

## Product Change Notice (PCN)

**Subject:** Add Alternate Assembly Locations on VFQFPN and FCLGA Packages

**Publication Date:** 7/22/2022

**Effective Date:** 10/21/2022

**Revision Description:**

Initial Release

**Description of Change:**

Renesas is adding alternate assembly locations for select VFQFPN and FCLGA packages. Refer to below table for the current and the alternate assembly locations and its material sets by package type.

There will be changes in the material sets at the alternate assembly locations.

No change in the moisture sensitive level as a result of this change.

<b>VFQFPN-12 (P9148)</b>	Current	Alternate
Assembly location	UTL	ASECL
Die attach material	8600	EN4900G
Wire material	Copper wire	Copper wire
Mold compound	GE-300LC2MA	G700LA

<b>VFQFPN-16 (F2932)</b>	Current	Alternate
Assembly location	ASECL	GEI
Die attach material	EN4900G	CRM-1076DJ-G
Wire material	Copper wire	Copper wire
Mold compound	G700LA	G700H

<b>VFQFPN-24 (F1423)</b>	Current	Alternate
Assembly location	ASECL	GEI
Die attach material	EN4900G	EN4900GC
Wire material	Copper wire	Copper wire
Mold compound	G700LA	G700H

<b>VFQFPN-40</b>	Current	Alternate
Assembly location	ASECL	UTL
Die attach material	EN4900G	8600
Wire material	Copper wire	Copper wire
Mold compound	G700LA	G770HCD

<b>FCLGA-48 (F0442 &amp; F0443)</b>	Current	Alternate
Assembly location	GEI	ASECL
Bump Composition	Sn/1.8Ag	Sn/1.8Ag
Mold compound	EME-A382	EME-G311AC

**Affected Product List:** Refer Appendix B.

**Reason for Change:**

The change is for increased manufacturing capability and business continuity.

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

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

**Product Identification:**

Assembly lot# with prefix "U" denote UTL, prefix "GR" denote GEI, prefix "RC" denote ASECL.

**Qualification Status:** Completed. Refer Appendix A.

**Sample Availability Date:** 6 weeks from sample request date

**Device Material Declaration:** Available on request

Note:

1. Acknowledgement must be received by Renesas within 30 days or Renesas will consider the change as approved.
2. If timely acknowledgement is provided by Customer, then Customer shall have 90 days from the date of receipt of this PCN to make any objections to this PCN. If Customer fails 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 customer must provide Renesas with a last time buy demand and purchase order.

For additional information regarding this notice, please contact [idt-pcn@lm.renesas.com](mailto:idt-pcn@lm.renesas.com)

**Appendix A - Qualification Results**
**Affected Package:** VFQFPN-12

**Qual Vehicle:** VFQFPN-12

**Assembly Material:** As shown in page 1

**Qual Plan & Results:** Tests are in accordance with JEDEC47 recommended tests.

Test Descriptions	Test Method	Test Results (Rej/SS)		
		Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25
* HAST - biased (130°C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5	0/5	0/5
Physical Dimensions	JESD22-B100	0/30	0/30	0/30
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260°C	0/25	0/25	-
Solderability Test	MIL-STD-883 (Method 2003)	0/5	0/5	0/5

*\*Tests were subjected to Preconditioning per JESD22-A113 prior to stress test*
**Affected Package:** VFQFPN-16

**Qual Vehicle:** VFQFPN-16

**Assembly Material:** As shown in page 1

**Qual Plan & Results:** Tests are in accordance with JEDEC47 recommended tests.

Test Descriptions	Test Method	Test Results (Rej/SS)		
		Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25
* HAST - biased (130°C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5	0/5	0/5
Physical Dimensions	JESD22-B100	0/30	0/30	0/30
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260°C	0/25	0/25	-
Solderability Test	MIL-STD-883 (Method 2003)	0/5	0/5	0/5

*\*Tests were subjected to Preconditioning per JESD22-A113 prior to stress test*

**Affected Package:** VFQFPN-24

**Qual Vehicle:** VFQFPN-24

**Assembly Material:** As shown in page 1

**Qual Plan & Results:** Tests are in accordance with JEDEC47 recommended tests.

Test Descriptions	Test Method	Test Results (Rej/SS)		
		Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25
* HAST - biased (130°C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5	0/5	0/5
Physical Dimensions	JESD22-B100	0/30	0/30	0/30
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260°C	0/25	0/25	-
Solderability Test	MIL-STD-883 (Method 2003)	0/5	0/5	0/5

*\*Tests were subjected to Preconditioning per JESD22-A113 prior to stress test*

**Affected Package:** VFQFPN-40

**Qual Vehicle:** VFQFPN-72

**Assembly Material:** As shown in page 1

**Qual Plan & Results:** Tests are in accordance with JEDEC47 recommended tests.

Test Descriptions	Test Method	Test Results (Rej/SS)		
		Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25
* HAST - biased (130°C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 3, 260°C	0/25	0/25	-

*\*Tests were subjected to Preconditioning per JESD22-A113 prior to stress test*

**Affected Package:** FCLGA-48

**Qual Vehicle:** FCLGA-48

**Assembly Material:** As shown in page 1

**Qual Plan & Results:** Tests are in accordance with JEDEC47 recommended tests.

Test Descriptions	Test Method	Test Results (Rej/SS)		
		Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55 °C to 125 °C, 700 cycles)	JESD22-A104	0/25	0/25	0/25
* HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25
High Temperature Storage Bake (150 °C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25
Physical Dimensions	JESD22-B100	0/30	0/30	0/30
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 3, 260 °C	0/25	0/25	-
Solderability Test	MIL-STD-883 (Method 2003)	0/5	0/5	0/5

*\*Tests were subjected to Preconditioning per JESD22-A113 prior to stress test*

**Appendix B – Affected Product List**

F0442LGRI	RC21008A057GND#KB0	RC21008A077GND#KB0	RC26008A052GND#KBU
F0442LGRI8	RC21008A058GND#BB0	RC21008A078GND#BB0	RC26008A053GND#BB0
F0443LGRI	RC21008A058GND#KB0	RC21008A078GND#KB0	RC26008A053GND#KB0
F0443LGRI8	RC21008A059GND#BB0	RC21008A079GND#BB0	RC26008A055GND#BBS
F1423EVB-DI	RC21008A059GND#KB0	RC21008A079GND#KB0	RC26008A055GND#BBU
F1423EVB-DLI	RC21008A060GND#BB0	RC21008A080GND#BB0	RC26008A055GND#KB0
F1423EVBI	RC21008A060GND#KB0	RC21008A080GND#KB0	RC26008A055GND#KBS
F1423EVB-SI	RC21008A061GND#BB0	RC21008A081GND#BB0	RC26008A055GND#KBU
F1423EVB-SLI	RC21008A062GND#BB0	RC21008A081GND#KB0	RC26008A058GND#BBU
F1423NBGI	RC21008A062GND#KB0	RC21008A082GND#BB0	RC26008A058GND#KBU
F1423NBGI8	RC21008A063GND#BB0	RC21008A082GND#KB0	RC26008AXXXGND#AB0
F2932NBGP	RC21008A063GND#KB0	RC21008A083GND#BB0	RC26008AXXXGND#BB0
F2932NBGP8	RC21008A064GND#BB0	RC21008A083GND#KB0	RC26008AXXXGND#KB0
P9148ANRGI	RC21008A064GND#KB0	RC21008A084GND#BB0	RC31008A000GND#BB0
P9148ANRGI8	RC21008A065GND#BB0	RC21008A084GND#KB0	RC31008A000GND#KB0
P9148NRGI	RC21008A065GND#KB0	RC21008A085GND#BB0	RC31008A050GND#BB0
P9148NRGI8	RC21008A066GND#BB0	RC21008A085GND#KB0	RC31008A050GND#BBN
RC21008A000GND#BB0	RC21008A066GND#KB0	RC21008A087GND#BB0	RC31008A050GND#KB0
RC21008A000GND#KB0	RC21008A067GND#BB0	RC21008A087GND#KB0	RC31008A050GND#KBN
RC21008A001GND#BB0	RC21008A068GND#BB0	RC21008A088GND#BB0	RC31008A051GND#BB0
RC21008A001GND#KB0	RC21008A068GND#KB0	RC21008A088GND#KB0	RC31008A051GND#KB0
RC21008A050GND#BB0	RC21008A069GND#BB0	RC21008A089GND#BB0	RC31008A052GND#BB0
RC21008A050GND#KB0	RC21008A069GND#KB0	RC21008A089GND#KB0	RC31008A052GND#KB0
RC21008A051GND#BB0	RC21008A070GND#BB0	RC21008A090GND#BB0	RC31008A053GND#BB0
RC21008A051GND#KB0	RC21008A070GND#KB0	RC21008A090GND#KB0	RC31008A053GND#KB0
RC21008A052GND#BB0	RC21008A072GND#BB0	RC21008A092GND#BB0	RC31008A054GND#BB0
RC21008A052GND#KB0	RC21008A072GND#KB0	RC21008A092GND#KB0	RC31008A055GND#BB0
RC21008A053GND#BB0	RC21008A073GND#BB0	RC21008A093GND#BB0	RC31008A056GND#BB0
RC21008A053GND#KB0	RC21008A073GND#KB0	RC21008A093GND#KB0	RC31008A056GND#KB0
RC21008A054GND#BB0	RC21008A074GND#BB0	RC21008AENGND#BB0	RC31008A060GND#BB0
RC21008A054GND#KB0	RC21008A074GND#KB0	RC21008AXXXGND#AB0	RC31008A060GND#KB0
RC21008A055GND#BB0	RC21008A075GND#BB0	RC21008AXXXGND#BB0	RC31008A061GND#BB0
RC21008A055GND#KB0	RC21008A075GND#KB0	RC21008AXXXGND#KB0	RC31008A061GND#KB0
RC21008A056GND#BB0	RC21008A076GND#BB0	RC26008A052GND#BB0	RC31008AXXXGND#AB0
RC21008A056GND#KB0	RC21008A076GND#KB0	RC26008A052GND#BBU	RC31008AXXXGND#BB0
RC21008A057GND#BB0	RC21008A077GND#BB0	RC26008A052GND#KB0	RC38008AXXXGND#AB0