TTM TECHNOLOGY ROADMAP
March 2009

DENSITY	STANDARD	ADVANCED & DEVELOPMENT
Minimum Line/Spacing - Internal 1/2 oz	3/3	2.5/2.5
Mimimum Line/Spacing - External 1/2 oz	4/4	3.5/3.5
Minimum Drilled Hole Size	10	8
Minimum Soldermask Web	4	2
Aspect Ratio - Line Card	12:1	14:1
Aspect Ratio - Backplane	14:1	17:1
Land Size (Diameter over Drill)	10	8
Thickness (Minimum / Maximum)	30 / 300	20 / 440
Thickness Tolerance	+/- 10	+/- 7
Minimum Core Thickness	3	2.5
Minimum Core Thickness (BC)	2	1
Minimum Prepreg Fill	2.5	2
BGA	1.0 mm	.4 mm
QFP	.65 mm	.5 mm
HDI & VIAS	**STANDARD**	**ADVANCED & DEVELOPMENT**
BBV Mechanical Drill	8	6
Back Drilling Depth Tolerance	+/- 8	+/- 5
Minimum Laser Via (Drill / Capture Pad)	5 / 12	4 / 9
Variable Depth Laser Via (Depth / Diameter)	9 / 12	9 / 10
Microvia Aspect Ratio	0.75:1	1:1
1 Layer Build Up	Yes	
2 Layer Build Up		Yes
3+ Layer Build Up		Yes
CONTROLLED IMPEDANCE	**STANDARD**	**ADVANCED & DEVELOPMENT**
28 - 150 Ohms	+/- 10%	+/-5%
50 - 150 Ohms	+/-10%	+/-8%
COPPER WEIGHTS	**STANDARD**	**ADVANCED & DEVELOPMENT**
Min Base Copper - plated layers	1/2 oz	1/4 oz
Max Base Copper - plated layers	2 oz	10 oz
Min Copper Foil - non plated layers	1/2 oz	1/8 oz
Max Copper Foil - non plated layers	2 oz	12 oz