

Product Change Notice (PCN)

Subject: Notice of Die Bond Material Change for SH2 Family FQFP Products

Publication Date: 12/22/2023

Effective Date: 5/1/2025

Revision Description: Initial Release

Description of Change:

The die bond material is to be changed.

The die bond material after change will be a material that has been mass-produced over 2100M pcs for other Renesas products.

Item		Before	After	Note
Assembly Site		Renesas Electronics Yonezawa Factory		No change
Final Test Site				
Component	Lead Frame	—	—	No change
	Die Bond	Company A's Die bond material A	Company A's Die bond material B	Use the same constituent materials as before the change
	Mold Resin (Resin material)	—	—	No change
Package	Dimensions	—	—	No change
Mark	Font	—	—	No change

Affected Product List:

The following parts of SH2 family FQFP products.

DF7055SF40LNV	DF7058BF80KNV	DF7058SKFAKV
DF7055SF40KNFV	DF7058BF80KNFV	DF7058SHFBKV
DF7055SF40KNV	DF7058BDF80KNV	DF7058SFALV
DF7055SKNF40KNV	DF7058SCFAKV	DF7058SDFAKV
DF7055SDF40KNV	DF7058SFAKV#GZ	R4F70590KAFPV
DF7058BF80LNV	DF7058SFAKV	

Reason for Change:

Due to the termination of the current material supply by the die bond material manufacturer.

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

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

Product Identification:

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

Qualification Status:

[Test results of representative products]

Test Item	Test Condition	Result Fail [pcs] / Test (pcs)
High Temperature Operating Life (HTOL)	Ta=150°C, Vccmax, 500h	0/77
High Temperature Storage Life (HTSL)	Ta=150°C, 2000h	0/45
Temperature Humidity Bias (THB)	Ta=85°C, RH=85%, Vccmax, 1000h	0/77
Unbiased HAST (UHST)	Ta=130°C, RH=85%, 96h	0/77
Temperature Cycling (TC)	Ta=-55°C~150°C, 1000cycles	0/77
Latch-Up Test (LU)	I-TEST, I=+/-150mA	0/5
ESD Test (ESD-HBM)	R=1.5kΩ, C=100pF, +/-2000V, 3times	0/5
Solderability (SD)	245°C, 5s, Wet area 95% or more	0/5
Preconditioning (PC)	Equivalent to Moisture Sensitivity Level 3	0/77

[THB,UHST,TC : Pretreatment performed equivalent to MSL3]

Sample Availability Date: Not applicable

Device Material Declaration: Please contact our sales representatives or distributors.

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 your Renesas sales representative.

supplementary explanation:

The manufacturing flow is shown below.

The manufacturing equipment and methods are the same for both before and after the change of material.

There is no change in the manufacturing equipment and methods used in each manufacturing process.

Item	Before	After
Manufacturing Equipment, Manufacturing Method	Dicing process	Dicing process No change in equipment or manufacturing method
	Die mount process	Die mount process No change in equipment or manufacturing method
	Wire bonding process	Wire bonding process No change in equipment or manufacturing method
	Mold process	Mold process No change in equipment or manufacturing method
	Marking / Trimming and Forming process	Marking / Trimming and Forming process No change in equipment or manufacturing method
	Tests	Tests No change in tests
	Packing	Packing No change in packing
	Warehousing and Shipping	Warehousing and Shipping No change in warehousing and shipping

4M Change Point (Die Bond Material Change) is shown below.

Item	Verification result	Judgment
Machine	The die mount process for both Company A die bond material A and die bond material B uses the same manufacturing equipment.	○
Method	The die mount process for both Company A die bond material A and die bond material B are both manufactured using the same manufacturing method.	○
Man	We have introduced a worker certification system, and only trained and certified workers are engaged in the work.	○
Material	We use certified die bond material. Both die bond materials A and B manufactured by Company A have been mass-produced, and we have confirmed that there are no problems.	○