Product Change Notice (PCN)

Subject: Add Alternate Foundry and Bump Locations on WLCSP-53 and WLCSP-54
Publication Date: 4/5/2021
Effective Date: 7/5/2021

Revision Description:
Initial Release

Description of Change:
This notification is to advise our customers that Renesas has qualified TSMC Fab 6 as an alternate Foundry for the products listed in this notice. There is no change to the product design or process technology as compared to the existing qualified Foundry, TSMC Fab 8.

Renesas is also adding HuaTian, China as an alternate bumping location. The current bumping 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/Cu (0.1 / 0.15 / 9±2)	Ti/Cu/Cu (0.1 / 0.3 / 9±2)
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	0.268 ± 0.025mm (268 ± 25µm)	0.268 ± 0.025mm (268 ± 25µm)

Affected Product List: Refer Appendix A

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 – Affected Product List

P9415-0AWQI	P9415-1AWQI8	P9415-7AWQI	P9415-R4AWQI8
P9415-0AWQI8	P9415-2AWQI	P9415-7AWQI8	P9415-R5AWQI
P9415-10AWQI	P9415-2AWQI8	P9415-8AWQI	P9415-R5AWQI8
P9415-10AWQI8	P9415-3AWQI	P9415-8AWQI8	P9415-RAWQI
P9415-11AWQI	P9415-3AWQI8	P9415-9AWQI	P9415-RAWQI8
P9415-11AWQI8	P9415-41AWQI	P9415-9AWQI8	P9415-REAWQI
P9415-12AWQI	P9415-41AWQI8	P9415-R1AWQI	P9415-REAWQI8
P9415-12AWQI8	P9415-4AWQI	P9415-R1AWQI8	P9415A-0AWQI
P9415-13AWQI	P9415-4AWQI8	P9415-R2AWQI	P9415A-0AWQI8
P9415-13AWQI8	P9415-5AWQI	P9415-R2AWQI8	P9416S-0AWQI
P9415-14AWQI	P9415-5AWQI8	P9415-R3AWQI	P9416S-0AWQI8
P9415-14AWQI8	P9415-6AWQI	P9415-R3AWQI8	P9416S-1AWQI
P9415-1AWQI	P9415-6AWQI8	P9415-R4AWQI	P9416S-1AWQI8

Product Qualification Report

Product Type: P9415 - 30W Wireless Power Receiver with WattShare TRX Mode			
Device Family:	AW850T002-FWXNA	**Process Technology:**	CV018G BCD Gen 3
Package Type:	WLCSP53	**Fab Location:**	TSMC Fab 6

Test Description	Conditions	Sample Size	Reject	Comments
Device Characterization	IDT's datasheet conditions	100 X 1 lot	0	Pass
ESD: Human Body Model	JESD22-A114 (JS-001) Classification (Class 2, 2KV)	3 x 3 lots	0	Pass
ESD: Charged Device Model	JESD22-C101 Classification (Class C2, 500V)	3 x 3 lots	0	Pass
Latch-Up	JESD78	3 x 3 lots	0	Pass
High Temperature Operating Life (Dynamic) - HTOL	JESD22-A108, +125°C, Vcc-max, 1000 Hrs.	77 x 3 lots	0	Pass
MTP Endurance Testing	1000 cycles @85C	77 x 3 lots	0	Pass
High Temp Storage Life - Data Retention	JESD22-A103 1000 hours @ 150C	77 x 3 lots	0	Pass

Package Qualification Report

Product Type: P9415/P9415S - Wireless Power Receiver with WattShare TRX Mode			
Device Family:	AW850T	**Process Technology:**	CV018G BCD Gen 3
Package Type:	WLCSP53	**Fab Location:**	TSMC
		Assembly Location:	HuaTien China

Test Description	Conditions	Sample Size	Reject	Comments
Temperature Cycling [1]	JESD22-A104, -55°C to +125□C, 700 cycles	25	0/25, x3 lots	Pass
Highly Accelerated Temperature and Humidity stress (UnBiased) [1]	JESD22-A110, +130°C, 85% R.H, 96 hrs	25	0/25, x3 lots	Pass
High Temperature Storage Life	JESD22-A103, +150°C, 1000 hrs	25	0/25, x3 lots	Pass
Physical Dimension	Per Renesas POD	30	0/30 x3 lots	Pass
Moisture Classification	J-STD-020	25	0/25, x3 lots	MSL 1, 260C

Note:

1. With preconditioning per JESD22-A113, MSL1 (260°C)