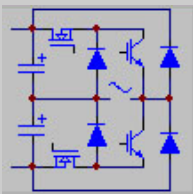
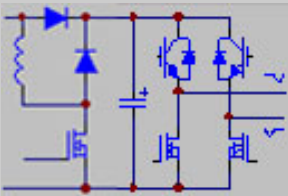
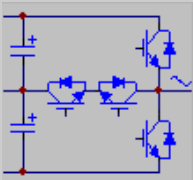


Power Modules

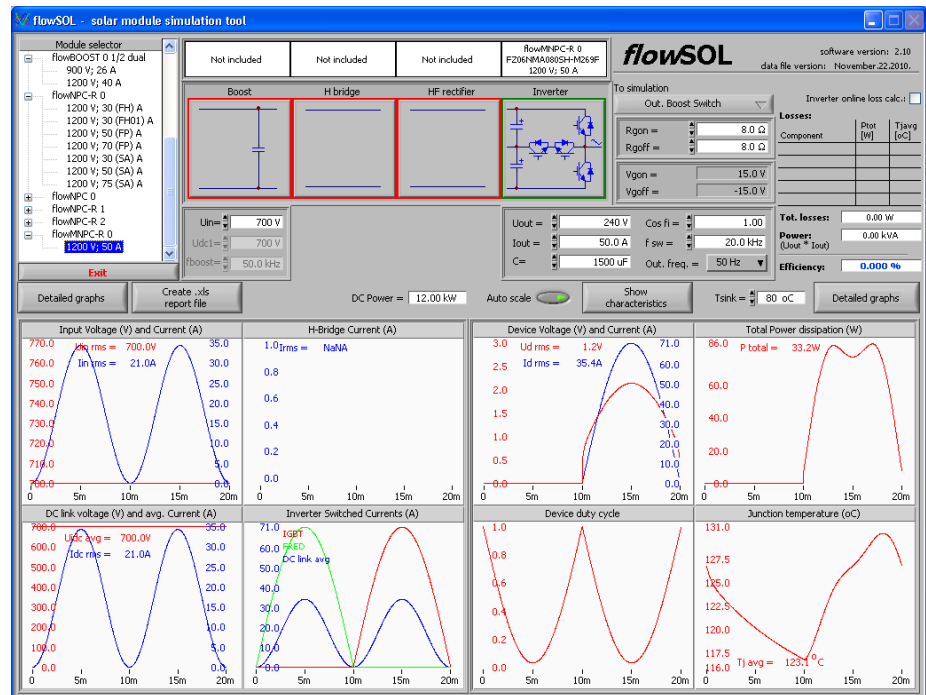


flowSOL - A New Simulator for Advanced Solar Inverter and UPS Topologies

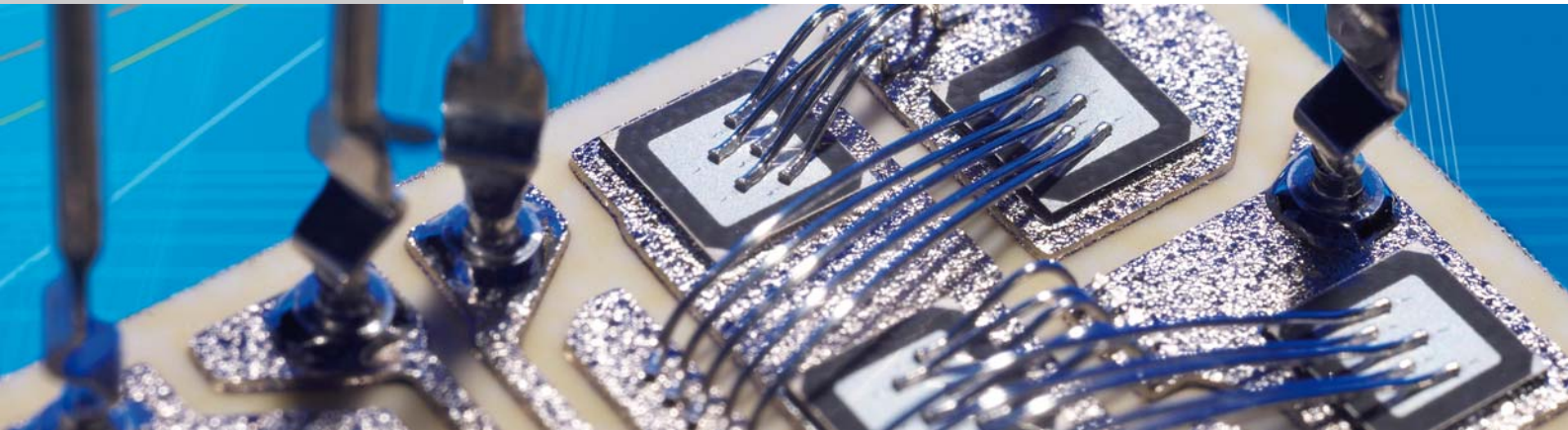
Advanced circuit topologies like

- Mixed Voltage Neutral Point Inverter
- Clamped Neutral Point Inverter
- H-bridge inverter with mixed component setup (MOSFET and IGBT's)
- Booster pre-stages with standard, dual or symmetrical inputs

are improving the system efficiency with standard, dual or symmetrical inputs.



Vincotech is pleased to introduce **flowSOL** its latest extension of simulation support tools. This simulator supports all circuit topologies currently used in Solar Inverter and UPS applications including single- and 3-phase transformer-less and transformer- based versions as well as reactive power capability. **flowSOL** is integrated into Vincotech's Integrated Simulation Environment ISE and can be downloaded free of charge.



Power Modules

The simulation tool can be used to determine the power loss and temperature rise of individual components within Vincotech's power modules at different working points (input voltage, output voltage, output current, switching frequency, gate drive, phase angle and heat sink temperature). This enables the designer to not only select the right power module for the application but at the same time determines the overall power losses of the semiconductor components used and the efficiency of the circuit. The selected power module can be easily exchanged against others for example with smaller or larger or more advanced components like SiC diodes to check for possible performance improvements or cost savings.

The simulator is based on real measurement data collected during the characterization of the module. This enables fast simulation speeds and very accurate results at the same time. Below is an example of a mixed Voltage NPC circuit simulation using **flowSOL**.

