ON Semiconductor®

# Final Product/Process Change Notification

Document # : FPCN22057X1
Issue Date: 23 May 2018

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| **Title of Change:** | Update to FPCN22057X - Former Fairchild TinyLogic® in SC70EP and SC88A-5 Fab Assembly Material and Assembly Location changing to SC88A-5 |
| **Proposed first ship date:** | 28 June 2018 |
| **Contact information:** | Contact your local ON Semiconductor Sales Office or <Steven.Zhong@onsemi.com> |
| **Samples:** | Contact your local ON Semiconductor Sales Office or <PCN.Samples@onsemi.com> |
| **Additional Reliability Data:** | Contact your local ON Semiconductor Sales Office or <Don.Knudsen@onsemi.com> |
| **Type of notification:** | This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change.<br>ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@ON Semiconductor.com> |
| **Change Part Identification:** | Products with date code "K" or greater may be from materials identified in table "After June 1st 2018 Description". Products with date code "1" or greater will have materials from "Post Implementation" in table below. |
| **Change category:** | ☒ Wafer Fab Change ☒ Assembly Change ☒ Test Change ☐ Other _____ |
| **Change Sub-Category(s):** | ☒ Manufacturing Site Change/Addition<br>☒ Manufacturing Process Change<br>☒ Material Change<br>☐ Product specific change<br>☐ Datasheet/Product Doc change<br>☒ Shipping/Packaging/Marking<br>☐ Other: _____ |
| **Sites Affected:** | ON Semiconductor Sites:<br>ON Leshan, China<br>ON Cebu Philippines<br>ON S. Portland Maine<br><br>External Foundry/Subcon Sites:<br>Subcon China, subcon Japan |

**Description and Purpose:**

FPCN22057X was issued to qualify new die source in Japan for TinyLogic® and migrate SC88A-5 to ON Leshan, China assembly and test site increasing the front end and back end capacity and standardizing materials.

This Update is issued for clarification of current materials being shipped, ON Semiconductor Philippines Plating is 100% Tin. The materials matrix below has been updated.

| Material to be changed | Before Change (existing flow) | | After June 28th 2018 until January 1st 2019 (existing flow) | | ( new flow) | After January 1st 2019 (new flow only) |
|---|---|---|---|---|---|---|
| Assy Site | ON Semi Philippines | Subcon China | ON Semi Philippines | Subcon China | ON Semi China (LPS) | ON Semi China (LPS) |
| Wire | Au | Au | Au | Au | Cu | Cu |
| Mold Compound | MC GREEN PA CK5000A | MC SUMITOMO G600 | MC GREEN PA CK5000A | MC SUMITOMO G600 | Henkel | Henkel |
| Lead Frame | LF SC 88A 5L C194 | LF SC70 5L Cu A194 PPF | LF SC 88A 5L C194 | LF SC70 5L Cu A194 PPF | SC88A OP14 | SC88A OP14 |
| Die Attach | EPOXY ABLESTIK 84-1LMISR4 | EPOXY ABLESTICK 2200D | EPOXY ABLESTIK 84-1LMISR4 | EPOXY ABLESTICK 2200D | Eutectic | Eutectic |
| Die Source | Onsemi US Fab | Onsemi US Fab | Onsemi US Fab | Onsemi US Fab | External Fab Japan | External Fab Japan |
| Plating | 100% Sn | Pre plated | 100% Sn | Pre plated | 100% Sn | 100% Sn |

**Reliability Data Summary:**

**QV DEVICE NAME:** MC74VHC1G14DFT2G
**RMS** L40690
**PACKAGE** SC88A (5ld)

| Test | Specification | Condition | Interval | Results |
|---|---|---|---|---|
| HTOL | JESD22-A108 | Ta=125°C, 100 % max rated Vcc | 1008 hrs | 0/288 |
| HTSL | JESD22-A103 | Ta= 150°C | 1008 hrs | 0/252 |
| TC | JESD22-A104 | Ta= -65°C to +150°C | 500 cyc | 0/297 |
| HAST | JESD22-A110 | 130°C, 85% RH, 18.8psig, bias | 96 hrs | 0/273 |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs | 0/234 |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | | 0/804 |
| RSH | JESD22- B106 | Ta = 265C, 10 sec | | 0/30 |

**Electrical Characteristic Summary:**

Electrical characteristics Available upon request.

**List of affected Parts:**

| Product ID | Qualification Vehicle |
|---|---|
| NC7S00P5X | MC74VHC1G14DFT2G |
| NC7S02P5X | |
| NC7S04P5X | |
| NC7S08P5X | |
| NC7S14P5X | |
| NC7S32P5X | |
| NC7S86P5X | |
| NC7ST00P5X | |
| NC7ST02P5X | |
| NC7ST04P5X | |
| NC7ST08P5X | |
| NC7ST32P5X | |
| NC7ST86P5X | |
| NC7SU04P5X | |
| NC7SZ00P5X | |
| NC7SZ02P5X | |
| NC7SZ04P5X | |
| NC7SZ05P5X | |
| NC7SZ08P5X | |
| NC7SZ125P5X | |
| NC7SZ126P5X | |
| NC7SZ14P5X | |
| NC7SZ32P5X | |
| NC7SZ38P5X | |
| NC7SZ86P5X | |
| NC7SZU04P5X | |

*NOTE:*
*Some parts impacted by this PCN are Special/Customer specific parts, thus MPN & CPN info will be available to affected customers only by following the link on the Email notification to retrieve an addendum that contains a list of affected products specific to the company.*