

## Product Change Notice (PCN)

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

**Publication Date:** 5/28/2024

**Effective Date:** 8/27/2024

**Revision Description:**

Initial Release

**Description of Change:**

Renesas is adding ASEC, Taiwan and JCET, China as the alternate Assembly locations in expanding the supply chain for select VFQFPN packages. The 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, equipment models and inspection items and sampling at the alternate locations. The process flows are identical at all the qualified assembly locations.

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

Material Set / Assembly	Existing			Alternate	
	ASEC, Taiwan	GEI, Taiwan	Carsem, Malaysia	JCET, China	ASEC, Taiwan
VFQFPN-8					
Die Attach Epoxy			QMI519		EN4900G
Bonding Wire			Copper Wire		Copper Wire
Mold Compound			EME-G770HCD		EME-G700LA
VFQFPN-16					
Die Attach Epoxy		CRM-1850, EN4900LR		800HT5, EN4900GC	
Bonding Wire		Gold wire		Gold wire	
Mold Compound		EME-G700HA		EME-G700LA	
VFQFPN-24					
Die Attach Epoxy	EN4900G	EN4900GC		EN-4900GC	
Bonding Wire	Copper Wire	Copper Wire		Copper Wire	
Mold Compound	EME-G700LA	EME-G700HA		EME-G700LA	
VFQFPN-36					
Die Attach Epoxy	EN4900G			EN-4900GC	
Bonding Wire	Copper Wire			Copper Wire	
Mold Compound	EME-G700LA			EME-G700LA	

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

**Reason for Change:**

The change is to create additional supply 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
GR	GEI Taiwan
MS	Carsem, Malaysia
JC	JCET China

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

**Sample Availability Date:** 8 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 <a href="mailto:idt-pcn@lm.renesas.com">idt-pcn@lm.renesas.com</a>
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**Appendix A - Qualification Results**
**Affected Package:** VFQFPN-8

**Qual Vehicle:** VFQFPN-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:** 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
* HAST - unbiased (130 °C/85% RH, 96 Hrs)	JESD22-A118	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-24, 36

**Qual Vehicle:** VFQFPN-36

**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
* HAST - unbiased (130 °C/85% RH, 96 Hrs)	JESD22-A118	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*

**Appendix B – Affected Product List**

8T39S06ANBGI	F1150NBGI	F1178NBGI	RA81F1485LGNM#BDO
8T39S06ANBGI8	F1150NBGI8	F1178NBGI8	RA81F1485STGNM#BDO
F1100NBGI	F1152NBGI	F1423NBGI	RA81F1485STGNM#KDO
F1100NBGI8	F1152NBGI8	F1423NBGI8	
F1102NBGI	F1162NBGI	F1471NTGI	
F1102NBGI8	F1162NBGI8	F1471NTGI8	