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## PRODUCT CHANGE NOTIFICATION

**PCN:** PCN162401

**Date:** June 16, 2016

**Subject:** 4Mb / 2Mb FAST and 4Mb Micropower (MoBL®) Automotive Asynchronous SRAM  
Products: Technology Transition to 65-nanometer Technology

**To:** JAMIE PEDERSON  
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**Change Type:** Major

### Description of Change:

Cypress is pleased to announce the transition of 4Mb / 2Mb FAST and 4Mb Micropower (MoBL®) automotive Asynchronous SRAMs from the 150-nanometer and 90-nanometer technology nodes to the 65-nanometer technology node at our partner fab United Micro Electronics Corporation (UMC) in Tainan, Taiwan. This change is consistent with Cypress's history of line-width reduction.

Cypress will be discontinuing the 4Mb / 2Mb FAST and 4Mb Micropower (MoBL®) automotive Asynchronous SRAM 150-nanometer and 90-nanometer products. The new 65-nanometer products are drop-in replacement parts and form, fit and function compatible with the older technology products. The list of affected part numbers, replacement part numbers, next best alternatives, Last Time Buy (LTB) and Last Time Ship (LTS) dates are provided in the attached "Affected Parts List" file. However, we urge adoption of the new part numbers as early as possible, in order to benefit from the much higher levels of reliability for automotive applications.

Datasheets and models for both the old and the new part numbers can be downloaded from the Cypress Website ([www.cypress.com](http://www.cypress.com)).

### Benefit of Change:

65-nanometer 4Mb / 2Mb FAST and 4Mb Micropower (MoBL®) automotive Asynchronous SRAM devices use 38- and 32-bit Hamming Codes for single-bit error detection and correction. A hardware ECC block performs all ECC-related functions in line, without user intervention and without affecting access-time performance. The single-bit error detection and correction capability is supplemented by an 8-bit interleaving scheme to prevent the occurrence of multi-bit errors. Together, these features provide very significant improvement in Soft Error Rate (SER) performance, resulting in FIT rates less than 0.1 FIT/Mbit, as well as protection against hard single-bit errors as well.

Migration to the 65-nanometer technology will result in very much improved product reliability.

**Affected Part Numbers:** 81

**Affected Parts:** Please refer to attached 'Affected Parts List' file.

**Qualification Status:**

The 65-nanometer products have been qualified through a series of tests identified in Qualification Test Plan (QTP) Report 150408. The QTP report can be found as an attachment to this notification or by visiting [www.cypress.com](http://www.cypress.com) and typing the QTP number in the keyword search window.

**Sample Status:**

Qualification samples are not built ahead of time for all part numbers affected by this change. Please refer to the attached 'Affected Parts List' file for the list of older technology parts and their corresponding 65-nanometer replacement parts. If you require qualification samples, please contact your sales representative as soon as possible, but within 30 days of the date of this PCN.

**Approximate Implementation Date:**

4Mb / 2Mb FAST 150-nanometer parts and 4Mb Micropower (MoBL®) 90-nanometer parts listed in the attached 'Affected Parts List' file are subject to End of Life (EOL) with Last Time Buy (LTB) and Last Time Ship (LTS) dates. Please refer to the attached file for the LTB/LTS dates.

**Anticipated Impact:**

The 65-nanometer products are completely compatible with existing products from a functional, parametric, quality and reliability performance perspective, however the customer will need to update their ordering process for the 65-nanometer ordering part numbers as found in the attached 'Affected Parts List' file.

Cypress also recommends that customers take this opportunity to review the product datasheet and any applicable application notes against their system design and environment conditions to assess any impact to their application.

**Method of Identification:**

The letter "G" affixed after the base part number designates the 65-nanometer technology with ECC functionality. For example, the 150-nanometer 4Mb FAST Asynchronous SRAM part CY7C1041CV33-10ZSXA will be replaced by the following 65-nanometer part: CY7C1041G30-10ZSXA

Cypress maintains traceability of product to wafer level, including wafer fabrication location, through the lot number marked on the package. Please refer to [www.cypress.com/products](http://www.cypress.com/products) for datasheets and a complete listing of the 65-nanometer Asynchronous SRAM Products.

**Response Required:**

No response is required.

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

Item	Marketing Part Number	Last Time Buy Date	Last Time Ship Date	Replacement Part Number (65nm)
1	CY62146ELL-45ZSXA	5-Jul-17	2-Jul-18	CY62146G-45ZSXA
2	CY62146ELL-45ZSXAT	5-Jul-17	2-Jul-18	CY62146G-45ZSXAT
3	CY62146EV30LL-45ZSXA	5-Jul-17	2-Jul-18	CY62146G30-45ZSXA
4	CY62146EV30LL-45ZSXAT	5-Jul-17	2-Jul-18	CY62146G30-45ZSXAT
5	CY621472E30LL-45ZSXA	5-Jul-17	2-Jul-18	CY621472G30-45ZSXA
6	CY621472E30LL-45ZSXAT	5-Jul-17	2-Jul-18	CY621472G30-45ZSXAT
7	CY62147EV30LL-45B2XA	5-Jul-17	2-Jul-18	Not Available
8	CY62147EV30LL-45B2XAT	5-Jul-17	2-Jul-18	Not Available
9	CY62147EV30LL-45BVXA	5-Jul-17	2-Jul-18	CY62147G30-45BVXA
10	CY62147EV30LL-45BVXAT	5-Jul-17	2-Jul-18	CY62147G30-45BVXAT
11	CY62147EV30LL-45ZSXA	5-Jul-17	2-Jul-18	CY62147G30-45ZSXA
12	CY62147EV30LL-45ZSXAT	5-Jul-17	2-Jul-18	CY62147G30-45ZSXAT
13	CY62147EV30LL-55ZSXE	5-Jul-17	2-Jul-18	CY62147G30-55ZSXE
14	CY62147EV30LL-55ZSXET	5-Jul-17	2-Jul-18	CY62147G30-55ZSXET
15	CY62148ELL-45ZSXA	5-Jul-17	2-Jul-18	Not Available
16	CY62148ELL-45ZSXAT	5-Jul-17	2-Jul-18	Not Available
17	CY62148ELL-55SXA	5-Jul-17	2-Jul-18	Not Available
18	CY62148ELL-55SXAT	5-Jul-17	2-Jul-18	Not Available
19	CY62148ESL-55ZAXA	5-Jul-17	2-Jul-18	Not Available
20	CY62148ESL-55ZAXAT	5-Jul-17	2-Jul-18	Not Available
21	CY62148EV30LL-45ZSXA	5-Jul-17	2-Jul-18	Not Available
22	CY62148EV30LL-45ZSXAT	5-Jul-17	2-Jul-18	Not Available
23	CY62148EV30LL-55ZSXE	5-Jul-17	2-Jul-18	Not Available
24	CY62148EV30LL-55ZSXET	5-Jul-17	2-Jul-18	Not Available
25	CY7C1011CV33-10BAJXE	5-Jul-17	2-Jul-18	CY7C1011G30-10BAJXE
26	CY7C1011CV33-10BAJXET	5-Jul-17	2-Jul-18	CY7C1011G30-10BAJXET
27	CY7C1011CV33-10ZSXA	5-Jul-17	2-Jul-18	CY7C1011G30-10ZSXA
28	CY7C1011CV33-10ZSXAT	5-Jul-17	2-Jul-18	CY7C1011G30-10ZSXAT
29	CY7C1011CV33-12ZSXE	5-Jul-17	2-Jul-18	CY7C1011G30-12ZSXE
30	CY7C1011CV33-12ZSXET	5-Jul-17	2-Jul-18	CY7C1011G30-12ZSXET
31	CY7C1041CV33-10BAJXE	5-Jul-17	2-Jul-18	CY7C1041G30-10BAJXE
32	CY7C1041CV33-10BAJXET	5-Jul-17	2-Jul-18	CY7C1041G30-10BAJXET
33	CY7C1041CV33-10BAXA	5-Jul-17	2-Jul-18	CY7C1041G30-10BAJXE
34	CY7C1041CV33-10BAXAT	5-Jul-17	2-Jul-18	CY7C1041G30-

				10BAJXET
35	CY7C1041CV33-10BAXE	5-Jul-17	2-Jul-18	CY7C1041G30-10BAJXE
36	CY7C1041CV33-10BAXET	5-Jul-17	2-Jul-18	CY7C1041G30-10BAJXET
37	CY7C1041CV33-10ZSXA	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXA
38	CY7C1041CV33-10ZSXAT	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXAT
39	CY7C1041CV33-12BAXE	5-Jul-17	2-Jul-18	CY7C1041G30-10BAJXE
40	CY7C1041CV33-12BAXET	5-Jul-17	2-Jul-18	CY7C1041G30-10BAJXET
41	CY7C1041CV33-12ZSXE	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXE
42	CY7C1041CV33-12ZSXET	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXET
43	CY7C1041CV33-20VXE	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXE
44	CY7C1041CV33-20VXET	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXET
45	CY7C1041CV33-20ZSXA	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXA
46	CY7C1041CV33-20ZSXAT	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXAT
47	CY7C1041CV33-20ZSXE	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXE
48	CY7C1041CV33-20ZSXET	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXET
49	CY7C1049CV33-10VXA	5-Jul-17	2-Jul-18	Not Available
50	CY7C1049CV33-10VXAT	5-Jul-17	2-Jul-18	Not Available
51	CY7C1049CV33-12ZSXA	5-Jul-17	2-Jul-18	Not Available
52	CY7C1049CV33-12ZSXAT	5-Jul-17	2-Jul-18	Not Available
53	CY7C1049CV33-15VXE	5-Jul-17	2-Jul-18	Not Available
54	CY7C1049CV33-15VXET	5-Jul-17	2-Jul-18	Not Available
55	CY7C1049CV33-15ZSXE	5-Jul-17	2-Jul-18	Not Available
56	CY7C1049CV33-15ZSXET	5-Jul-17	2-Jul-18	Not Available
57	CG7913AT	5-Jul-17	2-Jul-18	CY7C1011G30-12ZSXE
58	CG8223AA	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXA
59	CG8223AAT	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXAT
60	CG8231AA	5-Jul-17	2-Jul-18	CY62146G30-45ZSXA
61	CG8231AAT	5-Jul-17	2-Jul-18	CY62146G30-45ZSXAT
62	CG8232AA	5-Jul-17	2-Jul-18	CY62147G30-45ZSXA
63	CG8232AAT	5-Jul-17	2-Jul-18	CY62147G30-45ZSXAT
64	CG8233AA	5-Jul-17	2-Jul-18	Not Available
65	CG8233AAT	5-Jul-17	2-Jul-18	Not Available
66	CG8289AA	5-Jul-17	2-Jul-18	CY62147G30-45BVXA
67	CG8289AAT	5-Jul-17	2-Jul-18	CY62147G30-45BVXAT
68	CG8294AA	5-Jul-17	2-Jul-18	CY62147G30-45ZSXA
69	CG8294AAT	5-Jul-17	2-Jul-18	CY62147G30-45ZSXAT
70	CG8295AA	5-Jul-17	2-Jul-18	CY62146G30-45ZSXA
71	CG8295AAT	5-Jul-17	2-Jul-18	CY62146G30-45ZSXAT
72	CG8296AA	5-Jul-17	2-Jul-18	CY62147G30-55ZSXE
73	CG8296AAT	5-Jul-17	2-Jul-18	CY62147G30-55ZSXET
74	CG8305AA	5-Jul-17	2-Jul-18	Not Available
75	CG8305AAT	5-Jul-17	2-Jul-18	Not Available

76	CG8309AA	5-Jul-17	2-Jul-18	CY62146G-45ZSXA
77	CG8309AAT	5-Jul-17	2-Jul-18	CY62146G-45ZSXAT
78	CG8322AA	5-Jul-17	2-Jul-18	Not Available
79	CG8322AAT	5-Jul-17	2-Jul-18	Not Available
80	CG8359AA	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXA
81	CG8359AAT	5-Jul-17	2-Jul-18	CY7C1041G30-10ZSXAT