

Product Advisory (PA)

Subject: Add Additional Manufacturing Locations for DDR5 Temp Sensor in WLCSP6

Publication Date: 4/30/2021

Effective Date: 5/10/2021

Revision Description:

Initial Release

Description of Change:

Renesas is adding alternate manufacturing locations for these products to allow manufacturing flexibility and dual source. The alternate locations, CRSS and SFA are the current Renesas qualified manufacturing locations.

There will be no change in the moisture sensitive level.

Manufacturing Locations	Pre Bump Sort Location	Assembly /Bump Location	Post Bump Sort Location	Backend Location
Current	REPG, Malaysia	SFA, Korea	REPG, Malaysia	ASEM, Malaysia
Alternate	CRSS, Malaysia	SFA, Korea	SFA, Korea	SFA, Korea

Affected Product List: TS5111-Z2AHRI, TS5111-Z2AHRI8, TS5111-Z1AHRI, TS5111-Z1AHRI8, TS5111-Z0AHRI, TS5111-Z0AHRI8

Reason for Change:

To provide manufacturing flexibility and dual source.

Impact on Fit, Form, Function, Quality & Reliability:

The change will have no impact on the form, fit, function, quality and reliability.

Product Identification:

Traceable of manufacturing locations through assembly lot#.

Qualification Status: Refer Appendix A. Electrical correlation report available on request.

Sample Availability Date: 4/30/2021

Device Material Declaration: Available upon request.

Questions or requests pertaining to this change notice, including additional data or samples, must be sent to Renesas within 30 days of the publication date.

For additional information regarding this notice, please contact idt-pcn@lm.renesas.com

Product Qualification Report

Date: 4/27/2021

Product : TS5111-Z2AHR18			
Fab Base:	AP865T	Process Technology:	CM018G, 1P5M
Package Types:	WLCSP 6	Fab Location:	TSMC
		Assembly Location:	SFA - Korea
		Backend Location:	SFA - Korea

Test Description	Conditions	Sample Size	Results (rej/SS)	Comments
High Temperature Operating Life	JESD22-A108, Ta 125°C, Vccmax, 1000 hrs	77	0/77 x 3 lots	Passed
Early Life Failure Rate	JESD22-A108, Ta 125°C, Vccmax, 48 hrs	1000	0/1000 x 3 lots	Passed
ESD: Human Body Model	JESD22-A114 (JS-001) Classification	3	0/3, x3 lots	2000V Class 2
ESD: Charged Device Model	JESD22-C101 Classification	3	0/3, x3 lots	500V Class C2
ESD: Machine Model	JESD22-A115	3	0/3, x 3 lots	200V
Latch-Up	JESD78	6	0/6, x 3 lots	T _A at 125°C
Electrical Characterization	Datasheet	10	Results reported in Datasheet	Completed

Package Qualification Data

Fab Base: AP865T Package Type: WLCSP 6	Process Technology: CM018G, 1P5M, Fab Location: TSMC Assembly Location: SFA – Korea
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Test Description	Conditions	Sample Size	Results (rej/SS)	Comments
Temperature Cycling ¹	JESD22-A104, -55°C to +125°C, 1000 cycles	77	0/77, x3 lots	Passed
Unbiased Highly Accelerated Temperature and Humidity stress (Unbiased) ¹	JESD22-A118, +130°C, 85% R.H., 96 hrs	77	0/77, x3 lots	Passed
Highly Accelerated Temperature and Humidity stress (Biased) ¹	JESD22-A110, +130°C, 85% R.H., V _{CCmax} , 96 hrs	77	0/77, x3 lots	Passed
High Temperature Storage Life	JESD22-A103, +150°C, 1000 hrs	77	0/77, x3 lots	Passed
Physical Dimension	JESD22-B100 (Per applicable Renesas Package Outline Drawing)	30	0/30, x 3 lots	Pass
Moisture Classification	J-STD-020	77	0/77, x 3 lots	MSL1, 260°C

Note:

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