HIGH POWER SEMICONDUCTOR SWITCHES AND PRODUCTS
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Semiconductor Applications
- Pulse Power Systems
- Medical Equipment
- High Power Microwave Sources
- Industrial AC and DC drives
- Power Converters for Traction
- Renewable Energy
- Welding
- Induction Heating

Thyristor Discs & Assemblies
AMS Technologies has a comprehensive range of Thyristor discs including Phase Control, Fast Thyristors, Light triggered Thyristors, Pulsed Power LT Thyristors and asymetrical Thyristors - all in the industry standard Press Pack Design. To complete our product range we also have Thyristors in a stud design and as rotor Thyristors. These can be supplied as individual devices, or according to customer request as a complete press pack assembly with triggering and controls. Applications include AC and DC Motor Control, Lighting equipment, Rectifier Bridges, High Voltage DC Transmission equipment, Frequency converters and Welding / Induction heating equipment.

IGBT & SFRD Modules
Utilised for such systems as wind turbines, frequency converters, Pulse Power Systems, high power drives, Induction heating, DC Servomotor control and AC Motor control in industrial applications, our extensive range of IGBT Modules are fully suited to many areas combining an industry standard switching voltage with a very high switching current capability. We can offer a broad range of products switching in a wide band frequency range with various circuit layouts including half bridge, choppers and single switches to fulfill a plethora of requirements. These products offer fast switching with low switch on (Eon) and switch off (Eoff) times.

Power Modules
This is a description for various semiconductor packages that include rectifier diode modules, avalanche diode modules, phase control diode modules, high power thyristor modules with external cooling, modules with diode-thyristor and thyristor-diode circuit designs, single phase and three phase bridge, fast thyristor, or diode modules. The large combination of package styles, circuit designs and power ratings allow design engineer to select the correct configuration for his application; whether power converters for traction, soft starters for motor controls, welding and induction heating equipment, power bridges for power supplies or rectifiers for DC motors, we are able to offer a large range of products to provide you with the correct solution for your needs.

Diodes & Assemblies
In today's modern world of semiconductor switches, a paramount consideration for every engineer is the criteria for protection diodes, as well as the requirement for rectification of voltages for smooth operating parameters. Our range of Diodes provides protection for overvoltages, as well as offering several different circuit designs and packages for half wave and full wave rectification. With stud design, press pack, flanged, modules and compact cases, we can fulfil the customer requirements for avalanche, fast recovery, rectifier, high voltage diode stacks, rotor and voltage suppression diodes for many different applications. Design engineers confronted with half wave and rectifier diode applications, or high voltage power supplies, lasers, X Rays machines, industry and transport systems, can be assured that we have all the products for their designs.

Discrete Devices, Triacs, SCRs, Rectifiers
Discrete devices encompass a range of switching elements, SGRs, Thyristors, Diodes and Triacs amongst others. These are in industry standard TO Packages and are developed for applications in the general electronic industry. These Products are already utilised in general AC Switching, Lighting equipment, Power Tools, Motor control and heat regulation. There is also a range of high temperature triacs with a maximum rated junction temperature of 150°C. Available with integrated Alternistor or a Snubber, these discrete elements are adequately protected for most electrical environments.

Solid State relays
As a complement to our high power products, AMS Technologies also has a range of industry standard Solid State Relays for industrial applications. Utilising the standard “Hockey Puck” Packaging, as well as offering other package styles, for example the dual relay, we are able to offer relays for single phase as well as three phase applications. Already implemented in many applications such as lighting, motor control, machine controls, the photo isolation, LED status indicators, built in snubber amongst other features, have been found to be the right solution for many industrial needs.

Power Products
For the successful completion of any circuit with high power semiconductors, it is important to incorporate several other components, such as Resistors, Diodes, Measurement Devices. Also Protection devices such as Diodes and Snubber Capacitors are an intrinsic part of the circuit for semiconductor switching elements. We can offer a range of products to cover all your passive component and protection needs.

Measurement Devices
AMS Technologies product offering includes current transformers, also known as Rogowski coils, which are instruments to measure current flow in cables or charged particle beams. All the measurement devices use the Rogowski principle to ensure non-contact measurement of the current flowing from milliamperes to kiloamperes. The current transformers can be used in mediums such as air, ultra-high vacuum or oil. The instruments provide an accurate reading of DC currents, pulsed currents, RMS currents, pulse charge and position of a current-carrying beam. The devices are available with various diameters, to provide the user with flexibility to use the correct device depending on the outside diameter of the cable to be measured. The products are used primarily by research institutes, industry laboratories and cancer hadrotherapy centers worldwide.

Thermoelectric Solutions
AMS Technologies offers design support, components and customised assemblies for cooling, temperature stabilisation and power generation applications that utilise thermoelectric modules. Our thermal design service uses computational fluid dynamics and has been supporting manufacturers of medical, biotech and analytical instruments, as well as optoelectronic devices and beverage coolers for years. AMS Technologies supplies thermoelectric modules, aluminium and copper heat sinks that have become number one choice in many thermoelectric applications. A variety of temperature controllers and accessories like thermal grease are also available.
WHAT CAN WE DO FOR YOU?

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