



Specifications Metal core Printed Circuit Boards (ref. qpi_spec_es_1208_2014_MC)

CAD/CAM

- Gerber + aperture list for all kinds of layers
- Gerber RS274X for all kinds of layers
- DPF for all kinds of layers
- ODB++ for all kinds of layers
- HPGL for mechanical drawings
- DXF for mechanical drawings
- DWG for mechanical drawings
- Excellon for all drill and rout files
- Sieb & Meyer for all drill and rout files
- Mentor neutral file for netlist comparison
- IPC356 file for netlist comparison

Dimensions/Thickness/Layer count

- Max. board size 673,1 mm X 495,3 mm (26.5" x 19.5")*
*special sizes upon request
- Max. thickness 6.3mm (0.25")
- Max. 2 layers, optional thin FR4 material glued on aluminium base material

Materials

- Aluminium base
- TLaird® Metalcore
- Bergquist®

Tolerances

Profile tolerance	+/-	100µm	4mil
Hole tolerance	+/-	50µm	2mil
Positional tolerance	+/-	25µm	1mil
Lamination tolerance	+/-	200µm	8mil
Scoring tolerance (Min. distance of copper to the middle of the scoring line 700µm (27,5mil))	+/-	100µm	4mil
Track width tolerance	+/-	10µm	0.4mil
Solder resist positional tolerance	+/-	75µm	3mil

Copper foil thicknesses

18µm	0.5Oz
35µm	1Oz
70µm	2Oz
105µm	3Oz
Special constructions optional	

Solder resist

Solder resist colour options: White, Green, Red, Blue, Yellow, Black
 Min thickness 15-30 µm (0.4 – 1.2 mil)
 Min. clearance 75µm (3mil)
 Min. line width 100µm (4mil)

Silk screen

Legend colour options: Black, White, Yellow, Red
 Min. line width 100µm (4mil)
 Min. text height 500µm (20mil)

Solderable finishes

- Hot air solder level (HAL Pb)
- Hot air solder level (HAL Pb free)
- Immersion Ni/Au (Enig)
- Immersion Sn
- Immersion Ag
- Entek (OSP)
- Electrolytic silver over copper
- Carbon ink

Electrical test

- Flying probe
- Dedicated (bed of needles) fixture test
- High voltage test optional



Specifications Metal core Printed Circuit Boards

PCB Features/Design rules

	Standard		Advanced	
	µm	mil	µm	mil
Track	100	4	75	3
Gap	100	4	75	3
Min. Drilled hole	250	10	75 / 125	3 / 5
Aspect ratio	12:1	12:1	12:1	12:1
Min. Pad Through hole	500	20	450	18
Min. Micro via pad	250	10	250	10
Track to PTH	200	8	150	6
Track to NPTH	225	9	225	9

Approvals

- UL-94V0
- ISO TS16949

Manufacturing according

- IPC-A600 Class 2
- IPC-A600 Class 3

Testing According

- IPC-TM-650

Special products

Q.P.I. always strives to provide its clients with the products and technologies which they require and, should these not already exist, will develop them itself or in cooperation with others. Contact Q.P.I. for further information.

