

Product Change Notice (PCN)

Subject: Assembly & sorting factory addition for RL78/G1G LQFP44pin package products.

Publication Date: 9/13/2024

Effective Date: 12/27/2024

Revision Description:

Initial release

Description of Change:

Group name : RL78/G1G

Target package : 10mm×10mm 0.8mm pitch 44pin LQFP

- 1) Assembly & sorting factory
Existing factory: Renesas Semiconductor KL Sdn. Bhd. (KL)
Additional factory: Renesas Semiconductor (Beijing) Co., Ltd. (Beijing)
- 2) Assembly material
Use materials certified by additional factory.
Refer to the “Appendix” for detail.
- 3) Package outline
Refer to the “Appendix” for detail.
There is no change in footprint for additional factory products.
- 4) Marking
Some marking specifications are changed.
Refer to the “Appendix” for detail.

Affected Product List:

R5F11EF8AFP#10	R5F11EF8AFP#50	R5F11EF8AFP#70
R5F11EFAAFP#10	R5F11EFAAFP#50	R5F11EFAAFP#70

Reason for Change:

Stable supply for target group products.

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

Form: Refer to the “Appendix” for detail.

Impact on Fit, Function, Quality & Reliability: No Impact

Product Identification:

Our production history data can be checked from packing label or trace code.

Qualification Status: Available from 10/18/2024

Sample Availability Date: 12/27/2024

PCN sample is a representative ES sample.

The ES sample has the same functionality as the mass-produced product and its sample is the representative (ROM/RAM capacity, Fields of application and Wafer process).

Differences from MP products: The sorting place is different (the test program is the same).

Device Material Declaration: Please contact your Renesas sales representative.

- 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.

Appendix

DIFFERENCE OF SPECIFICATION

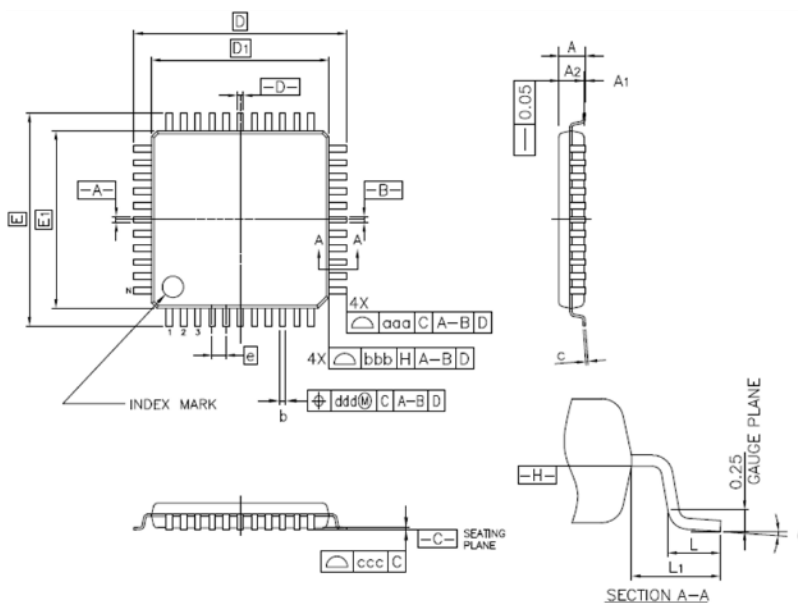
Item		Additional factory	Existing factory
Assembly factory		Beijing	KL
Sorting factory		Beijing	KL
Package	Outline	There are differences (Refer to the following)	
Lead frame	Material	No change	
	Inner pattern	Refer to outline drawing (Refer to the following)	
Die mount	Material	Ag epoxy paste B *	Ag epoxy paste A *
Bonding wire	Material	No change: Cu (Pd coating)	
Resin	Material	Epoxy resin B * (halogen-free)	Epoxy resin A * (halogen-free)
Plating	Material	No change	
Marking		There are differences (Refer to the following)	
Packing	Tray/ Emboss tape	No change	
Storage condition	after opening	No change	

* Factory certified materials.

There are differences in materials, but there is no change in reliability or characteristics.

Package outline (Beijing)

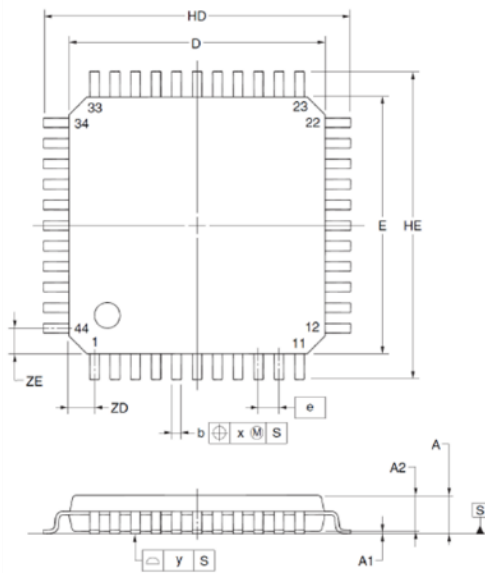
RENESAS Code : PLQP0044GF-A



Reference Symbol	Dimension in Millimeters		
	Min.	Nom.	Max.
A	—	—	1.70
A ₁	0.05	—	0.15
A ₂	1.35	1.40	1.45
D	12.00 BSC.		
D ₁	10.00 BSC.		
E	12.00 BSC.		
E ₁	10.00 BSC.		
N	—	44	—
e	0.80 BSC.		
b	0.30	0.37	0.45
c	0.09	—	0.20
ε	0°	3.5°	8°
L	0.45	0.60	0.75
L ₁	1.00 REF.		
aaa	—	—	0.20
bbb	—	—	0.20
ccc	—	—	0.10
ddd	—	—	0.20

Package outline (KL)

RENESAS Code : PLQP0044GC-A



(UNIT:mm)

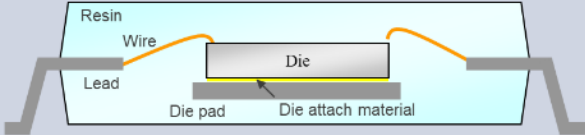

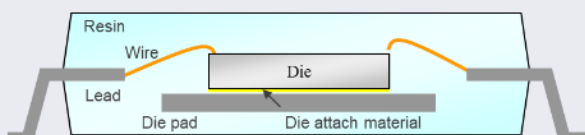

ITEM	DIMENSIONS
D	10.00±0.20
E	10.00±0.20
HD	12.00±0.20
HE	12.00±0.20
A	1.60 MAX.
A1	0.10±0.05
A2	1.40±0.05
A3	0.25
b	0.37 ^{+0.08} _{-0.07}
c	0.145 ^{+0.055} _{-0.045}
L	0.50
Lp	0.60±0.15
L1	1.00±0.20
θ	3°~5° _{-3°}
e	0.80
x	0.20
y	0.10
ZD	1.00
ZE	1.00

Dimension comparison

Beijing Symbol	PLQP0044GF-A			KL Symbol	PLQP0044GC-A		
	Dimension in Millimeters				Dimension in Millimeters		
	Min	Nom	Max		Min	Nom	Max
A	-	-	1.70	A	-	-	1.60
A1	0.05	-	0.15	A1	0.05	0.10	0.15
A2	1.35	1.40	1.45	A2	1.35	1.40	1.45
D	-	12.00	-	HD	11.80	12.00	12.20
D1	-	10.00	-	D	9.80	10.00	10.20
E	-	12.00	-	HE	11.80	12.00	12.20
E1	-	10.00	-	E	9.80	10.00	10.20
N	-	44	-	-	-	-	-
e	-	0.80	-	e	-	0.80	-
b	0.30	0.37	0.45	b	0.30	0.37	0.45
c	0.09	-	0.20	c	0.10	0.145	0.20
θ	0°	3.5°	8°	θ	0°	3°	8°
L	0.45	0.60	0.75	Lp	0.45	0.60	0.75
L1	-	1.00	-	L1	0.80	1.00	1.20
aaa	-	-	0.20	-	-	-	-
bbb	-	-	0.20	-	-	-	-
ccc	-	-	0.10	y	-	0.10	-
ddd	-	-	0.20	x	-	0.20	-

Package structure image


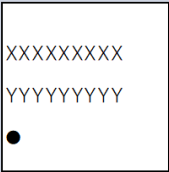
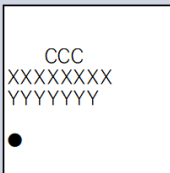
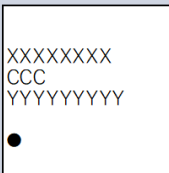
Package Section and die pad shape are reference example.

Assembly factory	PKG cross section	Die pad shape
Additional factory		 <p style="text-align: center;">Beijing</p>
Existing factory		 <p style="text-align: center;">KL</p>

There is no impact on the reliability by die pad shape.





Marking specifications

Marking position is reference example.

Assembly factory	Beijing (Additional factory)	KL (Existing factory)
Blank products		
ROM products		

Marking photos

Marking position and characters are reference example.
The color varies depending on the shooting conditions.

Assembly factory	Beijing (Additional factory)	KL (Existing factory)
Overall photo		
Enlarged photo		

4M changing points

(Addition of assembly and sorting factory , Change of material)

Item	Check Result	Judgement
Machine	Changing at assembly and sorting. The machines are equivalent to present machines. There are production of similar products and we have already checked the additional products have no risk on the production.	No risk
Method	The same as current products.	No risk
Man	Using operator certification system. Only certificated operator can work for the production.	No risk
Material	Only use certificated materials. The products has been certificated by reliability test same as existing products and have no risk.	No risk