Product Change Notice (PCN)

Subject: Add Alternate Bumping Location on WLCSP-40
Publication Date: 7/29/2020
Effective Date: 10/29/2020

Revision Description:
Initial Release

Description of Change:
Renesas is adding HuaTian, China as an alternate bumping location on package WLCSP-40.

The current location is at SFA, Korea.

The material sets of the current and the alternate location are as shown in the below table.

	Existing	Alternate
Material Sets	SFA - SFA Semicon, Korea	HTC – HuaTian, China
RDL (µm)	TiW / Cu /Cu (0.1 / 0.15 / 5.5 ± 1.5)	Ti / Cu / Cu (0.1 / 0.3 / 5.5±1.5)
UBM (µm)	Ti / Cu / Ni / Au (0.1 / 0.15 / 2 ± 0.5 / 0.5)	Ti / Cu / Cu / Ni / SnAg (0.1/0.3/5/2±0.5 / 4)
Polymide/ Passivation 1 and 2	Polymide HD4100 Thickness 7 ± 2µm	Polymide HD4100 Thickness 7 ± 2µm
Back Side Coating	Lintech LC2850 Thickness 25µm	Lintech LC2850 Thickness 25µm
Solder Ball Material (Bump)	SAC105	SAC105
Solder Ball Diameter (mm)	0.268 ± 0.025 (268 ± 25µm)	0.268 ± 0.025 (268 ± 25µm)

Affected Product List: Refer Appendix B

Reason for Change:
Supply continuity and flexibility.

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 “HT” denote HuaTian, China.

Qualification Status: Completed. Refer Appendix A
Sample Availability Date: Available on request
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

Appendix A - Qualification Results
Affected Package: WLCSP-40
Qual Vehicle: WLCSP-79
Qual Vehicle Material:

RDL (µm)	Ti / Cu / Cu (0.1 / 0.3 / 5.5±1.5)	Back Side Coating	Lintech LC2850 Thickness 25µm
UBM (µm)	Ti / Cu / Cu / Ni / SnAg (0.1/0.3/5/2±0.5 / 4)	Solder Ball Material (Bump)	SAC105
Polymide/ Passivation 1 and 2	Polymide HD4100 Thickness 7 ± 2µm	Solder Ball Diameter (mm)	0.268 ± 0.025 (268 ± 25µm)

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 - 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
Solder Ball Shear Test	JESD22-B117	0/5	0/5	0/5
Physical Dimensions	JESD22-B100	0/10	0/10	0/10

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

Appendix B – Affected Product List

P9222-0AZGI	P9222-R2AZGI	P9222-R5AZGI	P9222S-1AZGI
P9222-0AZGI8	P9222-R2AZGI8	P9222-R5AZGI8	P9222S-1AZGI8
P9222-1AZGI	P9222-R3AZGI	P9222-RAZGI	P9222-S2AZGI
P9222-1AZGI8	P9222-R3AZGI8	P9222-RAZGI8	P9222-S2AZGI8
P9222-2AZGI	P9222-R4AZGI	P9222-REAZGI	
P9222-2AZGI8	P9222-R4AZGI8	P9222-REAZGI8	