Product Change Notification

108477 - 00

Should you have any issues with the timeline or content of this change, please contact the Intel Representative(s) for your geographic location listed below. No response from customers will be deemed as acceptance of the change and the change will be implemented pursuant to the key milestones set forth in this attached PCN.

Americas Contact: asmo.pcn@intel.com

Asia Pacific Contact: apacgccb@intel.com

Europe Email: eccb@intel.com

Japan Email: jccb.ijkk@intel.com

Product Change Notification

Change Notification #:	**108477 - 00**
Change Title:	**Intel® Network Processors and Embedded Chipsets, PCN 108477-00, Product Material, Conversion to Pb-Free Products**
Date of Publication:	**May 23, 2008**

Key Characteristics of the Change:

Product Material

Forecasted Key Milestones:

Date of Qualification Data Availability:	May 23, 2008
Date Customer Must be Ready to Receive Post-Conversion Material:	Dec. 15, 2008
Date Orders will be Accepted for Post-Conversion Material:	May 23, 2008
Last Order date for non-Pb-Free Material:	Sep 15, 2008
Last Ship date for non-Pb Free Material:	Dec. 15,2008

Description of Change to the Customer:

The following changes have been made to the pre-conversion products listed in the table below, in order to be compliant with Intel's Pb-free/RoHS Initiative:

1. SLI (Second Level Interconnect) solder ball material has changed from Sn/Pb to Sn/Ag/Cu alloy.
2. DSC (Die Side Capacitor) attachment process on FCBGA packages has changed to Pb-free paste process where applicable.
3. Products are Pb-free board process compatible and peak reflow temperature has increased to 260°C.
4. Product Code and MM# has changed as shown in the Products Affected Table below.
5. A new marking "e1" with a circle around it will be added per JESD97 Marking Standards to indicate that the product SLI is now Pb-free*

* Note, Products in FCBGA packaging **may not be** completely Pb-free, but are RoHS compliant. The first level interconnect **may** use lead material which is exempt by RoHS.

This PCN does not extend the Last Time Order dates or availability of leaded packaging for any silicon beyond the LTOs in the conversion dates listed in previous PCNs.

All customers will need to move to new silicon steppings before the LTO date on this stepping change PCN on either lead-based or Pb-free package options.

Please feel free to contact your field representative with any questions or concerns.

Customer Impact of Change and Recommended Action:

1. Pb-free SLI products require new Pb-free board assembly process. Each customer should develop their own board profile envelope appropriate to their equipment, material and products.
2. The new products are not "drop in" or backward compatible with the conventional leaded board process. Intel recommends running solder joint evaluations in case Pb-free SLI parts are to be used in a leaded board assembly process.
3. The appearance of Sn/Ag/Cu solder balls may be grainy and dull when compared to shiny Sn/Pb balls. This may require an adjustment to vision system hardware and software.

Due to this change we will start to provide a distinctive symbol and label which identify those components or devices that are totally Pb-free and/or are capable of providing or have Pb-free 2nd level interconnects.

Lead version of these parts will no longer ship after December 15, 2008.

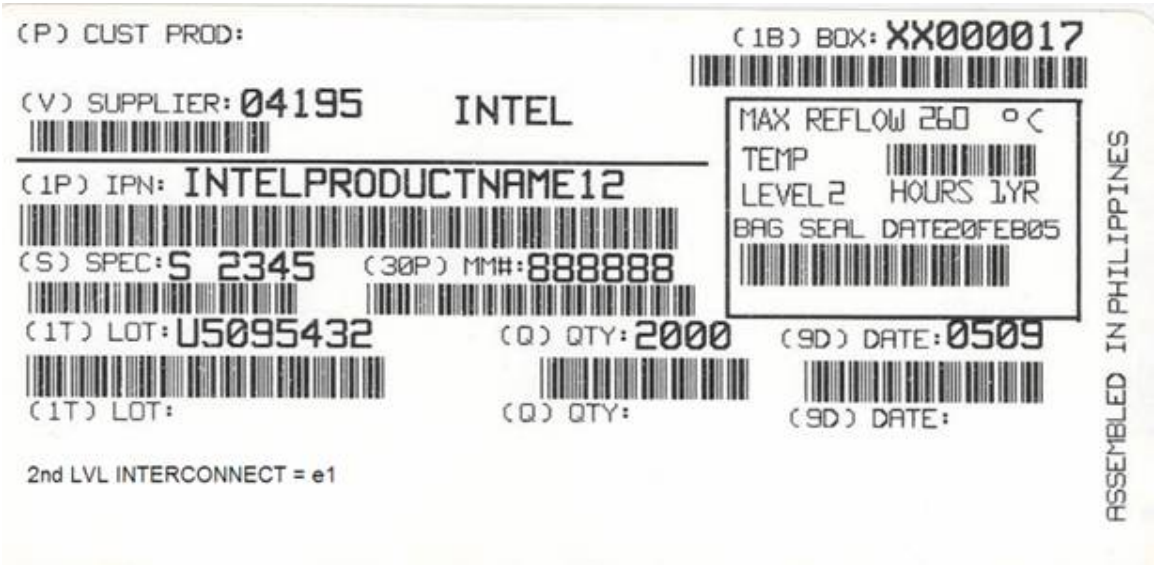
Note that Lead (Pb) has not been intentionally added, but may still exist as an impurity below 1000 ppm.

Current Label:

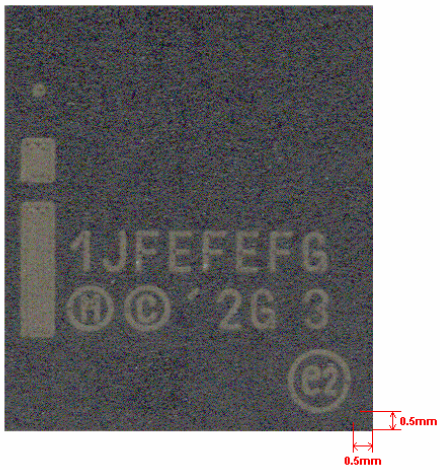
STD INTERMEDIATE BOX LABEL

New Label

STD INTERMEDIATE BAG LABEL



"e_x" mark on packages. Pb-free mark may be on separate line (as shown below) or on last line of existing mark (copyright line)



The following categories are meant to describe the Pb-free 2nd level interconnect (see figure 1) terminal
finish/material of components and/or the solder paste/solder used in board assembly.
e1 - SnAgCu (shall not be included in category e2)
e2 - Sn alloys with no Bi or Zn excluding SnAgCu
e3 - Sn
e4 - Precious metal (e.g., Ag, Au, NiPd, NiPdAu) (no Sn)
e5 - SnZn, SnZnx (no Bi)
e6 - contains Bi
e7 - low temperature solder (≤ 150 °C) containing Indium (no Bi)

The marketing package designator will also change to reflect Pb-free packaging. In order to facilitate this change a new MM# has been created for the affected products. Ceramic products are already Pb-free so the package designator will not change. However, the part mark will change to reflect Pb-free product. Please see table below.

Products Affected / Intel Ordering Codes:

Pre-Conversion Product Code	Pre-Conversion SPEC	Pre-Conversion MM#	Post-Conversion Product Code	Post-Conversion SPEC	Post-Conversion MM#s
Leaded Skus			PB-free sku		
RPIXP2805ABR	SLA7Y	889997	NPIXP2805ABR	SLA8C	890014
RPIXP2805ACR	SLA7D	889946	NPIXP2805ACR	SLA86	890007
RPIXP2855ABR	SLA7X	889996	NPIXP2855ABR	SLA8B	890013
RPIXP2855ACR	SLA7T	889990	NPIXP2855ACR	SLA84	890004
HPIXP2350AE		883920	WPIXP2350AE	ST01	883910
HPIXP2350AD		883936	WPIXP2350AD	ST02	883911
HPIXP2350AC		883944	WPIXP2350AC	ST03	883912
HPIXP2325AB		883945	WPIXP2325AB	ST04	883913
HPIXP2325AET		883946	WPIXP2350AET	ST05	883915
HPIXP2350ADT		883947	WPIXP2350ADT	ST06	883916
HPIXP2350ACT		883949	WPIXP2350ACT	ST07	883918
HPIXP2325ABT		883950	WPIXP2350ABT	ST08	883919
GC80503CSM66266	SL389	821226	QC80503CSM66266	SL9LN	883223
GC80503CSM66166	SL388	821225	QC80503CSM66166	SL9LM	883017
FW82801FB	SL7Y5	865377	NH82801FB	SL89L	868390
FW82801FB	SL7AG	857492	NH82801FB	SL89L	868390

Reference Documents / Attachments:

Document:	Location #:
Intel Pb-free Site	http://www.intel.com/research/silicon/leadfree.htm
JESD97	http://www.jedec.org/download/default.cfm
MDDS	http://www.intel.com/design/PACKTECH/packbook.htm

PCN Revision History:

Date of Revision:	Revision Number:	Reason:
May 23, 2008	00	Originally Published PCN