

Product Change Notification

(Notification – P2302008-DI)
 (IMO-AB-23-0009 / IMO-AB-23-0017-1 / DCZ013)

February 10, 2023

To: *Our Valued Distribution Customer*

The purpose of this notification is to communicate a product change of select Renesas Electronics America, Inc. (REA) devices.

This notification announces a change to the assembly and final test sites for select RA (RA6M3) & SYNERGY (S5D9) devices in the 176pin LFQFP package. As a result of the site changes, some assembly materials are also changing. See appendix for additional details.

There is a change to the part number, fit and form. There is no impact to the specifications, characteristics, quality & reliability of the products.

Affected Products: A review of our records indicates the list of products below may affect your company.

Booking Part Number	Replacement Part Number
R7FA6M3AF3CFC#AA0	R7FA6M3AF3CFC#BA1
R7FA6M3AH3CFC#AA0	R7FA6M3AH3CFC#BA1
R7FS5D97C3A01CFC#AA0	R7FS5D97C3A01CFC#BA1
R7FS5D97E3A01CFC#AA0	R7FS5D97E3A01CFC#BA1
R7FS5D97C3A01CFC#BA0	R7FS5D97C3A01CFC#BA1
R7FS5D97E3A01CFC#BA0	R7FS5D97E3A01CFC#BA1

Part numbers given in this list are for active part numbers in REA database at the time of this notification.

Key Dates:

Shipments from REA of the devices using the assembly and final test site begins.	July 3, 2023
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Response: No response is required. REA will consider this notification approved 30 days after its issue. If you anticipate volumes beyond your regular rate prior to the transition date, please contact your REA sales representative with a forecast of your requirements.

If the customer provides a timely acknowledgement, the customer shall have 90 days (an additional 60 days) from the date of receipt of this notification in which to make any objections to the notification. If the customer does not make any objections to this notification within 90 days of the receipt of the notification, then Renesas will consider the notification as approved. If customer cannot accept the notification, then the customer must provide Renesas with a last time buy demand and purchase order.

Please contact your REA sales representative for any questions or comments. Thank you for your attention.

Sincerely,

Renesas Electronics America, Inc.

Appendix A: Change Summary

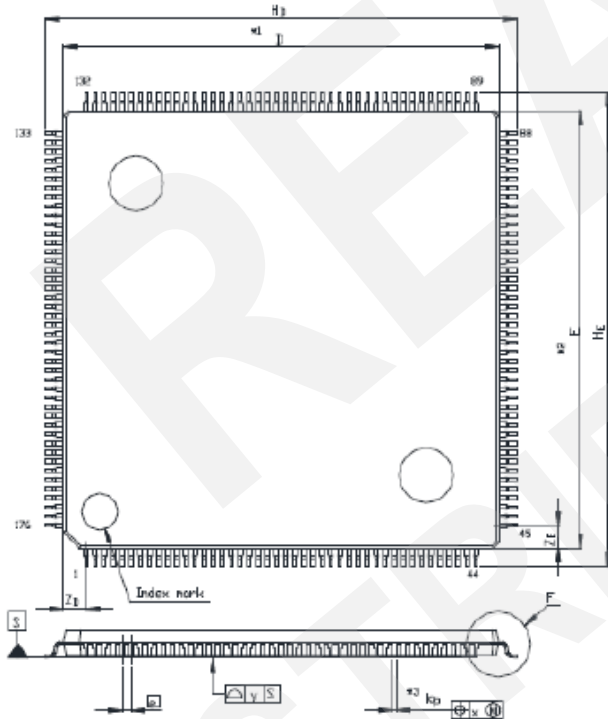
Item	Current	New
Assembly Site	Renesas Semiconductor (Suzhou) Co., Ltd	Greatek Electronics Inc.
Final Test Site (Sorting)		King Yuan Electronics Co., Ltd
Lead Frame Material	-	Changed (Standard material used in new factory. Structure is not changed)
Die Mount	-	Changed (Standard material used in new factory. (Structure is not changed)
Chip Thickness	280μm	305μm (12mil)
Package Outline	-	Changed (Changes in some dimensions.)
Package Mark	-	Changed
Package Marking Font	-	Changed
Packing Tray	-	Changed (Certified Tray)
Packing Bundling Band Color	-	Changed (Changed to Black)
Packing Full Carton Quantity	Fractional Packing: 1 Full Carton Packing: 320	Fractional Packing: Not Available Full Carton Packing: 240
Storage Condition (After Opening)	Within 30°C / 70%RH / 168h	Within 30°C / 60%RH / 168h

* There is no change in reliability and specification.

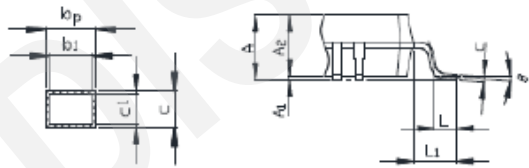
Appendix B: 24x24mm 176pin LQFP Package Change

Current Package

RENESAS Code: PLQP0176KB-A



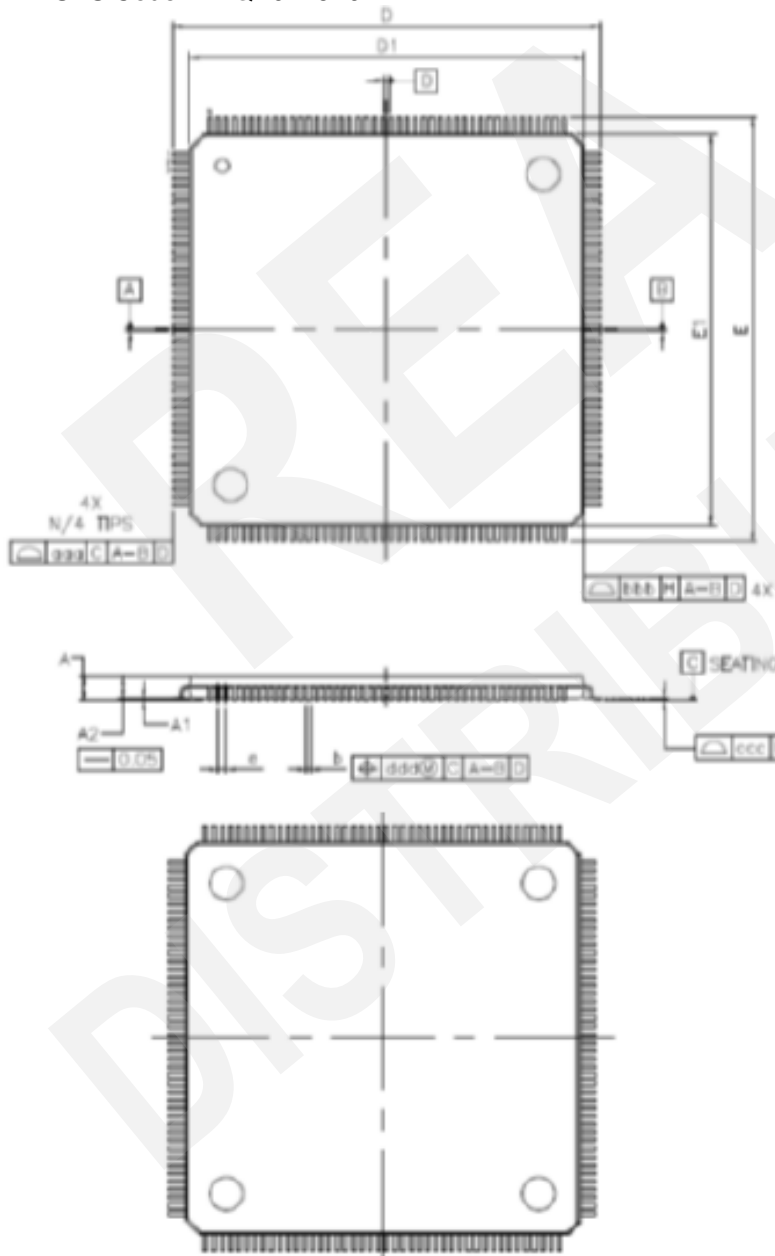
Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
D	23.9	24.0	24.1
E	23.9	24.0	24.1
A ₂	—	1.4	—
H ₁	25.8	26.0	26.2
H _E	25.8	26.0	26.2
A	—	—	1.7
A ₁	0.05	0.1	0.15
b _p	0.15	0.20	0.25
b _L	—	0.18	—
c	0.09	0.145	0.20
c _t	—	0.125	—
θ	0°	—	8°
□	—	0.5	—
x	—	—	0.08
y	—	—	0.08
Z ₁	—	1.25	—
Z _E	—	1.25	—
L	0.35	0.5	0.65
L _t	—	1.0	—



Appendix B: 24x24mm 176pin LQFP Package Change (cont.)

New Package

RENESAS Code: PLQP0176KJ-A



SYMBOLS	MIN.	NOM.	MAX.
A	-	-	1.60
A1	0.05	-	0.15
A2	1.35	1.40	1.45
D	26.00 BSC		
D1	24.00 BSC		
E	26.00 BSC		
E1	24.00 BSC		
N	176		
e	0.50 BSC		
b	0.17	0.22	0.27
b1	0.17	0.20	0.23
c	0.09	-	0.20
c1	0.09	-	0.18
θ	0°	3.5°	7°
L	0.45	0.60	0.75
L1	1.00 REF		
ddd	0.20		
bbb	0.20		
ccc	0.08		
ddd	0.08		

Appendix C: Package Dimension Change (24x24mm 176pin LQFP Package)

Gretek symbols are the same as the JEDEC standard.

Current	24x24mm 176pin LQFP			Change	24x24mm 176pin LQFP		
	PLQP0176KJ-A				PLQP0176KJ-A		
RSC	Dimension in Millimeters			Gretek	Dimension in Millimeters		
Symbol	Min	Nom	Max	Symbol	Min	Nom	Max
A	-	-	1.70	A	-	-	1.60
A1	0.05	0.10	0.15	A1	0.05	-	-
A2	-	1.40	-	A2	1.35	-	-
HD	25.80	26.00	26.20	D	-	26.00	-
D	23.90	24.00	24.10	D1	-	24.00	-
HE	25.80	26.00	26.20	E	-	26.00	-
E	23.90	24.00	24.10	E1	-	24.00	-
-	-	-	-	N	-	176	-
e	-	0.50	-	e	-	0.50	-
bp	0.15	0.20	0.25	b	0.17	0.22	0.27
-	-	-	-	b1	0.17	0.20	0.23
c	0.09	0.145	0.20	c	0.09	-	0.20
-	-	-	-	c1	0.09	-	0.16
θ	0°	-	8°	θ	0°	3.5°	7°
L	0.35	0.50	0.65	L	0.45	0.60	0.75
L1	-	1.00	-	L1	-	1.00	-
-	-	-	-	aaa	-	0.20	-
-	-	-	-	bbb	-	0.20	-
y	-	-	0.08	ccc	-	0.08	-
x	-	-	0.08	ddd	-	0.08	-

The dimensions are equivalent to the current ones.

The difference in the numerical value is because the part specified as the dimension is different.

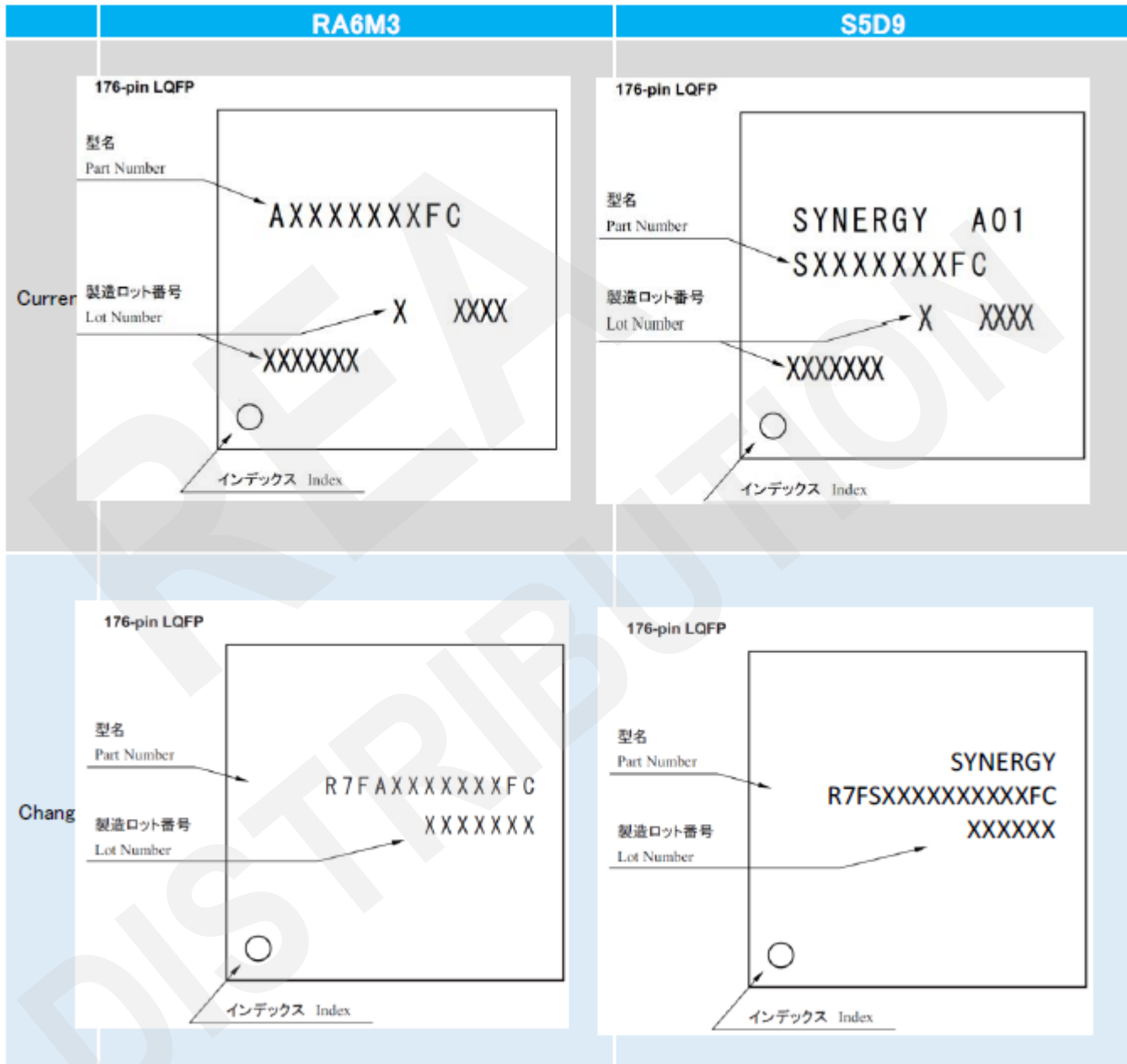
Appendix D: Marking Appearance and Font Change (24x24mm 176pin LQFP Package)

Marked characters are reference examples.

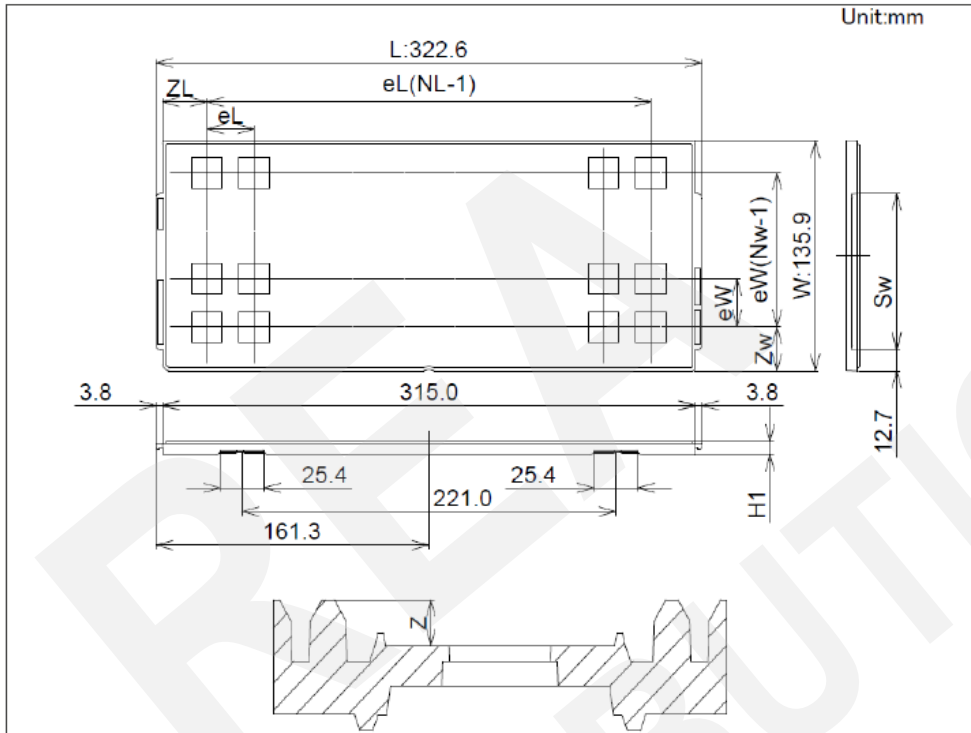
	Package surface	Package back	Font
Current			
Change			

There is no WS notation in the actual product

Appendix D: Marking Specification Change (24x24mm 176pin LQFP Package)



Appendix E: Packing Tray Change



Tray Code	Current	Change
		LQFP24x24x1.4
Position dimension of cells	Z	1.50
	Zw	20.70
	ZL	20.70
	eW	31.50
	eL	30.40
Thickness (mm)	Sw	92.1
Number of cells	H1	7.62
	Nw	4
Maximum storage pcs IC/Tray	NL	10
		40
Maximum storage pcs IC/Inner box	320	240
Material	Carbon PPE	
Heat resistant temperature	135°C MAX	
JEDECorCustom	JEDEC	
Surface resistance	Less than $1 \times 10^{11} \Omega/\square$	

Appendix F: Full Carton Packing Change

Unification of ordering into a full carton of full trays. Order quantity units will be in increments of 240 pieces.

In full carton packing, in which the tray and the inner box are filled, if the inner box cannot be filled with one production lot, a maximum of three lots will be combined to form a shipping lot.

Comparison Table

Item	Fractional Packing	Full Carton Packing
Packing Presentation	There are un-stored (empty) parts of the tray. The number of trays in the inner box is less than the specified number.	All items are stored in the tray. The number of trays stacked in the inner box is the specified upper limit, and the inner box is fully stored.
Product Label	No lot number on the upper left corner of the label.	The integrated lot details are indicated on the upper left of the label.
Integration of Assembly Lots	No integration, one production lot.	Possibility to combine up to 3 production lots in one inner box.
Order Model Name	1st digit after # in orderable model name: #A*	1st digit after # in orderable model name: #B*
Order Quantity	1 unit	Multiples of full carton unit of measure.

Example of Current Label (Fraction Storage)

There is no production lot notation on the upper left of the label.

Example New Label (Full Carton & Integrated Lot Storage)

Indicate the integrated production lot on the upper left of the label: 3 production lots.

Integration example (serial number, week code, quantity)



Appendix G: 4M Changing Points (Change for Assembly Factory & Materials)

Item	Check Result	Judgement
Machine	Change at assembly - the machines are equivalent to present machines. There are production of similar copper wire products and we have already checked the additional products have no risk on the production.	No Risk
Method	Same as current products.	No Risk
Man (Operator)	Using operator certification system. Only certificated operators can work for the production.	No Risk
Material	Only using certificated materials. The products have been certificated by same reliability test as present products and have no risk.	No Risk