (Gap=0.1mm) (All),(All)

Minimum Solder Mask Sliver Constraint: (0.097mm < 0.1mm) Between Pad U2-1(31.25mm,21.7mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.097mm < 0.1mm) Between Pad U2-2(30.6mm,21.7mm) on Top Layer And Pac
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U3-1(26.05mm,10.65mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U3-2(26.55mm,10.65mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U3-3(27.05mm,10.65mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U3-5(27.55mm,13.75mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U3-6(27.05mm,13.75mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U3-7(26.55mm,13.75mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U4-1(42.45mm,16.575mm) on Top Layer Anc
Minimum Solder Mask Sliver Constraint: (0.047mm < 0.1mm) Between Pad U4-2(43.1mm,16.575mm) on Top Layer Anc