



Dear Customer,

We would like to take this opportunity to welcome you and thank you for looking to ASA PCB as your Printed Circuit Manufacturing Partner and to provide your company with PCB Solution. ASA PCB has been supporting engineers for the Fortune 500 to 1000 and start up companies in manufacturing of printed circuit boards since 1993.

We are conveniently located in the Silicon Valley, California. Our engineering team and our founders are well respected and are highly skilled with over 25 years of industry experience servicing clients from the Silicon Valley and across the US to over seas companies. Our goals are to bring best in the breed quality and technologies to our customer-partner. We work closely and assist our client's need to deliver customer's requirements to detailed specifications and from concept to product and on time delivery. We use absolutely the best materials on our PCB and assure customer of best quality and delivery.

Some of our customer - partner are Xilinx, Broadcom, Samsung, Maxim, Linear Technology, Intel, Applied Materials, Juniper Networks, Broadcom, National Semiconductor, Altera, Conexant, Cisco, Sun Micro Systems, HP, Lockheed Martin, Ericson, NASA and more...We look forward to providing solution to your PCB requirements. Thank you for your support!



FOR MORE INFORMATION, PLEASE CONTACT:

Tony Nguyen – BDV Manager
Tel: 408.829.7085 Email: TonyN@asapcb.com

Bus: 3561 Homestead Rd., Suite #282 Santa Clara, CA 95051
Website: www.asapcb.com

SERVICES

24HRS - 5 DAYS ON QUICK TURN PROTOTYPE

10 – 30 DAYS ON PRODUCTION

PCB DESIGN AND LAYOUT

TECHNOLOGIES

BLIND AND BURIRED VIA

VIA IN PAD, FILL VIA

CONTROLLED IMPEDENCE

3/3 LINE & SPACE, STANDARD 5/5

IMMERSION TIN, SILVER AND GOLD

HARD GOLD & SILVER

OSP

RoHS COMPLIANCE

10 OZ. COPPER

CAPABILITIES

RIGID PCB

FLEX & RIGID-FLEX PCB

FR4 HI TEMP, POLYIMIDE, NELCO, ROGERS,

GTEK, ALUMININUM, SPECIAL ORDERS

MAXIMUM BOARD THICKNESS 300 MIL

.002 MIN. LASER DRILL THROUGH HOLE

PANEL SIZE UP TO 30 X 30

BURN IN BOARDS, LOAD AND TEST BOARDS

SINGLE TO 48 LAYERS

INDUSTRY

COMPUTER, NETWORKING, WIRELESS,
MICROWAVE RF, SEMICONDUCTOR,
CONSUMER DIGITAL, AUTOMOBILE, MILITARY &
AEROSPACE.

Capabilities Roadmap

Board Features	Standard	Premium	Advanced	Emerging	Comments
Laser Drilling/ Routing - w/vision	Available	Available	Available	Available	
Lines and Spaces (Outer)	.005"	.004"- .003"	.002"	.0025"	
Lines and Spaces (Inner)	.005"	.004"- .003"	.002"	.0025"	
Outer Annual Ring	.007"	.006"- .003"	<.003"	.0000000000"	
Inner Annual Ring	.007"	.006"- .003"	<.003"	.000"/build-up	
Hole to Plane Clearance or Conductor	0.013	.012-.007	.006-.0045		
Layer to Layer Registration (Core to Core)	.005"	.004"- .003"	.002"		Material Dependent
Layer to Layer Registration (Top to Bottom)	.005"	.004"- .003"	.002"		
PCB Thickness Tolerance	10%	9 - 5%	.002"		
Mechanical Drill Hole Minimum	.016"	.0145"- .006"	0.0059		
Laser Drilled Holes	.006"	.005"- .002"	.001"		
Aspect Ratio (>=> than .015")	9:1	10:1 - 16:1	17:1 - 20:1	21:1 - 25:1	
Controlled Impedance Characteristic	10%	9 - 5%	3%	1 Ohm	
Differential	10%	9 - 5%			
Fabrication Radius	+/-5 degrees	+/-5 degrees	+/-5 degrees	+/-5 degrees	
Warpage: flatness of finished board (inch per inch)	0.010	0.008	0.005	0.003	
Min Dielectric Thickness	0.004	0.004	0.002	0.001	
LPI Soldermask (Dams)	.005"	.004" - .003"	.002"		
Layer Count	20	>30	>40	>50	
Panel Sizes	12 X 18	18 x 24	20 x 26	22 x 30	

Max Board Thickness	0.125	0.200	0.300	<0.300	
Min Board Thickness	0.062	0.008	0.006	0.002	
Min Board Thickness Tolerance	+/- 10%	+/-7.5%	+/-5%		
Pad to Hole Size	Standard	Premium	Advanced	Emerging	
Min Plated Hole Size	0.010	0.010	0.006	0.002	
Tolerance- Plated Hole Size	+/-0.003	+/-0.003	+/-0.002	+/-0.001	
Min Inner Layer Pad (1 mil annular ring)	+/-0.018	+/-0.018	+/-0.012	+/-0.008	
	over FHS	over FHS	over FHS	over FHS	
Mech Min Drill Hole Size	0.010	0.010	0.006	0.004	
Laser Min Drill Hole Size	0.006	0.004	0.002		
Normal Finished Hole Sizes	0.010	0.008	0.006	0.004	
Plane Relief Diameter Over Drilled Hole	0.024	0.02	0.016	0.01	
Min Outer Layer Pad (1 mil annular ring)	0.012	0.010	0.008	0.006	
	over FHS	over FHS	over FHS	over FHS	
Min Outer Non Plated Hole to Metal	0.010	0.010	0.008	0.008	
Min Inner Non Plated Hole to Metal	0.010	0.010	0.008	0.008	
Max Number Holes per Square In (average over board)	200	200	300	1,000	
Max Number Holes per Square In (localized density)	n/a	n/a	n/a	n/a	
Testing Capabilities					
Universal Grid Tester (UGT)					
Flying Probe Tester:					
Min Pitch - 0.005					
Min Feature Size - 0.002					

Soldermask Criteria	Standard	Advanced	Premium	Emerging	
SMT Min Pad Spacing	0.008	0.008	0.007	0.007	
Line to SMT Min Space	0.005	0.004	0.003	0.003	
Min Soldermask Rib	0.005	0.005	0.004	0.003	

Materials

FR4 (Di, Multi, Tetra-fuctional)

High Temp FR4 (Di, Multi, Tetra-fuctional)

G200

G-tech

Polyimide

Resin Coated Foil

Thermount (Polyimide)

Thermount (Epoxy)

BT

Glass Reinforced Ceramic

PTFE Woven (D/S & Hybrid MLB)

PTFE Non-Woven (D/S & Hybrid MLB)

PTFE Ceramic (D/S & Hybrid MLB)

Speed Board C Prepreg

Speed Board N Prepreg

Full Array of Bonding Films

Flex (Capton-Upilex/LPI Covercoats)

Material Processing

Omega Ply Buried Resistors

Copper Invar Copper Metal Cors

Heat Sinks (Brass, Copper, & Aluminum)

Hole Filled (Plated over)

CB100 Silver Fill

SD2361 Epoxy Fill

Surface Finishes

Standard

Advanced

Premium

Emerging

Hot Air Solder Level (HASL) Min thickness	0.0003	0.0003	0.0002		
HASL Max thickness	0.0015	0.0015	0.001		
HASL Co Plan	+/- 1000 uin	+/- 1000 uin	+/- 500 uin		
OSP					
Immersion Gold Thickness	3-5 uin	5-8 uin			
Immersion Silver Thickness	10-20 uin	10-20 uin	10-20 uin		
Immersion Tin	30-50 uin	30-50 uin			
Electrolytic Hard Gold (Knoop Hardness 120 or >)	50 uin				
Soft Electrolytic Gold (Knoop Hardness 90 or <)					
Electrolytic Nickel					
Electroless Nickel					
Carbon Coating					