

Best-in-class products to meet
your application demands

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Never stop thinking



EasyPIM™, EasyPACK

The easy way with compact modules

Product range

600 V, 6 A - 200 A
1,200 V, 10 A - 150 A

Circuit design

- Bridge rectifier
- PIM
- FourPACK, SixPACK
- Dual, halfbridge

Applications

- Air-conditioning
- Household appliances
- General purpose drives from 150 W up to 30 kW
- Pumps, fans
- Uninterruptible power supplies

Features

- Compact module concept
- High reliability and power density
- Configuration flexibility
- Low cost design of modules
- Modules without base plates
- Easy's with clamping system
- Latest IGBT⁴ 1200V chip technology with t_{jop} of 150 °C
- IGBT³ 600 V with t_{jop} of 150 °C
- High automated production line
- RoHS compliant



EconoPIM™, EconoPACK™

Trendsetting in case design and IGBT technology

Product range

600 V, 10 A - 200 A
1,200 V, 10 A - 200 A
1,700 V, 50 A - 100 A

Circuit design

- PIM
- FourPACK, SixPACK
- TriPACK
- Shunt modules

Applications

- Variable speed drives
- Uninterruptible Power Supplies
- Welding applications
- Inductive heating
- Renewable energy systems

Features

- Modules with copper base plate
- Optimized heat spread
- Included thermistor (NTC)
- High reliability and power density
- Latest IGBT⁴ chip technology
- New mounting technology Press-Fit for EconoPACK™ and EconoPIM™ modules





34 mm, 62 mm, EconoPACK™+, EconoDUAL™ modules

The most competitive line of IGBTs from the expert

Product range

- 34 mm/62 mm modules
 - 600 V, 50 A - 400 A
 - 1,200 V, 25 A - 800 A
 - 1,700 V, 50 A - 600 A
- EconoPACK™+
 - 1,200 V, 150 A - 450 A
 - 1,700 V, 150 A - 450 A
- EconoDUAL™ 2
 - 1,200 V, 50 A - 200 A
- EconoDUAL™ 3
 - 1,200 V, 150 A - 450 A
 - 1,700 V, 150 A - 450 A

Circuit design

- 34 mm/62 mm modules
 - Single
 - Half bridge
 - Chopper modules
 - Diode modules
 - Single switch with series diode
- EconoPACK™+, EconoDUAL™
 - SixPACK
 - Dual modules
 - FourPACK

Applications

- Variable speed drives
- Uninterruptible power supplies
- Resonant converters
- Welding applications
- Renewable energy systems
- Inductive heating

Features

- High reliability
- Full product range in various configurations
- Latest IGBT⁴ chip technology for maximum power density and best parallel switching performance
- Symmetrical construction for even and low stray inductance
- EconoDUAL™ module concept enables more compact inverter designs
- RoHS-compliant



IGBT high current modules IHM, PrimePACK™

The best in class, solution for high power applications

Product range

- IHM
 - 1,200 V, 400 A - 3,600 A
 - 1,700 V, 400 A - 3,600 A
- PrimePACK™
 - 1,200 V, 450 A - 1,400 A
 - 1,700 V, 450 A - 1,200 A

Circuit design

- Single
- Half bridge
- Chopper modules
- H-bridge
- SixPACK
- Diode modules

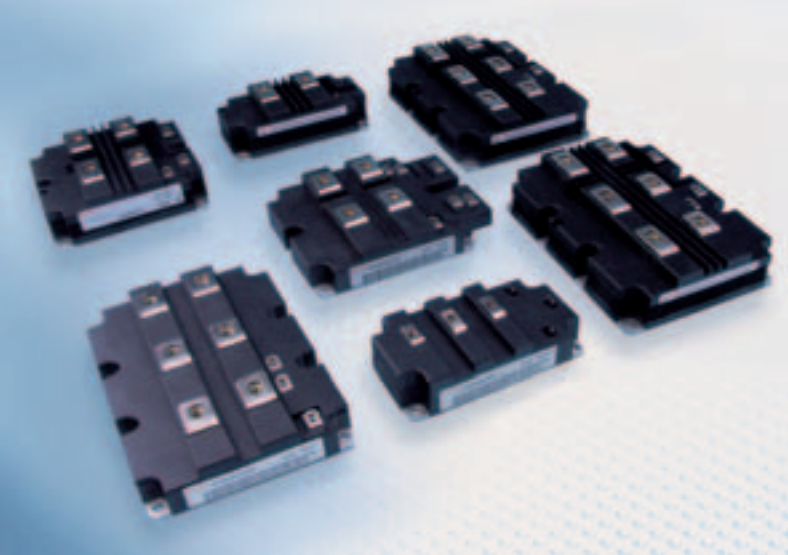
Applications

- Variable speed drives
- Commuter trains
- Tramways and trolleybuses
- Welding applications
- Medical X-ray technology
- Uninterruptible power supplies
- Renewable energy systems
- Inductive heating

Features

- High power density for compact converter designs
- Modules setting a world standard in their class
- Broad range of products
- Increased creepage and clearance for use in rough environments
- Robust module design
- Good saturation and switching characteristics with wide RBSOA
- RoHS compliant





IGBT high voltage modules IHV

Devices for traction and high power industrial drives

Product range

3,300 V, 200 A - 1,500 A
6,500 V, 200 A - 600 A

Circuit design

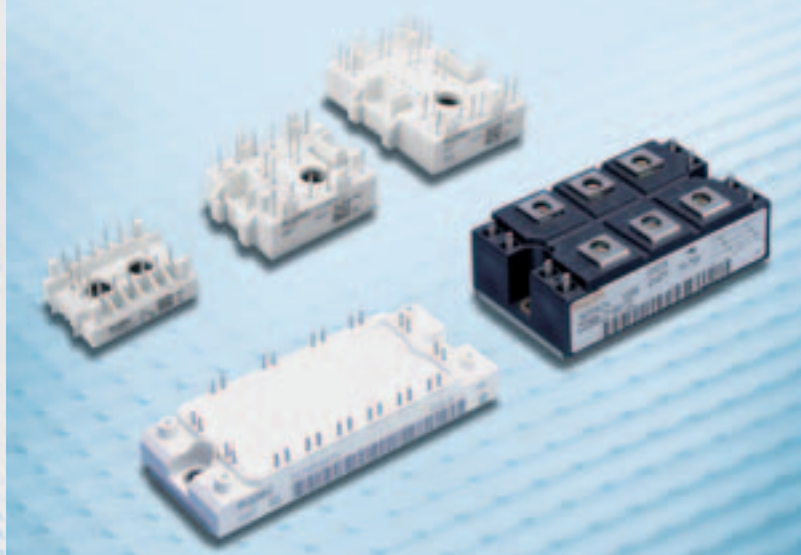
- Single
- Dual
- Chopper modules
- Diode modules

Applications

- Industrial drives for medium AC voltage
- Traction (commuter trains as well as rapid trains)
- Large drives

Features

- High power density for compact converter design
- AlSiC base plate for highest reliability and high power cycling capability
- Increased creepage and clearance for use in rough environments
- Package material with CTI up to 600
- IHV B-series, the second generation with operating temperature up to 150°C available
- Lightweight materials for reduction of overall converter weight
- Extended DC stability
- Fulfills NFF fire and smoke standards



Bridge rectifiers and AC controllers, EasyBRIDGE, EconoBRIDGE™, IsoPACK™

... for a more compact converter design

Product range

- EasyBRIDGE
800 V, 30 A - 50 A
1,600 V, 30 A - 65 A
- IsoPACK™
1,600 V, 85 A up to 205 A
- EconoBRIDGE™
1,600 V, 85 A up to 180 A

Circuit design

- 3-phase rectifier in uncontrolled, half controlled and full controlled bridges
- 3-phase AC switches

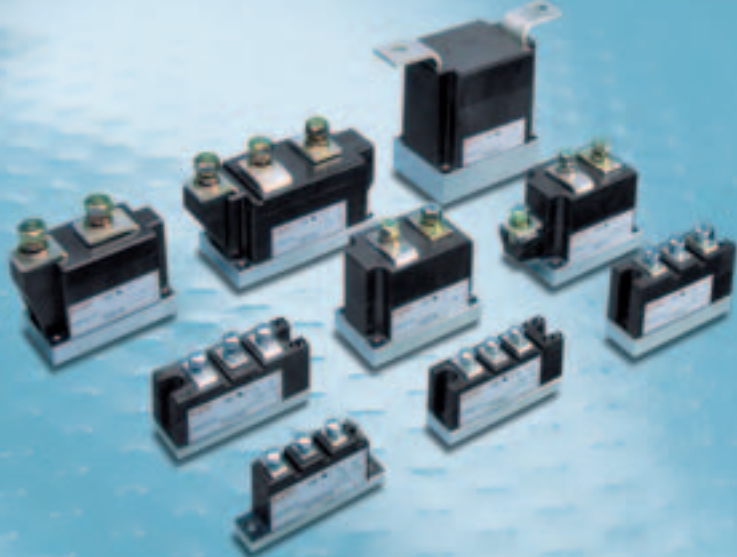
Applications

- Frequency converters in drive design
- Power supplies
- Uninterruptible power supplies
- Chopped power supplies for high power SMPS
- Softstarters
- Drives

Features

- EasyBRIDGE and EconoBRIDGE™
 - Solderpin modules with optional Brake IGBT and optional NTC resistor in rectifier configuration
 - Housing concept matches the EasyPACK and EconoPACK™ inverter module series
 - EasyBRIDGE modules also available for single phase applications
 - RoHS-compliant
- IsoPACK™ bridges
 - Modules with screwable power terminals
 - Concept designed for replacing 3 x 20 mm SCR/diode half bridge modules
- Housing concept matches the 62 mm IGBT modules





Thyristor and diode modules PowerBLOCK

A product range for optimum design

Product range

- Phase control thyristor PowerBLOCK
1,200 V - 3,600 V, 60 A - 800 A
- Rectifier diode PowerBLOCK
800 V - 4,400 V, 85 A - 1,070 A
- Fast Diode PowerBLOCK
800 V - 2,600 V, 46 A - 240 A

Circuit design

- Modules with single diode or thyristor
- Modules with two diodes, thyristors or in combination of both
- In halfbridge configuration for phase rectifier or AC switches

Applications

- Industrial drives
- Softstarters
- Power supplies
- Renewable energy systems
- Welding applications
- Electrolysis
- Traction

Features

- Modules in pressure contact technology with screwable power terminals for high current and blocking voltage
- Highest robustness and reliability
- Nearly all configurations are available for easy rectifier assemblies



Thyristor and diode PressPACK

When maximum power output is required at minimum power losses

Product range

- Phase control thyristor discs
200 V - 8,000 V
86 A - 4,700 A
- Light-triggered thyristors LTT
5,200 V - 8,000 V
500 A - 3,500 A
- Rectifier diode discs
200 V - 9,000 V
120 A - 8,000 A
- Fast rectifier diode discs
600 V - 6,500 V
56 A - 1,460 A

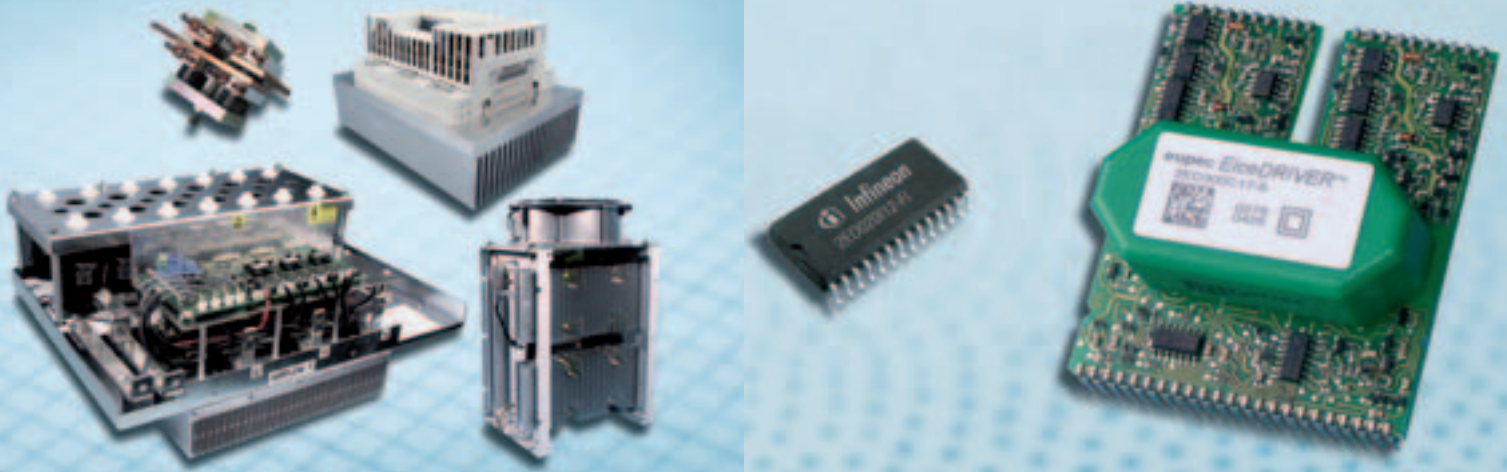
Applications

- Electric energy mains
- Industrial drives
- Softstarters
- Traction
- Power supplies
- Welding
- Electrolysis
- Renewable energy systems
- Pulsed power
- HVDC line transmission systems
- Static VAR compensation (SVC)

Features

- Wide product range
- High current
- High blocking voltage
- Light-triggered
- Highest robustness
- Highest reliability





Stacks and subassemblies

We are the experts for cooling management

EiceDRIVER™ IGBT driver boards and ICs

Driving the intelligent way

Product range

- SCR/diode stacks and sub-assemblies thyristor
180 V - 2,500 V, 10 A - 5,000 A
- IGBT ModSTACK™
180 V - 690 V, 50 kVA - 4 MVA
- IGBT PrimeSTACK
1,200 V IGBT, up to 1,600 A
1,700 V IGBT, up to 1,200 A

Applications

- Industrial drives and elevators
- Renewable energy and other distributed power generation systems
- UPS
- Traction
- Medical technology
- Energy treatment and HVDC conversion
- Galvanic, electrolysis and electroplating
- Pulsed power

Features

- Short time-to-market and reduced system costs due to “ready-to-use” power section
- Flexible system for power solutions due to modular approach
- Modular stack design for industrial approved cabinets
- Various power electronic available
- Optimized integrated thermal management
- Low inductance IGBT stack design

2ED300C17 - S/ST

Features

- For 1,200 V / 1,700 V IGBT modules
- V_{CEsat} monitoring
- “Soft shut down” for fault conditions
- Safe electrical isolation according to EN 50178
- Integrated DC - DC SMPS 8 W
- High peak output current 30 A
- ± 15 V secondary drive voltage

Applications

- Traction
- Large drives
- Distributed power
- Other applications > 100 kVA
- Renewable energy systems

2ED02012 - F

Features

- Fully operational to 1,200 V
- Gate drive supply range from 13 V to 18 V
- Gate drive currents of +1 A / -2 A
- Matched propagation delay for both channels
- High dV/dt immune
- General purpose operational amplifier
- General purpose comparator

Applications

- General purpose drives
- Other applications up to 15 kVA





Philosophy

Our business philosophy is “our customers first”

WE ARE ALWAYS ANXIOUS to have an open dialogue with our customers. Our customers benefit from innovative technologies and services and we also support in terms of ensuring successful marketing of products. Many product innovations were developed on this basis.

WE HAVE AN EXPERIENCED TEAM of regional application engineers supporting our customers in designing our products into their solutions. We create evaluation boards to enable a fast and reliable solution for the integration of our modules and devices in renewable power systems.

REGULAR QUALITY CERTIFICATION AUDITS together with our customers, strengthen our confidence and make our highly reliable production processes more transparent.

OUTSTANDING CUSTOMER SATISFACTION verifies the success of our work. An open and intensive cooperation in all areas is the basis for long-term partnerships. Both sides consider this to be most important.

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