# PRODUCT CHANGE NOTICE

## Alternate Manufacturing Site for the Listed Intersil QFN/TQFN Packaged Products

**Refer to:**
**PCN11005**

**Date: January 17, 2011**

intersil | SIMPLY SMARTER™

January 17, 2011

To: Our Valued Intersil Customer

Subject: **Alternate Manufacturing Site for the Listed Intersil QFN/TQFN Packaged Products – *STATS ChipPAC Malaysia***

This notice is to inform you that Intersil is using the STATS ChipPAC Malaysia (SCM) facility as an alternate site for performing assembly, final electrical test, tape and reel, packing, and shipping of the listed QFN/TQFN (Quad Flat No Lead / Thin Quad Flat No Lead) packaged products. Products manufactured at the SCM facility will be assembled using copper bond wire as an alternate to the gold bond wire currently used today. The advantages of copper bond wire include improved electrical conductivity of the wire, slower intermetallic growth, reduced wire sweep, and equivalent reliability performance. This action will expand current capabilities and capacities to optimize Intersil's ability to meet customer's delivery requirements. The product and site-specific verification activities are complete.

The STATS ChipPAC Malaysia (SCM) facility is ISO 9001:2008 and ISO/TS 16949:2009 certified and currently qualified as a primary supplier to Intersil for testing and assembly of QFN/TQFN packaged products with both copper and gold bond wire material. The following summarizes the activities that were conducted prior to production release to confirm there is no impact to form, fit, function, or interchangeability of the product.

- Intersil supplied test software and product specific hardware is used at SCM.
- The test equipment correlation plan involves the testing of golden (control) units and a correlation lot of select products at SCM and the current site.
    - Correlation units were tested, their performance recorded, and the results analyzed to validate the set-up.
    - A correlation lot of approximately 1000 units were tested at the current site and retested at SCM. The test results from each site were compared.
    - Continuous monitoring and comparison of the data from lots processed at multiple sites are an ongoing function of the responsible product engineers.
- The visual/mechanical inspection and tape and reel operations are compliant to JEDEC industry standards used by all Intersil subcontractors.
- The assembly qualification activity is considered QBE (Qualified by Extension) as the existing processes, materials, and equipment used to assemble the current QFN/TQFN products at SCM will be used for these products going forward. The reliability QBE summary is included for reference. There will be no change in the package outline drawing (POD). Products assembled at SCM with copper bond wire are classified as moisture sensitivity level three (MSL 3 at 260°C per J-STD-020). The qualified material set combinations for the current facilities and SCM are as follows:

| Material | Carsem-S (QFN) | Unisem (TQFN) | SCM (QFN/TQFN) |
|---|---|---|---|
| **Mold Compound** | Sumitomo EME-G770H | Sumitomo EME-G770HCD | Sumitomo EME-G770 |
| **Die Attach** | Hysol QMI 519 | CRM-1076NS | Ablebond A8290 |
| **Bond Wire** | 1.2 mil / 1.3 mil Gold (Au) | 1.0 mil Gold (Au) | 1.2 mil Copper (Cu) |

Product affected by this change is identifiable via Intersil's internal traceability system. In addition, product assembled at SCM using copper bond wire material may also be identified by the assembly site code (country of assembly) when marked on the devices. The site code for product assembled at SCM with copper bond wire is "M".

Products affected:

| | | |
|---|---|---|
| ISL62881HRTZ | ISL6333AIRZ-T | ISL6334ACRZ-T |
| ISL62881HRTZ-T | ISL6333AIRZ-TS2705 | ISL6334ACRZ-TS2568 |
| ISL6314CRZ | ISL6333BCRZ | ISL6334AIRZ |
| ISL6314CRZS2704 | ISL6333BCRZ-T | ISL6334AIRZ-T |
| ISL6314CRZ-T | ISL6333BIRZ | ISL6334AIRZ-TS2705 |
| ISL6314CRZ-TS2568 | ISL6333BIRZ-T | ISL6334CRZ |
| ISL6314CRZ-TS2701 | ISL6333CCRZ | ISL6334CRZ-T |
| ISL6314CRZ-TS2704 | ISL6333CCRZ-T | ISL6334CRZ-TS2568 |
| ISL6314CRZ-TS2705 | ISL6333CIRZ | ISL6334CRZ-TS2701 |
| ISL6314IRZ | ISL6333CIRZ-T | ISL6334DCRZ |
| ISL6314IRZ-T | ISL6333CRZ | ISL6334DCRZ-T |
| ISL6314IRZ-TS2705 | ISL6333CRZ-T | ISL6334DIRZ |
| ISL6333ACRZ | ISL6333CRZ-TS2568 ** | ISL6334DIRZ-T |
| ISL6333ACRZ-T | ISL6333IRZ | ISL6334IRZ |
| ISL6333ACRZ-TS2568 | ISL6333IRZ-T | ISL6334IRZ-T |
| ISL6333AIRZ | ISL6334ACRZ | ISL6334IRZ-TS2705 |

**** SCM is an existing site approved for package test activities.

Intersil will take all necessary actions to conform to customer requirements and to ensure the continued high quality and reliability of Intersil products being supplied. Customers may expect to receive product manufactured at either the current or the newly qualified sites beginning *ninety* days from the date of this notification or earlier with approval.

If you have concerns with this change notice, Intersil must hear from you promptly. Please contact the nearest Intersil Sales Office or call the Intersil Corporate line at 1-888-468-3774, in the United States, or 1-321-724-7143 outside of the United States.

Regards,

Jon Brewster

Jon Brewster
Intersil Corporation

PCN11005

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# PCN11005 – Reliability Summary

| Stress / Conditions | Duration | ISL9214 3X3 QFN | ISL6236 5X5 QFN | ISL6312 7X7 QFN |
|---|---|---|---|---|
| HTOL<br>Ta = 125C | 1000 Hours | 0/78 | N/A | 0/78 |
| Biased HAST<br>130C / 85% | 96 Hours | 0/78 | N/A | 0/78 |
| High Temp Storage<br>Ta = 150C | 1000 Hours | 0/78 | 0/78 | 0/78 |
| Acc. Bond Integrity (ABI) / Wire Pull<br>Ta = 175C | 96 Hours | 0/15 | 0/15 | 0/15 |
| ubHAST<br>130C / 85% RH | 96 Hours | 0/78 | 0/75 | 0/78 |
| Temp Cycle IND<br>+125C / -40C | 1000 Cycles | 0/234 | 0/234 | 0/234 |
| Temp Cycle MIL<br>+150C / -65C | 500 Cycles | 0/234 | 0/234 | 0/234 |