Product Change Notice (PCN)

Subject: Add Alternate Bump Location and Backend Location on WLCSP6 Package
Publication Date: 7/30/2021
Effective Date: 10/30/2021

Revision Description:
Initial Release

Description of Change:
This PCN notice is to advise customers that Renesas is adding UAT, Malaysia as an alternate bump as well as an alternate backend location on the products listed in this notice. The alternate location, UAT is the new Renesas's qualified manufacturing location.

There will be no change in the moisture sensitive level.

Table 1: Bump Location Comparison

Descriptions	Existing Bump Location SFA, Korea	Alternate Bump Location UAT, Malaysia
RDL (μm)	TiW / Cu / Cu (0.1 / 0.15 / 5.5 ± 1.5)	Ti / Cu / Cu (0.1 / 0.4 / 5.5 ± 1.5)
UBM (μm)	Ti / Cu / Cu (0.1 / 0.15 / 9 ± 2)	Ti / Cu / Cu (0.1 / 0.4 / 9 ± 2)
POLYMIDE/ PASSIVATION 1 and 2	Asahi BL301 Thickness 7 ± 2μm	Asahi BL301 Thickness 7 ± 2μm
BACK SIDE COATING	Lintech LC2850 Thickness 25μm	Lintech LC2850 Thickness 25μm
SOLDER BALL (Bump)	SAC105	SAC105
SOLDER BALL DIAMETER (μm)	0.220 ± 0.025 (220 ± 25μm)	0.220 ± 0.025 (220 ± 25μm)

Table 2: Backend Location Comparison

Descriptions	Existing Backend Location		Alternate Backend Location UAT, Malaysia
	SFA, Korea	ASEM, Malaysia	
Process Flow	Wafer Mount → Dicing → AOI → UV cure → PNP with 5S Inspection + TNR → Packing → Shipping		
Sawing Equipment	Disco - DFD6361	Disco- DFD6361	Disco- DFD6362
Pick and Place; Tape and Reel Equipment	MIT-C330	STI - Isort Maxx	MI 20
AOI	Condor-PD103X	Rudolph-NSX330	Rudolph-NSX105
Packing Materials	Same carrier tape & cover tape		
Labeling	Same labeling		
Mass Production since year	2014	2013	New

Notes: PNP denotes Pick and Place, TNR denotes Tape and Reel

Affected Product List: TS5111-Z2AHRI, TS5111-Z2AHRI8.

Reason for Change:
This change will allow the flexibility to ship from all the qualified facilities and will provide the increased capacity 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:
Lot # with "SL" prefix denotes SFA, Korea and "UA" prefix denotes UAT, Malaysia.

Qualification Status: Refer Appendix A
Sample Availability Date: 9/30/2021
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 consisder 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: WLCSP6
Qual Vehicle: WLCSP6
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
* 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
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	0/25

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

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