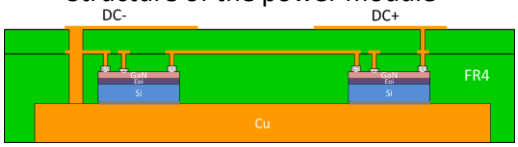
Google Little Box Challenge: Integrated GaN Power Package (2016)

Project

PCB Embedded integrated power module for Google Little Box Challenge inverter
Funding: internal R&D

Structure of the power module



PCB Embedded Integrated Power Package

- GaN half bridge with 4 semiconductors
- PCB embedding technology, no insulation
- High side and low side chip sintered to DC-connected lead frame (insulation in Chip buffer layer)
- Low inductance gate drive on module
- Local DC link

Performed tasks (by me)

- project management
- manufacturing flow design and alignment with internal manufacturing team
- static thermal design for dies (Solidworks)
- electro-magnetic design of the power module (Portunus, Fast Henry)
- Mechanical integration design
- Static electrical tests (Keysight B1505A)
- Patent DE102016206501A1 Leistungshalbleiterbauteil mit zwei lateralen Leistungshalbleiterbauelementen in HalbbrückenschaltungLeistungshalbleiterbauteil mit zwei lateralen Leistungshalbleiterbauelementen in Halbbrückenschaltung

PCB embedded power package

