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## PRODUCT CHANGE NOTIFICATION

**PCN:** PCN115099

**Date:** October 14, 2011

**Subject:** Process Technology Transition from RAM28 (0.65um) to RAM42 (0.35um) for Select Dual Port Static RAM (DP-SRAM) Products.

**To:** PCN ADMIN  
CYPRESS  
pcn\_admin@cypress.com

**Change Type:** Major

### Description of Change:

Cypress is announcing a process technology transition on the attached list of Dual Port SRAM products. Products will transition from RAM28 (0.65um) to RAM42 (0.35um), a process that is fully qualified and in full production at the Cypress Minnesota wafer fabrication facility.

RAM42 products are pin-to-pin compatible with the RAM28 equivalents.

Please see attached file, titled 'Electrical Characteristics Changes' for a detailed list of changes to electrical characteristics. Datasheets of RAM42 products are available on Cypress Website, [www.cypress.com](http://www.cypress.com) and are attached to this notification.

### Benefit of Change:

The affected list of RAM28 products were manufactured at the Cypress Texas wafer fabrication facility which was shutdown in Dec 2008. Cypress had built sufficient RAM28 inventory to support customers till 2012.

The migration to RAM42 technology at Cypress Minnesota is being carried out at this time to ensure that customers benefit from continuing supply and long term support on these products, on a newer and already mature process technology.

### Affected Part Numbers:

**Affected Parts: 33**

Item	Affected Part Numbers (RAM28)	Drop-In Replacement <sup>[1]</sup> Part Number (RAM42)	Last Time Buy (LTB) Date	Last Time Ship (LTS) Date
1	CY7C131-15NXI	CY7C131E-15NXI	4-APR-2012	1-OCT-2012
2	CY7C131-25JXC	CY7C131E-25JXC	4-APR-2012	1-OCT-2012
3	CY7C131-25JXCT	CY7C131E-25JXCT	4-APR-2012	1-OCT-2012
4	CY7C131-25NXC	CY7C131E-25NXC	4-APR-2012	1-OCT-2012
5	CY7C131-25NXCT	CY7C131E-25NXCT	4-APR-2012	1-OCT-2012
6	CY7C131-55JXC	CY7C131E-55JXC	4-APR-2012	1-OCT-2012
7	CY7C131-55JXCT	CY7C131E-55JXCT	4-APR-2012	1-OCT-2012
8	CY7C131-55JXI	CY7C131E-55JXI	4-APR-2012	1-OCT-2012
9	CY7C131-55JXIT	CY7C131E-55JXIT	4-APR-2012	1-OCT-2012
10	CY7C131-55NXC	CY7C131E-55NXC	4-APR-2012	1-OCT-2012
11	CY7C131-55NXCT	CY7C131E-55NXCT	4-APR-2012	1-OCT-2012

12	CY7C131-55NXI	CY7C131E-55NXI	4-APR-2012	1-OCT-2012
13	CY7C131A-15JXI	CY7C131AE-15JXI	4-APR-2012	1-OCT-2012
14	CY7C136-25JXC	CY7C136E-25JXC	4-APR-2012	1-OCT-2012
15	CY7C136-25JXCT	CY7C136E-25JXCT	4-APR-2012	1-OCT-2012
16	CY7C136-25JXI	CY7C136E-25JXI	4-APR-2012	1-OCT-2012
17	CY7C136-25NXC	CY7C136E-25NXC	4-APR-2012	1-OCT-2012
18	CY7C136-55JXC	CY7C136E-55JXC	4-APR-2012	1-OCT-2012
19	CY7C136-55JXCT	CY7C136E-55JXCT	4-APR-2012	1-OCT-2012
20	CY7C136-55NXC	CY7C136E-55NXC	4-APR-2012	1-OCT-2012
21	CY7C136-55NXCT	CY7C136E-55NXCT	4-APR-2012	1-OCT-2012
22	CY7C136A-55JXI	CY7C136AE-55JXI	4-APR-2012	1-OCT-2012
23	CY7C136A-55NXI	CY7C136AE-55NXI	4-APR-2012	1-OCT-2012
24	CY7C136A-55NXIT	CY7C136AE-55NXIT	4-APR-2012	1-OCT-2012
25	CY7C144-15AXC	CY7C144E-15AXC	4-APR-2012	1-OCT-2012
26	CY7C144-15AXCT	CY7C144E-15AXCT	4-APR-2012	1-OCT-2012
27	CY7C144-15AXI	CY7C144E-15AXI	4-APR-2012	1-OCT-2012
28	CY7C144-15AXIT	CY7C144E-15AXIT	4-APR-2012	1-OCT-2012
29	CY7C144-15JXI	CY7C144E-15JXI	4-APR-2012	1-OCT-2012
30	CY7C144-25AXC	CY7C144E-25AXC	4-APR-2012	1-OCT-2012
31	CY7C144-55AXC	CY7C144E-55AXC	4-APR-2012	1-OCT-2012
32	CY7C144-55JXC	CY7C144E-55JXC	4-APR-2012	1-OCT-2012
33	CY7C144-55JXCT	CY7C144E-55JXCT	4-APR-2012	1-OCT-2012

Legend: [1] A “Drop-in Replacement” is defined as a product that is pin-to-pin and feature/function compatible with the affected product.

**Customer Part Numbers Affected:**

**Affected Parts: NA**

**Qualification Status:**

The RAM42 process technology was originally qualified through a series of tests identified in Qualification Test Plan #98244. This QTP report can be found attached to this PCN or by visiting [www.cypress.com](http://www.cypress.com), typing the QTP number in the search window and clicking on the magnifying glass icon. Additional reliability monitoring data collected subsequent to the original qualification is attached to this notification.

The 52-PQFP/PLCC and 64-TQFP and 68-PLCC packages have been qualified through the series of tests identified in Qualification Test Plan #s 113405 and 113604 respectively. These reports can be found attached to this PCN or by visiting [www.cypress.com](http://www.cypress.com), typing the QTP number(s) in the search window and clicking on the magnifying glass icon.

Please note that on the PLCC-52 package qualification (QTP#113405), delamination was observed during time zero CSAM (acoustic imaging) inspection. Though this does not result in electrical failure, and the units passed all electrical testing after 3 iterations of moisture-soaked 260°C reflow and 500 cycles of condition C Temperature Cycling, showing no further delamination, Cypress will monitor this phenomenon closely and work on means to eliminate such delamination as a part of the continuous quality improvement program. We do recommend that customers review their reflow process and confirm acceptable performance of this PLCC-52 package in their manufacturing lines.

**Sample Status:**

Qualification samples are not built ahead of time for all part numbers affected by this change. Please see attached file for details of sample availability.

**Approximate Implementation Date:**

This change is effective immediately from the date of this notification. Please note Last Time Buy (LTB) and Last Time Ship (LTS) dates provided in the table above. The LTB date denotes

the date on which order entry closes; orders may be placed until the close of business (5:00 p.m. US Pacific Time) on this date. LTS date denotes the date on which shipment of orders ceases.

**Anticipated Impact:**

Please see attached file, titled ‘Electrical Characteristics Changes’ for a detailed list of changes to electrical characteristics. Cypress also recommends that customers take this opportunity to review these changes against current application notes, system design considerations and customer environment conditions to assess impact (if any) to their application. Product Application Notes are available on the Cypress website at [www.cypress.com](http://www.cypress.com). In the navigation pane on the top right, point your mouse over “Documentation” and click on “Application Notes” in the roll down menu.

**Method of Identification:**

Cypress maintains traceability of product to wafer level, including wafer fabrication location, through the lot number marked on the package. Please note that the RAM42 products will use a new ordering code (part number will include an “E” prior to the speed designation) and therefore will be distinguishable by top mark. See example below:

FROM (RAM28)		TO (RAM42)	
Ordering Code (Part Number)	Marking	Ordering Code (Part Number)	Marking
CY7C144-15AXI	CY7C144-15AXI	CY7C144E-15AXI	CY7C144E-15AXI

**Response Required:**

No response is required. Customers are encouraged to take note of the LTB and LTS dates on the RAM28 version and plan to convert to the RAM42 version prior to the LTB date.

For additional information regarding this change, contact your local sales representative or contact the PCN Administrator at [pcn\\_adm@cypress.com](mailto:pcn_adm@cypress.com).

Sincerely,

Cypress PCN Administration