PCB123-01 specification

Contact info

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Governing standard

IPC 6012 Class 2

PCB summary

Layers:	4
Surface:	ENIG gold (Ni/Au)
Solder mask :	Wet film, mask color blue, top and bottom
Silkscreen:	White, top and bottom
Electrical test:	Yes
Total thickness:	1.6 mm
Min trace width:	100 um
Min spacing:	100 um
Blind/buried vias:	No
Drilled hole qty:	2350
Min hole size:	0.3mm plated
Tolerance:	All holes are +/- 0.1mm
Min annular:	0.15mm
Aspect ratio:	5.3
PCB Size:	141.5*176.9mm, including board assembly break-off rails top/ bottom
Paste mask stencil:	No stencil from PCB manufacturer
No of boards in panel:	1 (one main board, four smaller break-off modules, break-off rails)
Material:	FR4 Standard

Number of boards wanted and delivery

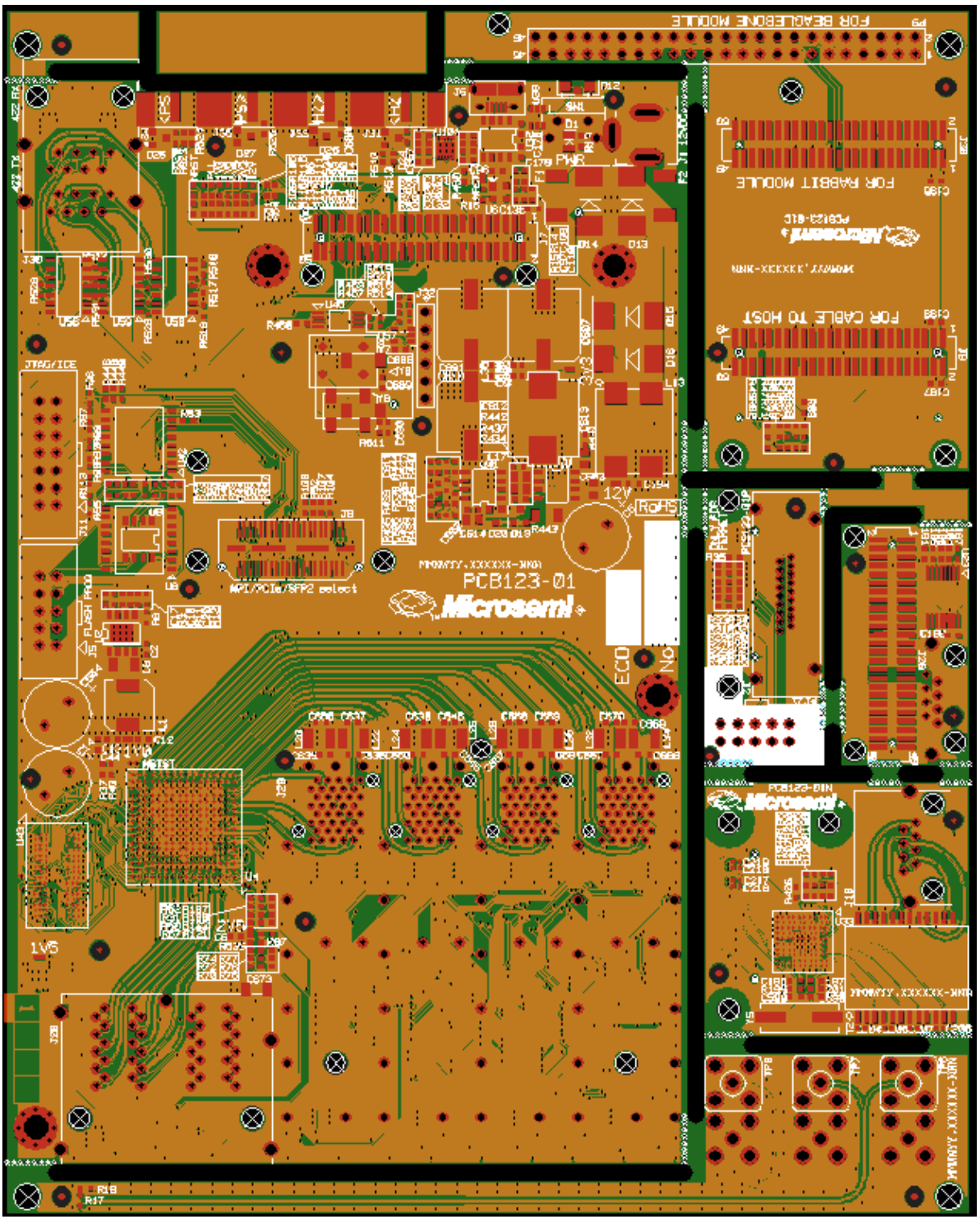
- 42 pcs, with 5 day delivery

Film data

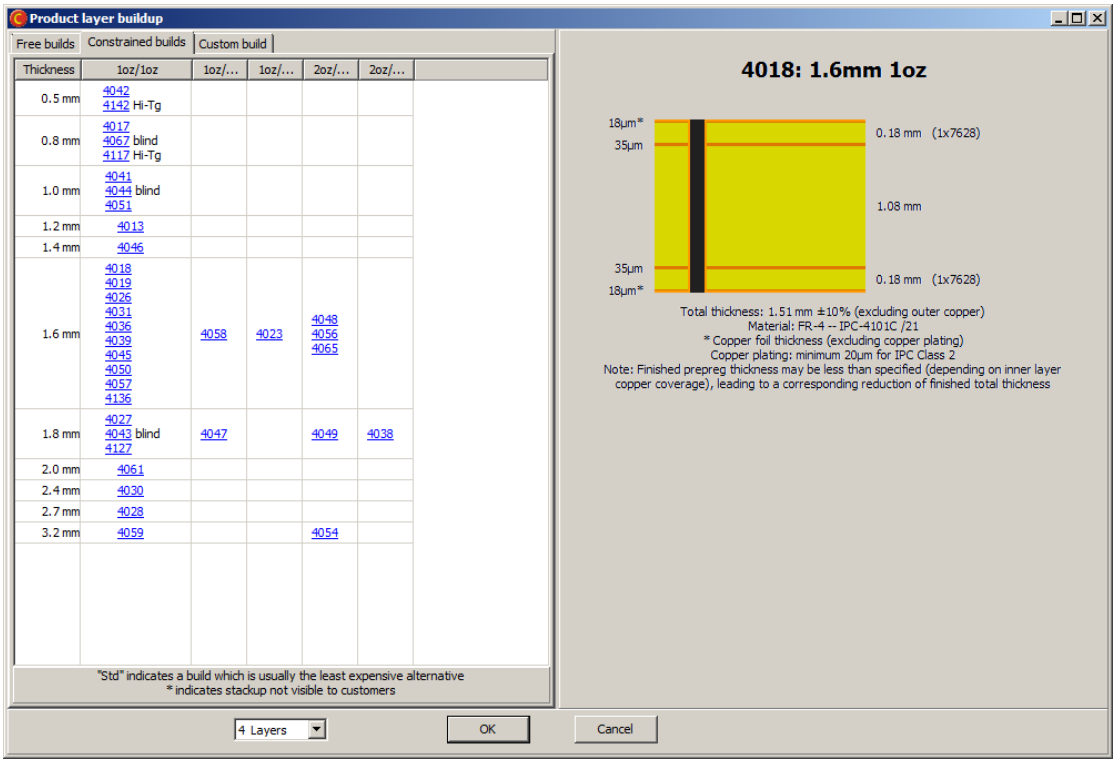
- Extended gerber format
- ODB++ on request

Special

- The design contains a main board as well as four smaller break-off modules, and board assembly break-off rails on the top and bottom edges.
- There are fifteen 2.4mm ***non-plated*** milled lines specified in the outline layer for board assembly break-off rail and module borders.
- There are three 1.0mm ***plated*** milled lines specified in the outline layer for a DC power input top right of main board.
- There are four 0.5mm ***plated*** milled lines specified in the outline layer for a micro-USB connector top right of main board.

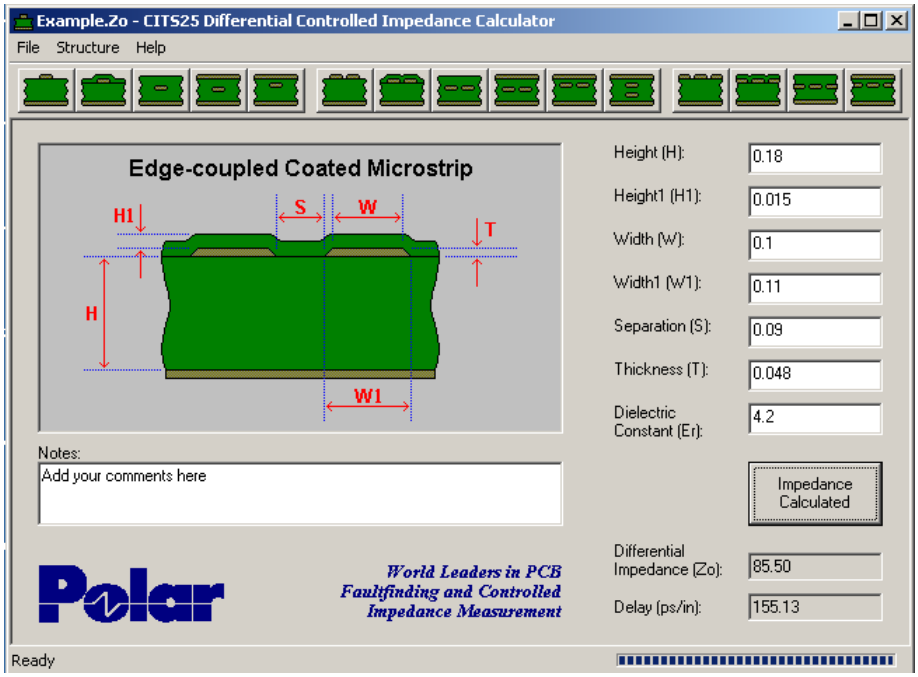


Stackup

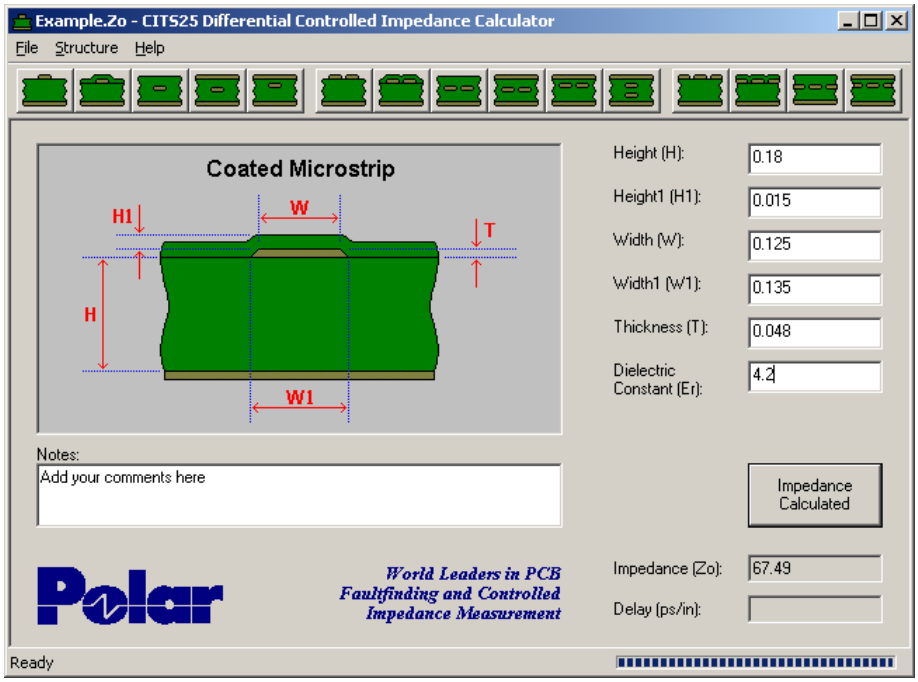


Impedance calculations – informative, boards are *not* impedance controlled in manufacturing

- Differential 100 ohms pairs, outer layers 1 & 4, nominal trace width 100µ (over-etch adjustment -0µ (top-of-trace) +10µ (bottom-of-trace)), nominal separation 100µ (over-etch adjustment -10µ). Our experience is that Polar calculates approx 10 ohms more than our TDR measures, or in other words this geometry results in a measured differential impedance close to 100 ohms.



- DDR3 traces, outer layers 1 & 4. Nominal trace width 125µ (over-etch adjustment -0µ (top-of-trace) +10µ (bottom-of-trace)).



- Regular traces, outer layers 1 & 4. Nominal trace width 100µ (over-etch adjustment -0µ (top-of-trace) +10µ (bottom-of-trace)).