

1. Footprint layout

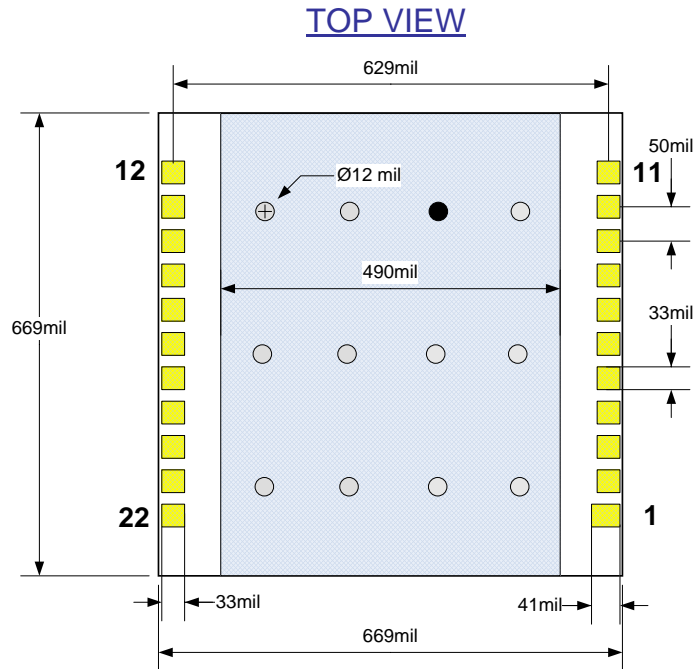


Figure 1: Footprint

Ground pad at the middle should be connected to main Ground plane by multiple vias.

Ground pad at the middle should be solder masked.

Silk print of module's outline is highly recommended.

2. Design restrictions

Avoid current loops by connecting single Ground pin to main Ground.

Route the selected Ground pin to main Ground with shortest possible trace or via.

Keep out of minimum 6mm on Component Side* from the copper planes, metals planes or enclosures, connectors or LCD screens (Fig. 2).

ORG-1300/ORG-1315 - keep out of minimum 0.8mm from the copper planes under the module (Fig. 3).

ORG-1318 - keep out of minimum 1.6mm from the copper planes under the module (Fig. 4).

Keep out of signal or switching power traces and vias under the ORG-13xx series module.

Signal traces to/from ORG-13xx on PCB Component Side or on Printed Side should have minimum length.

In case of adjacent high speed components, like CPU or memory, high frequency components, like transmitters, or metal planes, like LCD or battery enclosures, please contact OriginGPS for more precise, application specific recommendations.

• This document intentionally refers to the placement of the ORG-13XX series module on the Component Side of host PCB.

3. Placement

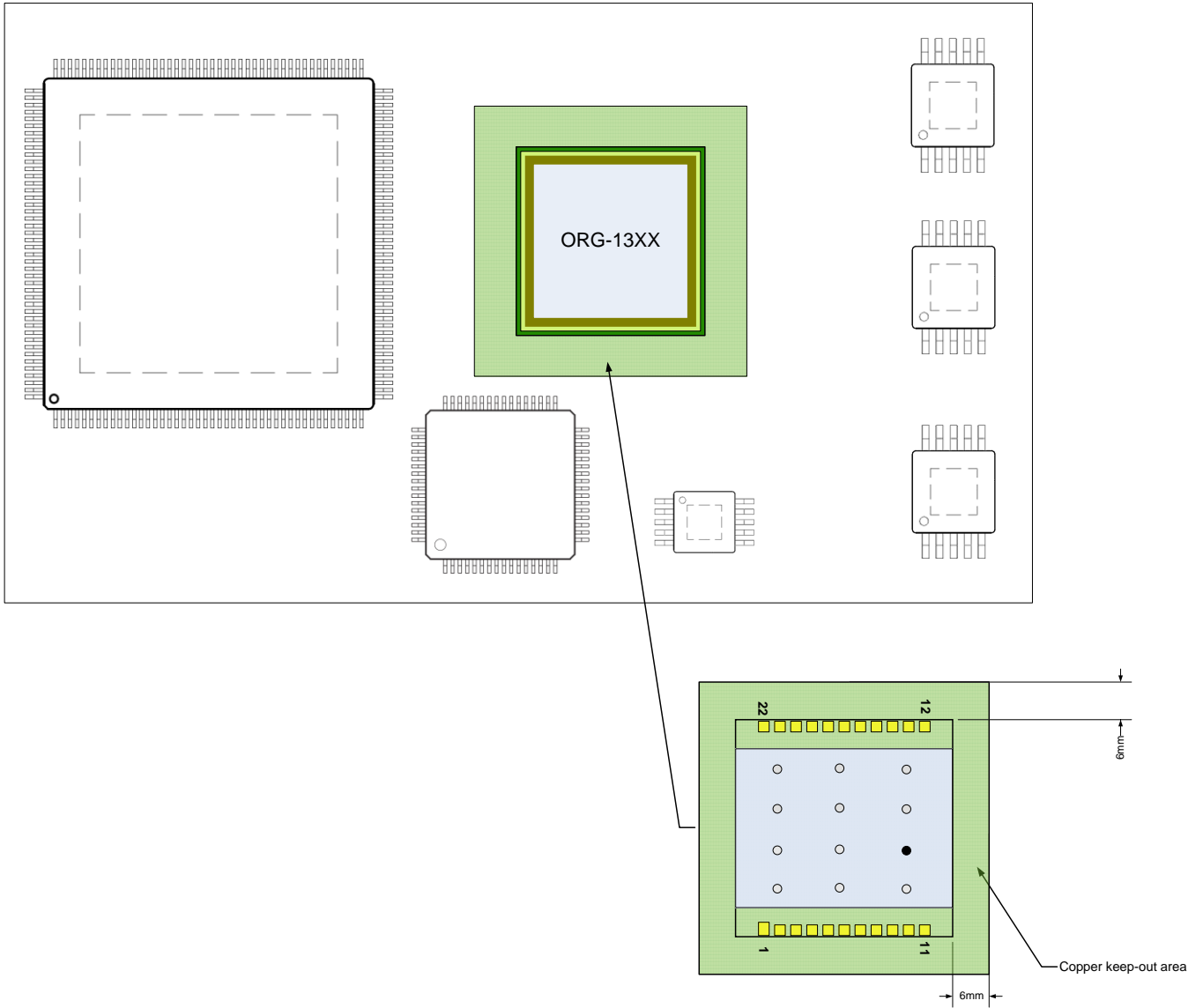


Figure 2: Placement

Additional resonant frequencies may impact GPS antenna performance while designing with ORG-13xx modules on large host PCB. Refer to Fig.2 for orientation on large rectangular host PCB.

Contact OriginGPS for application specific module orientation.

4. PCB stack up

ORG-1300/ORG-1315

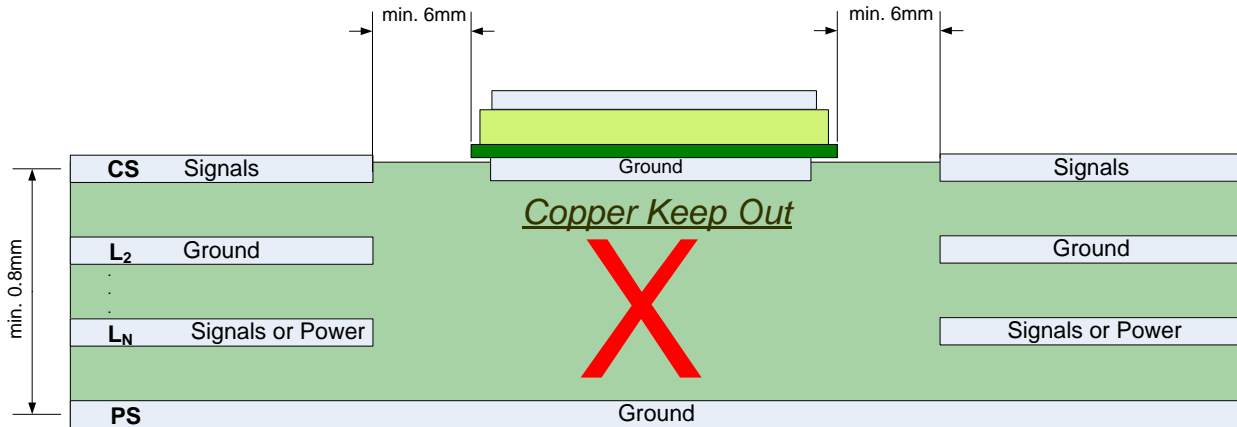


Figure 3: ORG-1300/ORG-1315 Stack up

ORG-1318

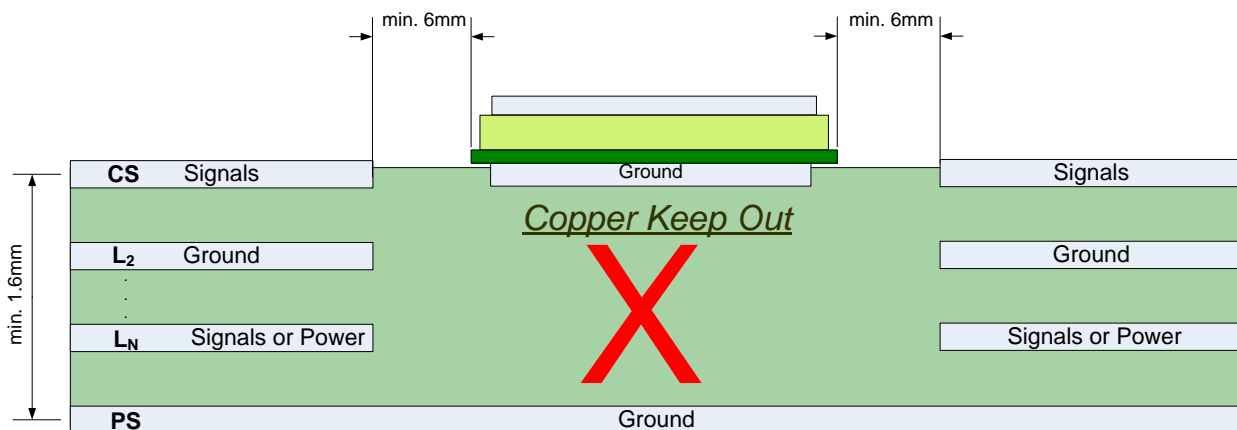
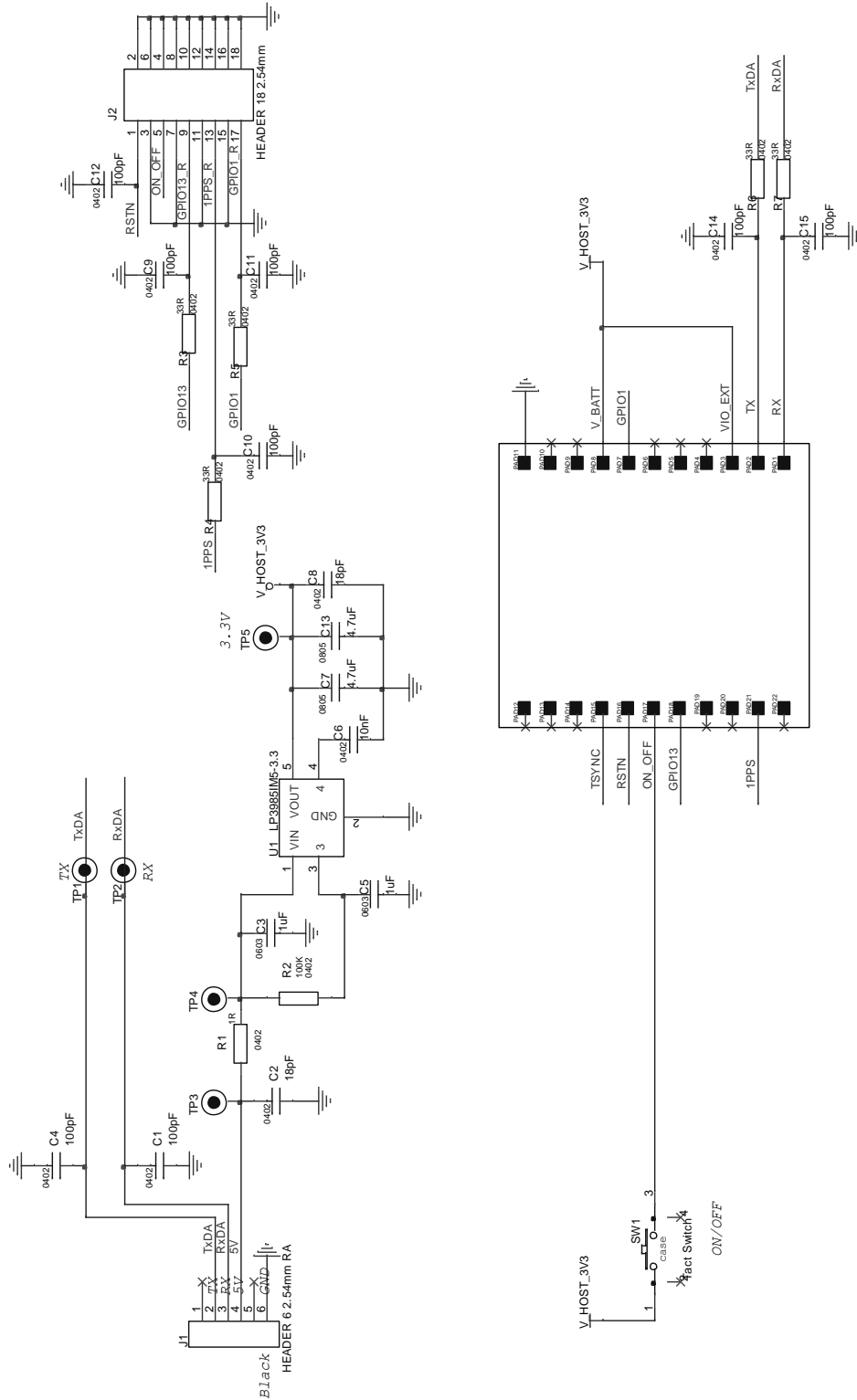


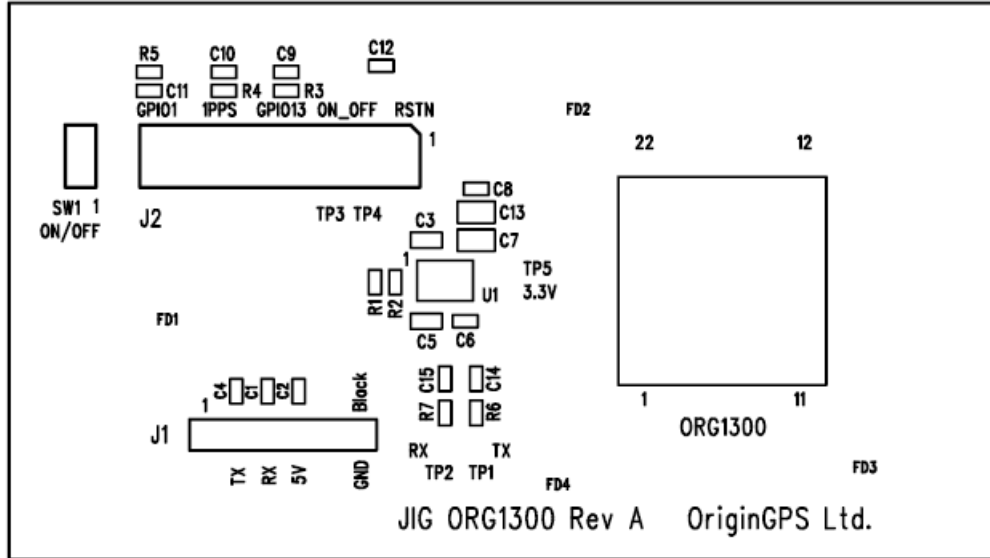
Figure 4: ORG-1318 Stack up

5. UART Demo Board schematics

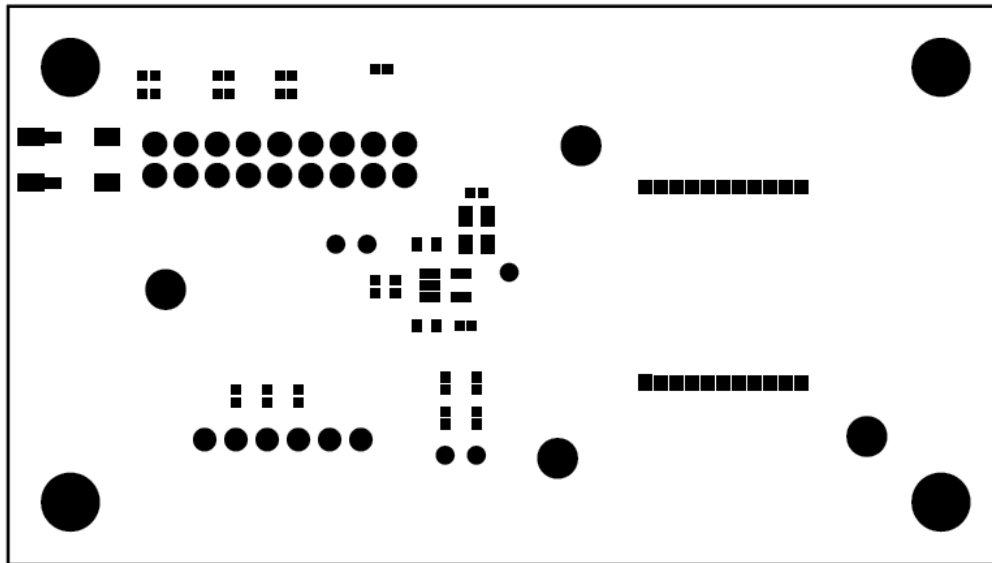


6. UART Demo Board PCB layout

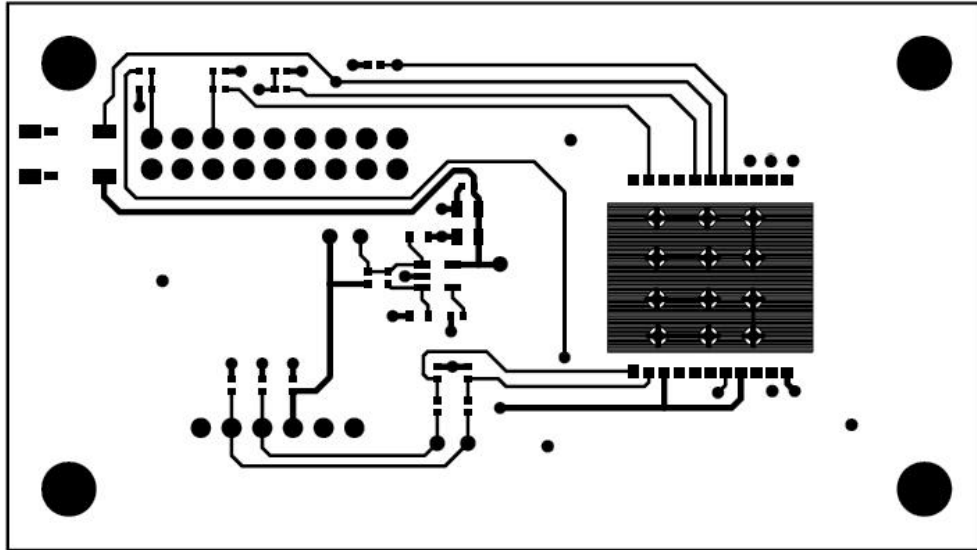
UART Demo board for ORG-13xx series modules is 2 layers 1.6mm thickness FR4 PCB.



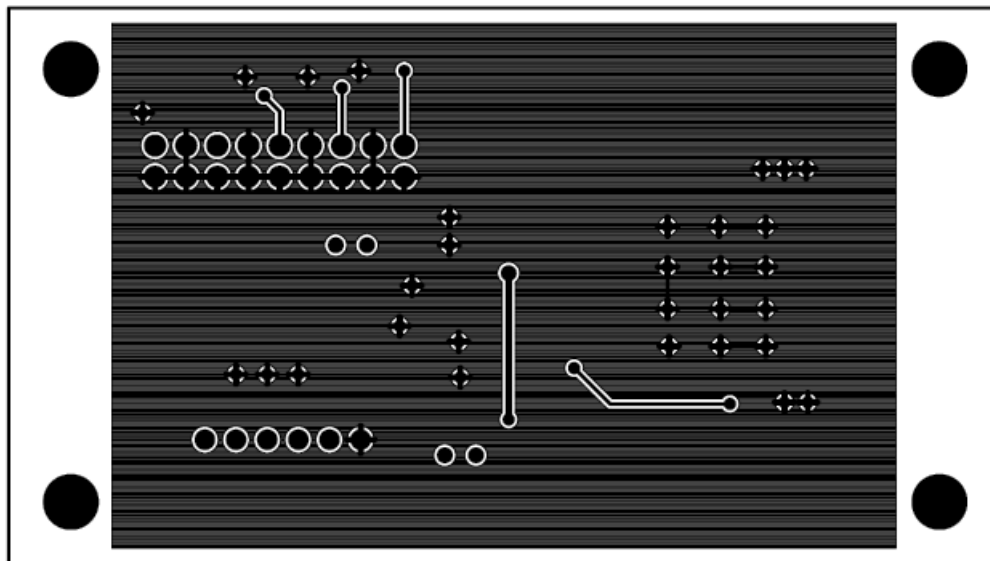
Components Placement



CS Solder Mask



Top Routing



Bottom Routing