

## Product Change Notice (PCN)

**Subject:** Datasheet specification change for listed Renesas HIP4020\* Products

**Publication Date:** 2/11/2019

**Effective Date:** 5/12/2019

**Revision Description:**

Initial Release

**Description of Change:**

This notice is to inform you that Renesas Electronics America Inc has updated datasheet. The update includes a change to the following electrical parameter: -

| # | Change details                              | Maximum Limit |     | Unit     |
|---|---|---------------|-----|----------|
|   |   | From          | To  |          |
| 1 | P-channel $r_{DS(ON)}$ , Low Supply Voltage | 2.1           | 2.5 | $\Omega$ |

**Affected Product List**

|                  |
|------------------|
| HIP4020IBZ       |
| HIP4020IBZT      |
| HIP4020IBZTS2705 |

**Reason for Change:**

The change to the datasheet aligns the documentation with the product characteristics and is necessary to maintain product manufacturability in support of customer delivery requirements. Details regarding the change are contained on the following page. The product datasheet is available on the Renesas website at : -

<https://www.renesas.com/sg/en/www/doc/datasheet/hip4020.pdf>

**Impact on fit, form, function, quality & reliability:**

The change will have no other impact on the form, fit, function, quality, reliability and environmental compliance of the devices.

**Product Identification:**

Product affected by this change is identifiable via Renesas’s internal traceability system.

**Qualification status:** Not Applicable

**Sample availability:** 2/18/2019

**Device material declaration:** Available upon request

*Questions or requests pertaining to this change notice, including additional data or samples, must be sent to Renesas within 30 days of the publication date.*

| For additional information regarding this notice, please contact your regional change coordinator (below) |  |   |  |
|---|--|---|--|
| Americas: <a href="mailto:PCN-US@RENEASAS.COM">PCN-US@RENEASAS.COM</a>                                    | Europe: <a href="mailto:PCN-EU@RENEASAS.COM">PCN-EU@RENEASAS.COM</a> | Japan: <a href="mailto:PCN-JP@RENEASAS.COM">PCN-JP@RENEASAS.COM</a> | Asia Pac: <a href="mailto:PCN-APAC@RENEASAS.COM">PCN-APAC@RENEASAS.COM</a> |

Appendix A – Affected datasheet (see attached)

HIP4020\* datasheet

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**Electrical Specifications**  $T_A = 25^\circ\text{C}$ ,  $V_{DD} = +5\text{V}$ ,  $V_{SSA} = V_{SSB} = V_{SS} = 0\text{V}$ , Unless Otherwise Specified

| PARAMETER                                   | SYMBOL       | TEST CONDITIONS                                     | MIN      | TYP | MAX      | UNITS    |
|---|--------------|---|----------|-----|----------|----------|
| Input Leakage Current                       | $I_{LEAK}$   | $V_{DD} = +15\text{V}$                              | -        | -   | 25       | nA       |
| Low Level Input Voltage                     | $V_{IL}$     |   | $V_{SS}$ | -   | 0.8      | V        |
| High Level Input Voltage                    | $V_{IH}$     |   | 2        |     | $V_{DD}$ | V        |
| ILF Output Low, Sink Current                | $I_{OH}$     | $V_{OUT} = 0.4\text{V}$ , $V_{DD} = +12\text{V}$    | 15       | -   | -        | mA       |
| ILF Output High, Source Current             | $I_{OL}$     | $V_{OUT} = 11.6\text{V}$ , $V_{DD} = +12\text{V}$   | -        | -   | -15      | mA       |
| Input Capacitance                           | $C_{IN}$     |   | -        | 2   | -        | pF       |
| P-Channel $r_{DS(ON)}$ , Low Supply Voltage | $r_{DS(ON)}$ | $V_{DD} = +3\text{V}$ , $I_{SOURCE} = 250\text{mA}$ | -        | 1.6 | 2.1      | $\Omega$ |

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**Electrical Specifications**  $T_A = 25^\circ\text{C}$ ,  $V_{DD} = +5\text{V}$ ,  $V_{SSA} = V_{SSB} = V_{SS} = 0\text{V}$ , unless otherwise specified

| PARAMETER                                   | SYMBOL       | TEST CONDITIONS                                     | MIN      | TYP | MAX      | UNIT     |
|---|--------------|---|----------|-----|----------|----------|
| Input Leakage Current                       | $I_{LEAK}$   | $V_{DD} = +15\text{V}$                              | -        | -   | 25       | nA       |
| Low Level Input Voltage                     | $V_{IL}$     |   | $V_{SS}$ | -   | 0.8      | V        |
| High Level Input Voltage                    | $V_{IH}$     |   | 2        |     | $V_{DD}$ | V        |
| ILF Output Low, Sink Current                | $I_{OH}$     | $V_{OUT} = 0.4\text{V}$ , $V_{DD} = +12\text{V}$    | 15       | -   | -        | mA       |
| ILF Output High, Source Current             | $I_{OL}$     | $V_{OUT} = 11.6\text{V}$ , $V_{DD} = +12\text{V}$   | -        | -   | -15      | mA       |
| Input Capacitance                           | $C_{IN}$     |   | -        | 2   | -        | pF       |
| P-Channel $r_{DS(ON)}$ , Low Supply Voltage | $r_{DS(ON)}$ | $V_{DD} = +3\text{V}$ , $I_{SOURCE} = 250\text{mA}$ | -        | 1.6 | 2.5      | $\Omega$ |