

MANUFACTURING CAPABILITIES

	Standard products	Reduced Produceability	R & D
Min. conductor width (1 oz copper, inner layer)	150 microns	125 microns	n/a
Min. conductor space (1 oz copper, inner layer)	150 microns	125 microns	n/a
Min. conductor width (1/2 oz copper, inner layer)	100 microns	100 microns	75 microns
Min. conductor space (1/2 oz copper, inner layer)	100 microns	100 microns	100 microns
Min. conductor width/space (outer layer)	150/150 microns	125/125 microns	75/75 microns
Min. electrical test pitch	250 microns	200 microns	200 microns
Min. conductor width (5 micron Cu, inner/outer layer)	n/a	75 microns	50 microns
Min. conductor space (5 micron Cu, inner/outer layer)	n/a	75 microns	50 microns
Minimum mech drilled via (thickness dependent)	300 microns	250 microns	200 microns
Fab Allowance (Pad size = drill + 2AR + FA) (more than 12 layers add 0.002)	375 microns	300 microns	250 microns
Min. drilled hole size (blind vias)	n/a	250 microns	200 microns
Min. drilled hole size (buried vias)	n/a	250 microns	200 microns
Max. drilled hole aspect ratio	7 to 1	8 to 1	>10 to 1
Max. overall board thickness	6.25 mm	6.75 mm	> 6.75 mm
Min. tolerance on PTHs	+/- 75 microns	+/- 50 microns	+/- 50 microns
Min. tolerance on NPTHs	+/- 50 microns	+/- 50 microns	+/- 50 microns
True Positional Tolerance (Rigid sections)	R.T.P. 200 microns	R.T.P. 150 microns	R.T.P. 100 microns
Microvia diameter/pad diameter	n/a	75/225 microns	75/225 microns
Avg layer count (rigid sections)	8 to 24	20 to 26	> 26
Avg layer count (flex sections)	8 to 24	20 to 26	> 26
Min. distance of feature to edge	375 microns	250 microns	125 microns
Min. Flexible dielectric thickness (design dep't.)	50 microns	50 microns	25 microns
Min. base copper thicknesses	18 microns	5 micron on polyimide film	5 micron on polyimide film
Max. panel size	450 x 600 mm	600 x 750 mm	600 x 750 mm
Impedance tolerance (characteristic, design dep't)	+/- 10%	+/- 10%	+/- 7%
Impedance tolerance (differential, design dep't)	+/- 15%	+/- 10%	+/- 10%
Warpage (design dependent)	1.50%	1.00%	0.70%
Surface finishes	standard:	HAL, tin/lead reflow, Gold/Nickel (electrolytic, ENIG)	
Dielectric materials	standard:	FR4 (high Tg), Kapton, GI Polyimide, BT caps	
	in development:	LCP, Duroid, Thermount cores	
Flexible constructions	standard:	Regal 1, Regal 5, adhesiveless (AP and "true"), Types 1-5	
	in development:	Regal X	
Soldermask types	standard:	dry film, LPISM, via plug	
	in development:	flexible LPISM	
Conformal coatings	standard:	acrylic, urethane, parylene	
Assembly capabilities	standard:	MIL-2000A, ANSI-J/STD 001, through-hole, SMT	