Product Change Notification (Notification - P1602009-DIGI) (CST-R2-T672)

March 15, 2016

To: Our Valued Digi-Key, Inc. Customer

Overview: The purpose of this notification is to communicate a product change for select Renesas Electronics America, Inc. (REA) devices. These devices have replacement part numbers.

This notification announces the change assembly and final test sites for certain 4Mb Low Power SRAM TSOP products. The table below describes the site changes.

| | Current Site | New Site |
|-----------------|-------------------------------|---------------------------|
| Assembly Site | Renesas Semiconductor Beijing | Amkor Technology Malaysia |
| Final Test Site | Renesas Semiconductor Beijing | Powertech Technology Inc. |

There are **no changes** to the wafer fabrication site, electrical characteristics (DC/AC), package materials, package dimensions, pin configurations, or product reliability & quality.

There are some changes to the packing specification. See the Appendix for details.

Affected Products: A review of our shipment records to your company indicate the attached list of products is affected by this notification.

| Booking Part Number | Replacement Part Number | Replacement Part Number | |
|------------------------------------|------------------------------------|-------------------------|--|
| RMLV0408EGSB-4S2#AA <mark>0</mark> | RMLV0408EGSB-4S2#AA <mark>1</mark> | | |
| RMLV0408EGSB-4S2#HA <mark>0</mark> | RMLV0408EGSB-4S2#HA <mark>1</mark> | | |
| RMLV0414EGSB-4S2#AA <mark>0</mark> | RMLV0414EGSB-4S2#AA <mark>1</mark> | | |
| RMLV0414EGSB-4S2#HA <mark>0</mark> | RMLV0414EGSB-4S2#HA <mark>1</mark> | | |
| RMLV0416EGSB-4S2#AA <mark>0</mark> | RMLV0416EGSB-4S2#AA <mark>1</mark> | | |
| RMLV0416EGSB-4S2#HA <mark>0</mark> | RMLV0416EGSB-4S2#HA <mark>1</mark> | | |

Part numbers given in this list are for active part numbers in REA database at the time of this notification.

| Key Dates: | Mass production shipments of the replacement part | Jun. 15 th , 2016 |
|------------|---|------------------------------|
| | number begin from REA. | Juli. 13, 2010 |

Response: No response is required. REA will consider this notification approved 30 days after its issue. If you anticipate volumes beyond your regular rate prior to the transition date, please contact your REA sales representative with a forecast of your requirements.

You are encouraged to sample the replacement device and begin qualification as soon as possible. Please contact you REA sales representative to obtain samples.

Please contact your REA sales representative for any questions or comments.

Thank you for your attention.

Sincerely,

Renesas Electronics America, Inc.



Appendix A: RMLV0408EGSB-4S2 Comparison Table (32pin TSOP (II) package)

| Item | | Current | After | Remarks |
|-----------------------|--------------------------|---|--|---|
| Orderable part number | | RMLV0408EGSB-4S2#AA0 (Tray packing) | RMLV0408EGSB-4S2#AA1 (Tran packing) | |
| Jruerable | part number | RMLV0408EGSB-4S2#HA0 (Tape & Reel packing) | RMLV0408EGSB-4S2#HA1 (Tape & Reel packing) | |
| Assembly | Line | Renesas Semiconductor Beijing (China) | Amkor Technology Malaysia (Malaysia) | |
| Country o | f origin display | CHINA | MALAYSIA | |
| IEITA Pac | kage Code | P-TSOP(2)32-10.16x20.95-1.27 | P-TSOP(2)32-10.16x20.95-1.27 | compatible mounting |
| Package N | farking Specification | Country of origin (Back-End Line: Assembly) Country of origin (Back-End Line: Assembly) CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA COUNTRY OF ORIGINAL CHINA CHINA CHINA COUNTRY OF ORIGINAL CHINA CHINA COUNTRY OF ORIGINAL CHINA CHINA CHINA COUNTRY OF ORIGINAL CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA CHINA COUNTRY OF ORIGIN CHINA | Country of origin (Back-End Line: Assembly) Country of origin (Back-End Line: Assembly) MALAYSIA 4S2 XXXXXXX Date Code | |
| | Lead frame material | Cu | Cu | material is equivalent |
| | Lead frame pattern | Current specification | New specification(change in pattern) | |
| Material | Lead plating | Pure Tin | Pure Tin | material is equivalent |
| | Die bonding | Epoxy paste | Epoxy paste | material is equivalent |
| | Wire bonding | Au | Au | material is equivalent |
| | Mold | Epoxy resin | Epoxy resin | material is equivalent |
| inal test | Line | Renesas Semiconductor Beijing (China) | Powertech Technology Inc. (Taiwan) | |
| | Packing Specification | Current specification | New specification | |
| ray | Tray | JEDEC Tray (TSOP II package size: 10.16mm x 20.95mm) | JEDEC Tray (TSOP II package size: 10.16mm x 20.95mm) | material is equivalent |
| acking | Storage number | 117pcs/tray | 117pcs/tray | |
| | Number of trays(Max.) | 8 trays + 1 tray(cover) | 10 trays + 1 tray(cover) | |
| | Inner box size (LxWxH) | 330mm x 152mm x 75mm | 351mm x 175mm x 104mm | |
| ape & | Packing Specification | Current specification | New specification | |
| Reel | Embossed tape | Current specification | New specification | No change in dimension |
| backing | Storage number | 1,000pcs/reel | 1,000pcs/reel | |
| | Inner box size (LxWxH) | 288mm x 273mm x 48mm | 340mm x 360mm x 60mm | |
| Shipping I | abel | Current specification | No change in specification | Changes in orderable part name and country of origin |

Appendix B: RMLV0416EGSB-4S2 Comparison Table (44pin TSOP (II) package)

| Item | | Current After | | Remarks |
|-----------------------|--------------------------|---|--|---|
| Orderable part number | | RMLV0416EGSB-4S2#AA0 (Tray packing) | RMLV0416EGSB-4S2#AA1 (Tray packing) | |
| | | RMLV0416EGSB-4S2#HA0 (Tape & Reel packing) | RMLV0416EGSB-4S2#HA1 (Tape & Reel packing) | |
| Assembly | Line | Renesas Semiconductor Beijing (China) | Amkor Technology Malaysia (Malaysia) | |
| Country o | f origin display | CHINA | MALAYSIA | |
| EITA Pac | kage Code | P-TSOP(2)44-10.16x18.41-0.80 | P-TSOP(2)44-10.16x18.41-0.80 | compatible mounting |
| Package N | 1arking Specification | Country of origin (Back-End Line: Assembly) Country of origin (Back-End Line: Assembly) CHINA | Country of origin (Back-End Line: Assembly) 1pin mark | |
| | Lead frame material | Cu | Cu | material is equivalent |
| Material | Lead frame pattern | Current specification | New specification(change in pattern) | |
| | Lead plating | Pure Tin | Pure Tin | material is equivalent |
| | Die bonding | Epoxy paste | Epoxy paste | material is equivalent |
| | Wire bonding | Au | Au | material is equivalent |
| | Mold | Epoxy resin | Epoxy resin | material is equivalent |
| inal test | Line | Renesas Semiconductor Beijing (China) Powertech Technology Inc. (Taiwan) | | |
| | Packing Specification | Current specification | New specification | |
| ray | Tray | JEDEC Tray (TSOP II package size: 10.16mm x 18.41mm) | JEDEC Tray (TSOP II package size: 10.16mm x 18.41mm) | material is equivalent |
| acking | Storage number | 135pcs/tray | 135pcs/tray | |
| | Number of trays(Max.) | 8 trays + 1 tray(cover) | 10 trays + 1 tray(cover) | |
| | Inner box size (LxWxH) | 330mm x 152mm x 75mm | 351mm x 175mm x 104mm | |
| ape & | Packing Specification | Current specification | New specification | |
| packing | Embossed tape | Current specification | New specification | No change in dimension |
| | Storage number | 1,000pcs/reel | 1,000pcs/reel | |
| | Inner box size (LxWxH) | 288mm x 273mm x 48mm | 340mm x 360mm x 60mm | |
| Shipping I | abel | Current specification | No change in specification | Changes in orderable part name and country of origin |



Appendix C: RMLV0414EGSB-4S2, Chip-select terminal: 1-pin type Comparison Table (44pin TSOP (II) package)

| | | | | - () |
|-----------------------|--------------------------|--|--|---|
| Item | | Current | After | Remarks |
| Orderable part number | | RMLV0414EGSB-4S2#AA0 (Tray packing) | RMLV0414EGSB-4S2#AA1 (Tray packing) | |
| Jiderable | part number | RMLV0414EGSB-4S2#HA0 (Tape & Reel packing) | RMLV0414EGSB-4S2#HA1 (Tape & Reel packing) | |
| Assembly Line | | Renesas Semiconductor Beijing (China) | Amkor Technology Malaysia (Malaysia) | |
| Country o | f origin display | CHINA | MALAYSIA | |
| EITA Pac | kage Code | P-TSOP(2)44-10.16x18.41-0.80 | P-TSOP(2)44-10.16x18.41-0.80 | compatible mounting |
| Package N | Marking Specification | Country of origin (Back-End Line: Assembly) CHINA 4S2 CHINA 4S2 | Country of origin (Back-End Line: Assembly) 1pin mark | |
| | Lead frame material | Cu | Cu | material is equivalent |
| Material | Lead frame pattern | Current specification | New specification(change in pattern) | |
| | Lead plating | Pure Tin | Pure Tin | material is equivalent |
| | Die bonding | Epoxy paste | Epoxy paste | material is equivalent |
| | Wire bonding | Au | Au | material is equivalent |
| | Mold | Epoxy resin | Epoxy resin | material is equivalent |
| inal test | Line | Renesas Semiconductor Beijing (China) | Powertech Technology Inc. (Taiwan) | |
| | Packing Specification | Current specification | New specification | |
| ray | Tray | JEDEC Tray (TSOP II package size: 10.16mm x 18.41mm) | JEDEC Tray (TSOP II package size: 10.16mm x 18.41mm) | material is equivalent |
| acking | Storage number | 135pcs/tray | 135pcs/tray | |
| | Number of trays(Max.) | 8 trays + 1 tray(cover) | 10 trays + 1 tray(cover) | |
| | Inner box size (LxWxH) | 330mm x 152mm x 75mm | 351mm x 175mm x 104mm | |
| ape & | Packing Specification | Current specification | New specification | |
| eel | Embossed tape | Current specification | New specification | No change in dimensio |
| acking | Storage number | 1,000pcs/reel | 1,000pcs/reel | |
| _ | Inner box size (LxWxH) | 288mm x 273mm x 48mm | 340mm x 360mm x 60mm | |
| Shipping I | abel | Current specification | No change in specification | Changes in orderable part name and country of origin |