

Product Advisory (PA)

Subject: Notice of Change of Die-Bond Material for RA8 Series Surface-Mount Package Products

Publication Date: 3/26/2025

Effective Date: 9/1/2025

Revision Description: initial release

Description of Change:

Applicable products: RA8 Series LFQFP-144pin products

The back-end factory: Renesas Electronics Corporation Beijing Factory ("Beijing")

Changes: The die-bond material will be changed.

The new die-bond material is a proven one for mass production at "Beijing"

Affected Product List:

Refer to the Product List in the appendix below.

Reason for Change:

To ensure a stable supply.

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

This change will not affect fitting, form, function, quality, and reliability.

Product Identification:

Our production history data can be queried by using the trace code of the product.

Qualification Status:

The reliability test has been completed. Please refer to the attached supplementary materials.

Sample Availability Date: Not applicable

Device Material Declaration:

Please contact our sales representatives or distributors.

Note :

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 your Renesas sales representative.

Appendix: Product List

NO.	Part Number	Package Type	Number of Pins	Family
1	R7FA8E1AFDCFB#BA0	LFQFP	144	RA
2	R7FA8E1AFDCFB#UA0	LFQFP	144	RA
3	R7FA8M1AFECFB#AA0	LFQFP	144	RA
4	R7FA8M1AFECFB#BA0	LFQFP	144	RA
5	R7FA8M1AFECFB#HA0	LFQFP	144	RA
6	R7FA8M1AHECFB#AA0	LFQFP	144	RA
7	R7FA8M1AHECFB#BA0	LFQFP	144	RA
8	R7FA8M1AHECFB#HA0	LFQFP	144	RA
9	R7FA8T1AFECFB#AA0	LFQFP	144	RA
10	R7FA8T1AFECFB#BA0	LFQFP	144	RA
11	R7FA8T1AFECFB#HA0	LFQFP	144	RA
12	R7FA8T1AHECFB#AA0	LFQFP	144	RA
13	R7FA8T1AHECFB#BA0	LFQFP	144	RA
14	R7FA8T1AHECFB#HA0	LFQFP	144	RA

• Appendix

1. Overview of Changed Materials

Item		Before Change	After Change	Note
Assembly factory		Renesas Semiconductor (Beijing) Co., Ltd		No change
Final test factory				
Parts	Lead frame	—	—	No change
	Die Bond	Die Bond Material A manufactured by company A	Die Bond Material B manufactured by company B	Refer to number 2 below
	Mold resin (resin materials)	—	—	No change
Package	Outline	—	—	No change
Marking	Font	—	—	No change

2. Changed Materials

Materials	Current	Addition
Die Bond materials	—	Similar materials are used.

There is no impact on reliability and specification.

3. Changes in Four Ms (Change of Die-Bond Materials)

Item	Check Result	Judgement
Machine	The die mounting process for die bond material A and die bond material B both use the same manufacturing equipment.	No risk
Method	The die mounting process for die bond material A and die bond material B is the same manufacturing method.	No risk
Man	Adopt operator certification system. Only certificated operator can work for the production.	No risk
Material	We use die bond materials that have been certified as materials. Die bond material B has a track record of mass production, and we have confirmed that there is no problem.	No risk

4. Reliability Test Results

Test Items	Test Conditions	ResultsFailure/Size
High Temperature Operating Life(HTOL)	Tj=125 °C, Vccmax, 1000 hrs	0/22
High Temperature Storage Life(HTSL)	Ta=150 °C, 1000 hrs	0/22
Temperature Humidity bias(THB) (*1)	Ta=85 °C, RH=85 %, Vccmax, 1000 hrs	0/22
Temperature Cycling(TC) (*1)	Ta=-65 °C to 150 °C , 300 cycles	0/22
Latch-Up(LU)	Pulse Current Injection, I=+/-150 mA	0/3
Electrostatic discharge(ESD-HBM)	1.5 kΩ, 100 pF, +/-2000 V, 1 time	0/3
Electrostatic discharge(ESD-CDM)	+/-500V,1time	0/3
Solderability(SD)	245 °C, 5 s, Solder coverage ≥95 %	0/5
Resistance to Soldering Heat(PC)	MSL3(Moisture Sensitivity Level 3)	0/22

*1) Preprocessing of MSL3 was applied to THB and TC.

- It is tested to confirm that all the samples are satisfied with an individual product specification.
- Basically qualification tests were performed using a representative product with the same wafer process and the same package structure.