




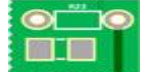




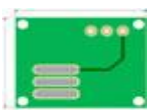


		STANDARD	SPECIAL	TOLERANCE
Type of circuit	-	Single sided, double sided, multilayer (4 to 12 layers), IMS	Multilayer with blind /buried vias IMS double sided + plated holes, Controlled impedance	NA
Materials	-	FR4, IMS, CEM1	FR4 High Tg, CTI > 250, High Frequency	NA
Solder-Mask	-	Green, white, red, blue, black	other colors available upon request	NA
Silkscreen	-	white, yellow, black	other colors available upon request	NA
Base copper thickness (inner & outer)	-	18 – 35 – 70 µm	105 – 140 – 210 – 400 µm	NA
Finishings	Immersion tin	1.0 – 1.3 µm	Other thickness possible upon request	-
	Immersion silver	0.3 – 0.5 µm		
	HAL Sn/Pb	1.5 – 10 µm		
	HAL Pb free	1.5 – 10 µm		
	OSP	-		
	ENiG	Ni 4-7 µm, Au 0.05-0.15 µm		
	Plated Au	Ni 4-7 µm, Au 0.5-1 µm		
Thickness		0.6 – 3.2 mm	0.2 – 3.2 mm	± 10%
Minimum hole drilled Diameter (PTH)		0.25 mm	0.15 mm	± 0.05 mm or - 0.0 / + 0.1 mm
Minimum hole finished diameter		0.15 mm	0.05 mm	NA
NPTH		0.6 mm	0.35 mm	± 0.05 mm
Layer alignment		± 0.1 mm	± 0.08 mm	± 0.1 mm
Hole-pad alignment		± 0.15 mm	± 0.10 mm	± 0.15 mm
Minimum annular ring (outer layers)		0.18 mm	< 0.15 mm	± 15 % (18 µm)
Minimum annular ring (inner layers)		0.3 mm	< 0.20 mm	± 15 % (18 µm)
Minimum line width (outer layers)- depending on base Cu thickness		18 µm – 0.12 mm	105 µm – 0.4 mm	± 15 % (18 µm)
		35 µm – 0.15 mm	210 µm – 0.6 mm	± 20 % (35 µm)
		70 µm – 0.19 mm	400 µm – 0.8 mm	± 25 % (70 µm)

		STANDARD	SPECIAL	TOLERANCE
Minimum space (outer layer) – depending on base Cu thickness		18 μm – 0.12 mm	105 μm – 0.5 mm	± 15 % (18 μm)
		35 μm – 0.15 mm	210 μm – 0.8 mm	± 20 % (35 μm)
		70 μm – 0.19 mm	400 μm – 1 mm	± 25 % (70 μm)
Minimum line width (inner layers) – depending on base Cu thickness		18 μm – 0.10 mm	105 μm – 0.4 mm	± 15 % (18 μm)
		35 μm – 0.13 mm	210 μm – 0.6 mm	± 20 % (35 μm)
		70 μm – 0.16 mm	400 μm – 0.8 mm	± 25 % (70 μm)
Minimum space (inner layer) – depending on base Cu thickness		18 μm – 0.10 mm	105 μm – 0.5 mm	± 15 % (18 μm)
		35 μm – 0.13 mm	210 μm – 0.8	± 20 % (35 μm)
		70 μm – 0.16 mm	400 μm – 1 mm	± 25 % (70 μm)
Minimum isolation inner layers		250 μm	250 μm	NA
Aspect ratio		8	13	NA
Solder mask thickness		> 20 μm	> 40 μm	NA
Soldermask dam		0.2 mm	0.18 mm	NA
Plugged vias			Available	NA
Silkscreen, minimum line width		0.2 mm	0.1 mm	NA
Carbon		0.45 mm	0.40 mm	NA
Peelable, hole coverage		Ø : 2.5 mm	> 2.5 mm	NA
Peelable, distance		1 mm	0.8 mm	NA
Scoring, core thickness		0.5 mm	0.3 mm	± 0.1 mm
Scoring, positioning		± 0.1 mm	± 0.1 mm	NA
Routing		± 0.2 mm	± 0.1 mm	< 50 mm ± 0.1 > 50 mm / < 200 mm ± 0.15 > 200 mm ± 0.2
Bow & twist		< 0.75 %	< 0.5 %	NA