



## Technical Capabilities for Single Sided PCB's

Item	Minimum Capability	Maximum Capability	Tolerance	Remarks
<b>Metal Finishing:</b> Hal Lead Free (SnCuNi) Chemical Tin (Inm.Sn) (*) Chemical Silver (Inm.Ag) Electroless Ni Immersion Gold (ENIG)	Ni: 3 µm Au: 0,04 µm	Ni: 7 µm Au: 0,07 µm	-	Sn100C Alloyage (*) Subcontracted  Not available for IMS pcbs
<b>Final Finishing:</b> Liquid PhotoImageable Solder Mask Ink Legend Conductive Carbon Ink Peelable Mask	-	-	-	A wide range of colours A wide range of colours
<b>Raw Material:</b> FR-4 Tg Standard CEM-1 IMS (Aluminium)	130 °C	140°C	-	Depending on the manufacturer
<b>Base Copper</b> FR-4 Tg Standard CEM-1 IMS (Aluminium)	17 µm 35 µm 35 µm	70 µm 35 µm 70 µm	-	Under request (consult delivery time): 105 µm  Depending on manufacturer's capabilities
<b>Diameter (raw material)</b> 	300 µm (FR-4 y CEM-1) 700 µm (IMS)	-	+ 0,10 / - 0,05 mm	Or equivalent tolerance
<b>Width and isolation of copper conductors (Base Copper)</b> 	100 µm (17 µm) 100 µm (35 µm) 200 µm (70 µm)	-	± 25% ± 25% ± 30%	-
<b>Copper annular ring (Base Copper)</b> 	100 µm (17 µm) 125 µm (35 µm) 250 µm (70 µm)	-	-	Recommendation: for a good soldering surface, for component holes ≥ 200 µm

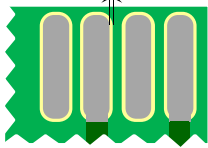
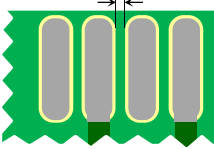
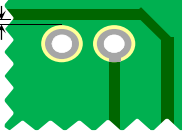
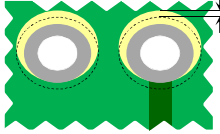
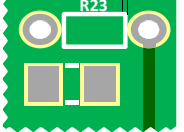
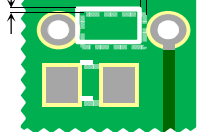
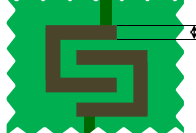


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Distance between NPTH and copper conductor	200 $\mu$ m	-	-	-
Distance between copper conductor and board edge (routed)	150 $\mu$ m	-	-	-
Misalignement between copper and hole	-	-	$\pm$ 100 $\mu$ m	-
Misalignement between outline and hole	-	-	$\pm$ 150 $\mu$ m	-
Distance between a copper conductor and theoretical scoring axis	500 $\mu$ m	-	-	-
Maximum hole to be plugged with peelable mask	0,30 mm	1,80 mm	-	-
Distance between peelable mask and copper pad	0,80 mm	-	-	-



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Solder Mask annular ring		50 µm	-	-	-
Solder Mask bridge		100 µm	-	-	-
Distance between solder mask clearance and copper conductor		50 µm	-	-	-
Misalignment between solder mask and copper		-	-	± 150 µm	-
Ink Legend width		100 µm	-	-	-
Misalignment between ink legend and copper		-	-	± 200 µm	-
Carbon ink width		600 µm	-	-	-



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Separation between carbon conductors	400 µm	-	-	-
Scoring positioning (taken on axis)	-	-	± 150 µm	-
Core thickness after scoring process	200 µm	-	± 150 µm	Standard: 300 µm
Misalignment between top-bottom scoring blades	-	-	± 150 µm	-
Espeor final	0,50 mm 1,0 mm 1,0 mm	3,2 mm 1,6 mm 3,0 mm	± 10 % (e > 1,0 mm) and ± 100 µm (e ≤ 1,0 mm) ± 10 % ± 10 %	For FR-4 material For CEM-1 material For IMS material
Alabeo y curvatura	-	1,0 % of diagonal	-	-
Dimensiones de producto terminado (fresado)	15 x 15 mm	600 x 500 mm	< 30 mm: ± 0.10 mm < 120 mm: ± 0.15 mm >120 mm: ± 0.20 mm	-
Other	-	-	-	According to IPC-A-600 revision G Standard