

# COUPLED INDUCTORS FOR SiC APPLICATIONS

## RIPPLE AND WEIGHT REDUCTION IN INTERLEAVED POWER CONVERTERS

VAC has cooperated in the joint research project GaN-HighPower for the next generation of cost-effective, resource-efficient photovoltaic (PV) inverters in the range of 150 kVA. The inductive component, which typically contributes the most to the overall weight of the inverter, was reduced by 50 %. This was achieved with a high switching frequency (70 kHz) by using low-permeability, nanocrystalline material (VITROPERM®) with low losses and through magnetic coupling resulting in overall higher power density.

### ADVANTAGES:

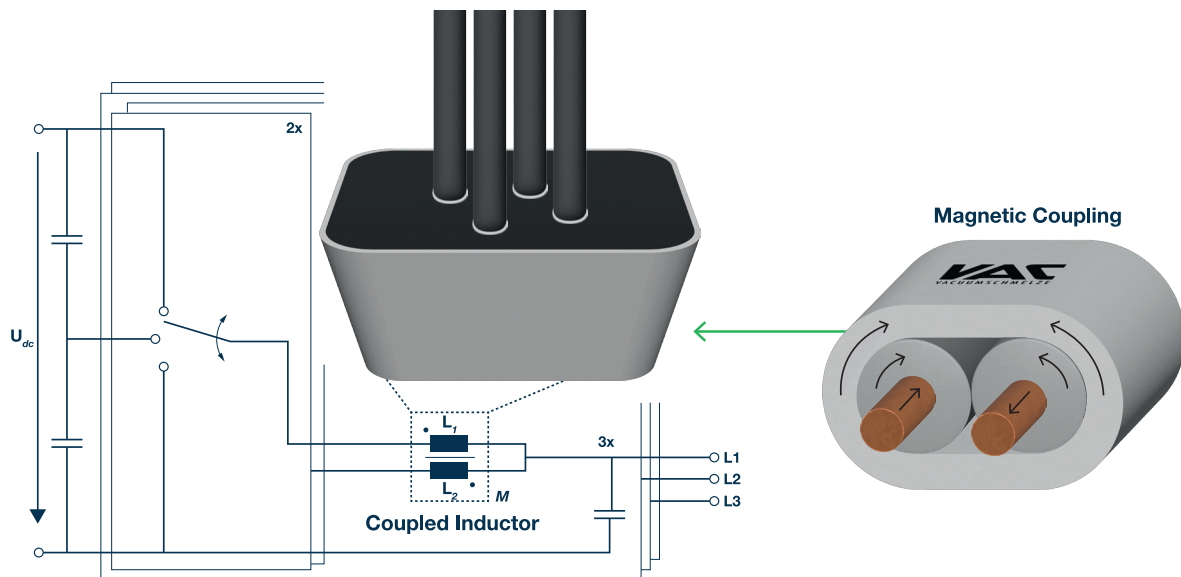
- Weight reduction
- Compact design
- Reduced losses in EMI filter by reduced output ripple
- Suitable for high switching frequencies



### APPLICATIONS:

- DC/DC, AC/DC or DC/AC converters
- Drives
- High power applications, e.g. 150 kVA
- Interleaved power electronics
- SiC-technology

## 50 % WEIGHT REDUCTION



ADVANCED MAGNETIC SOLUTIONS

**VAC**  
VACUUMSCHMELZE

#### **VACUUMSCHMELZE CHINA MAGNETICS**

Shanghai Sales Office  
Room 06, 19F  
Zhongrong Hengrui International Plaza  
620 Zhangyang Road, Pudong District  
Shanghai, PRC 200122  
Phone +86 21 58 31 98 37  
Fax +86 21 58 31 99 37  
[vac\\_china@vacuumschmelze.com](mailto:vac_china@vacuumschmelze.com)

#### **VACUUMSCHMELZE GMBH & CO. KG**

Grüner Weg 37  
D 63450 Hanau / Germany  
Phone +49 6181 38 0  
Fax +49 6181 38 2645  
[info@vacuumschmelze.com](mailto:info@vacuumschmelze.com)  
[www.vacuumschmelze.com](http://www.vacuumschmelze.com)

#### **VAC MAGNETICS LLC**

2935 Dolphin Drive  
Suite 100  
Elizabethtown, KY 42701  
Phone +1 270 769 1333  
Fax +1 270 769 3118  
[info-usa@vacmagnetics.com](mailto:info-usa@vacmagnetics.com)

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