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CIRCUITS LIMITED

PRODUCTION CAPABILITIES FOR FLEXIBLE BOARDS				
Sr. No.	Parameters	Standard		Complex
A.	MATERIAL			
	1. Material	Polyimide, LCP, Thinner FR-4 Core		
	2. Copper Foils (RA or Ed)	0.25 oz (9um), 0.33 oz (12um), 0.5 oz (18um), 1 oz (35um), 2 oz (70um)		
	3. Stiffeners	FR4, FR5, BT, Polyimide, Metal		
B.	LAMINATION (Flex Section)	MM	MIL	
	1. Max Layer Count	6 L		12 L
	2. Min. Dielectric Thickness	0.05	2	0.05
	3. Min. Base Copper Thickness	0.018	0.7	0.018
C.	PATTERN CAPABILITIES AND TOLERANCES			
	1. Min. Trace and Space (0.25oz)	0.076 / 0.076	3/3	0.076 / 0.076
	2. Min. Trace and Space (0.33oz)	0.10/ 0.10	4/4	0.10/ 0.10
	3. Min. Trace Space (0.5oz)	0.127 / 0.127	5/5	0.10/ 0.10
	4. Min. Trace and Space (1.0oz)	0.127 / 0.127	5/5	0.10/ 0.10
	5. Min. Outer layer Pad Diameter = FHS plus	dr+0.3	12/12	dr+0.25
	6. Min. Inner layer Pad Diameter = FHS plus	dr+0.35	14/14	dr+0.30
	7. Min. Inner layer Plane Clearance = FHS plus	dr+0.6	24	dr+0.55
	8. Min. Legend Line Width	0.18	7	0.15
D.	DRILL CAPABILITIES			
	1. Finish Hole Diameter Tolerance			
	● Plated	+/-0.075	3	+/-0.05
	● Non- plated	+/-0.05	2	+/-0.05
	2. Cu Thickness in Through Hole	>0.025	1	>0.025
	3. Via Formation			
E.	MECHANICAL DRILLING			
	1. Aspect Ratio	8 : 1		10 : 1
	2. Min. Drilled Micro via Diameter	0.25	10	0.20
	3. Min. Finished Micro via Diameter	0.20	8	0.15
	4. Min. Hole- edge-to-Hole edge (depend on Board Thick. And Drill Bit)	0.35	14	0.30
F.	PLASMA ETCHING			
	1. Min. Etched Micro via Diameter	0.25	10	0.25
	2. Min. Finished Micro via Diameter	0.20	8	0.20
G.	FABRICATION TOLERANCES			
	1. Min. Trace to Route Edge Dimension	0.30	12	0.30
	2. Min. route Dimensional Tolerance	+/-0.13	5	+/-0.13
	3. Min. Feature to Feature Dimensional Tolerance	+/-0.13	5	+/-0.13
	4. Impedance Tolerance (design dependent) (50ohm+)	+/-10%		+/-5 %
H.	SOLDER MASK & PHOTOIMAGABLE COVERLAY			
	1. Min. clearance			
	● Via Hole	Covered		Covered
	● Component Hole	0.13	5	0.10
	● Feature definition	0.15	6	0.15
I.	COVERLAY			
	1. Min. clearance			
	● Via Hole	Covered		Covered
	● Component Hole	0.20	8	0.25
	● Feature definition	0.30	12	0.25
J.	SURFACE FINISH			
	1. Gold / Nickel (Electrolytic Pure Gold)	Yes		Yes
	2. Gold / Nickel (Electrolytic Hard Gold)	Yes		Yes
	3. Gold / Nickel (Immersion / Electro less)			
	a. Nickel Thickness	>3.8um	>0.15	>3.8um
	b. Immersion Gold Thickness	0.05-0.1um	0.002 to 0.004	0.05-0.1um
	4. Selective EN / IMG	Yes		Yes
	5. HASL, Solder Thickness	4 to 8 um	0.16 to 0.32	4 to 8 um
	6. Immersion Silver	yes		yes
	7. Immersion Tin	yes		yes
	8. Lead free Compatible	yes		yes
K.	ELECTRICAL TEST CAPABILITIES			
	1. Smallest SMD Pitch	0.50	20	0.50
	2. Smallest BGA Pitch	0.78	31	0.78
L.	CONTROLLED IMPEDANCE			
	1. Impedance Control Tolerance	+/-10%		+/-5 %
	2. Differential Impedance Control Tolerance	+/-10%		+/-5 %