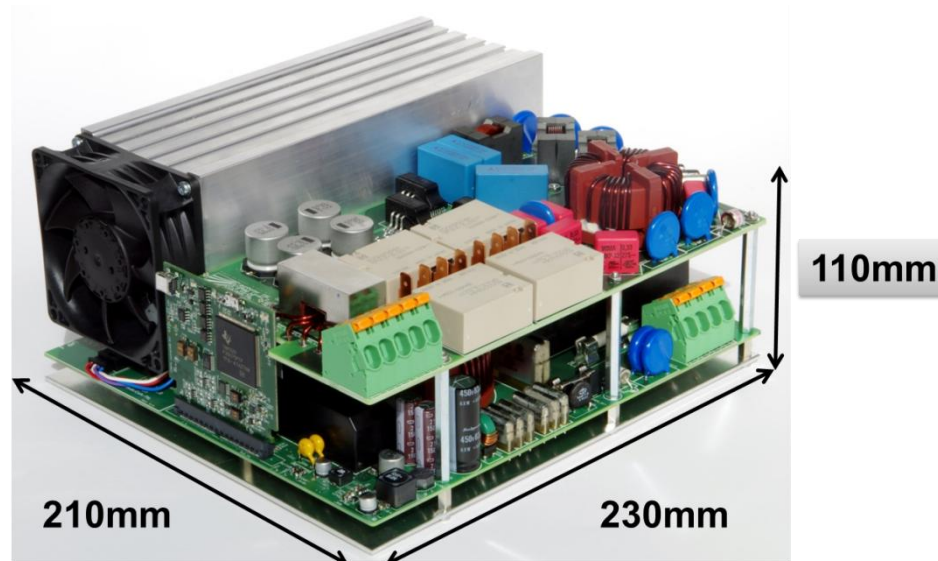


# Full SiC based 3-Phase 10kW UPS inverter



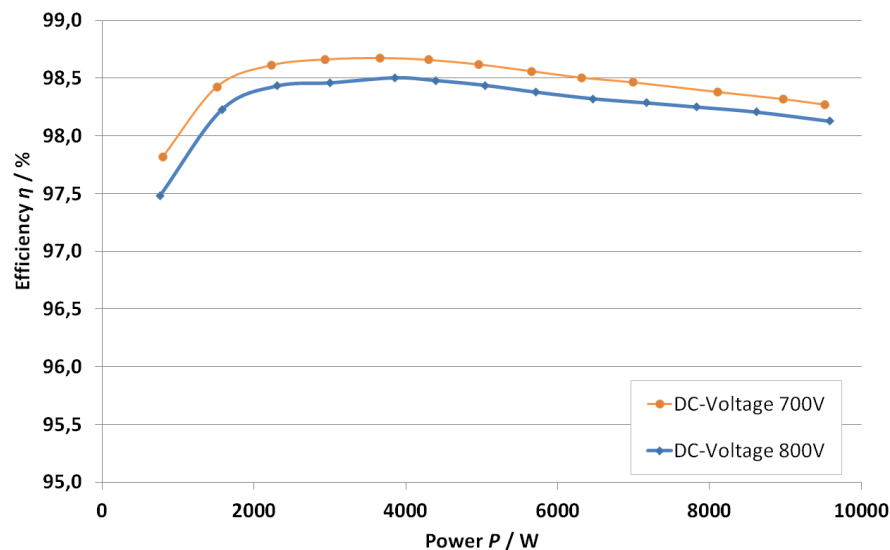
In collaboration with



## Dimensions & Weight

Dimensions (W x D x H)	230 x 210 x 110	mm
Volume	5300	cm <sup>3</sup>
Weight	~4.5	kg

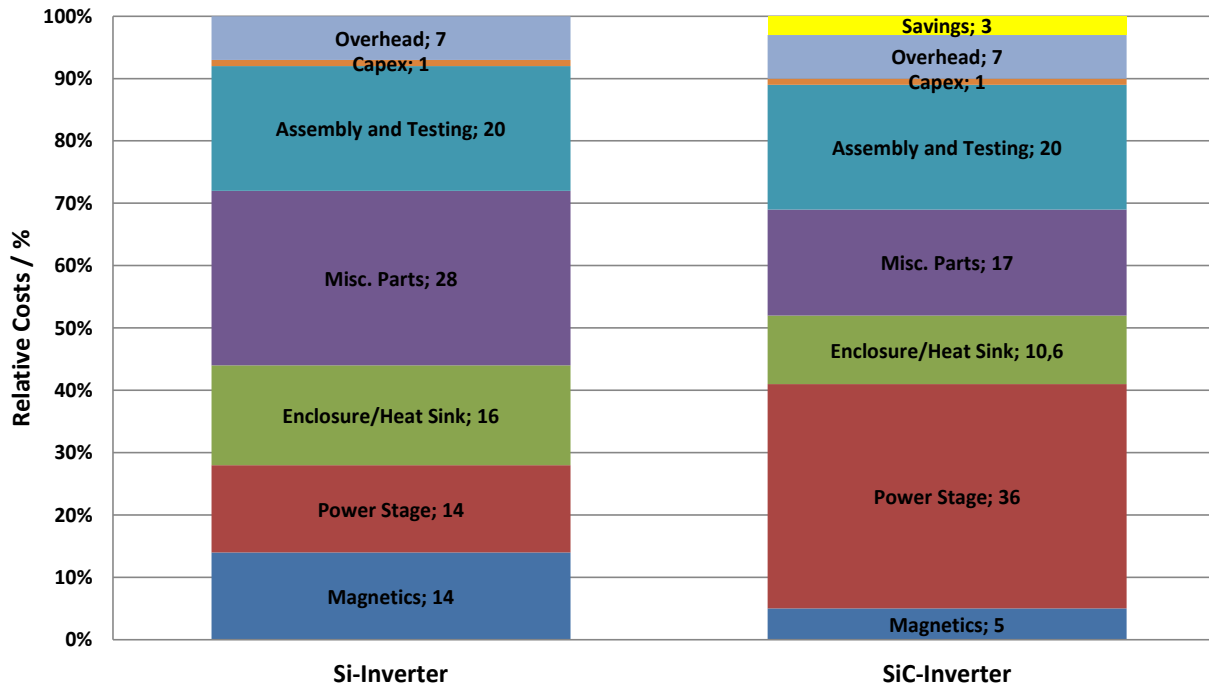
Efficiency Curve :  
Max efficiency is 98.7%



Parameters:  
Rg=2.2Ohm  
Dead Time=500ns  
Ohmic Load  
f=100kHz

## Overall System cost saving

### Comparison of Cost Structure of Si- and SiC-Inverter



■ Cost reduction

■ Cost increase

■ Misc. parts (capacitors)

■ Power stage, SiC-Module

■ Magnetics – to 1/3

■ Enclosure / Heat Sink – to 2/3

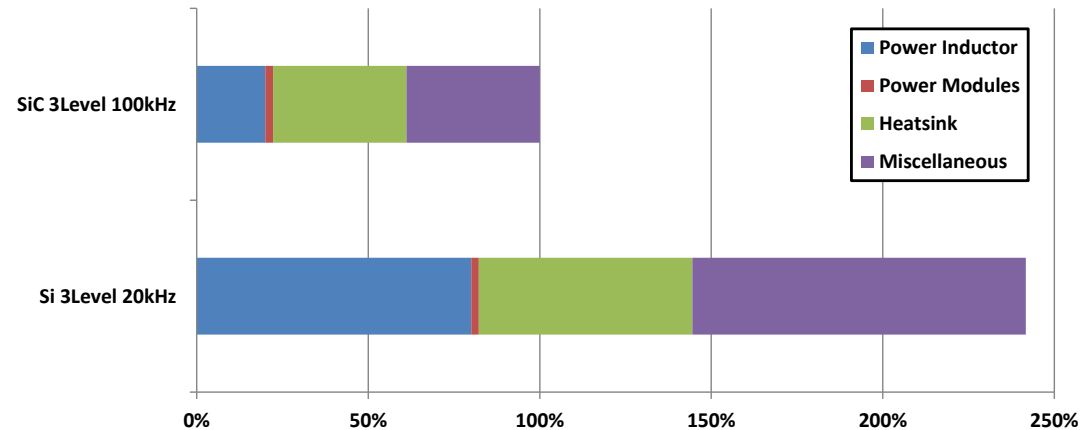
# System Cost Comparison 2

## Weight reduction

### Weight reduction

- Power Inductors – to 1/3
- Heat sink – to 2/3
- Misc. parts – to 1/3

relatively weight reduction of 10kW UPS inverter (100kHz, 4.5 kg)



## Running cost saving

### Running cost for different systems

- SiC 3-level vs. Si 3-level vs. Si 2-level
- SiC 3-level saves >30 % / >60 % of the running costs

Accumulated Running Costs at 0.17 per kWh

