

Coming 3 years technology roadmap

Process	Features and capability	Unit	Current(2011)		2012	2013
			Standard	Advanced		
Material	High material TG	°C	170	180	180	200
	Halogen free flammability		94V-0	94V-0	94V-0	94V-0
	Anti-CAF material		YES	YES	YES	YES
	MCPCB		YES	YES	YES	YES
Board dimension	Max panel size	Inch	21.4×24.4	21.5×25.2	21.5×25.2	21.5×25.2
		mm	543×620	546×640	546×640	546×640
	Max finish board size	Inch	18.5×23	18.5×24	19×24	19×24
		mm	470×584	470×610	482×610	482×610
	Min board thickness	Mil	12	10	10	10
		mm	0.30	0.25	0.25	0.25
	Max board thickness	Mil	95	120	138	160
		mm	2.4	3.0	3.5	4.0
Inner layer	Min line width/space	mil	4/4	3/3	3/3	2.5/2.5
	Max copper thickness (width/space)	OZ	4	5	6	7
		mil	9/7.5	10/9.5	13/11	16/14
	Min core thickness	mil	3	2	2	2
mm		0.075	0.05	0.05	0.05	

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Lamination	Max layer count	layer	14	16	18	20
	Min dielectric thickness	mil	3.5	3	2.5	2
		mm	0.09	0.076	0.064	0.05
	Ply up of Prepregs	ply	3	4	5	5
	Layer to layer registration	mil	3.5	3.5	3.5	3
mm		0.089	0.089	0.089	0.075	
Drilling	Min mechanical drill size	mil	8	6	6	5
		mm	0.2	0.15	0.15	0.127
	Min hole to hole pitch	mil	22	20	18	16
		mm	0.55	0.5	0.45	0.4
	Min laser drill size	mil	5	4	4	3
mm		0.125	0.1	0.1	0.075	
	Buried via & blind via		YES	YES	YES	YES
	Min line width/space	mil	4/4	3/3	2.5/2.5	2/2
Outer layer	Max copper thickness (width / space)	OZ	4	5	6	7
		mil	12/10	14/12	17/15	20/18

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Plating	Aspect ratio	ratio	6.3 : 1	8 : 1	9 : 1	10 : 1
		mil	T62/D9.8	T62/D7.8	T62/D7.0	T62/D6
	Max of min hole copper thickness	mil	>0.8	>1.0	>1.2	>1.5
		mm	>0.02	>0.025	>0.03	>0.038
Solder mask	Min S/M thickness	mil	0.2	0.3	0.4	0.5
		mm	0.005	0.0075	0.01	0.0125
	Solder dam Width	mil	3	2.8	2.8	2.5
		mm	0.075	0.07	0.07	0.062
	S/M registration tolerance	mil	+/-2.5	+/-2.0	+/-1.5	+/-1.5
		mm	+/-0.062	+/-0.05	+/-0.037	+/-0.037
Electrical testing	Max test points	points	24000	64000	64000	80000
	Smallest SMT pad size	mil	7	6	5	4
		mm	0.175	0.15	0.125	0.1
	Smallest BGA pad size	mil	7	6	5	5
mm		0.175	0.15	0.125	0.125	
Others	Impedance control (min)	Ohm	37.5	37.5	27.4	27.4
	Impedance control tolerance	%	+/-10%	+/-8%	+/-8%	+/-8%
	Differential control tolerance	%	+/-10%	+/-8%	+/-8%	+/-8%