ASA PCB Technology

Design Guidelines:	**Standard**	**Advanced**
Minimum Internal Line Width	0.005"	0.003"
Minimum Internal Spacing	0.005"	0.002"
Minimum External Line	0.005"	0.003"
Minimum External Spacing	0.005"	0.002"
Minimum Internal Copper Foil	0.0007"	0.00035"
Maximum Internal Copper Foil	0.0042"	0.0056"(+)
Minimum External Copper (TOTAL)	0.0014"	0.0007"
Maximum External Copper (TOTAL)	0.0084"	0.0112"
Minimum Internal Pad Over Drilled Hole Size	0.012"	0.006"
Minimum External Pad Over Drilled Hole Size	0.010"	0.006"
Minimum Drilled Hole Size	0.010"	0.006"
Minimum Aspect Ratio	10:01	14:01
Minimum Finished Hole Tolerance	0.003"+/-	0.002"+/-
Minimum SMT Pitch	0.015"	0.010"
Maximum Layer Count	16 lyr	30+ lyr
Minimum Dielectric Thickness	0.003"	0.0012"
Maximum Overall Thickness	.125"	.300"
Maximum Board Dimensions	20"x 22"	22"x 26"
Minimum Board Thickness (Multi-Layer)	.031"	.014"
Buried Resistor Tolerance		30%
Buried Capacitance pf / in 2		500
Testing		
Electrical Test - Continuity (ohms)	10	5
Electrical Test - Isolation (M ohms)	10	100
Electrical Test - Minimum Component Pitch	.015"	.010"
Impedance Testing (incl. Differential) Range (ohms)	25 - 150	25 - 150
Impedance Tolerance	10% +/-	5% +/-
DC Resistance Testing	X	X
Laminates		
FR-4 Epoxy (hi-Tg)	X	X
Polyimide	X	X
PTFE (Teflon)	X	X
Rogers 4350	X	X
Rogers 4003	X	X
Rogers (others)	X	X
BT	X	X
Cynate Ester		X
PPO / Polyphenylene Oxide		X
G-Tec / FR-408 / Nelco 4103-13	X	X
Special Features		
Blind / Buried Vias	X	X
Conductive Epoxy Fill	X	X
Via in SMT / BGA	X	X
Sequential Laminations	X	X
Suspended Circuitry	X	X
Precision Pad Technology	X	X