

Product Change Notice (PCN)

Subject: Add Alternate Fab Location

Publication Date: 2/16/2023

Effective Date: 2/16/2023

Revision Description:

Revision 2 to provide full qualification report.

Description of Change:

This PCN notice is to advise customers that Renesas is qualifying TSMC Fab 14 as an alternate fab location to alleviate supply chain constraint on the products listed in this notice. There is no change to the product design or process technology as compared to the existing fab location, TSMC Fab 12.

This product will have the same Orderable Part Number as the existing DDR4 Gen 2.5 RCD but with different manufacturing site info on the topmark.

There is no change to the package assembly and backend manufacturing processing including the product datasheets.

Affected Product List: Refer Appendix B

Reason for Change:

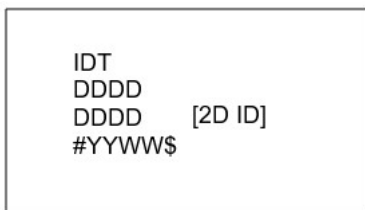
This change will allow the flexibility to ship from all the qualified facilities and will provide the increased capacity.

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:

Stepping “Y” on product marking denotes the alternate fab location, TSMC Fab 14. Refer top mark diagram as depicted below.



- Line 1 = IDT Name
- Line 2 = Part Number
- Line 3 = Part Number
- Line 4 = # - Die Rev (“Y” = TSMC Fab 14, “Z” = TSMC Fab 12)
 YYWW - Date Code
 \$ - Mark Location

Test Correlation report: Available on request

Note:

1. Acknowledgement must be received by Renesas within 30 days or Renesas will consider the change as approved.
2. Request customer for an expeditious qualification and approval of this PCN. Renesas intends to start ramping up production shipments in Q1'23.

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



Appendix A Product Qualification Report

Date: 1/20/2023

Product : 4RCD0232KC1YATG			
Fab Base:	BD012T001-FW	Process Technology:	CLN40G, 1P7M
Package Types:	FCCSP 253	Fab Location:	TSMC 14 - Taiwan
Qual Plan:	Q22-10-003	Assembly Location:	ASEC - Taiwan

Test Description	Conditions	Sample Size	Results (rej/SS)	Comments
High Temperature Operating Life	JESD22-A108, Tj 125°C, Vccmax, 1000 hrs	77	0/77, x 3 lots	Pass
Early Life Failure Rate	JESD22-A108, Tj 125°C, Vccmax, 48 hrs	2500	0/2500	Pass
ESD: Human Body Model	JESD22-A114 (JS-001) Classification	3	0/3, x 3 lots	Pass, Class 2 (2500V)
ESD: Charged Device Model	JS-002 Classification	3	0/3, x 3 lots	Pass, Class C2 (1000V)
Latch-Up	JESD78, +/-200mA	6	0/6, x 3 lots	Pass, T _A at 125°C
Electrical Characterization	Datasheet	10	Result reported in Datasheet	Complete
Temperature Cycling [§]	JESD22-A104, -55°C to +125°C, 700 cycles	25	0/25, x 3 lots	Pass
Highly Accelerated Temperature and Humidity stress (Biased) [§]	JESD22-A110, +130°C, 85% R.H., V _{CCmax} , 96 hrs	77	0/77, x 3 lots	Pass
Unbiased Highly Accelerated Temperature and Humidity stress [§]	JESD22-A118, +130°C, 85% R.H., 96 hrs	25	0/25, x 3 lots	Pass
High Temperature Storage	JESD22-A103, +150°C, 1000 hrs	77	0/77, x 3 lots	Pass
Moisture Classification	J-STD-020, MSL3 / 260°C	25	0/25, x 3 lots	Pass MSL 3

Note:

[§] With MSL preconditioning per JESD22-A113, MSL 3 / 260°C

Appendix B – Affected Product List

4RCD0232EMKC1ATG8B	4RCD0232KC1ATG/M	4RCD0232KC1ATG8/B	4RCD0232KC1ATGI
4RCD0232KC1ATG	4RCD0232KC1ATG8	4RCD0232KC1ATG8/M	