APPLICATION CENTER
POWER ELECTRONICS FOR
RENEWABLE ENERGY SYSTEMS

| High efficient and reliable DC/DC- and DC/AC-converter
| Online condition monitoring for power converters
| Simulation-based virtual prototyping
The Application Center offers services in the following areas

**Semiconductors**
- Characterization of devices
- Lifetime expectation analysis
- Lifetime prediction
- Strain models
- Simulation tools
- High precision test bench for device characterization

**Converters**
- High efficient DC/DC- and DC/AC-converter
- Inductivity and capacity optimized circuit board design
- Soft switching topologies

**Smart power electronics**
- Diagnostic methods and adaptive control
- Model-based, flexible and precise diagnosis
- Software/hardware package for online condition monitoring

**Grid integration**
- Model-based control methods for grid quality improvement
- Measurement equipment for harmonics
- Modeling, analyzing and solution development
- Optimization of ancillary services

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