

Product Change Notice (PCN)

Subject: Alternate bond wire material and assembly facility of the listed Renesas nSOIC packaged products

Publication Date: 6/4/2020

Effective Date: 9/2/2019

Revision Description:

Initial Release

Description of Change:

Alternate assembly facility of the listed Renesas nSOIC packaged products

- *Advanced Semiconductor Engineering, Chung Li, Taiwan R.O.C (ASECL)*
- *Greatek Electronics Inc., Taiwan R.O.C (Greatek)*

List of changes :

- Adding ASECL and Greatek as alternate assembly site, wire material change from Gold to Copper and Moisture Sensitivity Level change from MSL1 to MSL3.
- Adding Greatek as alternate assembly site

This notice is to inform you that Renesas will begin using copper wire bond material at the ASECL and Greatek facility for the Listed Renesas narrow Small Outlined Integrated Circuit (nSOIC) 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:

ASECL and Greatek are existing assembly supplier for Renesas. Adding assembly site will expand current capabilities and capacities to optimize Renesas's ability to meet customer's delivery requirements. Both ASECL and Greatek facility are ISO9001:2015 and IATF 16949:2016 certified. ASECL and Greatek are existing assembly supplier for high volume assembly of nSOIC 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 ASECL and Greatek 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	ASECL	W	For Copper wire products
2	Greatek	K	For Copper wire products

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

Qualification status: Completed, see attached

Sample availability: 7/1/2019

Device material declaration: Available upon request

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: PCN-US@RENEASAS.COM	Europe: PCN-EU@RENEASAS.COM	Japan: PCN-JP@RENEASAS.COM	Asia Pac: PCN-APAC@RENEASAS.COM

Appendix A : Affected Products

Table 1 – Adding ASECL and Greatek as alternate assembly site , wire material change from Gold to Copper and Moisture Sensitivity Level change from MSL1 to MSL3.

Affected Product List

ISL26313FBZ	ISL31491EIBZ-T7A	ISL32452EIBZ-T7A	ISL32486EIBZ-T7A	ISL6549CBZ-T
ISL26313FBZ-T	ISL31492EIBZ	ISL32453EIBZ	ISL32490EIBZ	ISL6615AIBZ
ISL26313FBZ-T7A	ISL31492EIBZ-T	ISL32453EIBZ-T	ISL32490EIBZ-T	ISL6615AIBZ-T
ISL26320FBZ	ISL31492EIBZ-T7A	ISL32453EIBZ-T7A	ISL32490EIBZ-T7A	ISL6622CBZ-T
ISL26320FBZ-T	ISL31495EIBZ	ISL32455EIBZ	ISL32492EIBZ	ISL6721ABZ
ISL26320FBZ-T7A	ISL31495EIBZ-T	ISL32455EIBZ-T	ISL32492EIBZ-T	ISL6721ABZ-T
ISL26321FBZ	ISL31495EIBZ-T7A	ISL32455EIBZ-T7A	ISL32492EIBZ-T7A	ISL6744ABZ
ISL26321FBZ-T	ISL31496EIBZ	ISL32457EIBZ	ISL32493EIBZ	ISL6744ABZ-T
ISL26321FBZ-T7A	ISL31496EIBZ-T	ISL32457EIBZ-T	ISL32493EIBZ-T	ISL6842IBZ
ISL26323FBZ	ISL31496EIBZ-T7A	ISL32457EIBZ-T7A	ISL32493EIBZ-T7A	ISL6842IBZ-T
ISL26323FBZ-T	ISL31498EIBZ	ISL32458EIBZ	ISL32495EIBZ	ISL83083EIBZ
ISL26323FBZ-T7A	ISL31498EIBZ-T	ISL32458EIBZ-T	ISL32495EIBZ-T	ISL83083EIBZ-T
ISL28225FBZ	ISL31498EIBZ-T7A	ISL32458EIBZ-T7A	ISL32495EIBZ-T7A	ISL83085EIBZ
ISL28225FBZ-T13	ISL3155EIBZ	ISL32459EIBZ	ISL32496EIBZ	ISL83085EIBZ-T
ISL28225FBZ-T7	ISL3155EIBZ-T	ISL32459EIBZ-T	ISL32496EIBZ-T	ISL8488EIBZA
ISL28225FBZ-T7A	ISL3155EIBZ-T7A	ISL32459EIBZ-T7A	ISL32496EIBZ-T7A	ISL8488EIBZA-T
ISL31470EIBZ	ISL32430EIBZ	ISL32470EIBZ	ISL32498EIBZ	ISL8489EIBZ
ISL31470EIBZ-T	ISL32430EIBZ-T	ISL32470EIBZ-T	ISL32498EIBZ-T	ISL8489EIBZ-T
ISL31470EIBZ-T7A	ISL32430EIBZ-T7A	ISL32470EIBZ-T7A	ISL32498EIBZ-T7A	ISL8700IBZ-TS2705
ISL31472EIBZ	ISL32432EIBZ	ISL32472EIBZ	ISL32600EFBZ	ISL8702AIBZ-TKR5632
ISL31472EIBZ-T	ISL32432EIBZ-T	ISL32472EIBZ-T	ISL32600EFBZ-T	ISL8702IBZ
ISL31472EIBZ-T7A	ISL32432EIBZ-T7A	ISL32472EIBZ-T7A	ISL32600EFBZ-T7A	ISL8702IBZ-T
ISL31475EIBZ	ISL32433EIBZ	ISL32475EIBZ	ISL32601EFBZ	ISL8702IBZ-TS2705
ISL31475EIBZ-T	ISL32433EIBZ-T	ISL32475EIBZ-T	ISL32601EFBZ-T	ISL8703AIBZ-T
ISL31475EIBZ-T7A	ISL32433EIBZ-T7A	ISL32475EIBZ-T7A	ISL32601EFBZ-T7A	ISL88041IBZ
ISL31478EIBZ	ISL32435EIBZ	ISL32478EIBZ	ISL32602EFBZ	ISL88041IBZ-T
ISL31478EIBZ-T	ISL32435EIBZ-T	ISL32478EIBZ-T	ISL32602EFBZ-T	ISL8840AABZ
ISL31478EIBZ-T7A	ISL32435EIBZ-T7A	ISL32478EIBZ-T7A	ISL32602EFBZ-T7A	ISL8840AABZ-T
ISL31485EIBZ	ISL32437EIBZ	ISL32483EIBZ	ISL32603EFBZ	ISL8841AMBZ
ISL31485EIBZ-T	ISL32437EIBZ-T	ISL32483EIBZ-T	ISL32603EFBZ-T	ISL8841AMBZ-T
ISL31485EIBZ-T7A	ISL32437EIBZ-T7A	ISL32483EIBZ-T7A	ISL32603EFBZ-T7A	ISL8845AABZ
ISL31490EIBZ	ISL32450EIBZ	ISL32485EIBZ	ISL33001IBZ	ISL8845AABZ-T
ISL31490EIBZ-T	ISL32450EIBZ-T	ISL32485EIBZ-T	ISL33001IBZ-T	
ISL31490EIBZ-T7A	ISL32450EIBZ-T7A	ISL32485EIBZ-T7A	ISL4489EIBZ	
ISL31491EIBZ	ISL32452EIBZ	ISL32486EIBZ	ISL4489EIBZ-T	
ISL31491EIBZ-T	ISL32452EIBZ-T	ISL32486EIBZ-T	ISL6535CBZ-T	

Table 2 - Adding Greatek as alternate assembly site
Affected Product List

ISL3150EIBZ	ISL3178EIBZ	ISL6208CBZ-TS2705	ISL8104IBZ-T	ISL83485IBZ-T
ISL3150EIBZ-T	ISL3178EIBZ-T	ISL6208IBZ	ISL8105AIBZ	ISL83485IBZ-T7A
ISL3150EIBZ-T7A	ISL3178EIBZ-T7A	ISL6208IBZ-T	ISL8105AIBZ-T	ISL83488IBZ
ISL3152EIBZ	ISL3179EFBZ	ISL6535CBZ	ISL8105IBZ	ISL83488IBZ-T
ISL3152EIBZ-T	ISL3179EFBZ-T	ISL6535IBZ	ISL8105IBZ-T	ISL83490IBZ
ISL3152EIBZ-T7	ISL3179EFBZ-T7A	ISL6535IBZ-T	ISL81483IBZ	ISL83490IBZ-T
ISL3152EIBZ-T7A	ISL3179EIBZ	ISL6545ACBZ	ISL81483IBZ-T	ISL83491IBZ
ISL3153EIBZ-T	ISL3179EIBZ-T	ISL6545ACBZ-T	ISL81483IBZS2705	ISL83491IBZ-T
ISL3156EIBZ	ISL3179EIBZ-T7A	ISL6545AIBZ	ISL81487EIBZ	ISL83491IBZ-T7A
ISL3156EIBZ-T	ISL3180EIBZ	ISL6545AIBZ-T	ISL81487EIBZ-T	ISL8483EIBZ
ISL3156EIBZ-T7A	ISL3180EIBZ-T	ISL6545CBZ	ISL81487IBZ	ISL8483EIBZ-T
ISL3158EIBZ	ISL32172EFBZ	ISL6545CBZ-T	ISL81487IBZ-T	ISL8483EIBZ-T7A
ISL3158EIBZ-T	ISL32172EFBZ-T	ISL6545CBZ-TS2568	ISL81487LIBZ	ISL8485CBZ
ISL3158EIBZ-T7A	ISL32172EIBZ	ISL6545IBZ	ISL81487LIBZ-T	ISL8485CBZ-T
ISL3159EFBZ	ISL32172EIBZ-T	ISL6545IBZ-T	ISL83070EIBZA	ISL8485EABZ
ISL3159EFBZ-T	ISL32173EFBZ	ISL6545IBZ-TS2568	ISL83070EIBZA-T	ISL8485EABZ-T
ISL3159EFBZ-T7A	ISL32173EFBZ-T	ISL6549CBZ	ISL83071EIBZA	ISL8485ECBZ
ISL3159EIBZ	ISL32173EIBZ	ISL6608CBZ	ISL83071EIBZA-T	ISL8485ECBZ-T
ISL3159EIBZ-T	ISL32173EIBZ-T	ISL6608CBZ-T	ISL83072EIBZA	ISL8485EIBZ
ISL3159EIBZ-T7A	ISL32174EIBZ	ISL6609ACBZ	ISL83072EIBZA-T	ISL8485EIBZ-T
ISL3160EFBZ	ISL32174EIBZ-T	ISL6609ACBZ-T	ISL83072EIBZA-T7A	ISL8485IBZ
ISL3160EFBZ-T	ISL32272EFBZ	ISL6609AIBZ	ISL83073EIBZA	ISL8485IBZ-T
ISL3160EFBZ-T7A	ISL32272EFBZ-T	ISL6609AIBZ-T	ISL83073EIBZA-T	ISL8487EIBZ
ISL3160EIBZ	ISL32273EFBZ	ISL6609AIBZ-TS2705	ISL83075EIBZA	ISL8487EIBZ-T
ISL3160EIBZ-T	ISL32273EFBZ-T	ISL6612ACBZ	ISL83075EIBZA-T	ISL8490EIBZ
ISL3160EIBZ-T7A	ISL32273EIBZ	ISL6612ACBZ-T	ISL83076EIBZA	ISL8490EIBZ-T
ISL3170EIBZ	ISL32273EIBZ-T	ISL6612ACBZA-T	ISL83076EIBZA-T	ISL8490IBZ
ISL3170EIBZ-T	ISL32275EIBZ	ISL6612AIBZ	ISL83077EIBZA	ISL8490IBZ-T
ISL3170EIBZ-T7A	ISL32275EIBZ-T	ISL6612AIBZ-T	ISL83077EIBZA-T	ISL8491EIBZ
ISL3171EIBZ	ISL3259EIBZ	ISL6614ACBZ	ISL83078EIBZA	ISL8491EIBZ-T
ISL3171EIBZ-T	ISL3259EIBZ-T	ISL6614ACBZ-T	ISL83078EIBZA-T	ISL8491IBZ
ISL3171EIBZ-T7A	ISL3259EIBZ-TS2705	ISL6622IBZ	ISL83080EIBZ	ISL8842AABZ
ISL3172EIBZ	ISL43485IBZ	ISL6622IBZ-T	ISL83080EIBZ-T	ISL8842AABZ-T
ISL3172EIBZ-T	ISL43485IBZ-T	ISL6722AABZ	ISL83082EIBZ	ISL8842AMBZ
ISL3172EIBZ-T7A	ISL4485EIBZ	ISL6722AABZ-T	ISL83082EIBZ-T	ISL8842AMBZ-T
ISL3173EIBZ	ISL4485EIBZ-T	ISL6729IBZ	ISL83086EIBZ	ISL8843AABZ
ISL3173EIBZ-T	ISL4491EIBZ	ISL6729IBZ-T	ISL83086EIBZ-T	ISL8843AABZ-T
ISL3175EIBZ	ISL4491EIBZ-T	ISL6744AABZ	ISL83088EIBZ	ISL8843AMBZ
ISL3175EIBZ-T	ISL485EIBZ	ISL6744AABZ-T	ISL83088EIBZ-T	ISL8843AMBZ-T
ISL3176EIBZ	ISL485EIBZ-T	ISL6840IBZ-T	ISL83483IBZ	ISL8844AABZ
ISL3176EIBZ-T	ISL6208CBZ	ISL6843IBZ	ISL83483IBZ-T	ISL8844AABZ-T
ISL3177EIBZ	ISL6208CBZ-T	ISL6843IBZ-T	ISL83483IBZ-T7A	ISL8844AMBZ
ISL3177EIBZ-T	ISL6208CBZ-TS2568	ISL8104IBZ	ISL83485IBZ	ISL8844AMBZ-T

Appendix B - Qualification Results (see attached)

Test Description	Condition	ISL3160EIBZ 14 Lead, 150mil nSOIC, 8.65mm x 3.90mm x 1.75mm Package	ISL32273EIBZ 16 Lead, 150mil nSOIC, 9.90mm x 3.90mm x 1.75mm Package	ISL6208CBZ-TS2705 8 Lead, 150mil nSOIC, 4.90mm x 3.90mm x 1.75mm Package
Moisture Sensitivity Classification		N = 66 Acc = 0 L3 Pb Free	N = 66 Acc = 0 L3 Pb Free	N = 66 Acc = 0 L3 Pb Free
High Temperature Operating Life (HTOL) +125°C	500 hours	N=80 Acc = 0		
	1000 hours	N=80 Acc = 0		
Biased Highly Accelerated Stress Test (b-HAST) +130°C ; 85% RH	96 hours	N=240 Acc = 0 L3 Pb-Free		
	192 hours	N=254 Acc = 0 L3 Pb-Free		
Unbiased Highly Accelerated Stress Test (uHAST) +130°C ; 85% RH	96 hours	N=240 Acc = 0 L3 Pb-Free	N=240 Acc = 0 L3 Pb-Free	N=240 Acc = 0 L3 Pb-Free
	192 hours	N=254 Acc = 0 L3 Pb-Free	N=254 Acc = 0 L3 Pb-Free	N=260 Acc = 0 L3 Pb-Free
Hot Temperature Storage (HTS) +150°C	500 hours	N=238 Acc = 0	N=238 Acc = 0	N=238 Acc = 0
	1000 hours	N=270 Acc = 0	N=260 Acc = 0	N=258 Acc = 0
Temperature Cycle (TCT) -65°C / +150°C	500 cycles	N=240 Acc = 0 L3 Pb-Free	N=240 Acc = 0 L3 Pb-Free	N=240 Acc = 0 L3 Pb-Free

Qualification Completed and Passed
 Not Applicable (NA)