

AURORA FACILITY

Attributes	Standard	Advanced
Maximum Board Size	16x22	
Maximum Panel Size	18x24	
Maximum Board Thickness	0.125	0.155
Minimum Board Thickness	0.031	0.01
Overall Board Thickness Tolerance (+/-)	10% or .005" whichever is greater	
Warpage / Bow and Twist Capability- Mills Per Inch	0.0100	0.0075
Maximum Rigid Layer Count	12	
Maximum Flex Layer Count		
Maximum Rigid-Flex Layer Count		
Minimum Core Thickness	0.003	
Minimum Dielectric Thickness	0.003	
Lam Cycles Rigid		
Lam Cycles Flex		
Lam Cycles Rigid-Flex		
Trace/Space-Base Copper Thickness	Standard	Advanced
Inner Layer Trace Width - ¼ oz. Cu		
Inner Layer Trace Width - ½ oz. Cu	0.003	
Inner Layer Trace Width - 1 oz. Cu	0.005	0.004
Inner Layer Trace Width - 2 oz. Cu	0.006	0.005
Inner Layer Trace Width - 3 oz. Cu	0.010	0.008
Inner Layer Trace Width - 4 oz. Cu	0.012	0.010
Inner Layer Space - Trace to Trace - ½ oz. Cu	0.003	

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Trace/Space-Base Copper Thickness (cont.)	Standard	Advanced
Inner Layer Space - Trace to Trace - 1 oz. Cu	0.005	0.004
Inner Layer Space - Trace to Trace - 2 oz. Cu	0.005	0.005
Inner Layer Space - Trace to Trace - 3 oz. Cu	0.010	0.008
Inner Layer Space - Trace to Trace - 4 oz. Cu	0.012	0.010
Outer Layer Trace Width - ¼ and ⅜ oz. Cu. Base	0.003	
Outer Layer Trace Width - ½ oz. Cu. Base	0.004	
Outer Layer Trace Width - 1 oz. Cu. Base	0.005	
Outer Layer Trace Width - 2 oz. Cu. Base	0.010	0.008
Outer Layer Trace Width - 3 oz. Cu. Base		
Outer Layer Space - Trace to Trace - ⅜ oz. Cu. Base	0.003	
Outer Layer Space - Trace to Trace - ½ oz. Cu. Base	0.004	
Outer Layer Space - Trace to Trace - 1 oz. Cu. Base	0.005	
Outer Layer Space - Trace to Trace - 2 oz. Cu. Base	0.010	0.008
Outer Layer Space - Trace to Trace - 3 oz. Cu. Base		
Gold Body / Bi-Level Gold w/ 0.25 oz. foil		
Gold Body / Bi-Level Gold w/ 0.5 oz. foil	0.004	
Minimum Outer Layer Trace Widths for Boards with Filled and Plated Over Vias	0.005	0.003
Minimum Outer Layer Spacing for Boards with Filled and Plated Over Vias	0.005	0.003
Etch Requirements	Standard	Advanced
Minimum Copper Sliver Between Antipads	0.005	0.004

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Etch Requirements (cont.)	Standard	Advanced
Etch Tolerance and Factor 1/2 oz. Cu or Less Inner/Outer NO VF	Etch tolerance per IPC-6012: Max spacing reduction of 20% for Class 3 and 30% for Class 2. Max conductor width reduction of 20%.	
Etch Tolerance and Factor 1/2 oz. Cu or Less Inner/Outer w/ VF		
Etch Tolerance and Factor 1 oz. Cu Inner/Outer NO VF		
Etch Tolerance and Factor 2 oz. Cu Inner/Outer NO VF		
Etch Tolerance and Factor 3 oz. Cu Inner/Outer NO VF		
Drill & Rout	Standard	Advanced
Smallest PTH - Via HDI		
Smallest Mechanical PTH - Via (Aspect ratio driven)	0.006	0.004
Smallest PTH - Component	0.015	
PTH - Tolerance	+/-0.005	+/-0.002
PTH - Tolerance Press Fit	+/-0.003	+/-0.002
NPTH - Tolerance	+/-0.003	+/-0.002
NPTH - Slot Tolerance	+/-0.005	+/-0.003
PTH - Slot Tolerance	+/-0.005	+/-0.003
Standard Rout Tolerances	+/-0.010	+/-0.004
Optical Rout Tolerances (Rout edge to feature location)		
Aspect Ratio - Plated Through Holes - > .020" Drilled	10:1	
Aspect Ratio - Plated Through Holes - .010" -.019" Drilled	10:1	
Minimum Drill to Copper for PTH	0.010	0.008
Minimum Drill to Copper for PTH Sub Assemblies		
Minimum Drill to Copper for Laser μ Vias		
Minimum Hole to Hole Edge for PTH	0.010	

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Drill & Rout (cont.)	Standard	Advanced
Minimum Hole to Hole Edge for Laser μ Vias		
Drill/Pad Size - No Break Out - Thru Drill	nominal \pm .012	
Drill/Pad Size - No Break Out - HDI		
Minimum Pad	0.015	
Minimum Isolated Pad		
Minimum Laser Drilled Pad		
SMT Pitch	0.010	
Buried Vias - Mechanical Drill Minimum Size		
Buried Vias - Mechanical Drill - Max Aspect Ratio		
Blind Vias - Mechanical Drill Minimum		
Blind Vias - Mechanical Drill - Max Aspect Ratio		
Blind Vias - Laser Drilled - Minimum Size		
Blind Vias - Laser Drilled - Maximum Size		
Blind Vias - Laser Drilled - Maximum Aspect Ratio		
Maximum Copper Fill Depth μ Vias		
Back Drill Depth Remaining Stub		
Back Drill - Minimum Over Primary Drill Size (Oversize bit will depend on primary drill size)		
Back Drill - Depth Tolerance		
Min Back Drill Depth for Filled & Plated Over BD Holes		
Drill True Position Tolerance Standard (+/-)	0.005	0.004
Drill True Position Tolerance w/ Camera Alignment (+/-)		
Drill Hole to Hole Positional Tolerance (+/-)	0.003	0.002

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Drill & Rout (cont.)	Standard	Advanced
Minimum PTH Size That Can Be Filled With Non-Conductive Material and Plated Over	0.008	.004 or 10:1 aspect ratio
Maximum PTH Size That Can Be Filled With Non-Conductive Material and Plated Over	0.018	2:1 aspect ratio
Impedance	Standard	Advanced
Impedance - Tolerance (+/-)	10% or 5Ω whichever is greater	5%
Maximum Impedance - Value Ohms	120Ω	
Minimum Impedance - Value Ohms	35Ω	
Impedance Coupon Size	8"x1" (varies)	
Solder Mask & Silkscreen	Standard	Advanced
Solder Mask Web Width Over Laminate (i.e. between pads)	0.004	0.003
Solder Mask Web Width Over Copper (i.e. over a trace)	0.004	0.003
Solder Mask Clearance to Pad (i.e. annular ring)	0.004	
Minimum Silkscreen Line Width / Height (white only)	0.005	0.003
Standard Silkscreen Line Width / Height	0.005	
Maximum Tented Via	0.018	
Spacing & Registration	Standard	Advanced
Minimum Copper Spacing to Board Edge	0.010	
Minimum Hole Spacing to Board Edge	0.012	
Layer to Layer Registration - Different Cores		0.003
Outer Layer Feature True Position Tolerance	0.006	0.005
Front to Back Registration (Same core)	0.002	
HASL Pad to Pad Space & Pad Size (Ganged areas not doable for SC)		