

**RFFE\_Controller\_v7**

*Manufacturing specifications*

November 2015



*Beam Diagnostics Group (DIG)*

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# PCB Fabrication Specification

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| **Design references** | | | |
| *Name* | RFFE\_Controller\_v6 |  | Date: 25/11/2014 |
| *File name* |  |  |  |
| *Designer* | Rafael Antonio Baron | Fernando Sant’anna |  |
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| --- | --- |
| **Mechanical characteristics** | |
| External size (mm) | 87 mm x 105 mm |
| Thickness (mm) | 1.6 mm |
| Multilayers | 4 layers |
| Min track width (mm/mils) | 0.1mm |
| Min Hole size (mm/mils) | 0.254mm |
| Laminate | FR-4 – TG150 |
| Pre-preg | FR-4 – TG150 |
|  | |
| **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 for prototype and Blue for production |
| 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 |
|  |  |

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

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| **Board Stackup Information** | | | | |
| Layer 1 | RF signals | Laminate/pre-preg | Thickness (mm/mils) |
| Layer 2 | RF Ground Plane | FR4 | 20 mils |
| Layer 3 | Digital signaling | FR4 | 20 mils |
| Layer 4 | Digital Ground plane | FR4 | 20 mils |
|  |  |  |  |
| 60 mils (1.6 mm) | | | | |