Capability

Existing Capability as of October 1, 2002		
Capability	**Production**	**Prototype**
Max Layer Count	14 Layers	26 Layers
Max Thickness	0.175" (4.445 mm)	0.175" (4.445 mm)
Min Panel Thickness HASL	0.020" (0.508 mm)	0.020" (0.508 mm)
Min Panel Thickness Immersion Gold (4 microinch max deposit)	0.014" (0.356 mm)	0.012" (0.305 mm)
Min Panel Thickness OSP	0.014" (0.356 mm)	0.012" (0.305 mm)
Min Panel Thickness Immersion Silver (7-20 microinch Ag thickness)	0.014" (0.356 mm)	0.012" (0.305 mm)
Drill to Metal	0.010" (0.254 mm)	0.008" (0.203 mm)
Min Finished Hole Size (FHS=Finished Hole Size) (Assumes HASL)	0.005" FHS </=0.062" (0.127mm FHS </=1.575mm) 0.008" FHS </=0.093" (0.203mm FHS </=2.362mm) 0.020" FHS </=0.175" (0.508mm FHS </=4.445mm)	0.003" FHS</=0.062" (0.076mmFHS</=1.575mm) 0.003" FHS</=0.093" (0.076mmFHS</=2.362mm) 0.010" FHS</=0.175" (0.254mmFHS</=4.445mm)
Min Via Drill Size	0.010" </=0.062" (0.254 mm </= 1.575 mm) 0.012" </=0.093" (0.305 mm </= 2.362 mm) 0.026" </=0.175" (0.660 mm </= 4.445 mm)	0.008" </=0.062" (0.203 mm </= 1.575 mm) 0.008" </=0.093" (0.203 mm </= 2.362 mm) 0.016" </=0.175" (0.406 mm </= 4.445 mm)
Min Hole Tolerance, diameter	+/- 0.002" (0.051 mm)	+/- 0.002" (0.051 mm)
Innerlayer Registration	+/- 0.003" (0.076 mm)	+/- 0.003" (0.076 mm)
Trace / Space Outerlayer (0.5 Oz)	0.004" - 0.004" (0.102 mm - 0.102 mm)	0.003" - 0.004" (0.076 mm - 0.102 mm)

Capability	Production	Prototype
Trace / Space Innerlayer (0.5 Oz)	0.004" / 0.004" (0.102 mm - 0.102 mm)	0.003" / 0.004" (0.076 mm - 0.102 mm)
Trace / Space (1 Oz) Innerlayer (2 Oz)	0.004" / 0.005" (0.102 mm - 0.127 mm) 0.007" / 0.007" (0.178 mm - 0.178 mm)	0.004" / 0.004" (0.102 mm - 0.102 mm) 0.006" / 0.006" (0.152 mm - 0.152 mm)
Aspect Ratio (thickness / drill diameter)	</= 8:1	</= 12:1
QFP Pitch Min	0.016" (0.406 mm) (not HASL)	0.010" (0.254 mm) (not HASL)
Soldermask Dam Min	0.003" (0.076 mm)	0.0025" (0.064 mm)
Carbon Ink	</= 200 ohms	</= 200 ohms
Controlled Impedance (Single ended) (Differential) (Rambus)	50 - 90 ohms +/- 8%* 100 - 155 ohms +/- 10% 28 ohms +/- 10%	50 - 90 ohms +/- 7%* 100 - 155 ohms +/- 8%* 28 ohms +/- 8%*
Min Core Thickness	0.003" (0.076 mm)	0.002" (0.051 mm)
Max Internal Copper Wt	4 ounces (113.4 g)	6 ounces (170.1 g)
Buried Vias (0.004" core min) (one third Oz Cu min)	0.010" (0.254 mm) drill	0.008" (0.203 mm) drill
Blind Vias (0.004" core min) (8 layer max)	0.010" (0.254 mm) drill	0.008" (0.203 mm) drill

** Less than 10% impedance tolerance capability is design dependent.*

High Performance Materials	Production	Prototype
Bismalemide Triazine (BT) or equivalent		Yes
Nelco N-4000-13 (SI)		Yes
Nelco N-4000-13	Yes	Yes
Getek	Yes	Yes
Rogers 4350	Yes	Yes