

PCB Capabilities

Microchip USA's new PCB manufacturing service optimizes clients' PCB purchasing process through cost reduction and production efficiency for any order size.

Process Capabilities

ITEM	CAPABILITY
Maximum Layer Count	50
Thickness Range	0.06 ~ 5.6mm
Min Outer Layer Line Width/Space	3/3 mil
Max Outer Layer Copper Thickness	30 oz
Max Inner Layer Copper Thickness	15 oz
Aspect Ratio	20:01
Mechanical Drill Range	0.15 ~ 6.5 mm
Mechanical Hole Position Tolerance	+/- 0.05 mm
Outline Tolerance	+/- 0.05 mm
Soldermask Dams Width Min	0.075 Green, 0.125 mm Other Colors
Impedance Tolerance	<50 +/- 5 ohms, >50 ohms +/- 10%
Surface Treatments	HASL, LFHASL, ENIG, ENEPIG, Immersion Silver, Immersion Tin, OSP, Hard Gold Fingers, Carbon Ink, Peelable Mask
Special Processes	POFV, Buried/Blind Vias, Back-Drilling, Controlled Depth Milling, Hybrid Materials, Counterbore, Copper Via Plugging

Roadmap

PRODUCT	PARAMETERS	PRESENTLY	2025	2026
Multi-Layer	Minimum Line Width (mils)	3.0/3.0	2.5/2.5	2.5/2.5
	Line Width Tolerance (mils)	+/- 0.8	+/- 0.5	+/- 0.5
	Layers (max)	50	56	60
	Aspect Ratio	20:1 (4.0/0.25)	22:1 (5.5/0.25)	24:1 (6.0/0.2)
Copper	Max Outer Layer	30 oz	30 oz	30 oz
	Max Inner Layer	15 oz	15 oz	15 oz
Blind/Buried Via	Number of Pressing	3	3	4
	Dimple PoFV (um)	≤ 75	≤ 50	≤ 25
HDI	Blind Via Aspect Ratio	0.8:1	1:01	1:01
	Via Plugging Aspect Ratio	0.8:1	0.8:1	0.8:1
	HDI Steps	5	6, Any-Layer	6, Any-Layer
Rigid	Flex Board Layers	12	16	18
	Structure	Books, Pontoons, Flying Tails	Books, Pontoons, Flying Tails	Books, Pontoons, Flying Tails

Materials

Conventional FR-4	S1141 / S1000H / S1000-2M
	IT158 / IT180A
	KB6160 / KB6165 / KB6167
	TU768 / TU865
Halogen Free	S1150G / TU747T / TU862
High Frequency	S7135 / S7136
	RO3003 / RO4003 / RO4350B / RO4730G3 / RO5880
	TLX-5 / TLX-6 / TLX-8 / RF30 / AD255 / AD3000C / F4B
High Speed	TU872SLK / TU883 / TU933+ / M-4 / M-6 / M-7 / IT968 / IT988
High Thermal Conductivity High CTI	ST115 / S1600L
Flexible	PI:SF202 SF305 (Adhesive) / AP85 Series / AP91 Series / SF305C (Coverlay)

