

Product Change Notice (PCN)

Subject: Alternate assembly facility of the listed Renesas DFN / QFN / TDFN / TQFN packaged products

Publication Date: 1/25/2021

Effective Date: 4/24/2021

Revision Description:

Initial Release

Description of Change:

1. Alternate bond wire material from Gold to Copper wire
2. Standardize Moisture Sensitivity Level
3. Alternate assembly facility of the listed Renesas DFN / QFN / TDFN / TQFN packaged products
 - *Carsem (M) Sdn Bhd – S Site, Ipoh, Malaysia (CAS)*

List of changes :

- Table 1 : - Wire material change from Gold to Copper
- Table 1 : - Standardize Moisture Sensitivity Level from MSL1,2, 3 to MSL3.
- Table 2 : - Adding CAS as alternate assembly site

Renesas Part #	Existing Assembly site / Wire Material / MSL	New Assembly Site / Wire material / MSL	Remarks
Product as listed in Table #1	CAS / Gold Wire / MSL 1,2,3	CAS / Copper Wire / MSL 3	*Copper wire was qualified and mass production in CAS *Wire change from Gold to Copper *Standardize MSL from MSL1,2,3 to MSL3
Product listed in Table #2	X / Copper Wire / MSL3	CAS / Copper Wire / MSL 3	*Copper wire was qualified and mass production in CAS *Enable CAS as alternate assembly site

This notice is to inform you that Renesas will begin using copper wire bond material at the CAS facility for the Listed Renesas DFN, QFN, TDFN and TQFN packaged products. The copper bond wire is an alternate to the gold bond wire currently used for assembly of the listed products.

Reason for Change:

CAS is existing assembly supplier for Renesas for Copper wire assembly. Adding assembly site will expand current capabilities and capacities to optimize Renesas’s ability to meet customer’s delivery requirements. CAS is existing assembly supplier for Renesas. CAS facility is ISO9001:2015 and IATF 16949:2016 certified. CAS is existing assembly supplier for high

volume assembly of DFN, QFN, TDFN, TQFN packaged products with both gold and copper bond wire material.

Impact on fit, form, function, quality & reliability:

The assembly qualification plan is designed using JEDEC and other applicable industry standards to confirm there is no impact to form, fit, function or interchangeability of the product. A summary of the qualification plan and results is included for reference. Please refer Appendix B. The remainder of the manufacturing operations (wafer fabrication, package level electrical test, etc) will continue to be processed to previously established manufacturing flow.

Products assembled with copper bond wire are classified as Moisture Sensitivity Level Three (MSL3). As such, the affected devices will be packed, labeled and shipped as MSL 3 upon implementation of the changes outlined in the PCN.

Product Identification:

Product affected by this change is identifiable via Renesas’s internal traceability system. In addition, product assembled at CAS may also be identified by the assembly site code (country of assembly) when marked on the devices. The site code for product assembled at

#	Assembly Site	Site Code	Remarks
1	CAS	X	For Copper wire products

Customers may expect to receive product assembled using gold bond wire from the current facility or copper bond wire from CAS facility until the existing inventory is depleted or earlier with customer’s approval.

Qualification status: Completed, See attached
Sample availability: 2/15/2021
Device material declaration: Available upon request

Sample is available February 15, 2021 onwards, and subject to availability. Customer may expect 1 – 2 months for sample replenishment.

Note:

- Acknowledgement must be received by Renesas within 30 days or Renesas will consider the change as approved.*
- 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.*
- 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 regional change coordinator (below)			
Americas: PCN-US@RENEASAS.COM	Europe: PCN-EU@RENEASAS.COM	Japan: PCN-JP@RENEASAS.COM	Asia Pac: PCN-APAC@RENEASAS.COM

Appendix A :-

Table #1 – Wire material change from Gold to Copper and Standardize Moisture Sensitivity Level from MSL1,2,3 to MSL 3.

Table 1 : Affected Product List

ISL6265CHRTZ	ISL9444IRZ-T	ISL9120IRTNZ	ISL28025FR12Z-T7A
ISL6265CHRTZ-T	ISL9444IRZ-T7A	ISL9120IRTNZ-T	ISL28025FR12Z-TS2490
ISL6265CIRTZ	ISL6341CRZ	ISL97656IRTZ	ISL6617IRZ
ISL6265CIRTZ-T	ISL6341CRZ-T	ISL97656IRTZ-T	ISL6617IRZ-T
ISL9444CRZ	ISL6341CRZ-TR5326	ISL97656IRTZ-TK	ISL6292-2CR3Z
ISL9444CRZ-T	ISL9120IRTAZ	ISL97656IRTZ-TS2722	ISL6292-2CR3Z-T
ISL9444CRZ-T7A	ISL9120IRTAZ-T	ISL28025FR12Z	ISL8502AIRZ-TKR5632
ISL9444IRZ	ISL9120IRTAZ-T7A	ISL28025FR12Z-T	



Table #2 – Adding CAS as alternate assembly site.

Table 2 :- Affected Product List

ISL95836HRTZ	ISL95338HRTZ	ISL88739HRZ-TR5698	ISL95816HRZ
ISL95836HRTZ-T	ISL95338HRTZ-T	ISL88739HRZ-TS2778	ISL95816HRZ-T
ISL95836HRTZ-TR5612	ISL95338HRTZ-T7A	ISL9237HRZ	ISL95816HRZ-TS2490
ISL95836HRTZ-TS2568	ISL95338HRTZ-TK	ISL9237HRZ-T7A	ISL95833BHRTZ
ISL95836IRTZ	ISL95338HRTZ-TS2778	ISL9237HRZ-TK	ISL95833BHRTZ-T
ISL95836IRTZ-T	ISL95338IRTZ	ISL9237HRZ-TS2568	ISL95833BHRTZ-TR5672
ISL95836IRTZ-TS2568	ISL95338IRTZ-TK	ISL9237HRZ-TS2722	ISL95833HRTZ
ISL9238BIRTZ	ISL9538BHRTZ-TS2701	ISL9237HRZ-TS2780	ISL95833HRTZ-T
ISL9238BIRTZ-T	ISL9538CHRTZ-TS2701	ISL9237IRZ-TR5700	ISL95833HRTZ-TS2490
ISL9538HRTZ-T	ISL9538HRTZ	ISL9237IRZR5700	ISL95833HRTZ-TS2568
ISL9237HRZ-T	ISL9538HRTZ-TK	ISL95521AHRZ	ISL95856IRZ
ISL95521BHRZ-T	ISL9538HRTZ-TS2701	ISL95521AHRZ-T	ISL95856IRZ-T
ISL9238IRTZ-T	ISL9538HRTZ-TS2778	ISL95521AHRZ-TS2778	ISL95866CIRZ
ISL88738HRTZ	ISL62773HRZ	ISL95521BHRZ	ISL95866CIRZ-T
ISL88738HRTZ-T	ISL62773HRZ-T	ISL95521BHRZ-TS2778	
ISL9238HRTZ-TKS2568	ISL62773HRZ-TS2705	ISL95521BIRZ	
ISL9238HRTZ-TR5542	ISL62773IRZ	ISL95521BIRZ-T	
ISL9238HRTZ-TS2780	ISL62773IRZ-T	ISL95812HRZ	
ISL9238IRTZ	ISL62773IRZ-TS2705	ISL95812HRZ-T	
ISL9241HRTZ-TS2701	ISL88739HRZ	ISL95812HRZ-TS2490	
ISL9241HRTZ-TS2780	ISL88739HRZ-T	ISL95812HRZ-TS2705	

Appendix B : Reliability Plan

Test Description	Condition	ISL6265CHRTZ 48 Lead, 6.0mm x 6.0mm TQFN Package	ISL6341CRZ 10 Lead, 3.0mm x 3.0mm TDFN Package
Moisture Sensitivity Classification	Level 3	N = 600 Acc = 0 L3 Pb Free	N = 1319 Acc = 0 L3 Pb Free
Biased Highly Accelerated Stress Test (bHAST) +130°C ; 85% RH	96 hours	N = 78 Acc = 0 L3 Pb Free	
Unbiased Highly Accelerated Stress Test (uHAST) +130°C ; 85% RH	96 hours	N=225 Acc = 0 L3 Pb-Free	N=492 Acc = 0 L3 Pb-Free
Hot Temperature Stroage (HTS) +150°C	1000 hours	N=225 Acc = 0	N=357 Acc = 0
Temperature Cycle (TCT) -65°C / +150°C	500 cycles	N=225 Acc = 0 L3 Pb-Free	N=494 Acc = 0 L3 Pb-Free

 Qualified by Extension
 Not Applicable (NA)