



CNPEM
Brazilian Center for Research
in Energy and Materials



Manufacturing specifications for the FMC_ADC_130M hardware

December 2015

Brazilian Synchrotron Light Laboratory
Beam Diagnostics Group (DIG)

PCB Fabrication Specification

Design references			
Name	FMC_ADC_130M	Date:	1/12/2015
File name			
Designers	Rafael Antonio Baron	Fernando Cambauva SantAnna	
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Mechanical characteristics	
External size (mm)	77 x 69 mm
Thickness (mm)	1.4 mm
Multilayers	6 layers
Min track width (mm/mils)	3mils
Min Hole size (mm/mils)	
Laminate	FR-4
Pre-preg	FR-4
Finish Copper	
External layers (μm)	35 μm
Holes walls (μm)	25 μm
Internal Layers-Planes (μm)	35 μm
Internal Layers-Signals (μm)	35 μm
Board finishing requirements	
Mask Solder color	Red
Silkscreen on top layer (color)	White
Silkscreen on bottom layer (color)	White
Surface Finishing	ENIG – Electroless Nickel / Immersion Gold according to IPC-4552
Thickness	Ni: 3 μm min, 6 μm máx. Au: 0.05 μm min, 0.125 μm máx

Additional Information	
Impedance test	No
Packaging requirements	No
Documentation to be delivered	No
Additional control quality requirements	No

Board Stackup Information

		Laminate/pre-preg	Thickness (mm/mils)
Layer 1	RF signals		
Layer 2	RF Ground Plane	FR-4	4.3 mils
Layer 3	Digital signals	FR-4	3.9 mils
Layer 4	RF Ground Plane + Digital Ground plane	FR-4	11.4 mils
Layer 5	Digital signals	FR-4	3.9 mils
Layer 6	Power	FR-4	4.3 mils
Total			58 mils = 1.4 mm

