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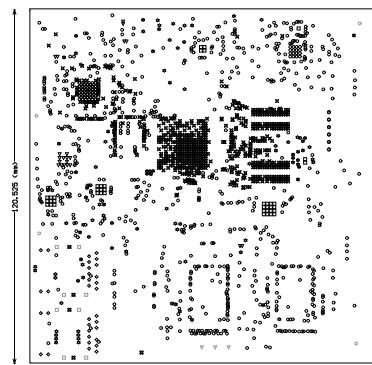
NOTES (UNLESS OTHERWISE SPECIFIED):

1. MAT'L: COPPER CLAD PLATED SHEET PER IPC-4101B/124.
2. a) LAMINATE AND PREPREG TO BE IN ACCORDANCE WITH IPC-4101B/124. MATERIAL MUST MEET UL 94V-0 FLAMMABILITY RATING. THE MATERIAL SHALL BE ROHS COMPLIANT WITH TG OF 150 C MINIMUM AND TD OF 330 C MINIMUM.
3. b) COPPER FOIL TO BE IN ACCORDANCE WITH IPC-MF-150.
FOIL THICKNESS: .010MM
SEE BOARD STACKUP
4. c) TOTAL BOARD THICKNESS OVER MASK: 1.434 MM +/- 10%.
5. d) UNLESS OTHERWISE SPECIFIED ALL HOLE DIMENSIONS APPLY AFTER PLATING.
6. e) ALL PLATED THROUGH HOLES TO HAVE A MINIMUM OF .025 MM COPPER.
7. f) ALL HOLES SHALL BE LOCATED WITHIN 0.75 MM DIAMETER OF TRUE POSITION, LAYER TO LAYER REGISTRATION SHALL BE WITHIN .003 .
8. g) ALL HOLES SURROUNDED BY LAND SHALL HAVE A MINIMUM ANNUAL RING OF 0.1 MM
9. h) CONDUCTOR WIDTHS AND SPACING SHALL BE WITHIN +/- 10% OF ARTWORK ORIGINALS.
10. i) APPLY SOLDERMASK (LIQUID PHOTO IMAGEABLE) OVER BARE COPPER, SOLDERMASK TO BE PER IPC-SM-840, TYPE B, CLASS 3, TRANSPARENT GREEN, ALL EXPOSED CONDUCTIVE SURFACES TO BE IMMERSION GOLD (ENIG). TENSILE ALL DIRECTIONS.
11. j) LEAD OFF DISTANCE OF BOARD SHALL NOT EXCEED .10 INCH PER INCH.
12. k) SILKSCREEN COMPONENT SIDES (TOP AND BOTTOM) USING BLUE NON-CONDUCTIVE INK. SILKSCREEN TO BE CRISP AND LEGIBLE. DO NOT CLIP SILKSCREEN OVER MASKED VIAS.
13. l) REMOVE ALL BURRS AND BREAK SHARP EDGES 0.4 MM MAX.
14. m) BOARD SHALL MEET THE REQUIREMENTS OF UL796 WITH A FLAMMABILITY RATING OF 94V-0. VENDOR'S UL LOGO OR DESIGNATION SHALL BE LOCATED ON SOLDEN SIDE OF BOARD.
15. n) FABRICATE IN ACCORDANCE WITH IPC-6012, CLASS 2.
16. o) DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
17. p) SURFACE MOUNT PAD SOLDER PLATING MUST BE FLAT TO A MAXIMUM OF .003 . ABOVE BOARD SURFACE.
18. q) DEFECTIVE BOARDS ON A PANEL SHALL BE MARKED WITH A BLACK X , COVERING 80% OR MORE OF THE BOARD.
19. r) OK TO REMOVE NON-FUNCTIONAL PADS ON INNER LAYERS.
20. s) VIA THERMALS ON PLANE LAYERS CAN BE REMOVED FOR DIRECT CONNECTION.
21. t) 16. CONTROLLED IMPEDANCE DIFF TRACES ON ALL LAYERS, EXCEPT L7_NonCritical
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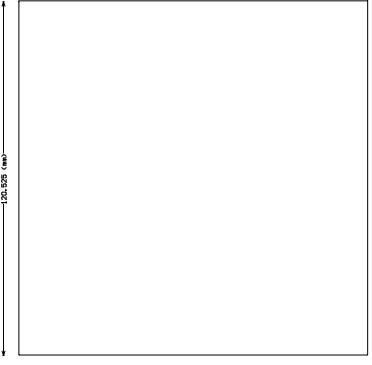
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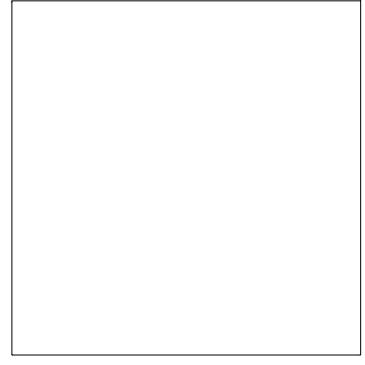
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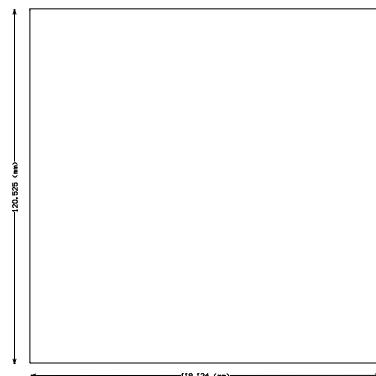
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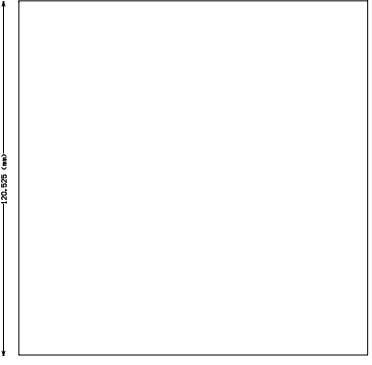
1. MAT'L: COPPER CLAD PLATED SHEET PER IPC-4101B/124.
MEET UL 94V-0 FLAMMABILITY RATING. THE MATERIAL SHALL BE ROHS COMPLIANT WITH TG OF 150 C MINIMUM AND TD OF 330 C MINIMUM.
 2. COPPER FOIL TO BE IN ACCORDANCE WITH PC-MF-150.
FINISHED COPPER WEIGHT:
SEE BOARD STACKUP
 3. TOTAL BOARD THICKNESS OVER MASK 1.434 MM +/- 10%.
 - 2a. UNLESS OTHERWISE SPECIFIED ALL HOLE DIMENSIONS APPLY AFTER PLATING.
ALL PLATED THROUGH HOLES TO HAVE A MINIMUM OF .025 MM COPPER.
 3. ALL HOLES SHALL BE LOCATED WITHIN 0.75 MM DIAMETER OF TRUE POSITION, LAYER TO LAYER REGISTRATION SHALL BE WITHIN .003".
ALL HOLES SURROUNDED BY LAND SHALL HAVE A MINIMUM ANNUAL RING OF 0.1 MM.
 4. CONDUCTOR WIDTHS AND SPACING SHALL BE WITHIN +/- 10% OF ARTWORK ORIGINALS.
 5. APPLY SOLDERMASK (LIQUID PHOTO IMAGEABLE) OVER BARE COPPER, SOLDERMASK TO PER IPC-SM-840, TYPE B, CLASS 3, TRANSPARENT GREEN, ALL EXPOSED CONDUCTIVE SURFACES TO BE IMMERSION GOLD (ENIG). TENT ALL VIAS.
 6. WARP OR TWIST OF BOARD SHALL NOT EXCEED .010 INCH PER INCH.
 7. SILKSCREEN COMPONENT SIDES (TOP AND BOTTOM) USING BLACK NON-CONDUCTIVE INK. SILKSCREEN MUST BE CRISP AND LEGIBLE. DO NOT CLIP SILKSCREEN OVER SHARP EDGES.
 8. REMOVE EXTRAS AND BREAK SHARP EDGES 0.1 MM MAX.
 9. BOARD SHALL MEET THE REQUIREMENTS OF UL756 WITH A FLAMMABILITY RATING OF 94V-0. VENDOR'S UL LOGO OR DESIGNATION SHALL BE LOCATED ON SOLDER SIDE OF BOARD.
 10. FABRICATE IN ACCORDANCE WITH IPC-6012, CLASS 2.
 11. DIMENSIONS AND TOLERANCES PER ANSI Y14.51.
 12. SURFACE MOUNT PAD SOLDER PLATING MUST BE FLAT TO A MAXIMUM OF .003 ABOVE BOARD SURFACE.
 13. DEFECTIVE BOARDS ON A PANEL SHALL BE MARKED WITH A BLACK X , COVERING 80% OR MORE OF THE BOARD.
 14. OK TO REMOVE NON-FUNCTIONAL PADS ON INNER LAYERS.
 15. VIA THERMALS ON PLANE LAYERS CAN BE REMOVED FOR DIRECT CONNECTION.
 16. CONTROLLED IMPEDANCE DIFF TRACES ON ALL LAYERS, EXCEPT L7_NonCritical
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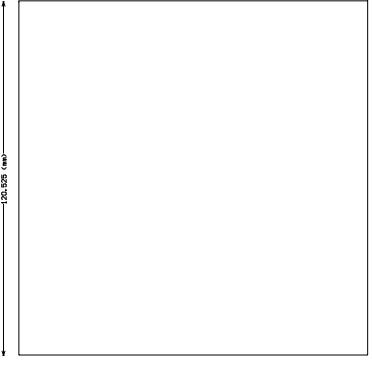
Symbol	Hit Count	Finished Length	Plated Length	Type
□	3	4.8e-011 (1.40mm)	PTH	Round
□	4	1.8e-011 (3.00mm)	PTH	Round
○	55	1.8e-011 (1.40mm)	PTH	Round
○	6	4.2e-011 (1.07mm)	PTH	Round
○	8	9.0e-011 (2.30mm)	PTH	Round
▽	22	9.8e-011 (0.250mm)	PTH	Round
○	32	10.1e-011 (1.02mm)	PTH	Round
○	50	15.2e-011 (0.90mm)	PTH	Round
○	109	18.4e-011 (0.90mm)	PTH	Round
○	278	3.9e-011 (0.10mm)	PTH	Round
○	838	7.87e-011 (0.200mm)	PTH	Round
1940 Total				



Layer Stack Up Detail for: WhiteRHINO_0v1.PcbDoc					
Layer	Series	Copper Thickness	Dielectric Thickness	Dielectric CTE	Dielectric Coeff.
Top Solder Mask	(GTS)	0.010mm	0.010mm	Solder	Resist 3.50
1.Top Layer	(GTL)	0.010mm	0.07mm	FR-4	4.10
2.Critical	(GCR)	0.010mm	0.12mm	FR-4	4.10
3.Critical	(GCR)	0.010mm	0.12mm	FR-4	4.10
4.Critical	(GCR)	0.010mm	0.12mm	FR-4	4.10
5.GND	(GP2)	0.010mm	0.12mm	FR-4	4.10
6.Power	(GP3)	0.010mm	0.12mm	FR-4	4.10
7.Non-Critical	(GP3)	0.010mm	0.12mm	FR-4	4.10
8.Power	(GP4)	0.010mm	0.12mm	FR-4	4.10
9.L1_Critical	(G4)	0.010mm	0.12mm	FR-4	4.10
L10.DR_Critical	(G5)	0.010mm	0.12mm	FR-4	4.10
L11.UND	(G5B)	0.010mm	0.07mm	FR-4	4.10
11.Bottom Layer	(GBL)	0.010mm	0.010mm	Solder	Resist 3.50

Alan Lengen, Ojneva Hazarka Bader Remote Sensing Group University of Cape Town	SEARCHER OJNEVA HAZARKA RS SEARCH OJNEVA HAZARKA	TRAIL White RHINO University of Cape Town
	DATE May 14, 2013	PART NO. REV. 0.1
	PLZ NAME DWD NO.	SCALD

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▼	4	.118.11mil (.3.00mm)	PTH	Round																																																																																																
○	5	.95.14mil (.1.90mm)	PTH	Round																																																																																																
△	4	.42.12mil (.1.07mm)	PTH	Round																																																																																																
●	8	.90.94mil (.2.30mm)	PTH	Round																																																																																																
▽	22	.9.64mil (.0.250mm)	PTH	Round																																																																																																
○	32	.016mil (.0.020mm)	PTH	Round																																																																																																
○	41	.12.98mil (.0.320mm)	PTH	Round																																																																																																
■	100	.18.64mil (.0.470mm)	PTH	Round																																																																																																
□	778	.3.94mil (.0.100mm)	PTH	Round																																																																																																
○	898	.7.67mil (.0.200mm)	PTH	Round																																																																																																
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