Introduction: PEMFCs are very promising for both mobile and mid-power stationary applications. As Silicon used in the miniature fuel cell is not a good conductor of electricity, electrical contacts has to be attached to the GDL to draw power. Here we build a 3D model and 7 different ways of attaching the contacts to the GDL is studied using COMSOL Multiphysics.

Conclusion: The gaps between the contacts reduce the local over potential in the electrode reducing the local current density. Reducing the gaps by segmentation reduce this effect. The gaps between the contacts reduce the local over potential in the electrode reducing the local current density. Reducing the gaps by segmentation reduce this effect.

References: