

R&D Electronics Newsletter (2014 Issue 10)

Welcome to our 10th issue of newsletter!

As **the exclusive Sales-Channel of TECHSEM**, which is a well-known Chinese developer and manufacturer of **diode / thyristor modules and capsules** with more than 48 years experience, **R&D Electronics** always strives to offer the best quality and price to our customers. You can find approximately 400 different products in our well-structured B2B e-commerce-portal www.rd-ebusiness.com. Recently we have succeeded substantially reducing the process costs. As the result you can benefit from the price reduction up to 20%. Please take the opportunity to use high quality power semiconductors at an excellent price-benefit ratio for your applications. Give us a try!

CE / UL marks and RoHS directive, what are they good for? What do they mean for power semiconductors? In this issue you can find answers to these questions.

All of our newsletters are archived in our online-shop. More information is available under: www.rd-ebusiness.com

Yours faithfully
R&D Electronics Team

The meaning of the CE marking:

The CE marking is the manufacturer's declaration that the product meets the requirements of the applicable EC directives. The actual words signified by "CE" have been disputed. It is often taken to be an abbreviation of Conformité Européenne, meaning "European Conformity". By affixing the CE marking on a product, a manufacturer is declaring, at its sole responsibility, conformity with all of the legal requirements to achieve CE marking which allows free movement and sale of the product throughout the European Economic Area. CE marking is intended for national market surveillance and enforcement authorities.



CE marking for power semiconductors:

The power semiconductors belong to the product groups „Electrical Equipment“ and „Electromagnetic Compatibility“, for which there are the directives required by CE marking:

- The Low Voltage Directive (LVD) 2006/95/EC is one of the oldest Single Market Directives for electrical equipment adopted by the European Union before the "New" or "Global" Approach. The Directive provides common broad objectives for safety regulations, so that electrical equipment approved by any EU member country will be acceptable for use in all other EU countries. The Low Voltage Directive does not supply any specific technical standards that must be met, instead relying on IEC technical standards to guide designers to produce safe products.
- Compliance with the Electromagnetic Compatibility (EMC) Directive 2004/108/EC is mandatory for nearly all electrical and electronic equipment imported into the European Union (EU). The EMC Directive requires that all products should comply with the basic protection requirements: the electromagnetic disturbance generated by the apparatus does not exceed a level specified in harmonized EMC Standards. This level is that above which radio and telecommunication equipment or other equipment may not be able to operate as intended. It has a level of immunity to the electromagnetic disturbance to be expected in its intended use, which allows it to operate without unacceptable degradation of its specified performance.

In general, the power semiconductors may only bear the CE marking, when they comply with the above two directives. **For instance all TECHSEM products comply with the related requirements and are marked with CE.**

The meaning of the UL certification:

UL (Underwriters Laboratories) is an independent safety consulting and certification company headquartered in the USA. UL does not "approve" any products. UL provides safety-related certification, validation, testing, inspection, auditing, advising and training services to a wide range of clients. It develops norms and processes to certify the products, materials, components, elements, systems and equipment with respect to safety. If the products have been certified, such products can bear the paid UL Mark, as long as they comply with the prescribed standards.



UL marking for power semiconductors:

In contrast to CE regulations, which define only minimum standards of product safety, it is with the UL certification a real quality mark. There are for instance the standards (UL 1557) for electrically isolated semiconductor, which are applicable for diode and thyristor modules. These requirements cover the isolation performance of thyristors, transistors, diodes, and the like, and their combination in module packages and constructional features that are pertinent to that performance. **All TECHSEM diode and thyristor modules meet the requirements of UL 1557 and are thus certified with UL marks (UL-file-No.: E321159).**

RoHS directive:

The EU Directive "Recast 2011/65/EU (RoHS 2) the restriction of the use of certain hazardous substances in electrical and electronic equipment" regulates the use of hazardous substances in devices and components. The aim of the Directive is the restriction of unwanted ingredients in electrical and electronic equipment placed on the EU market.



Common substances of the electronics are considered extremely dangerous for the environment because they are toxic for one, cannot or only poorly be reduced to the other. These substances should be banned from the products through RoHS directive. The following substances are affected:

- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd)
- Hexavalent chromium (Cr6+)
- Polybrominated biphenyls (PBB)
- Polybrominated diphenyl ether (PBDE)

In the RoHS directive, specific limits for the homogeneous materials contained in the product have been determined. **All TECHSEM products meet 100% the European RoHS requirements.**

Free Samples

You want to test our products? No problem. We provide now for certain types of products with limited quantities as free samples at your disposal. For the available products, you only need to pay for shipping costs from Hong Kong to your delivery address. Do not hesitate to register as customer in our shop and contact us for free samples of your choice: www.rd-ebusiness.com.