Design for Environment

Power Modules

SEC-15:000193 Uen Rev E

Since year 2000 Ericsson Power Modules has applied a design for environment (DfE) policy in all product development projects, including removal of hazardous substances according to the RoHS and REACH directives and a continuous development of designs and solutions for lower power consumption and lowest possible total cost of ownership for the end-user.

This include restriction of hazardous substances, with special focus on lead-free components, lead-free manufacturing processes, components and products that meet the requirements in customers lead-free manufacturing processes. Products and processes also comply with Ericsson lists of banned and restricted substances, which include the six restricted substances in the RoHS directive but also an extensive list of other substances that are either banned, restricted or under observation due to environmental regulations or concerns.

RoHS directive

The RoHS directive (2011/65/EU) requires that, electrical and electronic equipment (EEE) put on the market does not contain more than the permitted levels of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE). The directive apply to the final end-user products e.g. IT and telecommunications equipment, that fall within the scope of the directive. From a legal point of view, components and sub-assemblies, e.g. DC/DC power modules, are not covered by the directive but are required by the equipment manufacturers to meet the requirements in the RoHS directive. DC-DC power modules meet the requirements if the concentration values of hazardous substances do not exceed 0.1% by weight in homogeneous materials for lead, mercury, hexavalent chromium, PBB and PBDE and 0.01% by weight in homogeneous materials for cadmium.

Ericsson Power Modules' products are compatible with the relevant clauses and requirements in the RoHS directive. Products intended for surface mount assembly will also comply with high-temperature lead-free reflow soldering processes according to IPC/JEDEC J STD 020C and products intended for through-hole mount assembly will comply with lead-free wave soldering or manual soldering processes.

RoHS directive (2011/65/EU) states that all exemptions without an explicit expiry date will be terminated by 21 July 2016 if no renewal has been applied for. A renewal application that is rejected will mean that the exemption expire 12-18 months after the rejection decision. The Ericsson general stand-point is that use of exemptions shall be avoided. Suppliers are requested to introduce alternative design solutions when technically and economically feasible. Suppliers shall phase out the use of an exemption at latest 12 months before it is expired. Ericsson is communicating with its suppliers as well as cooperating within industry organizations and closely following the EU Commission process to ensure that our products are in compliance with the RoHS directive.

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REACH

Regulation (EC) No 1907/2006 of the European parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) entered into force on 1 June 2007 and will be fully implemented by 2018.

Ericsson is affected in two ways:

As a manufacturer using substances on their own and in preparations in the manufacturing process

As a supplier of finished products, i.e. subject to requirements on substances in articles.

Ericsson fulfills and will continuously fulfill all its obligations under REACH as they enter into force. Ericsson has also a register of substances and preparations used in the manufacturing processes to manage related REACH obligations.

Ericsson is communicating with its suppliers and expects that they (as manufacturers or importers of substances, preparations or articles) ensure the continued supply to Ericsson by fulfilling their obligations according to the REACH regulation, e.g. pre-registration and registration. Supplier compliance is assured through the normal sourcing agreement process. Ericsson expectations on suppliers regarding REACH are available here.

Generally the preferred way of handling REACH matters is by using or referring to the Ericsson REACH compliance information to customers and other external stakeholders which is available on the Corporate Responsibility web site.

The following information is according to Ericsson:

Substances that is intended to be released shall be registered (products shall not be registered). It is the manufacturer/importer of such substance that is required to register the substance (not Ericsson)

If a product contains more than 0.1% of a SVHC ("substance of very high concern") Ericsson must inform the customer, e.g. a materials declaration, and if the annual content used in a product exceeds 1 metric ton it should be authorized/registered.

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Duty to communicate information on substances in articles

According to the REACH regulations (Article 33), producers of articles containing substances of very high concern (SVHC) included on the candidate list in a concentration above 0.1% weight by weight shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

Download Ericsson REACH regulations (Article 33) document in the web site.

Efficiency and energy consumption

Efficiency and energy consumption are two of the most important environmental factors in the end-user equipment. In recent years the industry has learned that energy consumption in the operation of Information and Communication Technology equipment is the most critical factor relating to environmental impact and total cost of ownership. Ericsson Power Modules' DfE policy drives the design and development of high efficient DC/DC power modules that will decrease the energy consumption of the end-user equipment resulting in lower environmental impact and life cycle cost. This does not only affect the energy bill but also the design, dimensioning and cost of other parts of the complete installation, such as cooling fans and air conditioning, heat sinks, real estate requirements, power supplies and battery back-up capacity, etc. Higher efficiency in the DC/DC power modules will contribute to lower total cost of ownership for the end-user and a more resource efficient society.

Please contact your local Ericsson Power Modules sales office if you require a statement of compliance (SoC), Materials declarations or further information on high efficiency and RoHS compatible DC/DC power modules.

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