

## Product Change Notice (PCN)

**Subject:** Bonding-wire change to Cu-wire and site addition of Back-Grinding, Assembly and Final Test for the RH850/F1 and D1 series.

**Publication Date:** 12/28/2021

**Effective Date:** 7/1/2022 (The final delivery date for the products of current version: 31 Dec. 2023)

**Revision Description:** Initial release

### Description of Change:

Renesas plans to change bonding-wire to Cu-wire and to add the site of Back-Grinding, Assembly and Final Test for the RH850/F1 and D1 series to realize stable supply. From this scheme, Renesas will deliver products produced with changed materials and in the changed production sites for your orders and we would highly appreciate it if you would check the following change items and approve our plan.

**Wafer process sites:** TSMC(Taiwan Semiconductor Manufacturing Company, Ltd.) and Naka

**Assembly sites:** ASE-KH(Advanced Semiconductor Engineering Inc. Kaohsiung)

ATJ-Kumamoto(Amkor Technology Japan, Inc. Kumamoto)

**Final test sites:** TPW(TeraPower Technology Inc.) and TPJ(Tera Probe, Inc. Kyushu Operation Center)

**Target products:** RH850/F1 and D1 series

Items		Changes	Change contents
Product names		w/	e.g. R7F7010073AFD-C#BA4(ATJ-Kumamoto, Cu-wire)
Production sites	Wafer process	w/o	
	Wafer Test	w/o	
	Back Grinding	w/	ATJ-Kumamoto is added.
	Assembly	w/	D1S1-V2: ATJ-Kumamoto is added. F1KM: ASE-KH and ATJ-Kumamoto are added.
	Final Test	w/	Tera Probe is added.
Wafer process	PAD-opening	w/	PAD-opening is changed only for D1L1/D1L2(50→55μm).
Die-bonding materials		w/o	
Bonding wire	Wire materials	w/	Au-wire is changed to Cu-wire.
	Wire diameters	w/	ASE-KH: Φ20um ATJ-Kumamoto: Φ18um
Mark specifications		w/	"C" is added in mark characters for Cu-wire products.
Label specifications		w/	Product names printed on each label are changed for Cu-wire products.

Please refer to "Change List" in "Appendix" for detail.

### Affected Product List:

Please refer to "Product List" in "Appendix".

### Reason for Change:

For stable supply of products.

### Impact on Fit, Form, Function, Quality & Reliability:

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

### Product Identification:

Please refer to "Cu-wire product identification" in "Appendix".

**Qualification Status:** Please contact Renesas sales representatives.

**Sample Availability Date:** 3/31/2022

**Device Material Declaration:** Please contact Renesas sales representatives.

## Note:

1. Acknowledgement must be received by Renesas within 30 days or Renesas will consider the changes as approved.
2. If timely acknowledgement is provided by customers, then customers shall have 90 days from the date of receipt of this PCN to make any objections to this PCN. If customers fail to make objections to this PCN within 90 days of the receipt of the PCN then Renesas will consider the PCN changes as approved.
3. If customer cannot accept the PCN then customers must provide Renesas with the last order quantity and purchase order.

**For additional information regarding this notice, please contact your Renesas sales representative.**

**Appendix**  
**Product List**  
**F1L series**

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7010063AFE#BA4	R7F7010063AFD#BA4	R7F7010063AFE-C#BA4	R7F7010063AFD-C#BA4
R7F7010063AFE#KA4	R7F7010063AFD#KA4	R7F7010063AFE-C#KA4	R7F7010063AFD-C#KA4
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Current		After Change	
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Current		After Change	
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R7F701A363AFE#BA4	R7F701A363AFD#BA4	R7F701A363AFE-C#BA4	R7F701A363AFD-C#BA4
R7F701A363AFE#KA4	R7F701A363AFD#KA4	R7F701A363AFE-C#KA4	R7F701A363AFD-C#KA4
R7F701A364AFE#BA4	R7F701A364AFD#BA4	R7F701A364AFE-C#BA4	R7F701A364AFD-C#BA4
R7F701A364AFE#KA4	R7F701A364AFD#KA4	R7F701A364AFE-C#KA4	R7F701A364AFD-C#KA4
R7F7010033AFE#BA2	R7F7010033AFD#BA2	R7F7010033AFE-C#BA2	R7F7010033AFD-C#BA2
R7F7010033AFE#KA2	R7F7010033AFD#KA2	R7F7010033AFE-C#KA2	R7F7010033AFD-C#KA2
R7F7010034AFE#BA2	R7F7010034AFD#BA2	R7F7010034AFE-C#BA2	R7F7010034AFD-C#BA2

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7010034AFE#KA2	R7F7010034AFD#KA2	R7F7010034AFE-C#KA2	R7F7010034AFD-C#KA2
R7F7010243AFE#BA2	R7F7010243AFD#BA2	R7F7010243AFE-C#BA2	R7F7010243AFD-C#BA2
R7F7010243AFE#KA2	R7F7010243AFD#KA2	R7F7010243AFE-C#KA2	R7F7010243AFD-C#KA2
R7F7010244AFE#BA2	R7F7010244AFD#BA2	R7F7010244AFE-C#BA2	R7F7010244AFD-C#BA2
R7F7010244AFE#KA2	R7F7010244AFD#KA2	R7F7010244AFE-C#KA2	R7F7010244AFD-C#KA2
R7F7010253AFE#BA2	R7F7010253AFD#BA2	R7F7010253AFE-C#BA2	R7F7010253AFD-C#BA2
R7F7010253AFE#KA2	R7F7010253AFD#KA2	R7F7010253AFE-C#KA2	R7F7010253AFD-C#KA2
R7F7010254AFE#BA2	R7F7010254AFD#BA2	R7F7010254AFE-C#BA2	R7F7010254AFD-C#BA2
R7F7010254AFE#KA2	R7F7010254AFD#KA2	R7F7010254AFE-C#KA2	R7F7010254AFD-C#KA2
R7F7010443AFE#BA2	R7F7010443AFD#BA2	R7F7010443AFE-C#BA2	R7F7010443AFD-C#BA2
R7F7010443AFE#KA2	R7F7010443AFD#KA2	R7F7010443AFE-C#KA2	R7F7010443AFD-C#KA2
R7F7010444AFE#BA2	R7F7010444AFD#BA2	R7F7010444AFE-C#BA2	R7F7010444AFD-C#BA2
R7F7010444AFE#KA2	R7F7010444AFD#KA2	R7F7010444AFE-C#KA2	R7F7010444AFD-C#KA2
R7F7010453AFE#BA2	R7F7010453AFD#BA2	R7F7010453AFE-C#BA2	R7F7010453AFD-C#BA2
R7F7010453AFE#KA2	R7F7010453AFD#KA2	R7F7010453AFE-C#KA2	R7F7010453AFD-C#KA2
R7F7010454AFE#BA2	R7F7010454AFD#BA2	R7F7010454AFE-C#BA2	R7F7010454AFD-C#BA2
R7F7010454AFE#KA2	R7F7010454AFD#KA2	R7F7010454AFE-C#KA2	R7F7010454AFD-C#KA2

**F1M series**

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7015443AFE#BA2	R7F7015443AFD#BA2	R7F7015443AFE-C#BA2	R7F7015443AFD-C#BA2
R7F7015443AFE#KA2	R7F7015443AFD#KA2	R7F7015443AFE-C#KA2	R7F7015443AFD-C#KA2
R7F7015444AFE#BA2	R7F7015444AFD#BA2	R7F7015444AFE-C#BA2	R7F7015444AFD-C#BA2
R7F7015444AFE#KA2	R7F7015444AFD#KA2	R7F7015444AFE-C#KA2	R7F7015444AFD-C#KA2
R7F7015453AFE#BA2	R7F7015453AFD#BA2	R7F7015453AFE-C#BA2	R7F7015453AFD-C#BA2
R7F7015453AFE#KA2	R7F7015453AFD#KA2	R7F7015453AFE-C#KA2	R7F7015453AFD-C#KA2
R7F7015454AFE#BA2	R7F7015454AFD#BA2	R7F7015454AFE-C#BA2	R7F7015454AFD-C#BA2
R7F7015454AFE#KA2	R7F7015454AFD#KA2	R7F7015454AFE-C#KA2	R7F7015454AFD-C#KA2
R7F7015483AFE#BA2	R7F7015483AFD#BA2	R7F7015483AFE-C#BA2	R7F7015483AFD-C#BA2
R7F7015483AFE#KA2	R7F7015483AFD#KA2	R7F7015483AFE-C#KA2	R7F7015483AFD-C#KA2
R7F7015484AFE#BA2	R7F7015484AFD#BA2	R7F7015484AFE-C#BA2	R7F7015484AFD-C#BA2
R7F7015484AFE#BA6	R7F7015484AFD#BA6	R7F7015484AFE-C#BA6	R7F7015484AFD-C#BA6
R7F7015484AFE#KA2	R7F7015484AFD#KA2	R7F7015484AFE-C#KA2	R7F7015484AFD-C#KA2
R7F7015484AFE#KA6	R7F7015484AFD#KA6	R7F7015484AFE-C#KA6	R7F7015484AFD-C#KA6
R7F7015493AFE#BA2	R7F7015493AFD#BA2	R7F7015493AFE-C#BA2	R7F7015493AFD-C#BA2
R7F7015493AFE#KA2	R7F7015493AFD#KA2	R7F7015493AFE-C#KA2	R7F7015493AFD-C#KA2
R7F7015494AFE#BA2	R7F7015494AFD#BA2	R7F7015494AFE-C#BA2	R7F7015494AFD-C#BA2
R7F7015494AFE#KA2	R7F7015494AFD#KA2	R7F7015494AFE-C#KA2	R7F7015494AFD-C#KA2
R7F7015643AFE#BA2	R7F7015643AFD#BA2	R7F7015643AFE-C#BA2	R7F7015643AFD-C#BA2
R7F7015643AFE#KA2	R7F7015643AFD#KA2	R7F7015643AFE-C#KA2	R7F7015643AFD-C#KA2
R7F7015644AFE#BA2	R7F7015644AFD#BA2	R7F7015644AFE-C#BA2	R7F7015644AFD-C#BA2
R7F7015644AFE#KA2	R7F7015644AFD#KA2	R7F7015644AFE-C#KA2	R7F7015644AFD-C#KA2
R7F7015653AFE#BA2	R7F7015653AFD#BA2	R7F7015653AFE-C#BA2	R7F7015653AFD-C#BA2
R7F7015653AFE#KA2	R7F7015653AFD#KA2	R7F7015653AFE-C#KA2	R7F7015653AFD-C#KA2
R7F7015654AFE#BA2	R7F7015654AFD#BA2	R7F7015654AFE-C#BA2	R7F7015654AFD-C#BA2
R7F7015654AFE#KA2	R7F7015654AFD#KA2	R7F7015654AFE-C#KA2	R7F7015654AFD-C#KA2

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7015683AFE#BA2	R7F7015683AFD#BA2	R7F7015683AFE-C#BA2	R7F7015683AFD-C#BA2
R7F7015683AFE#KA2	R7F7015683AFD#KA2	R7F7015683AFE-C#KA2	R7F7015683AFD-C#KA2
R7F7015684AFE#BA2	R7F7015684AFD#BA2	R7F7015684AFE-C#BA2	R7F7015684AFD-C#BA2
R7F7015684AFE#KA2	R7F7015684AFD#KA2	R7F7015684AFE-C#KA2	R7F7015684AFD-C#KA2
R7F7015693AFE#BA2	R7F7015693AFD#BA2	R7F7015693AFE-C#BA2	R7F7015693AFD-C#BA2
R7F7015693AFE#KA2	R7F7015693AFD#KA2	R7F7015693AFE-C#KA2	R7F7015693AFD-C#KA2
R7F7015694AFE#BA2	R7F7015694AFD#BA2	R7F7015694AFE-C#BA2	R7F7015694AFD-C#BA2
R7F7015694AFE#KA2	R7F7015694AFD#KA2	R7F7015694AFE-C#KA2	R7F7015694AFD-C#KA2
R7F701A293AFE#BA2	R7F701A293AFD#BA2	R7F701A293AFE-C#BA2	R7F701A293AFD-C#BA2
R7F701A293AFE#KA2	R7F701A293AFD#KA2	R7F701A293AFE-C#KA2	R7F701A293AFD-C#KA2
R7F701A303AFE#BA2	R7F701A303AFD#BA2	R7F701A303AFE-C#BA2	R7F701A303AFD-C#BA2
R7F701A303AFE#KA2	R7F701A303AFD#KA2	R7F701A303AFE-C#KA2	R7F701A303AFD-C#KA2

### F1H series

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7015013AFE#BA2	R7F7015013AFD#BA2	R7F7015013AFE-C#BA2	R7F7015013AFD-C#BA2
R7F7015013AFE#KA2	R7F7015013AFD#KA2	R7F7015013AFE-C#KA2	R7F7015013AFD-C#KA2
R7F7015014AFE#BA2	R7F7015014AFD#BA2	R7F7015014AFE-C#BA2	R7F7015014AFD-C#BA2
R7F7015014AFE#KA2	R7F7015014AFD#KA2	R7F7015014AFE-C#KA2	R7F7015014AFD-C#KA2
R7F7015023AFE#BA2	R7F7015023AFD#BA2	R7F7015023AFE-C#BA2	R7F7015023AFD-C#BA2
R7F7015023AFE#KA2	R7F7015023AFD#KA2	R7F7015023AFE-C#KA2	R7F7015023AFD-C#KA2
R7F7015024AFE#BA2	R7F7015024AFD#BA2	R7F7015024AFE-C#BA2	R7F7015024AFD-C#BA2
R7F7015024AFE#KA2	R7F7015024AFD#KA2	R7F7015024AFE-C#KA2	R7F7015024AFD-C#KA2
R7F701A243AFE#BA2	R7F701A243AFD#BA2	R7F701A243AFE-C#BA2	R7F701A243AFD-C#BA2
R7F701A243AFE#KA2	R7F701A243AFD#KA2	R7F701A243AFE-C#KA2	R7F701A243AFD-C#KA2
R7F701A244AFE#BA2	R7F701A244AFD#BA2	R7F701A244AFE-C#BA2	R7F701A244AFD-C#BA2
R7F701A244AFE#KA2	R7F701A244AFD#KA2	R7F701A244AFE-C#KA2	R7F701A244AFD-C#KA2
R7F7015303AFE#BA2	R7F7015303AFD#BA2	R7F7015303AFE-C#BA2	R7F7015303AFD-C#BA2
R7F7015303AFE#KA2	R7F7015303AFD#KA2	R7F7015303AFE-C#KA2	R7F7015303AFD-C#KA2
R7F7015313AFE#BA2	R7F7015313AFD#BA2	R7F7015313AFE-C#BA2	R7F7015313AFD-C#BA2
R7F7015313AFE#KA2	R7F7015313AFD#KA2	R7F7015313AFE-C#KA2	R7F7015313AFD-C#KA2

### F1K series

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7015423AFE#BA3	R7F7015423AFD#BA3	R7F7015423AFE-C#BA3	R7F7015423AFD-C#BA3
R7F7015423AFE#KA3	R7F7015423AFD#KA3	R7F7015423AFE-C#KA3	R7F7015423AFD-C#KA3
R7F7015424AFE#BA3	R7F7015424AFD#BA3	R7F7015424AFE-C#BA3	R7F7015424AFD-C#BA3
R7F7015424AFE#KA3	R7F7015424AFD#KA3	R7F7015424AFE-C#KA3	R7F7015424AFD-C#KA3
R7F7015433AFE#BA3	R7F7015433AFD#BA3	R7F7015433AFE-C#BA3	R7F7015433AFD-C#BA3
R7F7015433AFE#KA3	R7F7015433AFD#KA3	R7F7015433AFE-C#KA3	R7F7015433AFD-C#KA3
R7F7015434AFE#BA3	R7F7015434AFD#BA3	R7F7015434AFE-C#BA3	R7F7015434AFD-C#BA3
R7F7015434AFE#KA3	R7F7015434AFD#KA3	R7F7015434AFE-C#KA3	R7F7015434AFD-C#KA3
R7F7015463AFE#BA3	R7F7015463AFD#BA3	R7F7015463AFE-C#BA3	R7F7015463AFD-C#BA3
R7F7015463AFE#KA3	R7F7015463AFD#KA3	R7F7015463AFE-C#KA3	R7F7015463AFD-C#KA3
R7F7015464AFE#BA3	R7F7015464AFD#BA3	R7F7015464AFE-C#BA3	R7F7015464AFD-C#BA3

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7015464AFE#KA3	R7F7015464AFD#KA3	R7F7015464AFE-C#KA3	R7F7015464AFD-C#KA3
R7F7015473AFE#BA3	R7F7015473AFD#BA3	R7F7015473AFE-C#BA3	R7F7015473AFD-C#BA3
R7F7015473AFE#KA3	R7F7015473AFD#KA3	R7F7015473AFE-C#KA3	R7F7015473AFD-C#KA3
R7F7015474AFE#BA3	R7F7015474AFD#BA3	R7F7015474AFE-C#BA3	R7F7015474AFD-C#BA3
R7F7015474AFE#KA3	R7F7015474AFD#KA3	R7F7015474AFE-C#KA3	R7F7015474AFD-C#KA3
R7F7015543AFE#BA3	R7F7015543AFD#BA3	R7F7015543AFE-C#BA3	R7F7015543AFD-C#BA3
R7F7015543AFE#KA3	R7F7015543AFD#KA3	R7F7015543AFE-C#KA3	R7F7015543AFD-C#KA3
R7F7015544AFE#BA3	R7F7015544AFD#BA3	R7F7015544AFE-C#BA3	R7F7015544AFD-C#BA3
R7F7015544AFE#KA3	R7F7015544AFD#KA3	R7F7015544AFE-C#KA3	R7F7015544AFD-C#KA3
R7F7015553AFE#BA3	R7F7015553AFD#BA3	R7F7015553AFE-C#BA3	R7F7015553AFD-C#BA3
R7F7015553AFE#KA3	R7F7015553AFD#KA3	R7F7015553AFE-C#KA3	R7F7015553AFD-C#KA3
R7F7015554AFE#BA3	R7F7015554AFD#BA3	R7F7015554AFE-C#BA3	R7F7015554AFD-C#BA3
R7F7015554AFE#KA3	R7F7015554AFD#KA3	R7F7015554AFE-C#KA3	R7F7015554AFD-C#KA3
R7F7015573AFE#BA3	R7F7015573AFD#BA3	R7F7015573AFE-C#BA3	R7F7015573AFD-C#BA3
R7F7015573AFE#KA3	R7F7015573AFD#KA3	R7F7015573AFE-C#KA3	R7F7015573AFD-C#KA3
R7F7015574AFE#BA3	R7F7015574AFD#BA3	R7F7015574AFE-C#BA3	R7F7015574AFD-C#BA3
R7F7015574AFE#KA3	R7F7015574AFD#KA3	R7F7015574AFE-C#KA3	R7F7015574AFD-C#KA3
R7F7015623AFE#BA3	R7F7015623AFD#BA3	R7F7015623AFE-C#BA3	R7F7015623AFD-C#BA3
R7F7015623AFE#KA3	R7F7015623AFD#KA3	R7F7015623AFE-C#KA3	R7F7015623AFD-C#KA3
R7F7015624AFE#BA3	R7F7015624AFD#BA3	R7F7015624AFE-C#BA3	R7F7015624AFD-C#BA3
R7F7015624AFE#KA3	R7F7015624AFD#KA3	R7F7015624AFE-C#KA3	R7F7015624AFD-C#KA3
R7F7015633AFE#BA3	R7F7015633AFD#BA3	R7F7015633AFE-C#BA3	R7F7015633AFD-C#BA3
R7F7015633AFE#KA3	R7F7015633AFD#KA3	R7F7015633AFE-C#KA3	R7F7015633AFD-C#KA3
R7F7015634AFE#BA3	R7F7015634AFD#BA3	R7F7015634AFE-C#BA3	R7F7015634AFD-C#BA3
R7F7015634AFE#KA3	R7F7015634AFD#KA3	R7F7015634AFE-C#KA3	R7F7015634AFD-C#KA3
R7F7015663AFE#BA3	R7F7015663AFD#BA3	R7F7015663AFE-C#BA3	R7F7015663AFD-C#BA3
R7F7015663AFE#KA3	R7F7015663AFD#KA3	R7F7015663AFE-C#KA3	R7F7015663AFD-C#KA3
R7F7015664AFE#BA3	R7F7015664AFD#BA3	R7F7015664AFE-C#BA3	R7F7015664AFD-C#BA3
R7F7015664AFE#KA3	R7F7015664AFD#KA3	R7F7015664AFE-C#KA3	R7F7015664AFD-C#KA3
R7F7015673AFE#BA3	R7F7015673AFD#BA3	R7F7015673AFE-C#BA3	R7F7015673AFD-C#BA3
R7F7015673AFE#KA3	R7F7015673AFD#KA3	R7F7015673AFE-C#KA3	R7F7015673AFD-C#KA3
R7F7015674AFE#BA3	R7F7015674AFD#BA3	R7F7015674AFE-C#BA3	R7F7015674AFD-C#BA3
R7F7015674AFE#KA3	R7F7015674AFD#KA3	R7F7015674AFE-C#KA3	R7F7015674AFD-C#KA3
R7F7015753AFE#BA3	R7F7015753AFD#BA3	R7F7015753AFE-C#BA3	R7F7015753AFD-C#BA3
R7F7015753AFE#KA3	R7F7015753AFD#KA3	R7F7015753AFE-C#KA3	R7F7015753AFD-C#KA3
R7F7015754AFE#BA3	R7F7015754AFD#BA3	R7F7015754AFE-C#BA3	R7F7015754AFD-C#BA3
R7F7015754AFE#KA3	R7F7015754AFD#KA3	R7F7015754AFE-C#KA3	R7F7015754AFD-C#KA3
R7F7015773AFE#BA3	R7F7015773AFD#BA3	R7F7015773AFE-C#BA3	R7F7015773AFD-C#BA3
R7F7015773AFE#KA3	R7F7015773AFD#KA3	R7F7015773AFE-C#KA3	R7F7015773AFD-C#KA3
R7F7015774AFE#BA3	R7F7015774AFD#BA3	R7F7015774AFE-C#BA3	R7F7015774AFD-C#BA3
R7F7015774AFE#KA3	R7F7015774AFD#KA3	R7F7015774AFE-C#KA3	R7F7015774AFD-C#KA3
R7F7015823AFE#BA3	R7F7015823AFD#BA3	R7F7015823AFE-C#BA3	R7F7015823AFD-C#BA3
R7F7015823AFE#KA3	R7F7015823AFD#KA3	R7F7015823AFE-C#KA3	R7F7015823AFD-C#KA3
R7F7015824AFE#BA3	R7F7015824AFD#BA3	R7F7015824AFE-C#BA3	R7F7015824AFD-C#BA3
R7F7015824AFE#KA3	R7F7015824AFD#KA3	R7F7015824AFE-C#KA3	R7F7015824AFD-C#KA3
R7F7015833AFE#BA3	R7F7015833AFD#BA3	R7F7015833AFE-C#BA3	R7F7015833AFD-C#BA3
R7F7015833AFE#KA3	R7F7015833AFD#KA3	R7F7015833AFE-C#KA3	R7F7015833AFD-C#KA3
R7F7015834AFE#BA3	R7F7015834AFD#BA3	R7F7015834AFE-C#BA3	R7F7015834AFD-C#BA3



Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7015834AFE#KA3	R7F7015834AFD#KA3	R7F7015834AFE-C#KA3	R7F7015834AFD-C#KA3
R7F7015863AFE#BA3	R7F7015863AFD#BA3	R7F7015863AFE-C#BA3	R7F7015863AFD-C#BA3
R7F7015863AFE#KA3	R7F7015863AFD#KA3	R7F7015863AFE-C#KA3	R7F7015863AFD-C#KA3
R7F7015864AFE#BA3	R7F7015864AFD#BA3	R7F7015864AFE-C#BA3	R7F7015864AFD-C#BA3
R7F7015864AFE#KA3	R7F7015864AFD#KA3	R7F7015864AFE-C#KA3	R7F7015864AFD-C#KA3
R7F7015873AFE#BA3	R7F7015873AFD#BA3	R7F7015873AFE-C#BA3	R7F7015873AFD-C#BA3
R7F7015873AFE#KA3	R7F7015873AFD#KA3	R7F7015873AFE-C#KA3	R7F7015873AFD-C#KA3
R7F7015874AFE#BA3	R7F7015874AFD#BA3	R7F7015874AFE-C#BA3	R7F7015874AFD-C#BA3
R7F7015874AFE#KA3	R7F7015874AFD#KA3	R7F7015874AFE-C#KA3	R7F7015874AFD-C#KA3
R7F7015953AFE#BA3	R7F7015953AFD#BA3	R7F7015953AFE-C#BA3	R7F7015953AFD-C#BA3
R7F7015953AFE#KA3	R7F7015953AFD#KA3	R7F7015953AFE-C#KA3	R7F7015953AFD-C#KA3
R7F7015954AFE#BA3	R7F7015954AFD#BA3	R7F7015954AFE-C#BA3	R7F7015954AFD-C#BA3
R7F7015954AFE#KA3	R7F7015954AFD#KA3	R7F7015954AFE-C#KA3	R7F7015954AFD-C#KA3
R7F7015973AFE#BA3	R7F7015973AFD#BA3	R7F7015973AFE-C#BA3	R7F7015973AFD-C#BA3
R7F7015973AFE#KA3	R7F7015973AFD#KA3	R7F7015973AFE-C#KA3	R7F7015973AFD-C#KA3
R7F7015974AFE#BA3	R7F7015974AFD#BA3	R7F7015974AFE-C#BA3	R7F7015974AFD-C#BA3
R7F7015974AFE#KA3	R7F7015974AFD#KA3	R7F7015974AFE-C#KA3	R7F7015974AFD-C#KA3
R7F7016023AFE#BA3	R7F7016023AFD#BA3	R7F7016023AFE-C#BA3	R7F7016023AFD-C#BA3
R7F7016023AFE#KA3	R7F7016023AFD#KA3	R7F7016023AFE-C#KA3	R7F7016023AFD-C#KA3
R7F7016024AFE#BA3	R7F7016024AFD#BA3	R7F7016024AFE-C#BA3	R7F7016024AFD-C#BA3
R7F7016024AFE#KA3	R7F7016024AFD#KA3	R7F7016024AFE-C#KA3	R7F7016024AFD-C#KA3
R7F7016033AFE#BA3	R7F7016033AFD#BA3	R7F7016033AFE-C#BA3	R7F7016033AFD-C#BA3
R7F7016033AFE#KA3	R7F7016033AFD#KA3	R7F7016033AFE-C#KA3	R7F7016033AFD-C#KA3
R7F7016034AFE#BA3	R7F7016034AFD#BA3	R7F7016034AFE-C#BA3	R7F7016034AFD-C#BA3
R7F7016034AFE#KA3	R7F7016034AFD#KA3	R7F7016034AFE-C#KA3	R7F7016034AFD-C#KA3
R7F7016053AFE#BA3	R7F7016053AFD#BA3	R7F7016053AFE-C#BA3	R7F7016053AFD-C#BA3
R7F7016053AFE#KA3	R7F7016053AFD#KA3	R7F7016053AFE-C#KA3	R7F7016053AFD-C#KA3
R7F7016054AFE#BA3	R7F7016054AFD#BA3	R7F7016054AFE-C#BA3	R7F7016054AFD-C#BA3
R7F7016054AFE#KA3	R7F7016054AFD#KA3	R7F7016054AFE-C#KA3	R7F7016054AFD-C#KA3
R7F7016063AFE#BA3	R7F7016063AFD#BA3	R7F7016063AFE-C#BA3	R7F7016063AFD-C#BA3
R7F7016063AFE#KA3	R7F7016063AFD#KA3	R7F7016063AFE-C#KA3	R7F7016063AFD-C#KA3
R7F7016064AFE#BA3	R7F7016064AFD#BA3	R7F7016064AFE-C#BA3	R7F7016064AFD-C#BA3
R7F7016064AFE#KA3	R7F7016064AFD#KA3	R7F7016064AFE-C#KA3	R7F7016064AFD-C#KA3
R7F7016073AFE#BA3	R7F7016073AFD#BA3	R7F7016073AFE-C#BA3	R7F7016073AFD-C#BA3
R7F7016073AFE#KA3	R7F7016073AFD#KA3	R7F7016073AFE-C#KA3	R7F7016073AFD-C#KA3
R7F7016074AFE#BA3	R7F7016074AFD#BA3	R7F7016074AFE-C#BA3	R7F7016074AFD-C#BA3
R7F7016074AFE#KA3	R7F7016074AFD#KA3	R7F7016074AFE-C#KA3	R7F7016074AFD-C#KA3
R7F7016123AFE#BA3	R7F7016123AFD#BA3	R7F7016123AFE-C#BA3	R7F7016123AFD-C#BA3
R7F7016123AFE#KA3	R7F7016123AFD#KA3	R7F7016123AFE-C#KA3	R7F7016123AFD-C#KA3
R7F7016124AFE#BA3	R7F7016124AFD#BA3	R7F7016124AFE-C#BA3	R7F7016124AFD-C#BA3
R7F7016124AFE#KA3	R7F7016124AFD#KA3	R7F7016124AFE-C#KA3	R7F7016124AFD-C#KA3
R7F7016133AFE#BA3	R7F7016133AFD#BA3	R7F7016133AFE-C#BA3	R7F7016133AFD-C#BA3
R7F7016133AFE#KA3	R7F7016133AFD#KA3	R7F7016133AFE-C#KA3	R7F7016133AFD-C#KA3
R7F7016134AFE#BA3	R7F7016134AFD#BA3	R7F7016134AFE-C#BA3	R7F7016134AFD-C#BA3
R7F7016134AFE#KA3	R7F7016134AFD#KA3	R7F7016134AFE-C#KA3	R7F7016134AFD-C#KA3
R7F7016223AFE#BA3	R7F7016223AFD#BA3	R7F7016223AFE-C#BA3	R7F7016223AFD-C#BA3
R7F7016223AFE#KA3	R7F7016223AFD#KA3	R7F7016223AFE-C#KA3	R7F7016223AFD-C#KA3
R7F7016224AFE#BA3	R7F7016224AFD#BA3	R7F7016224AFE-C#BA3	R7F7016224AFD-C#BA3

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F7016224AFE#KA3	R7F7016224AFD#KA3	R7F7016224AFE-C#KA3	R7F7016224AFD-C#KA3
R7F7016233AFE#BA3	R7F7016233AFD#BA3	R7F7016233AFE-C#BA3	R7F7016233AFD-C#BA3
R7F7016233AFE#KA3	R7F7016233AFD#KA3	R7F7016233AFE-C#KA3	R7F7016233AFD-C#KA3
R7F7016234AFE#BA3	R7F7016234AFD#BA3	R7F7016234AFE-C#BA3	R7F7016234AFD-C#BA3
R7F7016234AFE#KA3	R7F7016234AFD#KA3	R7F7016234AFE-C#KA3	R7F7016234AFD-C#KA3
R7F7015603AFE#BA3	R7F7015603AFD#BA3	R7F7015603AFE-C#BA3	R7F7015603AFD-C#BA3
R7F7015603AFE#KA3	R7F7015603AFD#KA3	R7F7015603AFE-C#KA3	R7F7015603AFD-C#KA3
R7F7015604AFE#BA3	R7F7015604AFD#BA3	R7F7015604AFE-C#BA3	R7F7015604AFD-C#BA3
R7F7015604AFE#KA3	R7F7015604AFD#KA3	R7F7015604AFE-C#KA3	R7F7015604AFD-C#KA3
R7F7015613AFE#BA3	R7F7015613AFD#BA3	R7F7015613AFE-C#BA3	R7F7015613AFD-C#BA3
R7F7015613AFE#KA3	R7F7015613AFD#KA3	R7F7015613AFE-C#KA3	R7F7015613AFD-C#KA3
R7F7015614AFE#BA3	R7F7015614AFD#BA3	R7F7015614AFE-C#BA3	R7F7015614AFD-C#BA3
R7F7015614AFE#KA3	R7F7015614AFD#KA3	R7F7015614AFE-C#KA3	R7F7015614AFD-C#KA3
R7F7015803AFE#BA3	R7F7015803AFD#BA3	R7F7015803AFE-C#BA3	R7F7015803AFD-C#BA3
R7F7015803AFE#KA3	R7F7015803AFD#KA3	R7F7015803AFE-C#KA3	R7F7015803AFD-C#KA3
R7F7015804AFE#BA3	R7F7015804AFD#BA3	R7F7015804AFE-C#BA3	R7F7015804AFD-C#BA3
R7F7015804AFE#KA3	R7F7015804AFD#KA3	R7F7015804AFE-C#KA3	R7F7015804AFD-C#KA3
R7F7015813AFE#BA3	R7F7015813AFD#BA3	R7F7015813AFE-C#BA3	R7F7015813AFD-C#BA3
R7F7015813AFE#KA3	R7F7015813AFD#KA3	R7F7015813AFE-C#KA3	R7F7015813AFD-C#KA3
R7F7015814AFE#BA3	R7F7015814AFD#BA3	R7F7015814AFE-C#BA3	R7F7015814AFD-C#BA3
R7F7015814AFE#KA3	R7F7015814AFD#KA3	R7F7015814AFE-C#KA3	R7F7015814AFD-C#KA3
R7F7016103AFE#BA3	R7F7016103AFD#BA3	R7F7016103AFE-C#BA3	R7F7016103AFD-C#BA3
R7F7016103AFE#KA3	R7F7016103AFD#KA3	R7F7016103AFE-C#KA3	R7F7016103AFD-C#KA3
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R7F7016104AFE#KA3	R7F7016104AFD#KA3	R7F7016104AFE-C#KA3	R7F7016104AFD-C#KA3
R7F7016113AFE#BA3	R7F7016113AFD#BA3	R7F7016113AFE-C#BA3	R7F7016113AFD-C#BA3
R7F7016113AFE#KA3	R7F7016113AFD#KA3	R7F7016113AFE-C#KA3	R7F7016113AFD-C#KA3
R7F7016114AFE#BA3	R7F7016114AFD#BA3	R7F7016114AFE-C#BA3	R7F7016114AFD-C#BA3
R7F7016114AFE#KA3	R7F7016114AFD#KA3	R7F7016114AFE-C#KA3	R7F7016114AFD-C#KA3
R7F7016203AFE#BA3	R7F7016203AFD#BA3	R7F7016203AFE-C#BA3	R7F7016203AFD-C#BA3
R7F7016203AFE#KA3	R7F7016203AFD#KA3	R7F7016203AFE-C#KA3	R7F7016203AFD-C#KA3
R7F7016204AFE#BA3	R7F7016204AFD#BA3	R7F7016204AFE-C#BA3	R7F7016204AFD-C#BA3
R7F7016204AFE#KA3	R7F7016204AFD#KA3	R7F7016204AFE-C#KA3	R7F7016204AFD-C#KA3
R7F7016213AFE#BA3	R7F7016213AFD#BA3	R7F7016213AFE-C#BA3	R7F7016213AFD-C#BA3
R7F7016213AFE#KA3	R7F7016213AFD#KA3	R7F7016213AFE-C#KA3	R7F7016213AFD-C#KA3
R7F7016214AFE#BA3	R7F7016214AFD#BA3	R7F7016214AFE-C#BA3	R7F7016214AFD-C#BA3
R7F7016214AFE#KA3	R7F7016214AFD#KA3	R7F7016214AFE-C#KA3	R7F7016214AFD-C#KA3

#### D1L1 and D1L2 series

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F701401EAFE#BA0	R7F701401EAFD#BA0	R7F701401EAFE-C#BA1	R7F701401EAFD-C#BA1
R7F701401EAFE#KA0	R7F701401EAFD#KA0	R7F701401EAFE-C#KA1	R7F701401EAFD-C#KA1
R7F701421EAFE#BA0	R7F701421EAFD#BA0	R7F701421EAFE-C#BA1	R7F701421EAFD-C#BA1
R7F701421EAFE#KA0	R7F701421EAFD#KA0	R7F701421EAFE-C#KA1	R7F701421EAFD-C#KA1
R7F701402EAFE#BA0	R7F701402EAFD#BA0	R7F701402EAFE-C#BA1	R7F701402EAFD-C#BA1
R7F701402EAFE#KA0	R7F701402EAFD#KA0	R7F701402EAFE-C#KA1	R7F701402EAFD-C#KA1

Current		After Change	
ASE-KH	ATJ-Kumamoto	ASE-KH	ATJ-Kumamoto
R7F701403EAFE#BA0	R7F701403EAFD#BA0	R7F701403EAFE-C#BA1	R7F701403EAFD-C#BA1
R7F701403EAFE#KA0	R7F701403EAFD#KA0	R7F701403EAFE-C#KA1	R7F701403EAFD-C#KA1
R7F701422EAFE#BA0	R7F701422EAFD#BA0	R7F701422EAFE-C#BA1	R7F701422EAFD-C#BA1
R7F701422EAFE#KA0	R7F701422EAFD#KA0	R7F701422EAFE-C#KA1	R7F701422EAFD-C#KA1
R7F701423EAFE#BA0	R7F701423EAFD#BA0	R7F701423EAFE-C#BA1	R7F701423EAFD-C#BA1
R7F701423EAFE#KA0	R7F701423EAFD#KA0	R7F701423EAFE-C#KA1	R7F701423EAFD-C#KA1

### D1S1-V2 series

Current	After Change	
ASE-KH	ASE-KH	ATJ-Kumamoto
R7F701416EAFE#BA0	R7F701416EAFE-C#BA0	R7F701416EAFD-C#BA0
R7F701416EAFE#KA0	R7F701416EAFE-C#KA0	R7F701416EAFD-C#KA0
R7F701417EAFE#BA0	R7F701417EAFE-C#BA0	R7F701417EAFD-C#BA0
R7F701417EAFE#KA0	R7F701417EAFE-C#KA0	R7F701417EAFD-C#KA0
R7F701436EAFE#BA0	R7F701436EAFE-C#BA0	R7F701436EAFD-C#BA0
R7F701436EAFE#KA0	R7F701436EAFE-C#KA0	R7F701436EAFD-C#KA0
R7F701437EAFE#BA0	R7F701437EAFE-C#BA0	R7F701437EAFD-C#BA0
R7F701437EAFE#KA0	R7F701437EAFE-C#KA0	R7F701437EAFD-C#KA0

### F1KM series

Current	After Change	
RSC	ASE-KH	ATJ-Kumamoto
R7F7016843AFP-C#BA1	R7F7016843AFE-C#BA1	R7F7016843AFD-C#BA1
R7F7016843AFP-C#KA1	R7F7016843AFE-C#KA1	R7F7016843AFD-C#KA1
R7F7016844AFP-C#BA1	R7F7016844AFE-C#BA1	R7F7016844AFD-C#BA1
R7F7016844AFP-C#KA1	R7F7016844AFE-C#KA1	R7F7016844AFD-C#KA1
R7F7016853AFP-C#BA1	R7F7016853AFE-C#BA1	R7F7016853AFD-C#BA1
R7F7016853AFP-C#KA1	R7F7016853AFE-C#KA1	R7F7016853AFD-C#KA1
R7F7016854AFP-C#BA1	R7F7016854AFE-C#BA1	R7F7016854AFD-C#BA1
R7F7016854AFP-C#KA1	R7F7016854AFE-C#KA1	R7F7016854AFD-C#KA1
R7F7016863AFP-C#BA1	R7F7016863AFE-C#BA1	R7F7016863AFD-C#BA1
R7F7016863AFP-C#KA1	R7F7016863AFE-C#KA1	R7F7016863AFD-C#KA1
R7F7016864AFP-C#BA1	R7F7016864AFE-C#BA1	R7F7016864AFD-C#BA1
R7F7016864AFP-C#KA1	R7F7016864AFE-C#KA1	R7F7016864AFD-C#KA1
R7F7016463AFP-C#BA1	R7F7016463AFE-C#BA1	R7F7016463AFD-C#BA1
R7F7016463AFP-C#KA1	R7F7016463AFE-C#KA1	R7F7016463AFD-C#KA1
R7F7016473AFP-C#BA1	R7F7016473AFE-C#BA1	R7F7016473AFD-C#BA1
R7F7016473AFP-C#KA1	R7F7016473AFE-C#KA1	R7F7016473AFD-C#KA1
R7F7016483AFP-C#BA1	R7F7016483AFE-C#BA1	R7F7016483AFD-C#BA1
R7F7016483AFP-C#KA1	R7F7016483AFE-C#KA1	R7F7016483AFD-C#KA1
R7F7016493AFP-C#BA1	R7F7016493AFE-C#BA1	R7F7016493AFD-C#BA1
R7F7016493AFP-C#KA1	R7F7016493AFE-C#KA1	R7F7016493AFD-C#KA1
R7F7016443AFP-C#BA1	R7F7016443AFE-C#BA1	R7F7016443AFD-C#BA1
R7F7016443AFP-C#KA1	R7F7016443AFE-C#KA1	R7F7016443AFD-C#KA1
R7F7016453AFP-C#BA1	R7F7016453AFE-C#BA1	R7F7016453AFD-C#BA1
R7F7016453AFP-C#KA1	R7F7016453AFE-C#KA1	R7F7016453AFD-C#KA1

## Change List

### F1L, F1M, F1H, F1K, D1L1 and D1L2 series

		Au-wire(Before change)	Cu-wire(After change)	Remarks
Production sites	Wafer process	w/o change		Refer to "Production Flow"
	Wafer Test	w/o change		
	Back Grinding	ATJ-Kumamoto addition		
	Assembly	w/o change		
	Final Test	TPJ addition *1		
Materials	PAD-opening( $\mu$ m)	50um	55um	Only D1L1/D1L2
	Wire-bonding materials	Au-wire	Cu-wire	*2
	Mold-resin materials	Mold-resin for Au-wire	Mold-resin for Cu-wire	
	Die-attach materials	w/o change		

### D1S1-V2 series

		Au-wire(Before change)	Cu-wire(After change)	Remarks
Production sites	Wafer process	w/o change		Refer to "Production Flow"
	Wafer Test	w/o change		
	Back Grinding	ATJ-Kumamoto/ATJ-Usuki addition		
	Assembly	ATJ-Kumamoto addition		
	Final Test	TPJ addition *1		
Materials	PAD-opening( $\mu$ m)	w/o change		
	Wire-bonding materials	Au-wire	Cu-wire	*2
	Mold-resin materials	Mold-resin for Au-wire	Mold-resin for Cu-wire	
	Die-attach materials	ASE-KH standard materials	ASE-KH/ATJ-Kumamoto standard materials	

### F1KM series

		Cu-wire(Before change)	Cu-wire(After change)	Remarks
Production sites	Wafer process	w/o change		Refer to "Production Flow"
	Wafer Test	w/o change		
	Back Grinding	ATJ-Kumamoto/ATJ-Usuki addition		
	Assembly	ASE-KH/ATJ-Kumamoto addition		
	Final Test	ASE-KH/TPJ addition *1		
Materials	PAD-opening( $\mu$ m)	w/o change		
	Wire-bonding materials	w/o change		
	Mold-resin materials	RSC standard materials	ASE-KH/ATJ-Kumamoto standard materials	
	Die-attach materials	RSC standard materials	ASE-KH/ATJ-Kumamoto standard materials	

\*1 TPJ is added only for ATJ-Kumamoto products.

\*2 Cu-wire diameters are ASE-KH:  $\phi$  20um and ATJ-Kumamoto:  $\phi$  18um.

ATJ-Kumamoto: Amkor Technology Japan, Inc. Kumamoto  
 ATJ-Usuki: Amkor Technology Japan, Inc. Usuki  
 TPW: TeraPower Technology Inc.  
 TPJ: Tera Probe, Inc. Kyushu Operation Center  
 ASE-KH: Advanced Semiconductor Engineering Inc. Kaohsiung

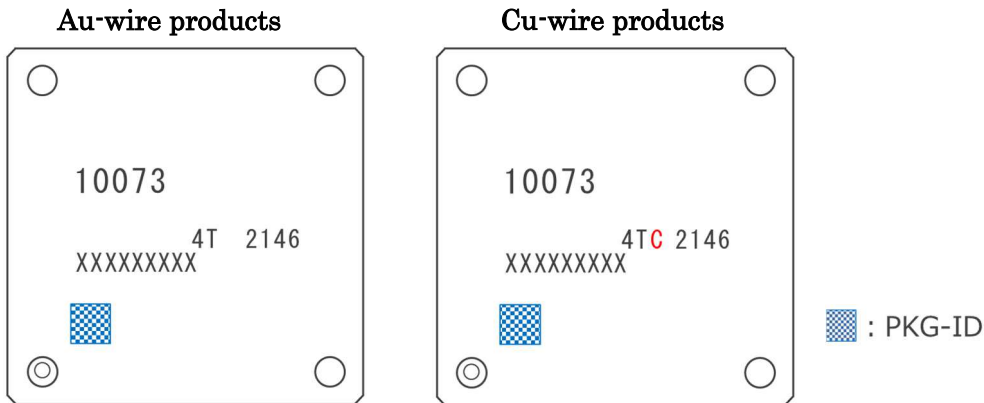
## Cu-wire product identification

### Product identification for Cu-wire products through mark print on each PKG

Mark example: ATJ-Kumamoto products for F1L-2M 176pin

Mark comparison between R7F7010073AFD#BA4(Au-wire) and R7F7010073AFD-**C**#BA4(Cu-wire)

“**C**” (The red character) is added in a part of the mark for the laser mark of Cu-wire products

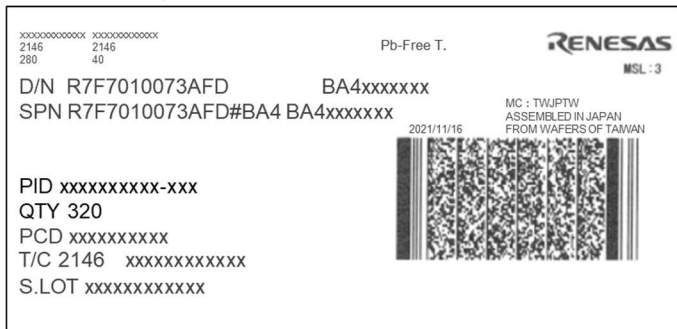


### Product identification for Cu-wire products through label print

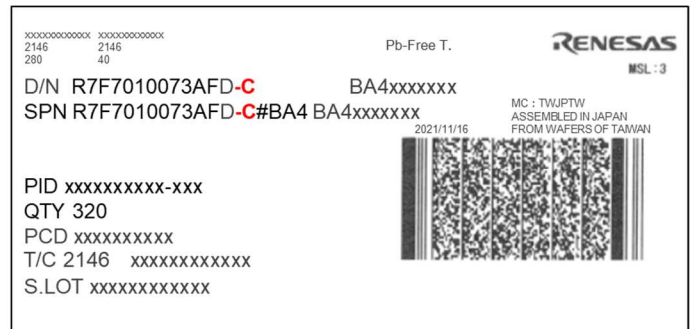
Label example: ATJ-Kumamoto products for F1L-2M 176pin

Label comparison between R7F7010073AFD#BA4(Au-wire) and R7F7010073AFD-**C**#BA4(Cu-wire)

#### Label image for Au-wire products



#### Label image for Cu-wire products



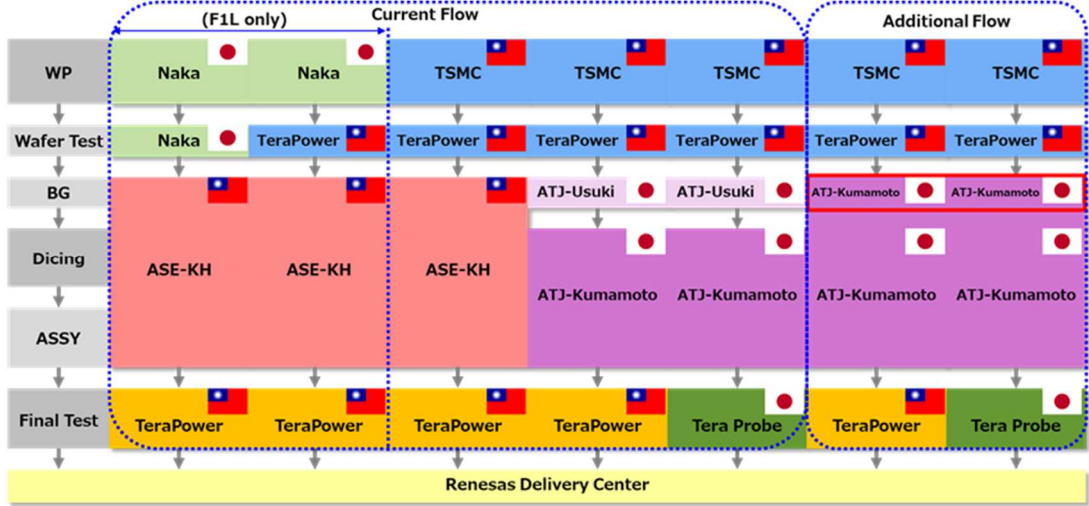
The red characters are different.

Production Flow

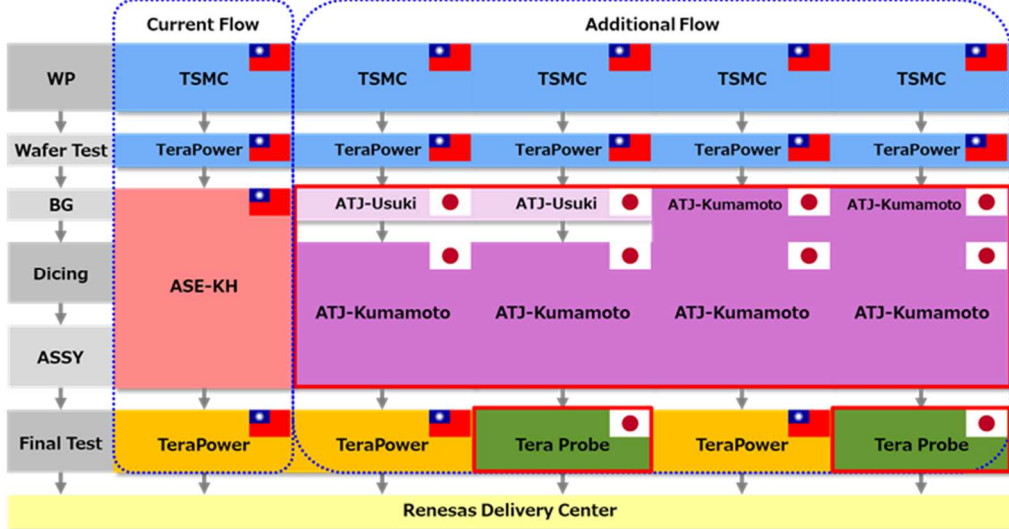
RH850/F1L, F1M, F1H, F1K, D1L1 and D1L2 series

**Additional sites**

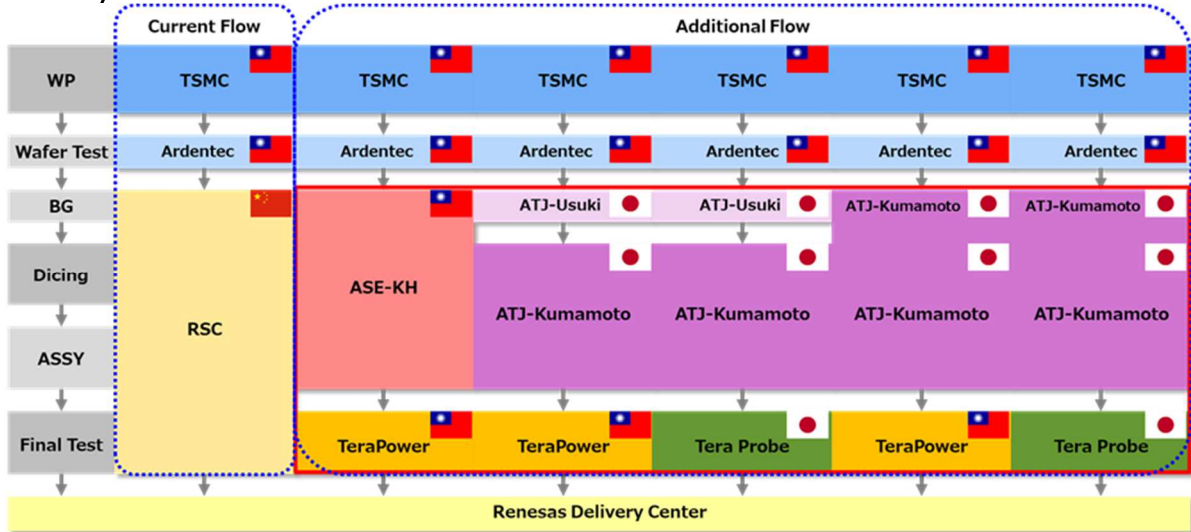
WP : Wafer Process  
BG : Back Grinding process



RH850/D1S1-V2 series



RH850/F1KM series



RSC : Renesas Semiconductor(Suzhou) Co. Ltd.