

Product Change Notice

(PCN tracking number : CST-R2-AJ094 Rev.1.0)

August 5, 2016

To: Valued RENESAS Customer

Renesas Product Summary: Standard SRAM (TSOP) products.

Change Description:

1. Site change of Back-end (assembly and final-test) process, including a change of assembly materials
2. Product integration by EOL of “-5SR, -7SI, -7SR” products and by part name unification to “-5SI” product

Reason for Change:

1. Due to obsolescence of manufacturing equipment, and material change for improvement of board-level package reliability
2. For long-time, stable supply by improvement of mass production efficiency

Identification: Identifiable by the country of origin, laser-marked on the package’s surface

Anticipated Impact:

1. Packing specification is changed accompanied with the site change of Back-end process
2. Moisture Sensitivity Level is changed from MSL2 to MSL3 accompanied with a change of lead-frame material (from 42-Alloy to Cu).
3. Electrical characteristics of “-5SI” product is completely upper-compatible with “-5SR, -7SI, -7SR” products

Date of Change: From December, 2016 onward

Schedule:

1. Regarding the site change of Back-end process (excluding EOL products),
 Commercial samples: October, 2016 (November, 2016 for some part names)
 Mass production (post-change products): December, 2016
 End of production (pre-change products): June, 2017
2. Regarding the EOL of “-5SR, -7SI, -7SR” products,
 Last-Time-Buy quantity forecast to RENESAS: June, 2017
 Last Time to Order: December, 2017
 Last Time to Ship: December, 2018

Supplemental Information: Please see the page 3 to 5 and the attachments (Appendix for CST-R2-AJ094).

Contact: General Purpose Analog and Power Solution Department 3,
 General Purpose Analog and Power Business Division,
 2nd Solution Business Unit

Internal Reference:

Attachments: Appendix for CST-R2-AJ094

In case of any questions, please contact your Renesas sales representative.

Customer Response (to be returned by email or mail)

- Acknowledge
- Acceptable
- Unacceptable (pls. comment)
- Not applicable

Company: _____
Name & Position: _____
Email: _____
Phone: _____

Note: Acknowledgement must be received by Renesas within 30 days of delivery of the PCN or Renesas will consider the change as approved. If timely acknowledgement is provided by Customer, then Customer shall have 90 days from the date of receipt of this PCN or commercial samples in which to make any objections to the PCN. If Customer fails to make objections to this PCN within 90 days of the receipt of the PCN or commercial samples then Renesas will consider the PCN changes as approved. If customer cannot accept the PCN then customer must provide Renesas with a last time buy demand and purchase order.

Comments

Signature of customer

1. Background of Change

Renesas announces 2 types of Product Changes on Standard SRAM (TSOP) products.

One is a site change of back-end (assembly and final-test site) process due to obsolescence of manufacturing equipment. It also includes a change of assembly materials for improvement of board-level package reliability.

The other is a product integration by EOL of “-5SR, -7SI, -7SR” products and by part name unification to “-5SI” product. It aims for long-time, stable supply by improvement of mass production efficiency.

We greatly appreciate your kind understanding and early approval for this notification.

2. Details of Change

- (1) The site of Back-end process is transferred from “Renesas Semiconductor Beijing (Assembly and Final-test site)” to “Amkor Technology Malaysia (Assembly site)” and to “Powertech Technology Inc. (Final-test site)”.
- (2) Regarding assembly material change,
 - (a) Lead frame material is changed from 42-Alloy to Cu, and moisture sensitivity level is changed from MSL2 to MSL3. (No change of lead frame material and MSL in existing Cu-products.)
 - (b) Lead plating material is changed from Sn-Cu to Sn. (No change of lead plating in existing Sn-products.)
- (3) Regarding the EOL of “-5SR, -7SI, -7SR” products,
 - (a) “Access and Temperature grades” of “-5SR, -7SI, -7SR” in 256Kb to 4Mb Low Power SRAM products are put to EOL, and part name of the products are unified to “-5SI”.
 - (b) Electrical characteristics (DC/AC) of unified “-5SI” product are completely upper-compatible with “-5SR, -7SI, -7SR” products.
 - (c) The unified “-5SI” products are processed under the post-change condition as described in above (1) and (2).
- (4) Regarding these changes,
 - (a) There are no changes in the site of Front-end (Wafer) process or revision of photomasks.
 - (b) Package outline and pin configuration is equivalent to those of pre-change products.
 - (c) Reliability and quality level are equivalent to those of pre-change products.
 - (d) Electrical characteristics (DC/AC) are equivalent to those of pre-change products, excluding “-5SR, -7SI, -7SR” of pre-change products.
 - (e) Packing specification is changed (both in tray and reel shipment.) For more detailed information, see the appendix for CST-R2-AJ094.

Comparison

Item		Pre Change	Post Change	
Assembly	Company	Renesas Semiconductor Beijing	Amkor Technology Malaysia	
	Country	China	Malaysia	
	Material	Lead frame	Cu or 42Alloy (*)	Cu
		Lead plating	Sn or Sn-Cu (*)	Sn
	Package marking specification	Country of origin "CHINA"	Country of origin "MALAYSIA"	
Final test	Company	Renesas Semiconductor Beijing	Powertech Technology Inc.	
	Country	China	Taiwan	
Moisture Sensitivity Level		MSL 3 or 2 (*)	MSL 3	
Packing specification	Tray packing	Please see the appendix.	Please see the appendix.	
	Tape & Reel packing	Please see the appendix.	Please see the appendix.	

(*) Pre-change products have two types of assembly material. Please see the attachments (Appendix for CST-R2-AJ094).

3. Release Support and Milestones

Sample submission	Commercial samples : October, 2016 (November, 2016 for R1RP0416DSB, R1RW0416DSB and R1LV1616HSA)
Renesas report	Reliability report : October, 2016 (November, 2016 for R1RP0416DSB, R1RW0416DSB and R1LV1616HSA)

4. Identification

Identifiable by the country of origin, laser-marked on the package's surface

5. Schedule

- (1) Regarding the site change of Back-end process (excluding EOL products),
 - Commercial samples: October, 2016 (November, 2016 for some part names)
 - Mass production (post-change products): December, 2016
 - End of production (pre-change products): June, 2017
- (2) Regarding the EOL of "-5SR, -7SI, -7SR" products,
 - Last-Time-Buy quantity forecast to RENESAS: June, 2017
 - Last Time to Order: December, 2017
 - Last Time to Ship: December, 2018

6. Supplemental Information

Please see the attachments (Appendix for CST-R2-AJ094).

7. Product list

Package Type	Product Type (Memory Cap., Supply Voltage)	Orderable part name	
		Pre Change	Post Change
28pin-TSOP(I)	256Kb 5V	R1LP5256ESA-5SI, -5SR, -7SI, -7SR#B0	R1LP5256ESA-5SI#B1
		R1LP5256ESA-5SI, -5SR, -7SI, -7SR#S0	R1LP5256ESA-5SI#S1
	256Kb 3V	R1LV5256ESA-5SI, -5SR, -7SI, -7SR#B0	R1LV5256ESA-5SI#B1
		R1LV5256ESA-5SI, -5SR, -7SI, -7SR#S0	R1LV5256ESA-5SI#S1
32pin-TSOP(I)	1Mb 5V	R1LP0108ESF-5SI, -5SR, -7SI, -7SR#B0	R1LP0108ESF-5SI#B1
		R1LP0108ESF-5SI, -5SR, -7SI, -7SR#S0	R1LP0108ESF-5SI#S1
	1Mb 3V	R1LV0108ESF-5SI, -5SR, -7SI, -7SR#B0	R1LV0108ESF-5SI#B1
		R1LV0108ESF-5SI, -5SR, -7SI, -7SR#S0	R1LV0108ESF-5SI#S1
32pin-sTSOP	1Mb 5V	R1LP0108ESA-5SI, -5SR, -7SI, -7SR#B0	R1LP0108ESA-5SI#B1
		R1LP0108ESA-5SI, -5SR, -7SI, -7SR#S0	R1LP0108ESA-5SI#S1
	1Mb 3V	R1LV0108ESA-5SI, -5SR, -7SI, -7SR#B0	R1LV0108ESA-5SI#B1
		R1LV0108ESA-5SI, -5SR, -7SI, -7SR#S0	R1LV0108ESA-5SI#S1
	2Mb 3V	R1LV0208BSA-5SI, -7SI#B0	R1LV0208BSA-5SI#B1
		R1LV0208BSA-5SI, -7SI#S0	R1LV0208BSA-5SI#S1
32pin-TSOP(II)	4Mb 5V	R1LP0408DSB-5SI, -5SR, -7SI, -7SR#B0	R1LP0408DSB-5SI#B1
		R1LP0408DSB-5SI, -5SR, -7SI, -7SR#S0	R1LP0408DSB-5SI#S1
44pin-TSOP(II)	2Mb 3V	R1LV0216BSB-5SI, -7SI#B0	R1LV0216BSB-5SI#B1
		R1LV0216BSB-5SI, -7SI#S0	R1LV0216BSB-5SI#S1
	4Mb Fast 5V	R1RP0416DSB-0PI, -0PR, -2LR, -2PI, -2PR, -2SR#D0	R1RP0416DSB-0PI, -0PR, -2LR, -2PI, -2PR, -2SR#D1
		R1RP0416DSB-2LR, -2PR#S0	R1RP0416DSB-2LR, -2PR#S1
	4Mb Fast 3V	R1RW0416DSB-0PI, -0PR, -2LR, -2PI, -2PR, -2SR, -2UR#D0	R1RW0416DSB-0PI, -0PR, -2LR, -2PI, -2PR, -2SR, -2UR#D1
		R1RW0416DSB-0PI, -0PR, -2PI, -2PR#S0	R1RW0416DSB-0PI, -0PR, -2PI, -2PR#S1
48pin-TSOP(I)	16Mb 3V	R1LV1616HSA-4SI, -5SI#B0	R1LV1616HSA-4SI, -5SI#B1
		R1LV1616HSA-4SI, -5SI#S0	R1LV1616HSA-4SI, -5SI#S1
	32Mb 3V	R1LV3216RSA-5SI#B0	R1LV3216RSA-5SI#B1
		R1LV3216RSA-5SI#S0	R1LV3216RSA-5SI#S1