

***Smar Research Semiconductor  
RoHS Compliancy  
Restriction of the use of Certain Hazardous Substances in  
electrical and electronic equipment***

Dear Valued Customer,

**REF: Smar Research Corporation Semiconductor Manufactured Parts**

I am writing to you with reference to the upcoming deadline for compliance with the RoHS requirements, which are due to come into effect on July 1st 2006 (European Union Directive 2002/95/EC, January 27, 2003).

This directive requires that any new electrical and electronic equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), or polybrominated diphenyl ethers (PBDE).

Manufacturers of standard products are responsible for determining if their products are compliant and taking the necessary steps to ensure compliance. In the case of custom devices, such as those we supply to you, it is you who must initiate the transition, which is the reason I am writing to you today.

**Smar Research Corporation offers packaging option that meet the requirements of RoHS, as well as the requirements of the high temperature reflow profile needed by the Pb-free materials. All such packages are qualified and classified to the requirements of IPC/JEDEC J-Std-020C. The devices will be marked and labeled with traceability identifiers compliant to the requirements of the JEDEC Standard JESD97.**

Please consider the future requirements for your existing ASIC design(s) and advise us which device(s) you need to convert and when you believe production will need to switch over. We suggest that you consider starting the process as soon as possible. Please contact your area sales manager or local customer service representative for further assistance.

The deadline is approaching fast. Please contact us to discuss your needs so that we can help you to be compliant.

Best Regards,

Basilio Selli  
Managing Director, Smar Research Corporation

## ***Frequently Asked Questions***

**Q: Is the foot-print (shape and dimensions) of the package affected when migrating?**

A: NO, the package dimensions and foot print will remain the same.

**Q: Is the performance of the part affected when migrating to RoHS?**

A: In general, the change does not affect the device performance. Any effect, if there is, can be detected immediately during the 100% device testing. This is the reason why prototypes need to be built, tested and approved by the customer before full conversion is to be done.

**Q: What is the difference in the soldering profiles for RoHS and non-RoHS parts?**

A: The solder reflow temperature is higher than for leaded components. (Depending on the body size and thickness, peak temperatures are defined in IPC/JEDEC J-Std-020C)

**Q: Can RoHS compliant and non-ROHS compliant packages be assembled in the same solder process?**

A: The solder reflow peak temperatures for parts containing lead and those not containing lead are different. Our suppliers are able to demonstrate that the lead-free packages can be reflowed in the “leaded” profile (backward compatibility) but NOT the other way (not forward compatible).

**Q: Are there different storage and handling precautions for the RoHS compliant parts?**

A: The same storage and handling conditions apply and is dependent on the MSL (moisture sensitivity level) classification of the package.