

## Product Change Notice (PCN)

**Subject:** Add Alternate Assembly Locations on Select DFN and VFQFPN Packages

**Publication Date:** 5/4/2023

**Effective Date:** 8/3/2023

### Revision Description:

Initial Release

### Description of Change:

Renesas is adding alternate Assembly locations for select DFN and VFQFPN packages. These alternate assembly locations are the current qualified locations for Renesas. The material sets of the current and the alternate assembly locations are as shown in the below table. There will be changes in the material sets at the alternate locations.

There will be no changes in the moisture sensitive level as a result of this change.

	Current	Alternate
DFN-8	<b>CRSS Malaysia</b>	<b>ASEC Taiwan</b>
Die attach material	QMI519	EN4900G
Wire material	Copper wire	Copper wire
Mold compound	G770HCD	G700LA

	GEI Taiwan	CRSS Malaysia
VFQFPN-16		
Die attach material	EN4900LR	QMI519
Wire material	Gold wire	Gold wire
Mold compound	EME-G700HA	EME-G770HCD

	ASEK Taiwan	UTL Thailand
VFQFPN-48		
Die attach material	EN4900F	8600
Wire material	Copper wire	Copper wire
Mold compound	G631H	G700LTD

	ASEC Taiwan	JCET China
VFQFPN-48 & 72		
Die attach material	EN4900G	EN-4900GC (48L) Y-Bond S502D1 (72L)
Wire material	Copper wire	Copper wire
Mold compound	G700LA	CEL-9240HF

	ASEC Taiwan	GEI Taiwan
VFQFPN-88		
Die attach material	EN4900G	CRM-1076DJ-G
Wire material	Copper wire	Copper wire
Mold compound	G700LA	G700HA

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

**Reason for Change:**

The change is to create dual source to secure 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# prefix denote Assembly Location

Prefix	Assembly Location
RC	ASEC Taiwan
MS	CRSS Malaysia
U	UTL Thailand
JC	JCET China
GR	GEI Taiwan
R	ASEK Taiwan

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

**Sample Availability Date:** 4 weeks from sample booking date

**Device Material Declaration:** Available upon 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:** DFN-8

**Qual Vehicle:** DFN-8

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

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

**Assembly Location:** ASEC Taiwan

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
Solderability Test	MIL-STD-883 (Method 2003)	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	-

**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.

**Assembly Location:** CRSS Malaysia

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
Solderability Test	MIL-STD-883 (Method 2003)	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	-

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

**Affected Package:** VFQFPN-48

**Qual Vehicle:** VFQFPN-48

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

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

**Assembly Location:** UTL Thailand

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
Solderability Test	MIL-STD-883 (Method 2003)	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	-

**Affected Package:** VFQFPN-48, VFQFPN-72

**Qual Vehicle:** VFQFPN-72

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

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

**Assembly Location:** JCET China

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
Solderability Test	MIL-STD-883 (Method 2003)	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:** VFQFPN-88

**Qual Vehicle:** VFQFPN-88

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

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

**Assembly Location:** GEI Taiwan

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
Solderability Test	MIL-STD-883 (Method 2003)	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*

**Appendix B – Affected Product List**

8A34002E-000NLG	8A34012ENLG8	8A34045E-006NLG8	8A35004B-000NLG#
8A34002E-000NLG#	8A34042E-000NLG	8A34045E-007NLG	8A35004B-000NLG8
8A34002E-000NLG8	8A34042E-000NLG#	8A34045E-007NLG#	8A35004BNLG
8A34002E-003NLG	8A34042E-000NLG8	8A34045E-007NLG8	8A35004BNLG#
8A34002E-003NLG8	8A34042E-001NLG	8A34045E-008NLG	8A35004BNLG8
8A34002E-004NLG	8A34042E-001NLG8	8A34045E-008NLG#	8A35004C-000NLG
8A34002E-004NLG8	8A34042ENLG	8A34045E-008NLG8	8A35004C-000NLG#
8A34002E-005NLG	8A34042ENLG#	8A34045E-168NLG	8A35004C-000NLG8
8A34002E-005NLG#	8A34042ENLG8	8A34045E-168NLG8	8A35004CNLG
8A34002E-005NLG8	8A34044E-000NLG	8A34045E-218NLG	8A35004CNLG#
8A34002E-006NLG	8A34044E-000NLG#	8A34045E-218NLG#	8A35004CNLG8
8A34002E-006NLG#	8A34044E-000NLG8	8A34045E-218NLG8	8A35004E-000NLG
8A34002E-006NLG8	8A34044E-001NLG	8A34045E-345NLG	8A35004E-000NLG#
8A34002E-990NLG	8A34044E-001NLG#	8A34045E-345NLG#	8A35004E-000NLG8
8A34002E-990NLG#	8A34044E-001NLG8	8A34045E-345NLG8	8A35004ENLG
8A34002E-ENGNLG	8A34044E-002NLG	8A34045E-500NLG	8A35004ENLG#
8A34002ENLG	8A34044E-002NLG#	8A34045E-500NLG8	8A35004ENLG8
8A34002ENLG#	8A34044E-002NLG8	8A34045E-ENGNLG	8A35012E-000NLG
8A34002ENLG8	8A34044E-500NLG	8A34045ENLG	8A35012E-000NLG#
8A34005-000NLG	8A34044E-500NLG8	8A34045ENLG#	8A35012E-000NLG8
8A34005-000NLG8	8A34044E-ENGNLG	8A34045ENLG8	8A35012ENLG
8A34005-001NLG	8A34044ENLG	8A34046E-000NLG	8A35012ENLG#
8A34005-001NLG8	8A34044ENLG#	8A34046E-000NLG#	8A35012ENLG8
8A34005-002NLG	8A34044ENLG8	8A34046E-000NLG8	8A35018D-000NLG
8A34005-002NLG8	8A34045E-000NLG	8A34046E-001NLG	8A35018D-000NLG#
8A34005-003NLG	8A34045E-000NLG#	8A34046E-001NLG#	8A35018D-000NLG8
8A34005-003NLG8	8A34045E-000NLG8	8A34046E-001NLG8	8A35018D-001NLG
8A34005-004NLG	8A34045E-001NLG	8A34046E-002NLG	8A35018D-001NLG#
8A34005-004NLG8	8A34045E-001NLG#	8A34046E-002NLG#	8A35018D-001NLG8
8A34005-ENGNLG	8A34045E-001NLG8	8A34046E-002NLG8	8A35018D-002NLG
8A34005NLG	8A34045E-003NLG	8A34046E-003NLG	8A35018D-002NLG#
8A34005NLG#	8A34045E-003NLG#	8A34046E-003NLG#	8A35018D-002NLG8
8A34005NLG8	8A34045E-003NLG8	8A34046E-003NLG8	8A35018DNLG
8A34012E-000NLG	8A34045E-004NLG	8A34046E-004NLG	8A35018DNLG#
8A34012E-000NLG#	8A34045E-004NLG#	8A34046E-004NLG#	8A35018DNLG8
8A34012E-000NLG8	8A34045E-004NLG8	8A34046E-004NLG8	8A35024E-000NLG
8A34012E-001NLG	8A34045E-005NLG	8A34046E-ENGNLG	8A35024E-000NLG#
8A34012E-001NLG#	8A34045E-005NLG#	8A34046ENLG	8A35024E-000NLG8
8A34012E-001NLG8	8A34045E-005NLG8	8A34046ENLG#	8A35024ENLG
8A34012ENLG	8A34045E-006NLG	8A34046ENLG8	8A35024ENLG#
8A34012ENLG#	8A34045E-006NLG#	8A35004B-000NLG	8A35024ENLG8

8A35025E-000NLG	8A35041NLG	F1180NBGI	RC32012A007GN2#KB0
8A35025E-000NLG#	8A35041NLG#	F1180NBGI8	RC32012A008GN2#BB0
8A35025E-000NLG8	8A35041NLG8	RC22112A001GN2#BB0	RC32012A008GN2#KB0
8A35025ENLG	8T39210NLGI	RC22112A001GN2#HBO	RC32012A009GN2#BB0
8A35025ENLG#	8T39210NLGI8	RC22112AXXXGN2#BB0	RC32012A009GN2#KB0
8A35025ENLG8	8V19N850DNLGI	RC22112AXXXGN2#HBO	RC32012AENGGN2#BB0
8A35027E-000NLG	8V19N850DNLGI/W	RC32012A000GN2#BB0	RC32012AXXXGN2#BB0
8A35027E-000NLG#	8V19N850DNLGI8	RC32012A000GN2#KB0	RC32012AXXXGN2#KB0
8A35027E-000NLG8	8V97003NLGI	RC32012A001GN2#BB0	RC38612A000GN2#BB0
8A35027E-001NLG	8V97003NLGI/W	RC32012A001GN2#KB0	RC38612A000GN2#HBO
8A35027E-001NLG#	8V97003NLGI8	RC32012A002GN2#BB0	RC38612A000GN2#KB0
8A35027E-001NLG8	F0109NBTI	RC32012A002GN2#KB0	RC38612A001GN2#BB0
8A35027E-003NLG	F0109NBTI8	RC32012A003GN2#BB0	RC38612A001GN2#HBO
8A35027E-003NLG8	F0110NBTI	RC32012A003GN2#KB0	RC38612A001GN2#KB0
8A35027E-103NLG	F0110NBTI8	RC32012A004GN2#BB0	RC38612A002GN2#BB0
8A35027ENLG	F0111NBTI	RC32012A004GN2#KB0	RC38612A002GN2#HBO
8A35027ENLG#	F0111NBTI8	RC32012A005GN2#BB0	RC38612A002GN2#KB0
8A35027ENLG8	F0424NTGK	RC32012A005GN2#KB0	RC38612AXXXGN2#BB0
8A35041-000NLG	F0424NTGK8	RC32012A006GN2#BB0	RC38612AXXXGN2#HBO
8A35041-000NLG#	F1130NBGI	RC32012A006GN2#KB0	RC38612AXXXGN2#KB0
8A35041-000NLG8	F1130NBGI8	RC32012A007GN2#BB0	