

ENGINEERING
TOMORROW

Danfoss

Save energy and increase
productivity with **customised
power modules**

25 years'
experience

in customer-specific
power module
development and
production.

siliconpower.danfoss.com

Certified according to industry standards

Power modules from Danfoss Silicon Power are manufactured on automated assembly lines. This enables us to produce modules of extremely high quality that comply with global standards within quality and production.

- ISO 9001: 2008
- ISO/TS 16949: 2009
- ISO 14001: 2004
- RoHS / REACH

With energy savings becoming ever more important, power management is the key to securing efficiency and durability. Customised power modules from Danfoss Silicon Power are fully configurable and tailored to optimise power management, increase quality and strengthen productivity.

Flexible component and supplier choice

One of the main advantages of Danfoss power modules is the flexibility that provides you with the choice between several manufacturers of IGBTs, MOSFETs or diodes.

Danfoss Silicon Power offers customised power modules up to 1700V to meet your application's specifications. Each component is selected to meet your specific requirements, from the density and type of semiconductors to the material of the base plate. Choose standard or customised housings with flexible pin positions and ensure a perfect fit in your application.

Cooperation towards results

Work together with our application experts, who can provide support throughout the entire process, from design and prototyping, through testing and quality assurance, to high volume production.

Using a fast and flexible management and design process Danfoss is usually able to deliver the first prototypes within a few weeks. When production begins deliveries are integrated seamlessly into your supply chain.

Cooled by ShowerPower®

Developed and patented by Danfoss, ShowerPower® is a superior, direct liquid cooling technology that uses simple, low cost plastic parts to provide homogenous cooling across large power modules.

- Eliminates the need for thermal interface material
- Allows direct cooling with standard power modules
- Achieve very low differential pressure drop

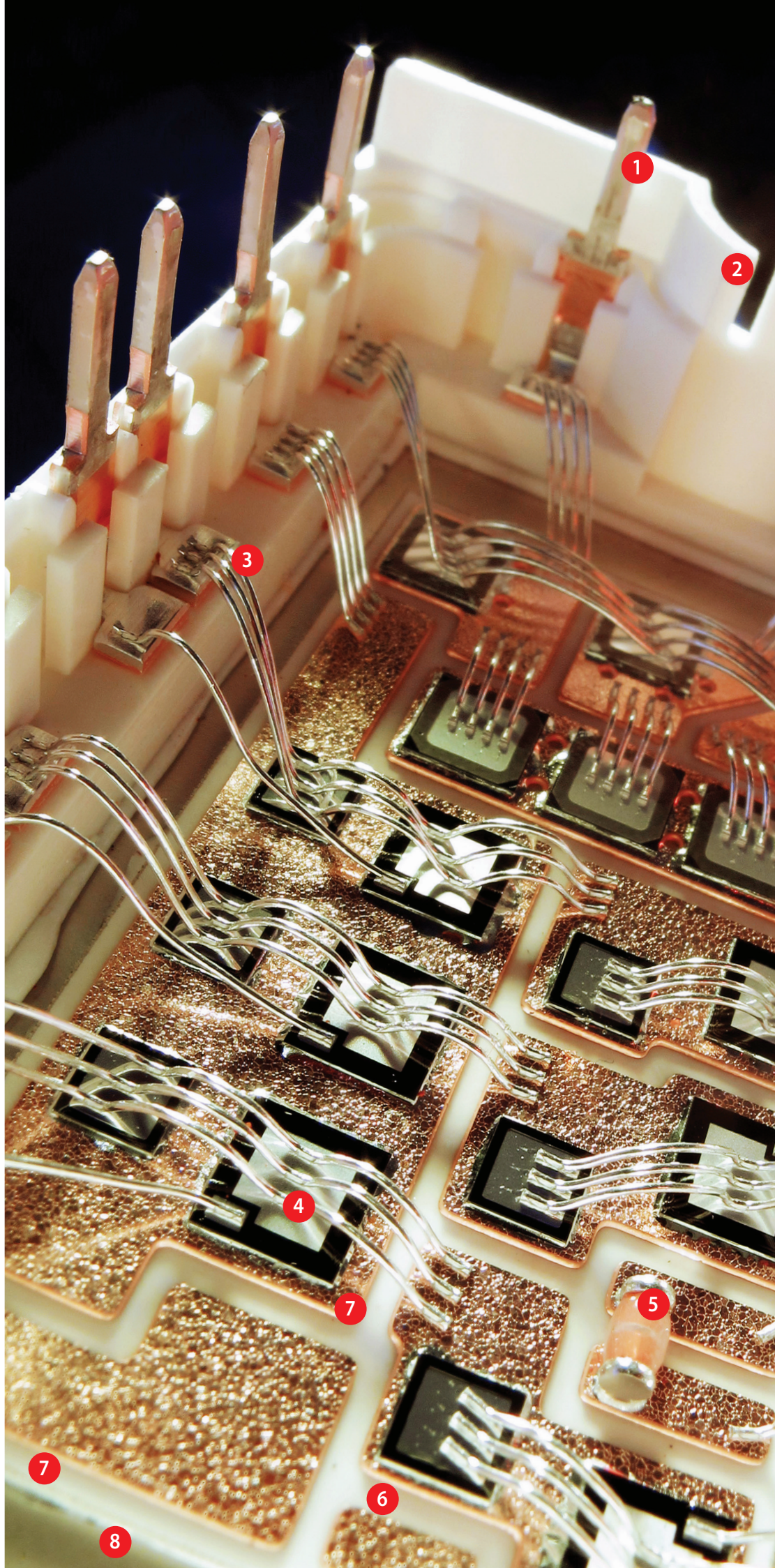
Danfoss Silicon Power ADVANTAGES

- *Customer specific development*
- *Exclusive use of proprietary technologies keeps you ahead of your competitors*
- *Compatibility with industrial plug-in standards*
- *Supports dual sourcing strategy*

APPLICATIONS

Danfoss power modules are listed under E197736 by UL and can be used in a wide variety of applications:

- *Frequency converters*
- *Renewables*
- *Power supplies*
- *Welding equipment*
- *Automotive applications*
- *HVAC*
- *Heavy-duty mining trucks*
- *Medical equipment*
- *Uninterruptible Power Supply (UPS)*



1 Solder pins
Flexible pin-out
Press-fit optional

2 UL approved

3 Wire bonded pins
Highly resistant against
– Vibration & shock
– Temperature cycles
– Power cycles

4 Semiconductors from main suppliers

5 Temperature sensor (NTC)

6 DCB substrate Al₂O₃ or AlN

7 Lead-free solder alloys
ROHS compliant
Vacuum solder process

8 Copper baseplate
– Rugged
– Easy handling
– Nickel plated
– Lowest Rth
– AlSiC optional

Danfoss Silicon Power

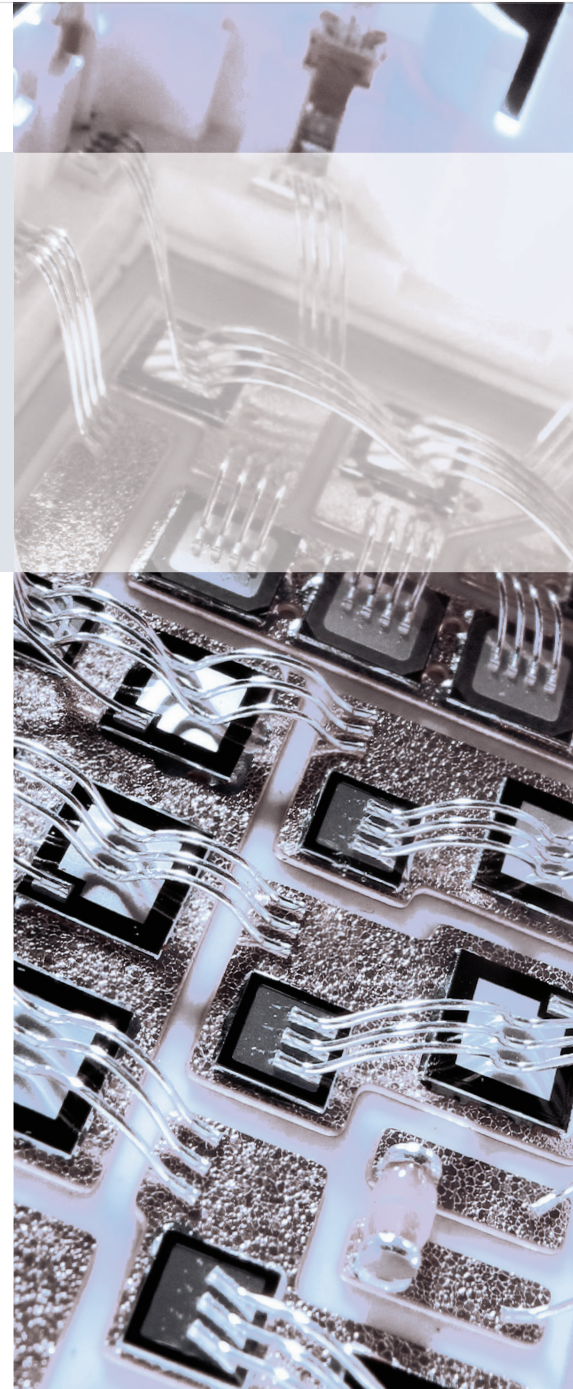
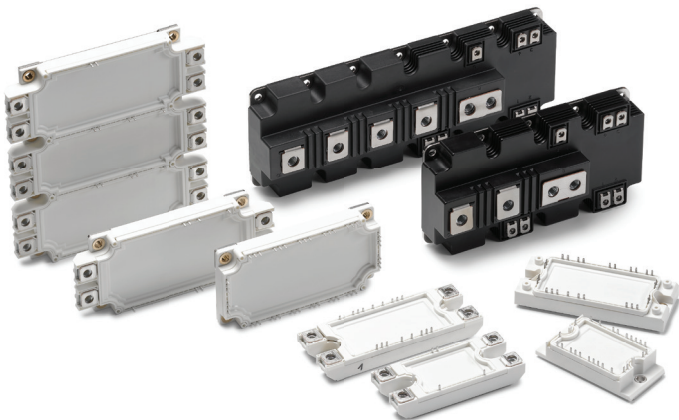
Based in Flensburg, Germany, Danfoss Silicon Power is a leading developer of customer specific IGBT and MOSFET modules and power stacks for power intensive applications.

Our power modules and power stacks are a preferred choice in demanding automotive and wind power applications and a wide variety of industrial applications.

Our 35,000 m² research, development and production facility is certified according ISO 9001, ISO/TS 16949, ISO 14001, ISO 50001 and OHSAS 18001. This enables us to quickly transfer

development projects to high volume production that can be integrated seamlessly into our customers' supply chain with full focus on quality.

Danfoss Silicon Power is a subsidiary of the Danfoss Group, the largest industrial company in Denmark. Danfoss employs more than 24,000 people in 100 countries within development, production, sales and support.



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