



Single Sided PCB

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FUTURE

CAPABILITIES - PCB Manufacturing

- Premium and Specialised manufacturers in Single Sided, Double Sided, Multilayer, RF/Microwave, Flexible, IMS/ MC, Aluminum Flex and Speciality PCBs.
- We confirm our manufacturing capability based upon final PCB designs & requirements.
- Acceptance of PCBs designs is subject to MRC and Feasibility checks.
- All our PCBs comply with IPC standards unless specified otherwise.
- We envision manufacturing the PCBs with **FUTURISTIC** parameters mentioned in the table that are currently indicative only.
- The PCBs with **STRATEGIC** capabilities mentioned in the table below are manufactured upon special requests.

Product Features	Variant	Standard	Strategic	Futuristic
Max. Layer Count		1	NA	NA
Min. Board Thickness (Finished)	SS	0.8 mm	0.4 mm*	<0.4 mm*
Max. Board Thickness (Finished)	SS	2.4 mm	3.0 mm*	>3.0 mm*
Copper Thickness		35 & 70 micron	105, 18 & 12 micron *	140 & <12 microns *
Min. Deliverable PCB Size		As per design	As per design	As per design
Max. Deliverable PCB Size		400 x 300 mm	1800 x 300 mm	As per design *
Smallest Mech Drill Diameter		0.35 mm	0.25 mm	0.15 mm
Min. Punched Hole Diameter		0.80 mm	0.80 mm	0.80 mm
Controlled Depth Drilling		Yes	Yes	Yes
NPTH Slots		Yes	Yes	Yes
Min. Line Width (trace) and Spacing	18 microns copper	4/4 mils*	3/3 mils*	3/3 mils*
Min. Line Width (trace) and Spacing	35 microns copper	6/6 mils	5/5 mils*	5/5 mils*
Min. Line Width (trace) and Spacing	70 microns copper	10/10 mils	8/8 mils	8/8 mils
Min. Line Width (trace) and Spacing	105 microns copper	15/15 mils	12/12 mils	12/12 mils
Min. Line Width (trace) and Spacing	140 microns copper	>20/20 mils	16/16 mils	16/16 mils
Process Pad Diameter for min. Annular ring of 0.05 mm	18 microns copper	Drill dia + 0.3 mm*	Drill dia + 0.3 mm*	Drill dia + 0.3 mm*
	35 microns copper	Drill dia + 0.4 mm*	Drill dia + 0.4 mm*	Drill dia + 0.4 mm*
	70 microns copper	Drill dia + 0.6 mm	Drill dia + 0.6 mm	Drill dia + 0.6 mm
	105 microns copper	Drill dia + 0.9 mm	Drill dia + 0.9 mm	Drill dia + 0.9 mm
	140 microns copper	Drill dia + 1.3 mm	Drill dia + 1.3 mm	Drill dia + 1.3 mm
Solder Mask Registration		6 mils	4 mils*	3 mils*
Solder Mask Min. Dam Size		6 mils	4 mils*	3 mils*
Min. Diameter Rout Cutter Available		1.6 mm	1.0 mm	0.8 mm
Routed Part Size Tolerance (Depends on PCB size)		0.2 mm	0.15 mm	0.1 mm
Bow & Twist Tolerance	Plus or minus	0.75%	0.50%	0.50%
Thickness Tolerance	Plus or minus	10%	10%	10%
Silver Cross-over (Jumper)			Yes	
Carbon Cross-over (Jumper)			Yes	

Product Features	Variant	Standard	Strategic	Futuristic
Surface Finishes				
HASL		Yes	No	
Lead Free HASL		Yes	No	
OSP (Entek)		Yes		
Lacquer (for Single Side PCBs only)		Yes		
ENIG (Electroless Nickel / Immersion Gold)		Yes		
Immersion Silver		No	Yes	
Immersion Tin		Yes		
Electrolytic Tin		Yes		
Electrolytic Nickel		Yes		
Electrolytic Hard Gold		Yes		
Edge Fingers - Gold Plated		Yes		
Carbon Printed Contacts		Yes		
Peelable mask		Yes		
Selective Gold		Yes		
Solder Masks				
Semi - Gloss Green		Yes		
Gloss Green		Yes		
Matte - Green		Yes		
Black		Yes		
Red		No	Yes	
Clear		No	Yes	
Blue		Yes		
White		Yes		
Legend				
Black		Yes		
Green		Yes		
White		Yes		
Yellow		No	Yes	
Fab				
Routed Array		Yes		
Profile Punching		Yes		
V Score, Edge to Copper		0.5 mm	0.4 mm	0.4 mm
V Score Angles		60°	30°,45° *	30°,45° *
Edge Beveling		Yes		
Electrical Test				
10 Volt		Yes		
40 Volt		Yes		
250 Volt		Yes		

T&C Apply:
 Products with asterisk(*) are only available on special request

Product Features	Variant	Standard	Strategic	Futuristic
Max. Test Area	FPT	610 x 510mm		--
	Bed of nails	16" x 12.8"		--
Min. pitch of test pads	FPT	0.25 mm	0.15 mm	--
	Bed of nails	0.5 mm		--
Min. test pad size	FPT	0.2 x 0.2 mm	0.1 x 0.1 mm	--
	Bed of nails	0.3 x 0.3 mm		--
Test conditions	FPT	10 ohms, 10 Meg Ohms	5 ohms, 12.7 Meg Ohms	--
	Bed of nails	20 ohms, 10 Meg Ohms		--
Laminate Materials Single sided				
CEM -1			Yes	
CEM -3			Yes	
FR1			Yes	
FR2			Yes	
FR4			Yes	
XPC			Yes	
RF			Yes	
Reports				
Quality Conformance Inspection report			Yes	
Microsection			Yes	
Solderability			Yes	
XRF (X-ray Fluorescence)			Yes	
Ionic Contamination			Yes	
Time Domain Reflectometry test (TDR) for Controlled Impedance Boards			Yes	
FAI (First Article Inspection)			Yes	
PPAP Documents (on specific request)			Yes	
Certificate of Compliance (C of C)			Yes	
UL				
94VO (for a large selected families of products)			Yes	
System Approvals				
ISO 9001:2015			Yes	
IATF 16949:2016			Yes	
ISO 14001:2015			Yes	
BS/OHSAS 18001:2007			Yes	
German Automotive VDA 6.3		No		Yes

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