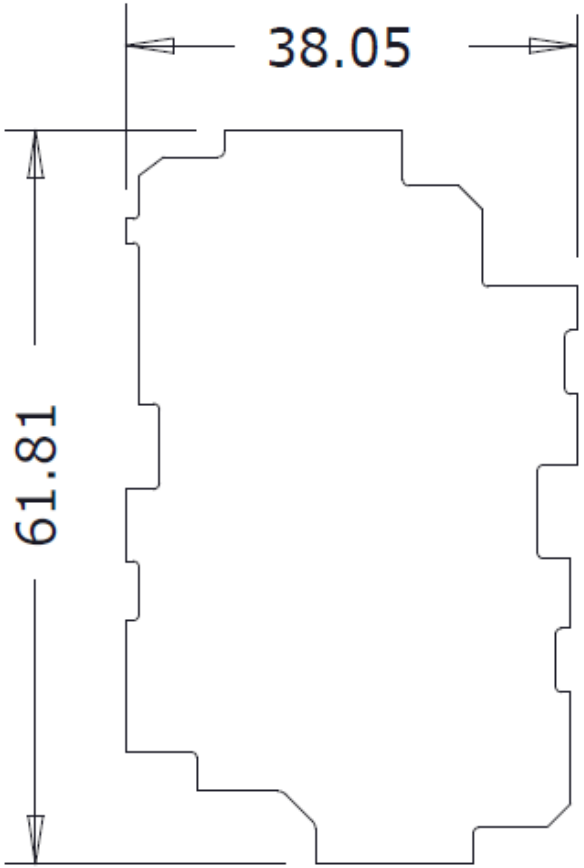
LRF3-C3648 Module

Antenna Guidelines

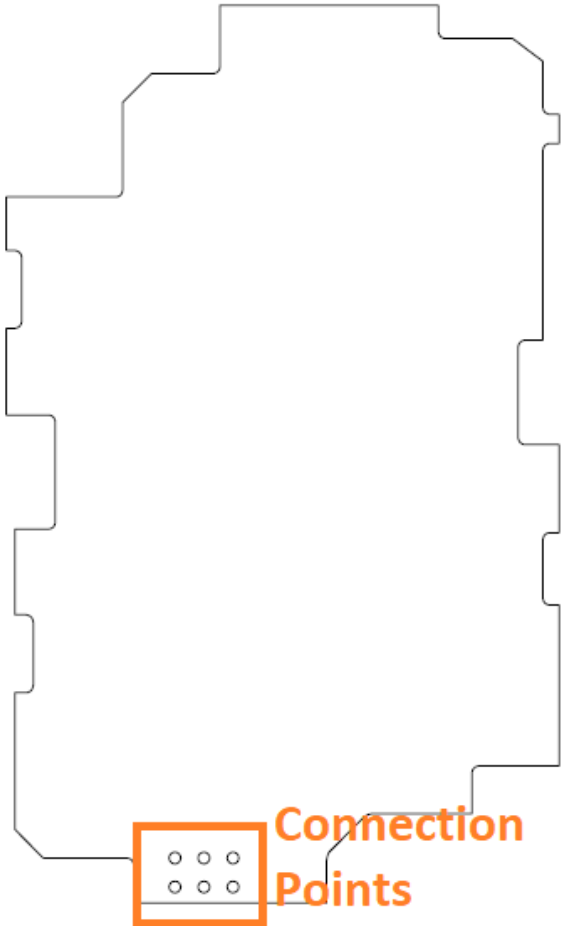
1. Module Dimensions

- The module is of fixed dimensions and no outside changes are permitted.
- Refer to ‘C3648module.dxf’ for footprint.



2. Module Connections

- Module can only be used with another PCBs connected using the 6-pin connector.
- Keep area under the antenna clear of any copper or electrolytic components.

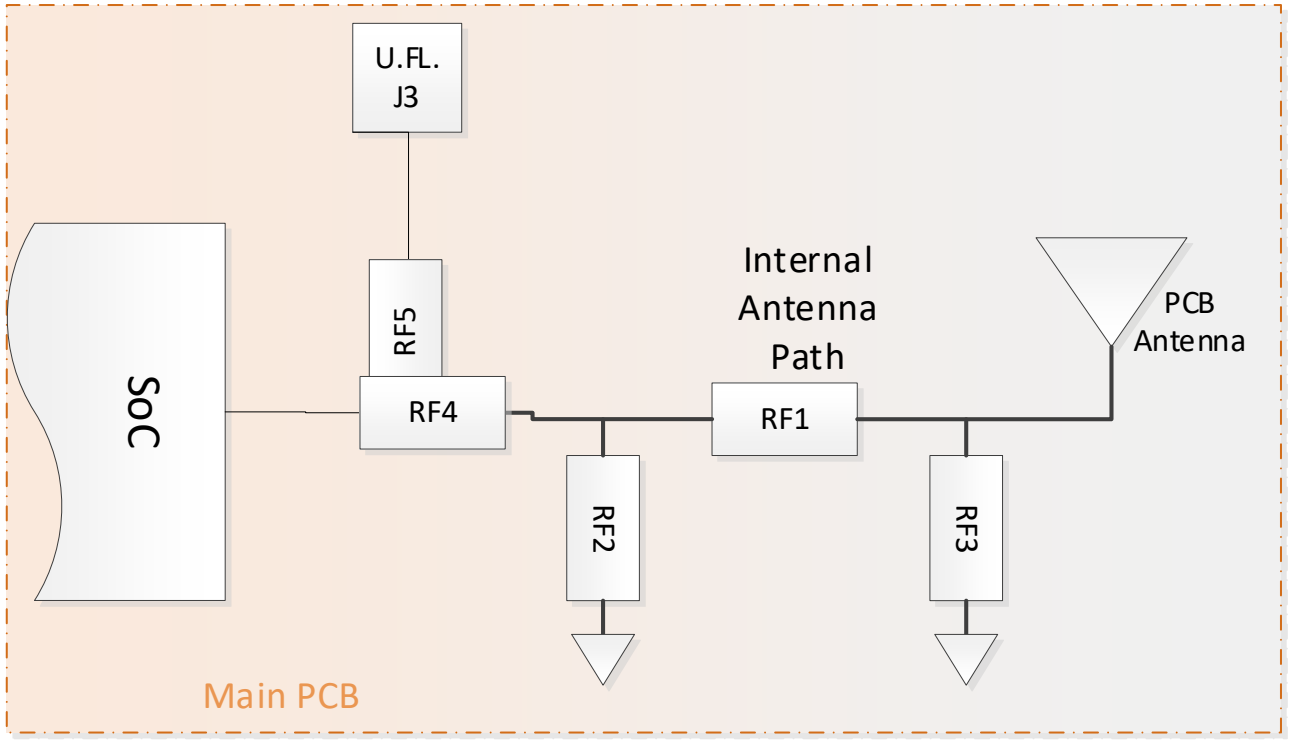


4. Antenna

- The module comes with an embedded PCB antenna design that followed the specifications of the antenna.
- About the signal line between PCB and an antenna on the module
  - It is a 50-ohm line design.
  - Fine tuning of return loss etc. can be performed using a matching network. However, it is required to check "Class1 change" and "Class2 change" which the authorities define then.
- The concrete contents of a check are the following two points.
  1. An antenna gain is lower than a gain given in antenna specifications.
  2. The emission level is not getting worse.

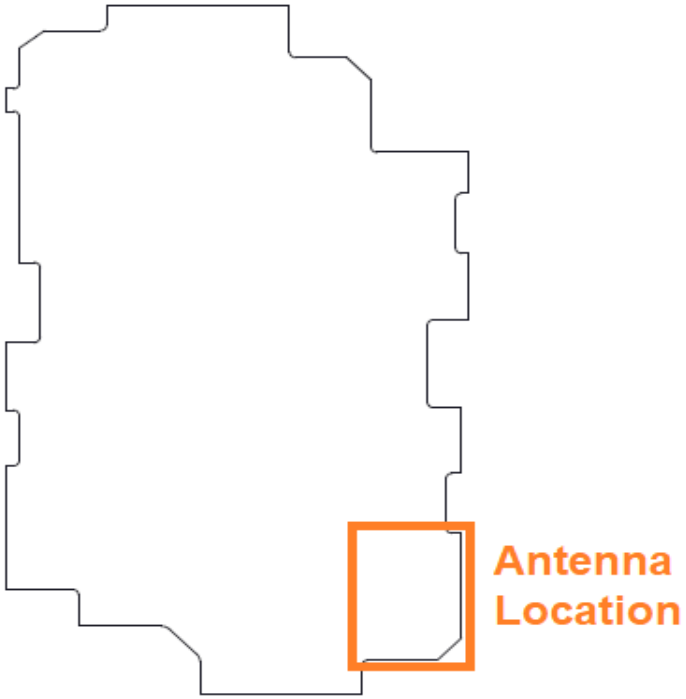
4. Antenna

- Please refer KDB 996369 D04 Module Integration Guide for guidance, installation instructions and testing requirements.
- Options for internal & external antenna:



4. Antenna

- Antenna locations are as shown below.



6. Warning

- The module comes with a PCB antenna design that followed the specifications of the antenna.
- The module has fixed antenna tuning values for host product.
- Module is intended for Leviton’s use only.
- Any party involved should follow provided guidelines for layout of the module.
- Third party or outside customer is not allowed to change the antenna tuning values unless consulted and approved by the module manufacturer. Necessary filing and testing to be done by third party or outside customer in that case to prove regulatory compliance.

7. Reference Design

- For reference design, please refer to MIFA design mentioned in the document – section 7.1 of “AN91445 Antenna Design and RF Layout Guidelines.pdf”.