PUN 16-05 • December 1, 2016

Sensor Process Migration

This is to inform Honeywell Sensing and Internet of Things (SIoT) customers that effective May 2017, Honeywell will be upgrading the tooling used in the manufacturing of some of its airflow, infrared, force, humidity and pressure sensors. This upgrade in tooling will not impact form, fit or function of the sensors. Honeywell is investing in tooling and equipment upgrades in order to ensure the longevity, continued quality and performance of its sensor product line. Given the age of the equipment, a tooling update is also necessary to ensure continuity of supply. All sensors that are scheduled to ship on or after May 2017 will be produced and manufactured using the new equipment. It is our goal to ensure a seamless transition.

Affected Products

The following Series of products are included in this migration:

- Airflow sensors: All: AWM, HAF
- Force sensors: 1865
- Infrared sensors: all products are affected except SE, SEP, SME (all emitters)
- Humidity sensors: All: HIH3000, HIH4000, HIH-4010/4020/4021, HIH-5030/31, HIH6000, HIH61000, HIH7000, HIH8000, HIH9000
- Pressure sensors: 100PC/200PC, 20PC, 40PC, ASDX, ASG/Sensym, JZ-Silicon

Qualification

More than 90% of Honeywell sensors have already successfully transitioned to the new tooling equipment. Performance and function of products from both new and old tooling are equivalent. See included in this nofication a timeline for the tooling upgrade. If your organization would like to purchase additional inventory of units produced on the old tooling equipment through a last time buy, Honeywell will accept orders per the schedule included in this notification. Honeywell is willing and able to provide pre-production samples (exact or comparable parts) for qualification/evaluation purposes as they become available on a case-by-case basis (5 samples or less) at no charge.

This communication has been prepared to meet any required communication obligations, and Honeywell will implement the tooling change communication using JEDEC JESD45. This is a recognized global information protocol which effectively means that if there are no objections/questions received within 30 days of notification, the change is deemed to be accepted. Honeywell SPS has a strong tradition of providing cost-effective sensing solutions with uncompromising quality. We employ Six Sigma processes and hold our suppliers to the highest industry standards, which are routinely verified through a rigorous testing and auditing processes.

Timeline

| DATE | ACTIVITY |
|--------------|--|
| Dec 1, 2016 | Direct Customers and Authorized Distributors are informed of notification |
| Dec 31, 2016 | Deadline for Direct Customers and Authorized Distributors to inform the Honeywell regional product manager of their validation details/transition plan (schedule and stock to support validation time lag) and validation data and sample requests |
| Jan 31, 2017 | Deadline for Direct Customers/Authorized Distributors to place Last Time Buy orders for legacy tool parts |
| May 31, 2017 | All affected Honeywell sensors will start to be built using the new tooling equipment |
| Dec 31, 2017 | Last date to receive affected sensors built on the legacy tool pursuant to Last Time Buy orders |

Important Actions

Honeywell internal Sales team and Authorized Distributors:

- Inform affected customers as soon as possible.
 - The Honeywell internal Sales team can view the affected customer lists and Frequently Asked Questions that are posted on Honeywell's internal NPI/Announcement Team Room.
- Refer to Timeline above for deadlines.

Additional Information

The following supporting materials are available:

- Affected Part Numbers
- Customer Letter: Authorized Distributors can modify this letter and send to their customers

Contact Information

- North America: Tomoko Fujiwara, Product Marketing Manager, tomoko.fujiwara@honeywell.com
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Regions Affected

⊠ Asia Pacific (APAC)

🖾 Europe

⊠ Middle East, Turkey, Africa (META)

☑ Latin America (LATAM)☑ North America (NA)

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Sensor Process Migration – Frequently Asked Questions

1. What processes are changing?

Honeywell has made manufacturing investments to migrate from a 4-inch wafer process to a 6-inch wafer process in its semiconductor fabrication facility based in Richardson, Texas that will affect a select group of sensors. Many of the tools used in the wafer fabrication are able to process both 4-inch and 6-inch wafers. Honeywell is changing the remaining process steps that can only process 4-inch wafers, which will be upgraded to 6-inch-capable only.

2. What is a wafer?

A wafer, also called a slice or substrate, is a round disc of semiconductor material, such as a crystalline silicon, used in electronics for the fabrication of integrated circuits.

3. Why is Honeywell making these changes at this time?

Honeywell is making these changes for the following reasons:

- To keep up with a changing industry landscape because 4-inch processes are becoming obsolete due to a lack of new equipment and support from OEMs.
- Newer processing tools and equipment are more reliable than existing tools and equipment, enhancing OEM support and helping to reduce downtime.

4. What products are affected?

Airflow sensors (all), select force sensors, select infrared sensors, humidity sensors (all), and select pressure sensors (board mount; excludes TruStability[™] and Basic Pressure) are included in this process change.

- 5. Will there be any location or personnel change? No, there will be no change in personnel or location.
- 6. Does Honeywell have experience with 6-inch wafer processing? Yes, Honeywell has been using a 6-inch wafer process for over 5 years.
- 7. How will the fit, form and function of the product be evaluated? As stated in the announcement, fit, form and function will not change. To ensure this, Honeywell's engineering team has been conducting internal validation testing for over 5 years.

8. Will my part number be validated?

Every product sub-family will be validated and part numbers will be qualified directly or indirectly on a "same as" process. If your part number has been identified as a core product, then it will be validated. If it is a derivative of a core product, it will be validated based on similarity.

9. My application has a special feature. How does Honeywell address my unique concerns? Honeywell intends to support all of its customers to ensure that all migration issues are resolved prior to the change.

10. What determines the timeframe of implementation?

Validation/Qualification will determine the change over time. Although Honeywell has set a date to make the migration, these dates are based on qualification data availability.

11. How will the affected parts be tracked?

The parts will be tracked based on date codes. As the finished good part numbers will not be changing, we will be implementing a date code tracking process to ensure that each part number changeover date is properly documented.

12. Can we purchase safety stock of the 4-inch process parts to support our validation schedule?

Yes, Honeywell has made arrangements to support safety stock build up for customers seeking to conduct in-house validation.

- **13. Who do I contact if our engineering team members have a technical question?** See Contact Information below.
 - North America: Tomoko Fujiwara, Product Marketing Manager, tomoko.fujiwara@honeywell.com
 - North America: Ryan Gaveske, Product Marketing Manager, ryan.gaveske@honeywell.com
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