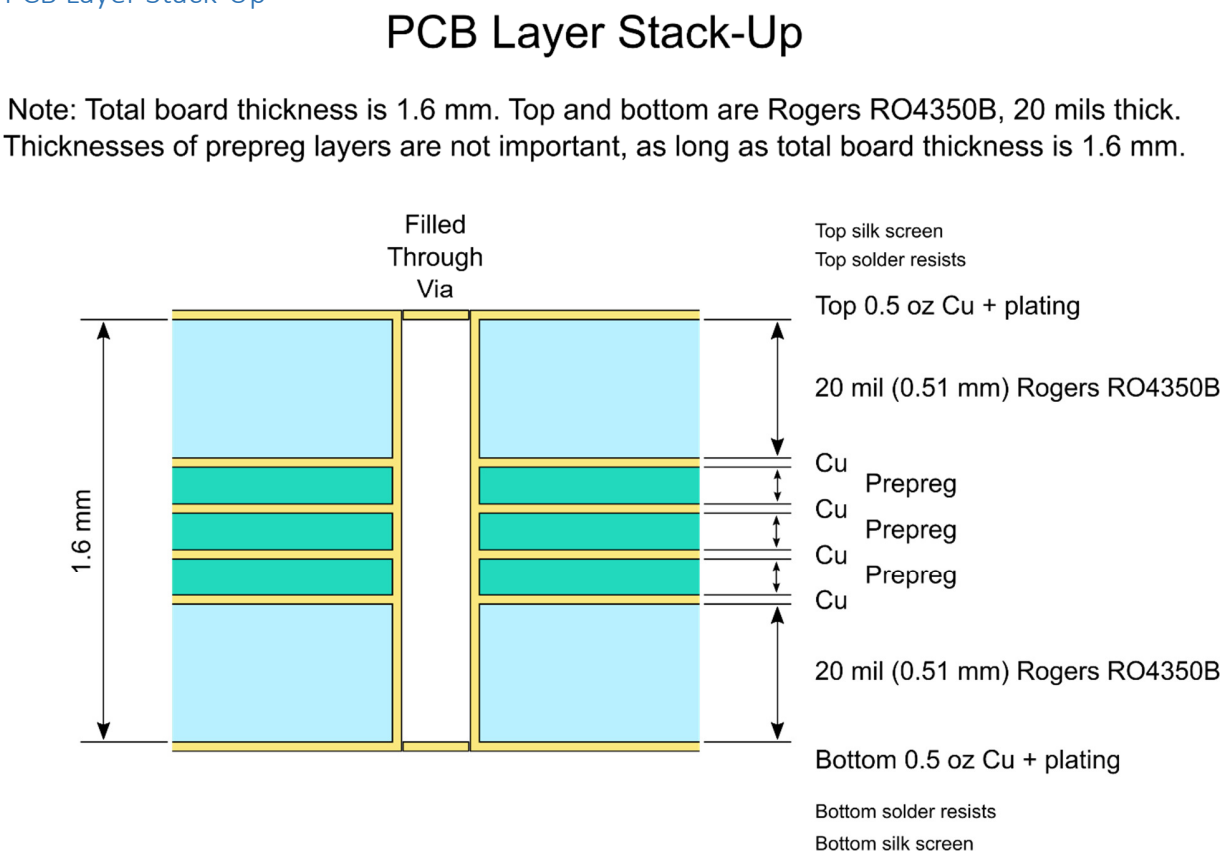
PCB Manufacturing Info

PCB Layer Stack-Up



IMPORTANT: Top and bottom are 20mils Rogers RO4350B

Board Description

Designation:	LimeRFE_1v31
Version:	1v31
Type:	Lead Free
Size:	125 mm x 162.5 mm
Size with frame:	141 mm x 178.5 mm
Thickness:	1.6 mm +/- 10 %

Material: Rogers RO4350B + FR4

Number of layers: 6 (4 inner)

Top layer copper foil thickness: 0.5 oz (18 um)+plating

Dielectric thickness between Top layer and 2nd layer: 508 um (20 mils) – Rogers RO4350B

Dielectric between Top layer and 2nd layer relative permittivity (Er): 3.66 – Rogers RO4350B

Top layer copper foil thickness: 0.5 oz (18 um)+plating

Dielectric thickness between Bottom layer and 5th layer: 508 um (20 mils) – Rogers RO4350B

Dielectric between Bottom layer and 5th layer relative permittivity (Er): 3.66 – Rogers RO4350B

Minimum finished hole size: 200 um

Minimum spacing: 100 um

Minimum track width: 100 um

Drill diameters: finished hole

Plating finish (both sides): Immersion gold
0.05-0.10 um of gold over
2.50-5.00 um of nickel

Top silkscreen: Required

Bottom silkscreen: Required

Board Stack-up

Solder Paste Front:	Lime_RFE-F.Paste.gtp
Silk Screen Front:	Lime_RFE-F.SilkS.gto
Solder Mask Front:	Lime_RFE-F.Mask.gts
1. Front Layer:	Lime_RFE-T.gtl (Top layer of top RO4350B)
2. Inner 1 - (GND):	Lime_RFE-GND.g2 (Bottom layer of top RO4350B)
3. Inner 2 - (SIG1):	Lime_RFE-SIG1.g3 (Top layer of inner FR4)
4. Inner 3 - (SIG2):	Lime_RFE-SIG2.g4 (Bottom layer of inner FR4)
5. Inner 4 - (PWR):	Lime_RFE-PWR.g5 (Top layer of bottom RO4350B)
6. Back Layer:	Lime_RFE-B.gbl (Bottom layer of bottom RO4350B)
Solder Mask Back:	Lime_RFE-B.Mask.gbs
Silk Screen Back:	Lime_RFE-B.SilkS.gbo
Solder Paste Back:	Lime_RFE-B.Paste.gbp

PCB edges:	Lime_RFE-Edge.Cuts.gm1
Drill map:	Lime_RFE-drl_map.gbr
	Lime_RFE-NPTH-drl_map.gbr

Important Notes

All vias must be resin filled with metal cap

DRCs must be run on Gerber files before building boards.

Solder mask: green, both sides, halogen free, glossy finish (NOT matte).

Silkscreen: white epoxy ink, halogen free, both sides. No silkscreen on pads.

Electrical test: 100 % netlist.

Boards are to be individually bagged.

Design software used: KiCad Version: 4.0.7, release build

Controlled Impedance

- 50 Ohm uncoated RF GCPW lines (Top layer, RF) characteristics:

  Track width for GCPW line 0.79 mm, gap 0.25 mm

  Rogers 4350, 20.00 mil (between T and GND Layers), metal thickness 0.5 oz (18 um)+plating

- 50 Ohm uncoated RF GCPW lines (Bottom layer, RF) characteristics:

  Track width for GCPW line 0.79 mm, gap 0.25 mm

  Rogers 4350, 20.00 mil (between B and PWR Layers), metal thickness 0.5 oz (18 um)+plating

Contact Details

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