PCN# : [MCP-AC-22-0064]

Product Change Notice (PCN)

Subject: Assembly materials change for R8C/L3x LFQFP 100pin package products
Publication Date: 12/27/2022
Effective Date: 4/1/2023

Revision Description:
Initial release.

Description of Change:
Material change: Lead frame (Shape change)
Mold resin (Mold resin type addition. Uses two types of mold resin)

※Refer to the difference specification file
"MCP-AB-22-0133_R8C_L3Ax_LFQFP100pin_Difference specification"

Affected Product List:
This time, we unify and apply to the part number after the revision of the wait mode function restriction that has already been notified on technical update (TN-R8C-A057B/E) and PCN.
For detailed part number, Refer to page 2 onwards.

Reason for Change:
Stable supply for R8C products.

Impact on Fit, Form, Function, Quality & Reliability:
No impact.

Product Identification:
Possible to confirm the production history data from the packing label or trace code.

Qualification Status: We will prepare by 2/28/2023.
Sample Availability Date: 4/1/2023
Device Material Declaration: Contact Renesas sales, distributor or agency.

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.

Target part number list:

Target Part number
R5F2L3A7CDFP#31
R5F2L3A7CN603FP#31
R5F2L3A7CN604FP#31
R5F2L3A7CNFP#31
R5F2L3A8CDFP#31
R5F2L3A8CNFP#11
R5F2L3A8CNFP#31
R5F2L3AACDFP#31
R5F2L3AACNFP#31
R5F2L3ACCDFP#31
R5F2L3ACCN600FP#31
R5F2L3ACCN601FP#31
R5F2L3ACCN602FP#31
R5F2L3ACCN607FP#31
R5F2L3ACCNFP#31
R5F2L3A7MDFP#31
R5F2L3A7MNFP#31
R5F2L3A8MDFP#31
R5F2L3A8MNFP#31
R5F2L3AAMDFP#31
R5F2L3AAMNFP#31
R5F2L3ACMDFP#31
R5F2L3ACMNFP#31

Part number before the release of wait mode function restrictions:

Target Part number before change	Part number after change
R5F2L3A7CDFP#30	R5F2L3A7CDFP#31
R5F2L3A7CNFP#30	R5F2L3A7CNFP#31
R5F2L3A8CDFP#30	R5F2L3A8CDFP#31
R5F2L3AACDFP#30	R5F2L3AACDFP#31
R5F2L3AACNFP#30	R5F2L3AACNFP#31
R5F2L3ACCDFP#30	R5F2L3ACCDFP#31
R5F2L3ACCNFP#30	R5F2L3ACCNFP#31
R5F2L3A7MDFP#30	R5F2L3A7MDFP#31
R5F2L3A8MDFP#30	R5F2L3A8MDFP#31
R5F2L3A8MNFP#30	R5F2L3A8MNFP#31
R5F2L3AAMNFP#30	R5F2L3AAMNFP#31

Difference of specification (R8C/L3Ax LFQFP 100pin)

(Mold resin, Lead frame)

Assembly factory: RSB Sorting factory: RSB

December. 26. 2022

MCU PRODUCT MARKETING DEPARTMENT
MCU DEVICE SOLUTION BUSINESS DIVISION
IoT AND INFRASTRUCTURE BUSINESS UNIT
RENESAS ELECTRONICS CO., LTD.

MCP-AB-22-0133

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(Rev. 5.0-1 October 2020)

Difference outline

■ Target products

R8C/L3Ax LFQFP 100pin products that change the lead frame and mold resin.

■ Change items

Material change: Lead frame (Shape change)

Mold resin (Mold resin type addition. Uses two types of mold resin)

■ Reason for change

Stabilization of supply.

- Impact on Fit, Form, Function,

  No impact. Outline does not change.
- Quality & Reliability:

  No impact

Material change items

Item		Before change	After change
Lead frame	Shape	Shape is different.	
	Material	No change	
Mold resin	Material	Epoxy resin A * (halogen-free)	Epoxy resin A or B * (halogen-free)

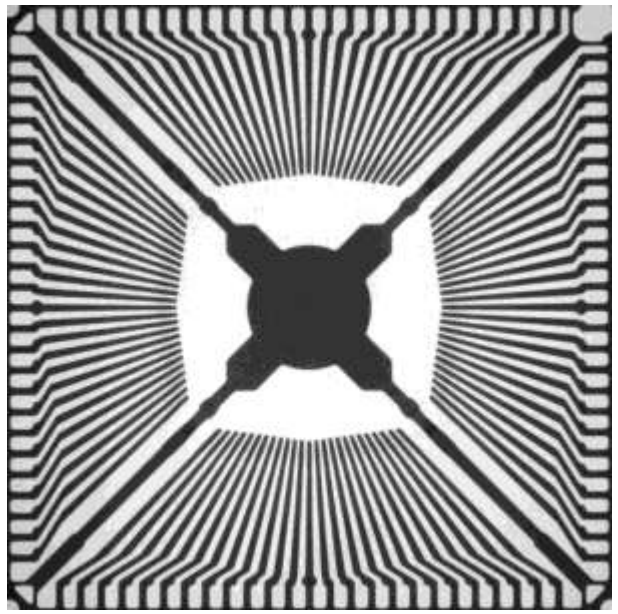
* Although there are material changes, the combination after the change has a track record of mass production, and there is no change in reliability and characteristics.

Lead frame shape

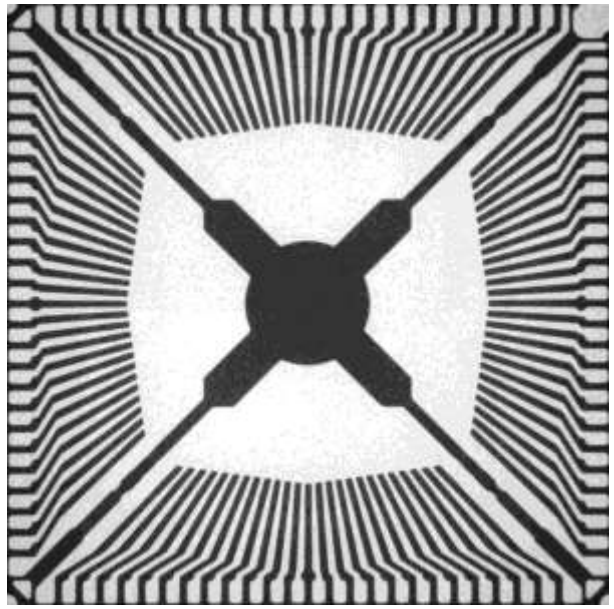
14×14mm 0.5mm pitch 100pin LFQFP lead frame

Consolidate into certified and proven lead frames.

Before change: **“Frame A”**



After change **“Frame C”**



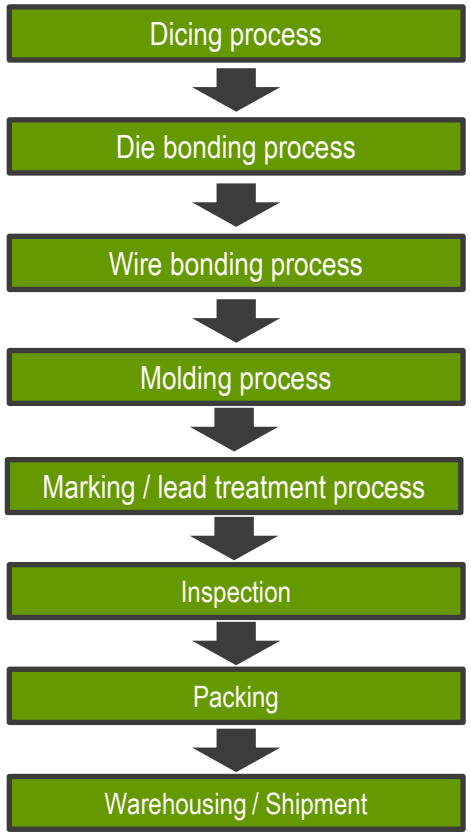
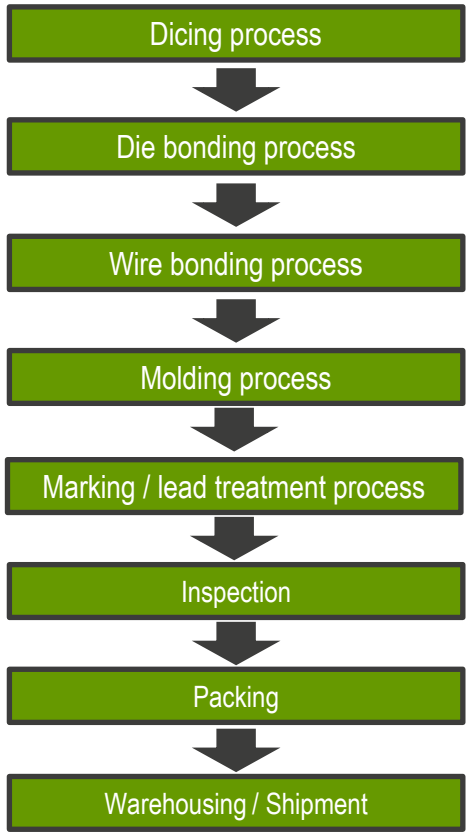
RX, RL78 family
(Notified for M16C family)

Marking visibility

※Character is reference example

	Surface	Back side
Additional mold resin		
Current mold resin		

Manufacturing equipment and manufacturing process: No change

Verification item	Before change	After change	
Manufacturing equipment and process			There are no changes in equipment or manufacturing methods. There are no changes in equipment or manufacturing methods. There are no changes in equipment or manufacturing methods. There are no changes in equipment or manufacturing methods. There are no changes in equipment or manufacturing methods. There is no change in inspection. There is no change in packing. There are no changes in warehousing or shipments.

4M change points (Lead frame shape change)

Item	Check Result	Judgement
Machine	There is no change in the equipment.	**No risk**
Method	There is no change in the manufacturing method.	**No risk**
Man	Adopt operator certification system. Only certificated operator can work for the production.	**No risk**
Material	Only use certificated materials. The lead frame to be changed has a mass production record. It has been confirmed that there is no problem with quality.	**No risk**

4M change points (Mold resin change)

Item	Check Result	Judgement
Machine	There is no change in the molding equipment.	**No risk**
Method	There is no change in the mold manufacturing method.	**No risk**
Man	Adopt operator certification system. Only certificated operator can work for the production.	**No risk**
Material	Only use certificated materials. The mold resin to be changed has a mass production record. It has been confirmed that there is no problem with quality.	**No risk**

Concrete approach at change

Items	Failure mode	factor	At process establishment	Judgement
The shape of lead frame change	Assembly failure	Die misaligned	Mass productivity was evaluated using similar products with the same PKG outline.	No risk
	Impact on reliability	Delamination after reflow	Reliability evaluation with similar products with the same PKG outline is no problem.	No risk
Mold resin change	Impact on reliability	Delamination after reflow	Reliability evaluation with similar products with the same PKG outline is no problem.	No risk

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