

## Product Change Notice (PCN)

**Subject:** Correction of Moisture Sensitivity Level and Alternate bond wire material of the listed Renesas DFN, QFN, TDFN, TQFN packaged products

**Publication Date:** 07/07/2021

**Effective Date:** 10/5/2021

**Revision Description:**

Initial Release

**Description of Change:**

Correction of Moisture Sensitivity Level and Alternate bond wire material the listed Renesas QFN packaged products

- Carsem (M) Sdn, Bhd – S Site, Ipoh, Malaysia

**List of changes :**

- Table 1 – Correction of Moisture Sensitivity Level, from MSL4 to MSL3.
- Table 2 – Wire material change from Gold to Copper
- Table 2 – Standardize Moisture Sensitivity Level from MSL1,2,3 to MSL3

Renesas Part #	Existing Assembly site / Wire Material / MSL	New Assembly Site / Wire material / MSL	Remarks
Product as listed in Table #1	CAS / Copper Wire / MSL 4	CAS / Copper Wire / MSL 3	*No change in Bill of Material (BOM)  *Correction of MSL from MSL4 to MSL3
Product listed in Table #2	CAS / Gold Wire / MSL1,2,3	CAS / Copper Wire / MSL 3	*Copper wire was qualified and mass production in CAS  * Wire material change from Gold to Copper  * Standardize Moisture Sensitivity Level from MSL1,2,3 to MSL3

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. 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  
**Sample availability:** 7/31/2021  
**Device material declaration:** Available upon request

Sample is available July 31, 2021 onwards, and subject to availability. Customer may expect 1 – 2 months for sample replenishment.

**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.

Questions or requests pertaining to this change notice, including additional data or samples, must be sent to Renesas within 30 days of the publication date.

For additional information regarding this notice, please contact your regional change coordinator (below)			
Americas: <a href="mailto:PCN-US@RENESAS.COM">PCN-US@RENESAS.COM</a>	Europe: <a href="mailto:PCN-EU@RENESAS.COM">PCN-EU@RENESAS.COM</a>	Japan: <a href="mailto:PCN-JP@RENESAS.COM">PCN-JP@RENESAS.COM</a>	Asia Pac: <a href="mailto:PCN-APAC@RENESAS.COM">PCN-APAC@RENESAS.COM</a>

**Appendix A : Affected Products**

Table 1 – Correction of Moisture Sensitivity Level, from MSL4 to MSL3.

**Table 1 - Affected Product List**

ISL6308CRZ	ISL6308CRZ-T	ISL6308CRZ-TR5372	ISL6308CRZ-TS2568
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Table 2 – Wire material change from Gold to Copper and Standardize Moisture Sensitivity Level from MSL1

**Table 2:- Affected Product List**

ISL62381HRTZ	ISL54060IRTZ-T	ISL9000AIRMZGZ-T	ISL6262CRZ-TK	ISL9219IRZ-T
ISL62381HRTZ-T	ISL54061IRTZ	ISL9000AIRMNZ	ISL6262CRZ-TS2568	ISL33001IRT2Z
ISL62382HRTZ	ISL54061IRTZ-T	ISL9000AIRMNZ-T	ISL6262IRZ	ISL33001IRT2Z-T
ISL62382HRTZ-T	ISL54062IRTZ	ISL9000AIRNFZ	ISL6262IRZ-T	ISL33001IRT2Z-TS2705
ISL62386HRTZ	ISL54062IRTZ-T	ISL9000AIRNJZ	ISL6269ACRZ	ISL33002IRT2Z
ISL62386HRTZ-T	ISL54063IRTZ	ISL9000AIRNNZ	ISL6269ACRZ-T	ISL33002IRT2Z-T
ISL62882HRTZ	ISL54063IRTZ-T	ISL9001AIRNZ-T	ISL6269ACRZ-TS2568	ISL33003IRT2Z
ISL62882HRTZ-T	ISL54064IRTZ	ISL9005AIRNZ-T	ISL6269BCRZ	ISL33003IRT2Z-T
ISL62882HRTZ-TR5390	ISL54064IRTZ-T	ISL9205AIRZ	ISL6269BCRZ-T	ISL6292-2CR4Z
ISL62882HRTZR5390	ISL6263ACRZ	ISL9205AIRZ-T	ISL6269BCRZ-TS2568	ISL6292-2CR4Z-T
ISL62883HRTZ	ISL6263ACRZ-T	ISL9205BIRZ	ISL6269BIRZ	ISL6292BCRZ
ISL62883HRTZ-T	ISL9000AIRCCZ	ISL9205BIRZ-T	ISL6269BIRZ-T	ISL6292BCRZ-T
ISL62883HRTZ-TS2705	ISL9000AIRCCZ-T	ISL9205CIRZ	ISL6310CRZ	ISL6292BCRZ-TS2767
ISL62883IRTZ	ISL9000AIRCJZ	ISL9205CIRZ-T	ISL6310CRZ-T	ISL6298-2CR4Z
ISL62883IRTZ-T	ISL9000AIRCJZ-T	ISL9205DIRZ	ISL6310IRZ	ISL6298-2CR4Z-T
ISL9001AIRBZ-T	ISL9000AIRFCZ	ISL9205DIRZ-T	ISL6312ACRZ	ISL6298CR4Z
ISL9001AIRCZ-T	ISL9000AIRFCZ-T	ISL28022FRZ	ISL6312ACRZ-T	ISL6298CR4Z-T
ISL9001AIRFZ-T	ISL9000AIRFDZ	ISL28022FRZ-T	ISL6312ACRZ-TS2709	ISL9110BIRTAZ-TS2765
ISL9001AIRJZ-T	ISL9000AIRFDZ-T	ISL28022FRZ-T7A	ISL6312AIRZ	ISL9110IRTNZ
ISL9001AIRKZ-T	ISL9000AIRFJZ	ISL28023FR12Z	ISL6312AIRZ-T	ISL9110IRTNZ-T
ISL9005AIRBZ-T	ISL9000AIRJBZ	ISL28023FR12Z-T	ISL6312AIRZ-TS2568	ISL9110IRTNZ-T7A
ISL9005AIRCZ-T	ISL9000AIRJNZ	ISL28023FR12Z-T7A	ISL6549CRZ	ISL9204IRZ-T
ISL9005AIRFZ-T	ISL9000AIRJNZ-T	ISL28023FR60Z	ISL6549CRZ-T	ISL97635AIRZ
ISL9005AIRJZ-T	ISL9000AIRKCZ	ISL28023FR60Z-T	ISL6611AIRZ	ISL97635AIRZ-T
ISL9005AIRKZ-T	ISL9000AIRKFZ	ISL28023FR60Z-T7A	ISL6611AIRZ-T	ISL97635AIRZ-TK
ISL54059IRTZ	ISL9000AIRKJZ	ISL6132IRZA-TR5585	ISL9205IRZ	ISL97636AIRZ
ISL54059IRTZ-T	ISL9000AIRKKZ	ISL6262CRZ	ISL9205IRZ-T	ISL97636AIRZ-T
ISL54060IRTZ	ISL9000AIRMZGZ	ISL6262CRZ-T	ISL9219IRZ	ISL97636AIRZ-TK

Appendix B : Reliability Test Result

Test Description	Condition	ISL6308CRZ 40 Lead QFN , 6mm x 6mm	ISL6341CRZ 10 Lead TDFN, 3mm x 3mm	ISL8009AIRZ-TK 8 Lead DFN, 2mm x 3mm	ISL8013AIRZ-T 16 Lead QFN, 4mm x 4mm	ISL8033IRZ-T 24 Lead QFN 4mm x 4mm	ISL8088IRZ-T 10 Lead DFN 3mm x 3mm
Moisture Sensitivity Classification	Level 3	N=66 Acc=0 L3 Pb-Free	N=66 Acc=0 L3 Pb-Free	N=88 Acc=0 L3 Pb-Free	N=88 Acc=0 L3 Pb-Free	N=88 Acc=0 L3 Pb-Free	N=66 Acc=0 L3 Pb-Free
Bias High Accelerated Stress Test (b-HAST) +130°C / 85% RH	96 hours			N=78 Acc=0	N=78 Acc=0	N=78 Acc=0	N=78 Acc=0
Unbias High Accelerated Stress Test (uHAST) +130°C / 85% RH	96 hours	N=312 Acc=0	N=156 Acc=0	N=156 Acc=0	N=156 Acc=0	N=156 Acc=0	N=156 Acc=0
Hot Temperature Storage (HTS) +150°C	1000 hours	N=312 Acc=0	N=240 Acc=0	N=156 Acc=0	N=156 Acc=0	N=156 Acc=0	N=156 Acc=0
Temperature Cycling Test (TCT) -55°C / +125°C	500 cycles	N=449 Acc=0	N=449 Acc=0	N=480 Acc=0	N=480 Acc=0	N=480 Acc=0	N=480 Acc=0

Completed and Passed  
 Qualified by Extension (QBE)  
 Not Applicable