

▲ Voltage ref = 1.533V
Actual volt ref = 1.6238V

▲ Max Current Draw from AUX = 8.22A (ref pwr budget sheet)
Recomanded fuse rating >= 10.22A (8.22/0.8)

▲ AUX_ISENSE = mV/A
Isense Max Current = 20A
AUX Current limit SHDN = 10.22A
Actual AUX Current Max = 40A
Actual current limit = 10.83A

Aux Battery Voltage Sense

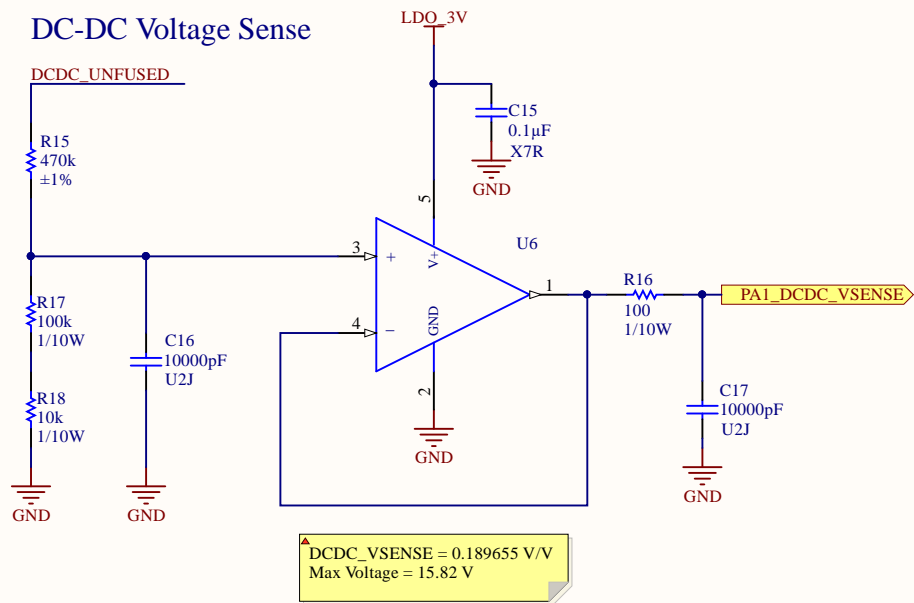
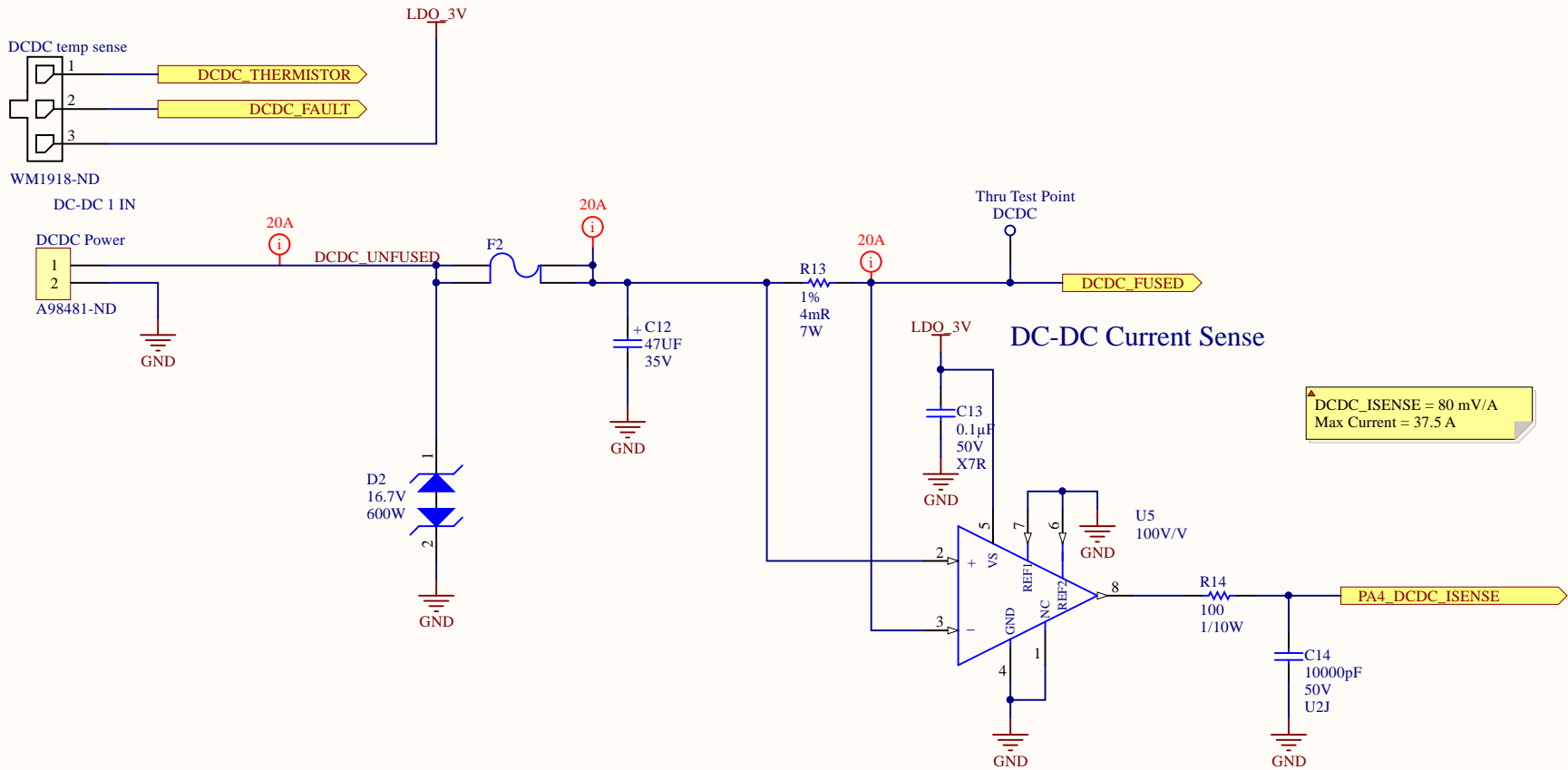
▲ AUX_VSENSE = 0.189655 V/V
Max Voltage = 15.82 V

PROJECT	MSXIV_PowerSelection.PrjPcb	
DOCUMENT	Title	
PART NUMBER	VARIANT	[No Variations]
DRAWN BY	REVISION	
LAST MODIFIED	2020-04-04	SHEET * OF *

MIDNIGHT

SUN

Engineering 5 - 1002
University of Waterloo
(519) 888-4567 x32978
hardware@uwmidsun.com



PROJECT	MSXIV_PowerSelection.PrjPcb	
DOCUMENT	Title	
PART NUMBER	VARIANT	[No Variations]
DRAWN BY	REVISION	
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▲ Change connector to avoid wire parraleling
-Megafit
-Sabre

▲ Add current and voltage sense for power supple channel

▲ Ask for ideal diode placement, after or before fuse

▲ PWR_Supply_ISENSE = 80 mV/A
Max Current = 37.5 A

▲ DCDC_VSENSE = 0.189655 V/V
Max Voltage = 15.82 V

Power Supply Voltage Sense

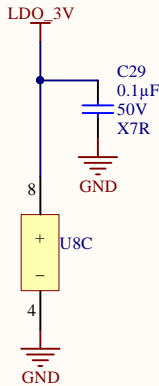
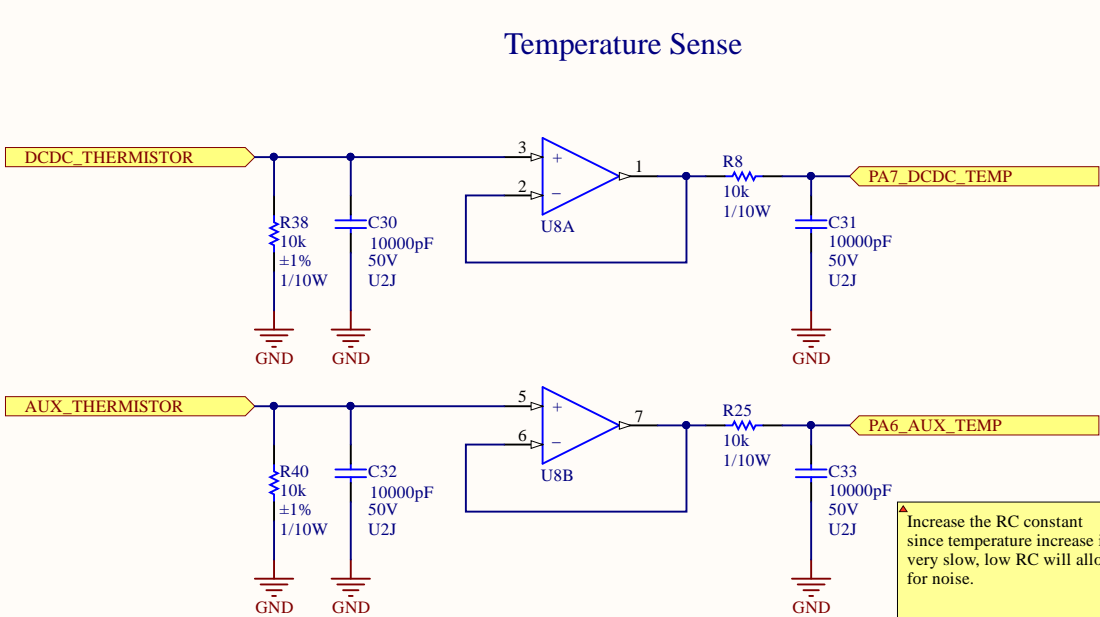
Power Supply Current Sense

PROJECT		MSXIV_PowerSelection.PrjPcb	
DOCUMENT		Title	
PART NUMBER		VARIANT	[No Variations]
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LAST MODIFIED		2020-04-04	SHEET * OF *



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Temperature Sense



▲ Beaware that there will be two general purpose amp as dedc and aux both uses this design, please make sure does this part belong in main schematic or stays here.

▲ Increase the RC constant since temperature increase is very slow, low RC will allow for noise.

▲ Ask if the buffer needed?

PROJECT MSXIV_PowerSelection.PrjPcb	
DOCUMENT Title	
PART NUMBER	VARIANT [No Variations]
DRAWN BY	REVISION
LAST MODIFIED 2020-04-04	SHEET * OF *

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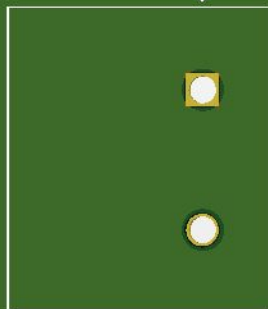
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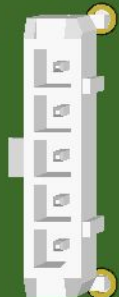
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Project:	MSXIV_PowerSelection.PrjPcb
Revision:	<Parameter ProjectRevision not found>
Project Lead:	<Parameter ProjectAuthor not found>
Generated On:	2020-04-04 8:41 PM
Production Quantity:	1
Currency	CAD
Total Parts Count:	123

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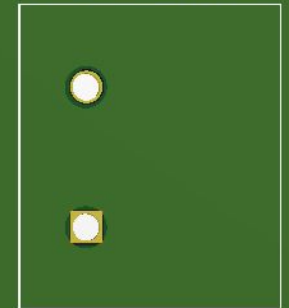
DCDC Power



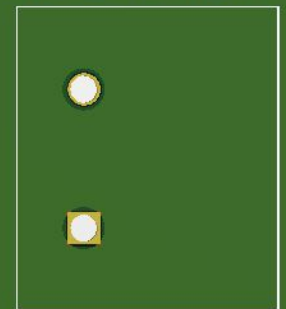
AUX Power



Front Power Distribution



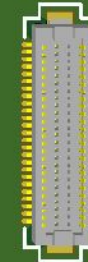
Rear Power Distribution



M3



P1



M4



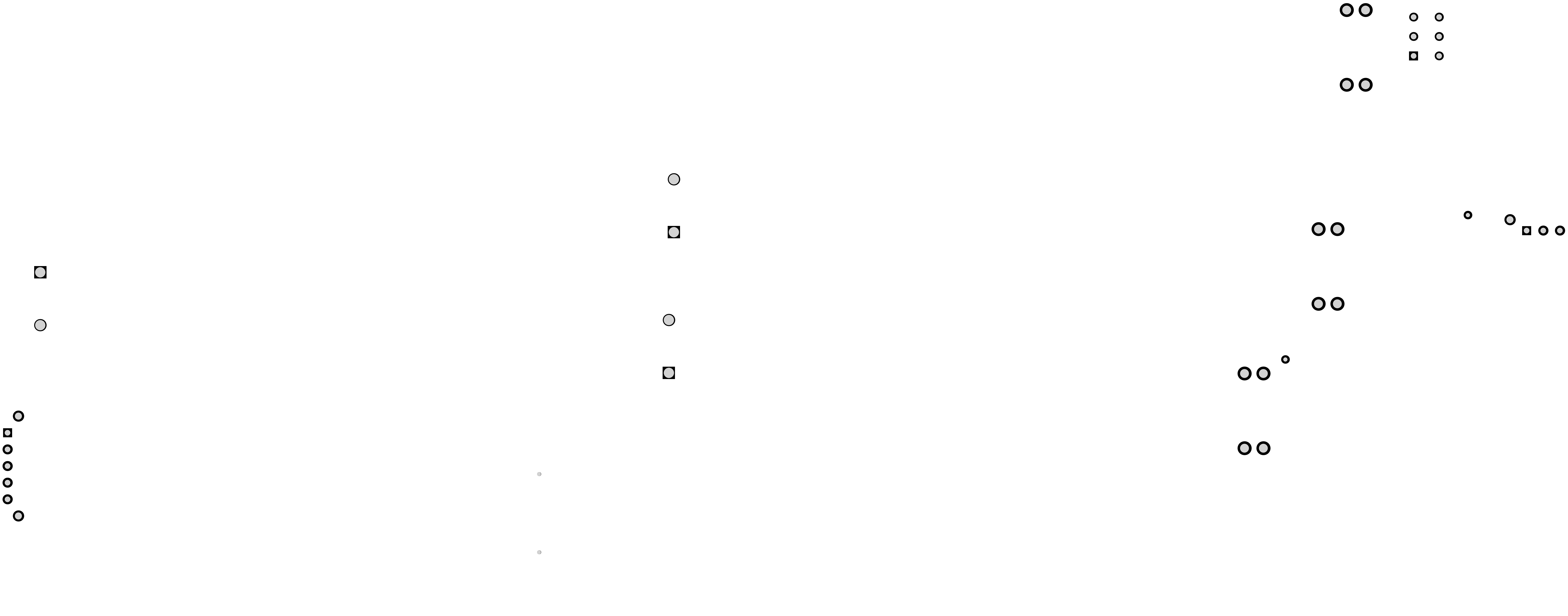
M1



M2







Design Rules Verification Report

Filename : D:\Josh9\Documents\Midnight Sun\hardware\MSXIV_PowerSelection\Power Sel

Warnings 0
Rule Violations 474

Warnings	
Total	0

Rule Violations	
Clearance Constraint (Gap=0.254mm) (All),(All)	0
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Un-Routed Net Constraint (All)	317
Modified Polygon (Allow modified: No), (Allow shelved: No)	0
Width Constraint (Min=0.254mm) (Max=0.254mm) (Preferred=0.254mm) (All)	0
Hole Size Constraint (Min=0.025mm) (Max=2.54mm) (All)	4
Hole To Hole Clearance (Gap=0.254mm) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0.254mm) (All),(All)	10
Silk To Solder Mask (Clearance=0.254mm) (IsPad),(All)	143
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	474

Un-Routed Net Constraint (All)
Un-Routed Net Constraint: Net 3V3 Between Pad C1-1(190.714mm,22.733mm) on Top Layer And Pad 3V3-TP(203.327mm,22.987mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad 3V3-TP(203.327mm,22.987mm) on Top Layer And Pad U1-1(219.957mm,22.413mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad AUX Power-1(10.1mm,33.9mm) on Multi-Layer And Pad DCDC Power-2(16mm,53.3mm) on Multi-Layer
Un-Routed Net Constraint: Net GND Between Pad AUX Power-1(10.1mm,33.9mm) on Multi-Layer And Pad P1-29(105.6mm,14.9mm) on Top Layer
Un-Routed Net Constraint: Net NetAUX Power_2 Between Pad AUX Power-2(10.1mm,30.9mm) on Multi-Layer And Pad R40-1(154.432mm,121.78mm) or
Un-Routed Net Constraint: Net AUX_BAT_IN Between Pad AUX Power-4(10.1mm,24.9mm) on Multi-Layer And Pad AUX Power-3(10.1mm,27.9mm) or
Un-Routed Net Constraint: Net AUX_BAT_IN Between Pad AUX Power-3(10.1mm,27.9mm) on Multi-Layer And Pad R9-1(186.931mm,47.244mm) on Top
Un-Routed Net Constraint: Net LDO_3V Between Pad AUX Power-5(10.1mm,21.9mm) on Multi-Layer And Pad C2-1(199.096mm,22.733mm) on Top Layer
Un-Routed Net Constraint: Net AUX_FUSED Between Pad R3-2(228.346mm,46.527mm) on Top Layer And Pad AUX-TH_TP(240.411mm,47.117mm) or
Un-Routed Net Constraint: Net NetC10_1 Between Pad C10-1(165.227mm,45.934mm) on Top Layer And Pad R11-1(170.675mm,47.244mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C11-2(161.33mm,47.117mm) on Top Layer And Pad C10-2(165.227mm,47.284mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C10-2(165.227mm,47.284mm) on Top Layer And Pad U4-2(181.378mm,45.847mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad P1-45(105.6mm,22.9mm) on Top Layer And Pad C1-1(190.714mm,22.733mm) on Top Layer
Un-Routed Net Constraint: Net PA0_AUX_VSENSE Between Pad P1-25(109.2mm,13.4mm) on Top Layer And Pad C11-1(159.98mm,47.117mm) on Top
Un-Routed Net Constraint: Net PA0_AUX_VSENSE Between Pad C11-1(159.98mm,47.117mm) on Top Layer And Pad R10-2(175.768mm,47.257mm) or
Un-Routed Net Constraint: Net GND Between Pad R12-2(154.432mm,47.257mm) on Top Layer And Pad C11-2(161.33mm,47.117mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C1-2(192.064mm,22.733mm) on Top Layer And Pad C3-2(196.128mm,22.733mm) on Top Layer
Un-Routed Net Constraint: Net NetC12_1 Between Pad C12-1(228.6mm,65.249mm) on Top Layer And Pad R13-1(238.76mm,60.325mm) on Top Layer
Un-Routed Net Constraint: Net NetC12_1 Between Pad U5-2(211.216mm,67.31mm) on Top Layer And Pad C12-1(228.6mm,65.249mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C13-2(219.456mm,73.319mm) on Top Layer And Pad C12-2(228.6mm,71.149mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C12-2(228.6mm,71.149mm) on Top Layer And Pad U7-13(252.915mm,81.09mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C13-1(219.456mm,71.969mm) on Top Layer And Pad DCDC temp sense-3(289.893mm,70.358mm)
Un-Routed Net Constraint: Net LDO_3V Between Pad U5-5(212.516mm,73.11mm) on Top Layer And Pad C13-1(219.456mm,71.969mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C25-2(218.567mm,88.559mm) on Top Layer And Pad C13-2(219.456mm,73.319mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad D2-2(215.773mm,72.644mm) on Top Layer And Pad C13-2(219.456mm,73.319mm) on Top Layer
Un-Routed Net Constraint: Net PA4_DCDC_ISENSE Between Pad P1-21(109.2mm,15.4mm) on Top Layer And Pad C14-1(199.136mm,71.969mm) on Top
Un-Routed Net Constraint: Net PA4_DCDC_ISENSE Between Pad C14-1(199.136mm,71.969mm) on Top Layer And Pad R14-2(204.724mm,73.292mm)
Un-Routed Net Constraint: Net GND Between Pad C15-2(193.548mm,73.319mm) on Top Layer And Pad C14-2(199.136mm,73.319mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R29-2(196.596mm,88.532mm) on Top Layer And Pad C14-2(199.136mm,73.319mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C14-2(199.136mm,73.319mm) on Top Layer And Pad U5-7(211.216mm,73.11mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C15-1(193.548mm,71.969mm) on Top Layer And Pad C34-1(194.564mm,111.466mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C15-1(193.548mm,71.969mm) on Top Layer And Pad U5-5(212.516mm,73.11mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad U6-5(185.144mm,72.832mm) on Top Layer And Pad C15-1(193.548mm,71.969mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U6-2(182.394mm,71.882mm) on Top Layer And Pad C15-2(193.548mm,73.319mm) on Top Layer
Un-Routed Net Constraint: Net NetC16_1 Between Pad C16-1(165.735mm,71.969mm) on Top Layer And Pad R17-1(171.196mm,71.742mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C17-2(160.147mm,73.319mm) on Top Layer And Pad C16-2(165.735mm,73.319mm) on Top Layer
Un-Routed Net Constraint: Net PA1_DCDC_VSENSE Between Pad P1-24(109.2mm,13.9mm) on Top Layer And Pad C17-1(160.147mm,71.969mm) or
Un-Routed Net Constraint: Net PA1_DCDC_VSENSE Between Pad C17-1(160.147mm,71.969mm) on Top Layer And Pad R16-2(176.784mm,73.292mm)
Un-Routed Net Constraint: Net GND Between Pad R18-2(154.432mm,73.292mm) on Top Layer And Pad C17-2(160.147mm,73.319mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad C18-1(415.925mm,87.209mm) on Top Layer And Pad Q6-1(427.863mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q9-3(405.003mm,82.55mm) on Top Layer And Pad C18-1(415.925mm,87.209mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C18-2(415.925mm,88.559mm) on Top Layer And Pad C19-2(421.513mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C20-2(355.727mm,88.559mm) on Top Layer And Pad C18-2(415.925mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q11-3(412.115mm,82.55mm) on Top Layer And Pad C19-1(421.513mm,87.209mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad C19-1(421.513mm,87.209mm) on Top Layer And Pad Q8-1(434.975mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad C20-1(355.727mm,87.209mm) on Top Layer And Pad Q14-1(362.331mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q15-3(334.899mm,82.55mm) on Top Layer And Pad C20-1(355.727mm,87.209mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C9-2(302.212mm,83.693mm) on Top Layer And Pad C20-2(355.727mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C2-1(199.096mm,22.733mm) on Top Layer And Pad LDO_3V-TP(209.169mm,22.733mm) on Top
Un-Routed Net Constraint: Net VBAT Between Pad C38-1(344.551mm,87.209mm) on Top Layer And Pad C21-1(350.353mm,88.392mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad C21-1(350.353mm,88.392mm) on Top Layer And Pad Q13-6(371.983mm,88.04mm) on Top Layer
Un-Routed Net Constraint: Net VG_3 Between Pad C21-2(351.703mm,88.392mm) on Top Layer And Pad Q14-4(366.141mm,82.55mm) on Top Layer

Un-Routed Net Constraint (All)
Un-Routed Net Constraint: Net VG_3 Between Pad Q15-4(336.169mm,82.55mm) on Top Layer And Pad C21-2(351.703mm,88.392mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C3-2(196.128mm,22.733mm) on Top Layer And Pad C2-2(200.446mm,22.733mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C2-2(200.446mm,22.733mm) on Top Layer And Pad U1-2(219.957mm,21.463mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C2-2(200.446mm,22.733mm) on Top Layer And Pad U3-1(204.47mm,41.275mm) on Top Layer
Un-Routed Net Constraint: Net NetC22_1 Between Pad C22-1(164.719mm,87.209mm) on Top Layer And Pad R5-1(170.421mm,88.519mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C22-2(164.719mm,88.559mm) on Top Layer And Pad C27-2(174.879mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R7-2(161.811mm,88.519mm) on Top Layer And Pad C22-2(164.719mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad U2-5(214.294mm,112.607mm) on Top Layer And Pad C23-1(227.076mm,111.466mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R42-2(221.107mm,112.789mm) on Top Layer And Pad C23-2(227.076mm,112.816mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad C24-1(255.905mm,87.209mm) on Top Layer And Pad C6-1(282.877mm,83.693mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad U7-15(252.915mm,82.359mm) on Top Layer And Pad C24-1(255.905mm,87.209mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C24-2(255.905mm,88.559mm) on Top Layer And Pad C6-2(288.877mm,83.693mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C24-2(255.905mm,88.559mm) on Top Layer And Pad Power Supply -1(263.525mm,101.854mm) or
Un-Routed Net Constraint: Net GND Between Pad U7-13(252.915mm,81.09mm) on Top Layer And Pad C24-2(255.905mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net POWER_SUPLY_FUSED Between Pad C25-1(218.567mm,87.209mm) on Top Layer And Pad
Un-Routed Net Constraint: Net POWER_SUPLY_FUSED Between Pad U2-3(213.644mm,106.807mm) on Top Layer And Pad
Un-Routed Net Constraint: Net GND Between Pad U2-4(214.294mm,106.807mm) on Top Layer And Pad C25-2(218.567mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net DCDC_FUSED Between Pad C26-1(190.881mm,87.209mm) on Top Layer And Pad R24-1(212.598mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C26-2(190.881mm,88.559mm) on Top Layer And Pad R29-2(196.596mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R30-2(180.594mm,88.532mm) on Top Layer And Pad C26-2(190.881mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net AUX_FUSED Between Pad C27-1(174.879mm,87.209mm) on Top Layer And Pad R26-1(202.438mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C27-2(174.879mm,88.559mm) on Top Layer And Pad R30-2(180.594mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net PA5_PWR_SUP_ISENSE Between Pad P1-20(109.2mm,15.9mm) on Top Layer And Pad C28-1(200.406mm,111.466mm)
Un-Routed Net Constraint: Net PA5_PWR_SUP_ISENSE Between Pad C28-1(200.406mm,111.466mm) on Top Layer And Pad
Un-Routed Net Constraint: Net GND Between Pad C34-2(194.564mm,112.816mm) on Top Layer And Pad C28-2(200.406mm,112.816mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C28-2(200.406mm,112.816mm) on Top Layer And Pad U2-7(212.994mm,112.607mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C34-1(194.564mm,111.466mm) on Top Layer And Pad C29-1(204.343mm,122.007mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C29-1(204.343mm,122.007mm) on Top Layer And Pad U2-5(214.294mm,112.607mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C31-2(195.874mm,123.19mm) on Top Layer And Pad C29-2(204.343mm,123.357mm) on Top Layer
Un-Routed Net Constraint: Net NetC30_1 Between Pad C30-1(188.849mm,122.007mm) on Top Layer And Pad DCDC temp
Un-Routed Net Constraint: Net NetC30_1 Between Pad R38-1(182.88mm,121.78mm) on Top Layer And Pad C30-1(188.849mm,122.007mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C30-2(188.849mm,123.357mm) on Top Layer And Pad C31-2(195.874mm,123.19mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R38-2(182.88mm,123.33mm) on Top Layer And Pad C30-2(188.849mm,123.357mm) on Top Layer
Un-Routed Net Constraint: Net PA7_DCDC_TEMP Between Pad P1-18(109.2mm,16.9mm) on Top Layer And Pad C31-1(194.524mm,123.19mm) on Top Layer
Un-Routed Net Constraint: Net PA7_DCDC_TEMP Between Pad C31-1(194.524mm,123.19mm) on Top Layer And Pad R8-2(201.435mm,123.317mm) or
Un-Routed Net Constraint: Net GND Between Pad C34-2(194.564mm,112.816mm) on Top Layer And Pad C31-2(195.874mm,123.19mm) on Top Layer
Un-Routed Net Constraint: Net NetAUX Power_2 Between Pad R40-1(154.432mm,121.78mm) on Top Layer And Pad C32-1(160.401mm,122.007mm) or
Un-Routed Net Constraint: Net NetAUX Power_2 Between Pad C32-1(160.401mm,122.007mm) on Top Layer And Pad U8-5(180.045mm,123.104mm) or
Un-Routed Net Constraint: Net GND Between Pad C32-2(160.401mm,123.357mm) on Top Layer And Pad C33-2(166.243mm,123.357mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R40-2(154.432mm,123.33mm) on Top Layer And Pad C32-2(160.401mm,123.357mm) on Top Layer
Un-Routed Net Constraint: Net PA6_AUX_TEMP Between Pad P1-19(109.2mm,16.4mm) on Top Layer And Pad C33-1(166.243mm,122.007mm) on Top Layer
Un-Routed Net Constraint: Net PA6_AUX_TEMP Between Pad C33-1(166.243mm,122.007mm) on Top Layer And Pad R25-2(171.958mm,123.33mm) or
Un-Routed Net Constraint: Net GND Between Pad C33-2(166.243mm,123.357mm) on Top Layer And Pad R38-2(182.88mm,123.33mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad U9-5(186.414mm,112.329mm) on Top Layer And Pad C34-1(194.564mm,111.466mm) on Top Layer
Un-Routed Net Constraint: Net NetC35_1 Between Pad C35-1(166.243mm,111.466mm) on Top Layer And Pad R33-1(171.958mm,111.239mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C36-2(160.401mm,112.816mm) on Top Layer And Pad C35-2(166.243mm,112.816mm) on Top Layer
Un-Routed Net Constraint: Net PA2_PWR_SUP_VSENSE Between Pad P1-23(109.2mm,14.4mm) on Top Layer And Pad C36-1(160.401mm,111.466mm)
Un-Routed Net Constraint: Net PA2_PWR_SUP_VSENSE Between Pad C36-1(160.401mm,111.466mm) on Top Layer And Pad
Un-Routed Net Constraint: Net GND Between Pad R34-2(154.432mm,112.789mm) on Top Layer And Pad C36-2(160.401mm,112.816mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad C37-1(338.709mm,87.209mm) on Top Layer And Pad C38-1(344.551mm,87.209mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad Q15-5(336.169mm,88.04mm) on Top Layer And Pad C37-1(338.709mm,87.209mm) on Top Layer
Un-Routed Net Constraint: Net VG_1 Between Pad R36-1(307.213mm,86.982mm) on Top Layer And Pad C37-2(338.709mm,88.559mm) on Top Layer

Un-Routed Net Constraint (All)
Un-Routed Net Constraint: Net VG_1 Between Pad C37-2(338.709mm,88.559mm) on Top Layer And Pad TP5-TP(375.666mm,88.646mm) on Top Layer
Un-Routed Net Constraint: Net VG_2 Between Pad R37-1(313.055mm,86.982mm) on Top Layer And Pad C38-2(344.551mm,88.559mm) on Top Layer
Un-Routed Net Constraint: Net VG_2 Between Pad C38-2(344.551mm,88.559mm) on Top Layer And Pad TP6-TP(381.508mm,88.646mm) on Top Layer
Un-Routed Net Constraint: Net NetC4_1 Between Pad C4-1(216.916mm,39.214mm) on Top Layer And Pad R3-1(228.346mm,42.627mm) on Top Layer
Un-Routed Net Constraint: Net NetC4_1 Between Pad U3-2(205.12mm,41.275mm) on Top Layer And Pad C4-1(216.916mm,39.214mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C5-2(210.225mm,47.117mm) on Top Layer And Pad C4-2(216.916mm,45.114mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C4-2(216.916mm,45.114mm) on Top Layer And Pad D1-2(223.901mm,46.609mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C5-1(208.875mm,47.117mm) on Top Layer And Pad LDO_3V-TP(209.169mm,22.733mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad U3-5(206.42mm,47.075mm) on Top Layer And Pad C5-1(208.875mm,47.117mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U3-6(205.77mm,47.075mm) on Top Layer And Pad C5-2(210.225mm,47.117mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C5-2(210.225mm,47.117mm) on Top Layer And Pad U5-1(210.566mm,67.31mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad C6-1(282.877mm,83.693mm) on Top Layer And Pad C9-1(296.212mm,83.693mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad R1-1(280.276mm,22.86mm) on Top Layer And Pad C6-1(282.877mm,83.693mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C6-2(288.877mm,83.693mm) on Top Layer And Pad C9-2(302.212mm,83.693mm) on Top Layer
Un-Routed Net Constraint: Net PA3_AUX_ISENSE Between Pad P1-22(109.2mm,14.9mm) on Top Layer And Pad C7-1(195.54mm,47.117mm) on Top Layer
Un-Routed Net Constraint: Net PA3_AUX_ISENSE Between Pad C7-1(195.54mm,47.117mm) on Top Layer And Pad R6-2(201.435mm,47.244mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C8-2(192.572mm,47.117mm) on Top Layer And Pad C7-2(196.89mm,47.117mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad C7-2(196.89mm,47.117mm) on Top Layer And Pad U3-7(205.12mm,47.075mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad C8-1(191.222mm,47.117mm) on Top Layer And Pad U3-5(206.42mm,47.075mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad U4-5(184.128mm,46.797mm) on Top Layer And Pad C8-1(191.222mm,47.117mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U4-2(181.378mm,45.847mm) on Top Layer And Pad C8-2(192.572mm,47.117mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad C9-1(296.212mm,83.693mm) on Top Layer And Pad Q15-8(334.264mm,85.955mm) on Top Layer
Un-Routed Net Constraint: Net AUX_BAT_IN Between Pad D1-1(223.901mm,42.545mm) on Top Layer And Pad F1-1(233.045mm,31.115mm) or
Un-Routed Net Constraint: Net AUX_BAT_IN Between Pad R9-1(186.931mm,47.244mm) on Top Layer And Pad D1-1(223.901mm,42.545mm) on Top Layer
Un-Routed Net Constraint: Net DCDC_UNFUSED Between Pad D2-1(215.773mm,68.58mm) on Top Layer And Pad F2-1(246.38mm,57.15mm) or
Un-Routed Net Constraint: Net DCDC_UNFUSED Between Pad R15-1(187.96mm,71.742mm) on Top Layer And Pad D2-1(215.773mm,68.58mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U5-6(211.866mm,73.11mm) on Top Layer And Pad D2-2(215.773mm,72.644mm) on Top Layer
Un-Routed Net Constraint: Net NetD3_1 Between Pad D3-1(276.352mm,84.963mm) on Top Layer And Pad R19-2(318.897mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net NetD3_1 Between Pad U7-16(252.915mm,82.995mm) on Top Layer And Pad D3-1(276.352mm,84.963mm) on Top Layer
Un-Routed Net Constraint: Net VG_3 Between Pad D3-2(276.352mm,87.513mm) on Top Layer And Pad R19-1(318.897mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net VG_3 Between Pad TP8-TP(261.62mm,88.646mm) on Top Layer And Pad D3-2(276.352mm,87.513mm) on Top Layer
Un-Routed Net Constraint: Net Power Supply_UNFUSED Between Pad D4-1(217.551mm,108.077mm) on Top Layer And Pad F3-1(251.46mm,96.647mm) or
Un-Routed Net Constraint: Net Power Supply_UNFUSED Between Pad R31-1(189.23mm,111.239mm) on Top Layer And Pad F3-1(251.46mm,96.647mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad D4-2(217.551mm,112.141mm) on Top Layer And Pad R42-2(221.107mm,112.789mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U2-6(213.644mm,112.607mm) on Top Layer And Pad D4-2(217.551mm,112.141mm) on Top Layer
Un-Routed Net Constraint: Net NetD5_1 Between Pad D5-1(267.716mm,84.963mm) on Top Layer And Pad R36-2(307.213mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net NetD5_1 Between Pad U7-20(252.915mm,85.534mm) on Top Layer And Pad D5-1(267.716mm,84.963mm) on Top Layer
Un-Routed Net Constraint: Net VG_1 Between Pad D5-2(267.716mm,87.513mm) on Top Layer And Pad R36-1(307.213mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net NetD6_1 Between Pad D6-1(272.034mm,84.963mm) on Top Layer And Pad R37-2(313.055mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net NetD6_1 Between Pad U7-18(252.915mm,84.264mm) on Top Layer And Pad D6-1(272.034mm,84.963mm) on Top Layer
Un-Routed Net Constraint: Net VG_2 Between Pad D6-2(272.034mm,87.513mm) on Top Layer And Pad R37-1(313.055mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net DCDC_UNFUSED Between Pad DCDC Power-1(16mm,62.83mm) on Multi-Layer And Pad R15-1(187.96mm,71.742mm) or
Un-Routed Net Constraint: Net DCDC_FUSED Between Pad DCDC-TH_TP(273.304mm,73.152mm) on Multi-Layer And Pad R15-1(187.96mm,71.742mm) on Multi-Layer
Un-Routed Net Constraint: Net DCDC_FUSED Between Pad U7-23(252.915mm,87.439mm) on Top Layer And Pad DCDC-TH_TP(273.304mm,73.152mm) on Multi-Layer
Un-Routed Net Constraint: Net AUX_BAT_IN Between Pad F1-1(233.045mm,31.115mm) on Multi-Layer And Pad F1-3(236.445mm,31.115mm) or
Un-Routed Net Constraint: Net NetC4_1 Between Pad F1-2(233.045mm,44.585mm) on Multi-Layer And Pad F1-4(236.445mm,44.585mm) on Multi-Layer
Un-Routed Net Constraint: Net NetC4_1 Between Pad R3-1(228.346mm,42.627mm) on Top Layer And Pad F1-2(233.045mm,44.585mm) on Multi-Layer
Un-Routed Net Constraint: Net DCDC_UNFUSED Between Pad F2-1(246.38mm,57.15mm) on Multi-Layer And Pad F2-3(249.78mm,57.15mm) or
Un-Routed Net Constraint: Net NetC12_1 Between Pad F2-2(246.38mm,70.62mm) on Multi-Layer And Pad F2-4(249.78mm,70.62mm) on Multi-Layer
Un-Routed Net Constraint: Net NetC12_1 Between Pad R13-1(238.76mm,60.325mm) on Top Layer And Pad F2-2(246.38mm,70.62mm) on Multi-Layer
Un-Routed Net Constraint: Net Power Supply_UNFUSED Between Pad F3-1(251.46mm,96.647mm) on Multi-Layer And Pad F3-3(254.86mm,96.647mm) or
Un-Routed Net Constraint: Net NetF3_2 Between Pad F3-2(251.46mm,110.117mm) on Multi-Layer And Pad F3-4(254.86mm,110.117mm) on Multi-Layer

Un-Routed Net Constraint (All)
Un-Routed Net Constraint: Net NetF3_2 Between Pad Q19-8(235.458mm,110.212mm) on Top Layer And Pad F3-2(251.46mm,110.117mm) on Multi-Layer
Un-Routed Net Constraint: Net Power Supply_UNFUSED Between Pad F3-3(254.86mm,96.647mm) on Multi-Layer And Pad Power
Un-Routed Net Constraint: Net VBAT Between Pad Rear Power Distribution-1(129.3mm,44.7mm) on Multi-Layer And Pad Front Power
Un-Routed Net Constraint: Net VBAT Between Pad Front Power Distribution-1(130.2mm,70.07mm) on Multi-Layer And Pad U7-15(252.915mm,82.359mm)
Un-Routed Net Constraint: Net GND Between Pad Front Power Distribution-2(130.2mm,79.6mm) on Multi-Layer And Pad R18-2(154.432mm,73.292mm) or
Un-Routed Net Constraint: Net GND Between Pad Rear Power Distribution-2(129.3mm,54.23mm) on Multi-Layer And Pad Front Power
Un-Routed Net Constraint: Net GND Between Pad LED1-2(259.959mm,22.786mm) on Top Layer And Pad GND-TP(266.954mm,22.987mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad LDO_3V-TP(209.169mm,22.733mm) on Top Layer And Pad U1-5(222.257mm,22.413mm) on Top
Un-Routed Net Constraint: Net NetLED1_1 Between Pad LED1-1(259.959mm,21.286mm) on Top Layer And Pad R1-2(281.826mm,22.86mm) on Top
Un-Routed Net Constraint: Net GND Between Pad U1-2(219.957mm,21.463mm) on Top Layer And Pad LED1-2(259.959mm,22.786mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad P1-2(109.2mm,24.9mm) on Top Layer And Pad P1-1(109.2mm,25.4mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad P1-1(109.2mm,25.4mm) on Top Layer And Pad Rear Power Distribution-2(129.3mm,54.23mm) or
Un-Routed Net Constraint: Net GND Between Pad P1-3(109.2mm,24.4mm) on Top Layer And Pad P1-2(109.2mm,24.9mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad P1-26(105.6mm,13.4mm) on Top Layer And Pad P1-27(105.6mm,13.9mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad P1-27(105.6mm,13.9mm) on Top Layer And Pad P1-28(105.6mm,14.4mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad P1-28(105.6mm,14.4mm) on Top Layer And Pad P1-29(105.6mm,14.9mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad P1-29(105.6mm,14.9mm) on Top Layer And Pad P1-4(109.2mm,23.9mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad P1-4(109.2mm,23.9mm) on Top Layer And Pad P1-3(109.2mm,24.4mm) on Top Layer
Un-Routed Net Constraint: Net PA8_EN Between Pad P1-32(105.6mm,16.4mm) on Top Layer And Pad U7-1(247.465mm,88.075mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad P1-40(105.6mm,20.4mm) on Top Layer And Pad P1-41(105.6mm,20.9mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad P1-41(105.6mm,20.9mm) on Top Layer And Pad P1-42(105.6mm,21.4mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad P1-42(105.6mm,21.4mm) on Top Layer And Pad P1-43(105.6mm,21.9mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad P1-43(105.6mm,21.9mm) on Top Layer And Pad P1-44(105.6mm,22.4mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad P1-44(105.6mm,22.4mm) on Top Layer And Pad P1-45(105.6mm,22.9mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad P1-47(105.6mm,23.9mm) on Top Layer And Pad P1-48(105.6mm,24.4mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad P1-48(105.6mm,24.4mm) on Top Layer And Pad P1-49(105.6mm,24.9mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad P1-49(105.6mm,24.9mm) on Top Layer And Pad P1-50(105.6mm,25.4mm) on Top Layer
Un-Routed Net Constraint: Net PA10_VIA11\ID11 Between Pad P1-5(109.2mm,23.4mm) on Top Layer And Pad U7-10(247.465mm,82.359mm) on Top
Un-Routed Net Constraint: Net VBAT Between Pad P1-50(105.6mm,25.4mm) on Top Layer And Pad Rear Power Distribution-1(129.3mm,44.7mm) or
Un-Routed Net Constraint: Net PA9_VIA11\ID12 Between Pad P1-6(109.2mm,22.9mm) on Top Layer And Pad R21-2(235.966mm,88.532mm) on Top
Un-Routed Net Constraint: Net PA8_VIA11\ID13 Between Pad P1-7(109.2mm,22.4mm) on Top Layer And Pad R22-2(230.124mm,88.532mm) on Top
Un-Routed Net Constraint: Net PB15_SIH\ID1N Between Pad P1-8(109.2mm,21.9mm) on Top Layer And Pad U7-2(247.465mm,87.439mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad Power Supply -1(263.525mm,101.854mm) on Multi-Layer And Pad Power
Un-Routed Net Constraint: Net GND Between Pad Power Supply -2(263.525mm,105.354mm) on Multi-Layer And Pad Power
Un-Routed Net Constraint: Net Power Supply_UNFUSED Between Pad Power Supply -4(268.125mm,101.854mm) on Multi-Layer And Pad Power
Un-Routed Net Constraint: Net Power Supply_UNFUSED Between Pad Power Supply -5(268.125mm,105.354mm) on Multi-Layer And Pad Power
Un-Routed Net Constraint: Net VS_1 Between Pad Q10-1(388.239mm,82.55mm) on Top Layer And Pad Q10-2(389.509mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad U7-21(252.915mm,86.169mm) on Top Layer And Pad Q10-1(388.239mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q10-2(389.509mm,82.55mm) on Top Layer And Pad Q10-3(390.779mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q10-3(390.779mm,82.55mm) on Top Layer And Pad Q9-1(402.463mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_1 Between Pad Q10-4(392.049mm,82.55mm) on Top Layer And Pad Q9-4(406.273mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_1 Between Pad TP5-TP(375.666mm,88.646mm) on Top Layer And Pad Q10-4(392.049mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net POWER_SUPLY_FUSED Between Pad Q10-5(392.049mm,88.04mm) on Top Layer And Pad Q6-6(430.403mm,88.04mm)
Un-Routed Net Constraint: Net POWER_SUPLY_FUSED Between Pad U7-24(252.915mm,88.075mm) on Top Layer And Pad
Un-Routed Net Constraint: Net VS_2 Between Pad Q11-1(409.575mm,82.55mm) on Top Layer And Pad Q11-2(410.845mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q12-3(397.891mm,82.55mm) on Top Layer And Pad Q11-1(409.575mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q11-2(410.845mm,82.55mm) on Top Layer And Pad Q11-3(412.115mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_2 Between Pad Q12-4(399.161mm,82.55mm) on Top Layer And Pad Q11-4(413.385mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_2 Between Pad Q11-4(413.385mm,82.55mm) on Top Layer And Pad Q8-4(438.785mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad Q9-7(403.733mm,88.04mm) on Top Layer And Pad Q11-7(410.845mm,88.04mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad Q11-8(411.48mm,85.955mm) on Top Layer And Pad Q5-8(443.992mm,85.955mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q12-1(395.351mm,82.55mm) on Top Layer And Pad Q12-2(396.621mm,82.55mm) on Top Layer

Un-Routed Net Constraint (All)
Un-Routed Net Constraint: Net VS_2 Between Pad Q12-2(396.621mm,82.55mm) on Top Layer And Pad Q12-3(397.891mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_2 Between Pad TP6-TP(381.508mm,88.646mm) on Top Layer And Pad Q12-4(399.161mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net DCDC_FUSED Between Pad Q12-5(399.161mm,88.04mm) on Top Layer And Pad Q8-6(437.515mm,88.04mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q13-1(369.443mm,82.55mm) on Top Layer And Pad Q13-2(370.713mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q14-3(364.871mm,82.55mm) on Top Layer And Pad Q13-1(369.443mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q13-2(370.713mm,82.55mm) on Top Layer And Pad Q13-3(371.983mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_3 Between Pad Q14-4(366.141mm,82.55mm) on Top Layer And Pad Q13-4(373.253mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad Q13-6(371.983mm,88.04mm) on Top Layer And Pad Q9-7(403.733mm,88.04mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q14-1(362.331mm,82.55mm) on Top Layer And Pad Q14-2(363.601mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q14-2(363.601mm,82.55mm) on Top Layer And Pad Q14-3(364.871mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net AUX_FUSED Between Pad Q16-5(329.057mm,88.04mm) on Top Layer And Pad Q14-6(364.871mm,88.04mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q15-1(332.359mm,82.55mm) on Top Layer And Pad Q15-2(333.629mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q16-3(327.787mm,82.55mm) on Top Layer And Pad Q15-1(332.359mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q15-2(333.629mm,82.55mm) on Top Layer And Pad Q15-3(334.899mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_3 Between Pad Q16-4(329.057mm,82.55mm) on Top Layer And Pad Q15-4(336.169mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q16-1(325.247mm,82.55mm) on Top Layer And Pad Q16-2(326.517mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad U7-17(252.915mm,83.629mm) on Top Layer And Pad Q16-1(325.247mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_3 Between Pad Q16-2(326.517mm,82.55mm) on Top Layer And Pad Q16-3(327.787mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_3 Between Pad R19-1(318.897mm,86.982mm) on Top Layer And Pad Q16-4(329.057mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net AUX_FUSED Between Pad U7-22(252.915mm,86.805mm) on Top Layer And Pad Q16-8(327.152mm,85.955mm) on Top Layer
Un-Routed Net Constraint: Net NetQ19_1 Between Pad Q19-1(233.553mm,106.807mm) on Top Layer And Pad Q19-2(234.823mm,106.807mm) on Top Layer
Un-Routed Net Constraint: Net NetQ19_1 Between Pad U2-2(212.994mm,106.807mm) on Top Layer And Pad Q19-1(233.553mm,106.807mm) on Top Layer
Un-Routed Net Constraint: Net NetQ19_1 Between Pad Q19-2(234.823mm,106.807mm) on Top Layer And Pad Q19-3(236.093mm,106.807mm) on Top Layer
Un-Routed Net Constraint: Net NetQ19_1 Between Pad Q19-3(236.093mm,106.807mm) on Top Layer And Pad R27-1(243.84mm,99.822mm) on Top Layer
Un-Routed Net Constraint: Net NetQ19_4 Between Pad R42-1(221.107mm,111.239mm) on Top Layer And Pad Q19-4(237.363mm,106.807mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q5-1(442.087mm,82.55mm) on Top Layer And Pad Q5-2(443.357mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q6-3(430.403mm,82.55mm) on Top Layer And Pad Q5-1(442.087mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q5-2(443.357mm,82.55mm) on Top Layer And Pad Q5-3(444.627mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_1 Between Pad Q6-4(431.673mm,82.55mm) on Top Layer And Pad Q5-4(445.897mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad Q5-5(445.897mm,88.04mm) on Top Layer And Pad Q7-8(449.199mm,88.04mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q6-1(427.863mm,82.55mm) on Top Layer And Pad Q6-2(429.133mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q6-2(429.133mm,82.55mm) on Top Layer And Pad Q6-3(430.403mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_1 Between Pad Q9-4(406.273mm,82.55mm) on Top Layer And Pad Q6-4(431.673mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q7-1(449.199mm,82.55mm) on Top Layer And Pad Q7-2(450.469mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q8-3(437.515mm,82.55mm) on Top Layer And Pad Q7-1(449.199mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q7-2(450.469mm,82.55mm) on Top Layer And Pad Q7-3(451.739mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VG_2 Between Pad Q8-4(438.785mm,82.55mm) on Top Layer And Pad Q7-4(453.009mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q8-1(434.975mm,82.55mm) on Top Layer And Pad Q8-2(436.245mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_2 Between Pad Q8-2(436.245mm,82.55mm) on Top Layer And Pad Q8-3(437.515mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q9-1(402.463mm,82.55mm) on Top Layer And Pad Q9-2(403.733mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net VS_1 Between Pad Q9-2(403.733mm,82.55mm) on Top Layer And Pad Q9-3(405.003mm,82.55mm) on Top Layer
Un-Routed Net Constraint: Net NetR10_1 Between Pad R10-1(175.768mm,45.707mm) on Top Layer And Pad U4-1(181.378mm,46.797mm) on Top Layer
Un-Routed Net Constraint: Net VBAT Between Pad VBAT-TP(272.796mm,22.987mm) on Top Layer And Pad R1-1(280.276mm,22.86mm) on Top Layer
Un-Routed Net Constraint: Net NetC10_1 Between Pad R11-1(170.675mm,47.244mm) on Top Layer And Pad U4-3(181.378mm,44.897mm) on Top Layer
Un-Routed Net Constraint: Net NetR11_2 Between Pad R12-1(154.432mm,45.707mm) on Top Layer And Pad R11-2(172.225mm,47.244mm) on Top Layer
Un-Routed Net Constraint: Net DCDC_FUSED Between Pad U5-3(211.866mm,67.31mm) on Top Layer And Pad R13-2(238.76mm,71.125mm) on Top Layer
Un-Routed Net Constraint: Net DCDC_FUSED Between Pad R13-2(238.76mm,71.125mm) on Top Layer And Pad U7-23(252.915mm,87.439mm) on Top Layer
Un-Routed Net Constraint: Net NetR14_1 Between Pad R14-1(204.724mm,71.742mm) on Top Layer And Pad U5-8(210.566mm,73.11mm) on Top Layer
Un-Routed Net Constraint: Net NetC16_1 Between Pad U6-3(182.394mm,70.932mm) on Top Layer And Pad R15-2(187.96mm,73.292mm) on Top Layer
Un-Routed Net Constraint: Net NetR16_1 Between Pad R16-1(176.784mm,71.742mm) on Top Layer And Pad U6-1(182.394mm,72.832mm) on Top Layer
Un-Routed Net Constraint: Net NetC16_1 Between Pad R17-1(171.196mm,71.742mm) on Top Layer And Pad U6-3(182.394mm,70.932mm) on Top Layer
Un-Routed Net Constraint: Net NetR17_2 Between Pad R18-1(154.432mm,71.742mm) on Top Layer And Pad R17-2(171.196mm,73.292mm) on Top Layer

Un-Routed Net Constraint (All)
Un-Routed Net Constraint: Net GND Between Pad R18-2(154.432mm,73.292mm) on Top Layer And Pad R35-2(154.432mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad R21-1(235.966mm,86.982mm) on Top Layer And Pad R20-1(241.3mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net PA10_VIA1\IND1\ Between Pad R20-2(241.3mm,88.532mm) on Top Layer And Pad U7-10(247.465mm,82.359mm) on Top Layer
Un-Routed Net Constraint: Net NetR2_1 Between Pad R2-1(208.267mm,88.519mm) on Top Layer And Pad R23-2(224.282mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad R22-1(230.124mm,86.982mm) on Top Layer And Pad R21-1(235.966mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net PA9_VIA1\IND1\ Between Pad R21-2(235.966mm,88.532mm) on Top Layer And Pad U7-11(247.465mm,81.725mm) on Top Layer
Un-Routed Net Constraint: Net NetR2_2 Between Pad R30-1(180.594mm,86.982mm) on Top Layer And Pad R2-2(209.817mm,88.519mm) on Top Layer
Un-Routed Net Constraint: Net NetR2_2 Between Pad R2-2(209.817mm,88.519mm) on Top Layer And Pad U7-5(247.465mm,85.534mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad U1-1(219.957mm,22.413mm) on Top Layer And Pad R22-1(230.124mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net PA8_VIA1\IND1\ Between Pad R22-2(230.124mm,88.532mm) on Top Layer And Pad U7-12(247.465mm,81.09mm) on Top Layer
Un-Routed Net Constraint: Net POWER_SUPLY_FUSED Between Pad R23-1(224.282mm,86.982mm) on Top Layer And Pad R23-1(224.282mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net NetR2_1 Between Pad R23-2(224.282mm,88.532mm) on Top Layer And Pad U7-4(247.465mm,86.169mm) on Top Layer
Un-Routed Net Constraint: Net DCDC_FUSED Between Pad U5-3(211.866mm,67.31mm) on Top Layer And Pad R24-1(212.598mm,86.982mm) on Top Layer
Un-Routed Net Constraint: Net NetR4_1 Between Pad R4-1(186.423mm,88.519mm) on Top Layer And Pad R24-2(212.598mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net NetR4_1 Between Pad R24-2(212.598mm,88.532mm) on Top Layer And Pad U7-6(247.465mm,84.9mm) on Top Layer
Un-Routed Net Constraint: Net NetR25_1 Between Pad R25-1(171.958mm,121.78mm) on Top Layer And Pad U8-7(178.745mm,123.104mm) on Top Layer
Un-Routed Net Constraint: Net AUX_FUSED Between Pad R26-1(202.438mm,86.982mm) on Top Layer And Pad U3-3(205.77mm,41.275mm) on Top Layer
Un-Routed Net Constraint: Net AUX_FUSED Between Pad R26-1(202.438mm,86.982mm) on Top Layer And Pad U7-22(252.915mm,86.805mm) on Top Layer
Un-Routed Net Constraint: Net NetC22_1 Between Pad R5-1(170.421mm,88.519mm) on Top Layer And Pad R26-2(202.438mm,88.532mm) on Top Layer
Un-Routed Net Constraint: Net NetC22_1 Between Pad R26-2(202.438mm,88.532mm) on Top Layer And Pad U7-8(247.465mm,83.629mm) on Top Layer
Un-Routed Net Constraint: Net POWER_SUPLY_FUSED Between Pad R27-2(243.84mm,110.622mm) on Top Layer And Pad R27-2(243.84mm,110.622mm) on Top Layer
Un-Routed Net Constraint: Net NetR28_1 Between Pad R28-1(206.248mm,111.239mm) on Top Layer And Pad U2-8(212.344mm,112.607mm) on Top Layer
Un-Routed Net Constraint: Net NetR29_1 Between Pad R29-1(196.596mm,86.982mm) on Top Layer And Pad U7-3(247.465mm,86.805mm) on Top Layer
Un-Routed Net Constraint: Net NetC35_1 Between Pad U9-3(183.664mm,110.429mm) on Top Layer And Pad R31-2(189.23mm,112.789mm) on Top Layer
Un-Routed Net Constraint: Net AUX_FUSED Between Pad U3-3(205.77mm,41.275mm) on Top Layer And Pad R3-2(228.346mm,46.527mm) on Top Layer
Un-Routed Net Constraint: Net NetR32_1 Between Pad R32-1(177.8mm,111.239mm) on Top Layer And Pad U9-1(183.664mm,112.329mm) on Top Layer
Un-Routed Net Constraint: Net NetC35_1 Between Pad R33-1(171.958mm,111.239mm) on Top Layer And Pad U9-3(183.664mm,110.429mm) on Top Layer
Un-Routed Net Constraint: Net NetR33_2 Between Pad R34-1(154.432mm,111.239mm) on Top Layer And Pad R33-2(171.958mm,112.789mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R34-2(154.432mm,112.789mm) on Top Layer And Pad R40-2(154.432mm,123.33mm) on Top Layer
Un-Routed Net Constraint: Net NetR4_2 Between Pad R35-1(154.432mm,86.982mm) on Top Layer And Pad R4-2(187.973mm,88.519mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad R35-2(154.432mm,88.532mm) on Top Layer And Pad R7-2(161.811mm,88.519mm) on Top Layer
Un-Routed Net Constraint: Net NetC30_1 Between Pad U8-3(179.395mm,118.704mm) on Top Layer And Pad R38-1(182.88mm,121.78mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U8-4(180.045mm,118.704mm) on Top Layer And Pad R38-2(182.88mm,123.33mm) on Top Layer
Un-Routed Net Constraint: Net NetR4_2 Between Pad R4-2(187.973mm,88.519mm) on Top Layer And Pad U7-7(247.465mm,84.264mm) on Top Layer
Un-Routed Net Constraint: Net NetR5_2 Between Pad R7-1(160.261mm,88.519mm) on Top Layer And Pad R5-2(171.971mm,88.519mm) on Top Layer
Un-Routed Net Constraint: Net NetR5_2 Between Pad R5-2(171.971mm,88.519mm) on Top Layer And Pad U7-9(247.465mm,82.995mm) on Top Layer
Un-Routed Net Constraint: Net NetR6_1 Between Pad R6-1(199.885mm,47.244mm) on Top Layer And Pad U3-8(204.47mm,47.075mm) on Top Layer
Un-Routed Net Constraint: Net NetR8_1 Between Pad U8-2(178.745mm,118.704mm) on Top Layer And Pad R8-1(199.885mm,123.317mm) on Top Layer
Un-Routed Net Constraint: Net NetC10_1 Between Pad U4-3(181.378mm,44.897mm) on Top Layer And Pad R9-2(188.481mm,47.244mm) on Top Layer
Un-Routed Net Constraint: Net 3V3 Between Pad U1-3(219.957mm,20.513mm) on Top Layer And Pad U1-1(219.957mm,22.413mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U2-1(212.344mm,106.807mm) on Top Layer And Pad U2-4(214.294mm,106.807mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U2-6(213.644mm,112.607mm) on Top Layer And Pad U2-4(214.294mm,106.807mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U2-7(212.994mm,112.607mm) on Top Layer And Pad U2-6(213.644mm,112.607mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U3-1(204.47mm,41.275mm) on Top Layer And Pad U3-4(206.42mm,41.275mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U3-1(204.47mm,41.275mm) on Top Layer And Pad U3-7(205.12mm,47.075mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U3-7(205.12mm,47.075mm) on Top Layer And Pad U3-6(205.77mm,47.075mm) on Top Layer
Un-Routed Net Constraint: Net NetR10_1 Between Pad U4-1(181.378mm,46.797mm) on Top Layer And Pad U4-4(184.128mm,44.897mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad U4-5(184.128mm,46.797mm) on Top Layer And Pad U6-5(185.144mm,72.832mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U5-1(210.566mm,67.31mm) on Top Layer And Pad U5-4(212.516mm,67.31mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U5-6(211.866mm,73.11mm) on Top Layer And Pad U5-4(212.516mm,67.31mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U5-7(211.216mm,73.11mm) on Top Layer And Pad U5-6(211.866mm,73.11mm) on Top Layer
Un-Routed Net Constraint: Net NetR16_1 Between Pad U6-1(182.394mm,72.832mm) on Top Layer And Pad U6-4(185.144mm,70.932mm) on Top Layer

Un-Routed Net Constraint (All)

Un-Routed Net Constraint: Net NetR8_1 Between Pad U8-1(178.095mm,118.704mm) on Top Layer And Pad U8-2(178.745mm,118.704mm) on Top Layer
Un-Routed Net Constraint: Net GND Between Pad U8-4(180.045mm,118.704mm) on Top Layer And Pad U9-2(183.664mm,111.379mm) on Top Layer
Un-Routed Net Constraint: Net NetR25_1 Between Pad U8-7(178.745mm,123.104mm) on Top Layer And Pad U8-6(179.395mm,123.104mm) on Top Layer
Un-Routed Net Constraint: Net LDO_3V Between Pad U8-8(178.095mm,123.104mm) on Top Layer And Pad U9-5(186.414mm,112.329mm) on Top Layer
Un-Routed Net Constraint: Net NetR32_1 Between Pad U9-1(183.664mm,112.329mm) on Top Layer And Pad U9-4(186.414mm,110.429mm) on Top Layer

Hole Size Constraint (Min=0.025mm) (Max=2.54mm) (All)

Hole Size Constraint: (3.7mm > 2.54mm) Pad M1-(134.799mm,8.52mm) on Multi-Layer Actual Hole Size = 3.7mm
Hole Size Constraint: (3.7mm > 2.54mm) Pad M2-(142.673mm,8.52mm) on Multi-Layer Actual Hole Size = 3.7mm
Hole Size Constraint: (3.7mm > 2.54mm) Pad M3-(104.3mm,42.8mm) on Multi-Layer Actual Hole Size = 3.7mm
Hole Size Constraint: (3.7mm > 2.54mm) Pad M4-(120.321mm,8.52mm) on Multi-Layer Actual Hole Size = 3.7mm

Minimum Solder Mask Sliver (Gap=0.254mm) (All),(All)

Minimum Solder Mask Sliver Constraint: (0.105mm < 0.254mm) Between Pad P1-(105.9mm,12.35mm) on Multi-Layer And Pad P1-(107.4mm,11.6mm) or
Minimum Solder Mask Sliver Constraint: (0.105mm < 0.254mm) Between Pad P1-(105.9mm,26.45mm) on Multi-Layer And Pad P1-(107.4mm,27.2mm) or
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U1-1(219.957mm,22.413mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U1-2(219.957mm,21.463mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U4-1(181.378mm,46.797mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U4-2(181.378mm,45.847mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U6-1(182.394mm,72.832mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U6-2(182.394mm,71.882mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U9-1(183.664mm,112.329mm) on Top Layer And Pad
Minimum Solder Mask Sliver Constraint: (0.147mm < 0.254mm) Between Pad U9-2(183.664mm,111.379mm) on Top Layer And Pad

Silk To Solder Mask (Clearance=0.254mm) (IsPad),(All)

[illegible]

Silk To Solder Mask (Clearance=0.254mm) (IsPad),(All)

[illegible]

Silk To Solder Mask (Clearance=0.254mm) (IsPad),(All)

[illegible]



