Quicktronics Technology Capabilities

Current Technology Capability and Future Development

Special Process Offerings

Feature General	Standard	Advanced*
Plugged and capped Vias (VIPPO)	like IPC 4761	
Feature Rigid PCB		
thick layer of copper (inner a. outher layer)	up to 350 µm (10oz)	
max. lenght Rigid boards (double side, PTH)	2.500 mm	
max. lenght Rigid boards (ML4 - ML6)	1.450 mm	ML8 - 1.450 mm
Feature Semi Flex PCB		
FR4 Semi-Flex PCB (with UL)	Bendable up to 500 times	
FR4 Semi-Flex thickness (with UL)	155 µm (include 35µmCu a. SM)	
Bending Ability (FR4 Semi-flex PCB)	180 degree	
Feature Flex PCB		
Total Lenght PI-Flex (PTH)	up to 25 meter (on roll)	upt to 50 meter

Process Capability

Feature(all dim. in mm)	Standard	Advanced*
Max. Layer Count	2-20	up to 32
Min. Drill Size (PTH)	0,15 mm	
Min. Finished hole	0,1 mm	
Diameter plated hole tolerane	+/- 0.076 mm	+/- 0.05 mm
Diameter non plated hole tolerane	+/- 0.05 mm	+/- 0.04 mm
Diameter press fit hole tolerance	+/- 0.05 mm	
Positioning hole tolerance	+/- 0.076 mm	+/- 0.05 mm
Max. Aspect ratio (Base on finished hole)	15:1	

Min. Board thickness	0,3 mm	0,2 mm
Max. Board thickness	4.0 mm	10 mm
Finished board thickness tolerance	+/- 10%	
Min. Core thickness	0.075 mm	0.063 mm
Min. Prepreg thickness	0.075 mm	0.06 mm
Min. Copper foil thickness	0.5 Oz	0.33 Oz
Max. Copper foil thickness	6 oz (210 µm)	10 oz (350 µm)
Min. Inner layer Line / Space	0.075 mm	
Min. Outer layer Line & Space	0.075 mm	
Pattern registration tolerance	+/- 0.05 mm	
Min. Pad size over drill	Drill + 0.2 mm	Drill + 0.15 mm
Min. Solder mask clearance	0.08 mm	0.05 mm
Min. Solder mask web between pads	0.075 mm	
Min. Soldermask registration tolerance	+/- 0.05 mm	
Max. plugged hole diameter	0.50 mm	
Min. Legend width	0.11 mm	
Min. Size of carbon pad	Cu pad+ 0.40 mm	Cu pad + 0.30 mm
Min. Spacing between carbon pads	0.40 mm	0.30 mm
Routing dimension tolerance	+/- 0.1 mm	
Punching dimesion tolerance	+/- 0.1 mm	+/- 0.076 mm
Scoring angle	30, 45, 60 degree	
Scoring web thickness tolerance	+/- 0.1 mm	
Beveling angle	20, 30, 45, 60, 70 degree	
Warp and Twist	≤0.75%	
Impedance Single ended tolerance	+/- 10%	+/- 5%
Impedance Differential tolerance	+/- 10%	+/- 5%
Impedance Coplanar Tolerance	+/- 10%	+/- 5%
Min. Nickel thickness	3 µm	2.5 µm
Hard gold plated thickness	0.25-0.76um	0.76-1 µm

Min. Immersion gold thickness	0.05 µm	0.076 µm
Min. Immersion Tin thickness	0.8-1.2 µm	
Min. Immersion Silver thickness	0.15-0.5 µm	
OSP (Entek HT) thickness	0.20-0.50 µm	0.2-0.8 µm
Lead Free HASL thickness	1-40 µm	
HASL thickness	1-40 µm	

High Density Interconnect (HDI)

Feature(all dim. in mm)	Standard	Advanced*
Blind Via size (Laser drill)	0.1-0.2 mm	0.08 mm
Min. Target/ Capture Pad diameter for laser blir	Drill+0.25 mm	Drill+0.20 mm
Max. Laser blind via depth	0.075 mm	0,115 mm
Max. Aspect Ratio (Base on laser drill size)	0.75:1	
HDI Type Construction	Type I, Type II	Type III, Stack via, Stragger via
Build Up Layers	1-N-1, 2-N-2	3-N-3
Copper Fill Plating for laser blind via	Yes	
Max. Dimple for Cu fill in laser blind via	30 µm	20 µm
Min. Pad size over mechnical buried via	Drill+0.25 mm	Drill+0.20 mm
Finished hole size for Via in Pad Technology/ Plated over filled via (POFV)	0.30 mm	0.25 mm
Min. Pad size over drill for via in pad technolog	Drill+0.30 mm	Drill+0.25 mm

Materials and Surface Finishes

Feature(all dim. in mm)	Standard	Advanced*
FR-4 (Lead Free material)	TG 135, 150, 170 'C	TG 180 'C
FR-4 (Halogen Free material)	TG 150 'C	TG 170 'C
CEM 1 / CEM3	TG 135	
CAF Resistant Laminate	YES	

Solder mask Printing	Taiyo PSR-4000 (matte, glossy), KSM-S6189 (matte, glossy), RongDa-H9100 (matte, glossy), others on request	
Solder mask color	Green, White, Black, Red, Yellow, others on request	
Via Plugging solder mask	KSM-S6189 EPH75	Taiyo
Legend color	White, Yellow, Black, Light Grey	
Peelable mask on board	Peter SD2954, Blue color	
Carbon Ink	Chuan-DAO-CCI301, Tamura MRX-713J	
Kapton tape	Yes	