

# PRODUCT / PROCESS CHANGE NOTIFICATION

## 1. PCN basic data

|                      |                                                                                   |                                      |
|----------------------|-----------------------------------------------------------------------------------|--------------------------------------|
| 1.1 Company          |  | STMicroelectronics International N.V |
| 1.2 PCN No.          | MDG/16/9299                                                                       |                                      |
| 1.3 Title of PCN     | ST Shenzhen (China) new assembly site - TSSOP 20 products                         |                                      |
| 1.4 Product Category | Products in TSSOP20 package, listed in the PCN.                                   |                                      |
| 1.5 Issue date       | 2016-06-16                                                                        |                                      |

## 2. PCN Team

|                           |                          |
|---------------------------|--------------------------|
| 2.1 Contact supplier      |                          |
| 2.1.1 Name                | ROBERTSON HEATHER        |
| 2.1.2 Phone               | +1 8475853058            |
| 2.1.3 Email               | heather.robertson@st.com |
| 2.2 Change responsibility |                          |
| 2.2.1 Product Manager     | Michel BUFFA             |
| 2.1.2 Marketing Manager   | Daniel COLONNA           |
| 2.1.3 Quality Manager     | Pascal NARCHE            |

## 3. Change

|              |                                                                                               |                                                                                                   |
|--------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 3.1 Category | 3.2 Type of change                                                                            | 3.3 Manufacturing Location                                                                        |
| Materials    | Any change on substrate (part number, supplier, plant, design or composition of any layer...) | To AMKOR ATP (Philippines) , ST Microcontrollers Division is adding ST Shenzhen (China) location. |

## 4. Description of change

|                                                                                       |                                                                                                                                                                                            |                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                       | Old                                                                                                                                                                                        | New                                                                                                                                                                                                                                                                |
| 4.1 Description                                                                       | Current assembly plant : AMKOR ATP (Philippines)<br>Current Bill Of Materials :<br>- Wire Bonding : 0.8 mil Au<br>- Glue : 8290 Ablestik<br>- Resin : G700K<br>- Leadfinishing : Rough PPF | Current assembly plant, AMKOR ATP (Philippines), remains unchanged.<br>Additional assembly plant : ST Shenzhen (China)<br>Additional Bill Of Materials :<br>- Wire Bonding : 0.8 mil Ag<br>- Glue : 8601-S25 Ablestik<br>- Resin : G700KC<br>- Leadfinishing : PPF |
| 4.2 Anticipated Impact on form,fit, function, quality, reliability or processability? | Lead color and surface finish change depending on lead finishing.                                                                                                                          |                                                                                                                                                                                                                                                                    |

## 5. Reason / motivation for change

|                      |                                                                                                                                                                                                                                                                                                                                   |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5.1 Motivation       | Today production is only issued from AMKOR ATP (Philippines). In order to ensure top class service for our customers, given the continued growth of the STM32 & STM8 families, ST Microcontrollers Division will increase production capacity and improve flexibility through the qualification of an additional assembly source. |
| 5.2 Customer Benefit | DOUBLE SOURCING                                                                                                                                                                                                                                                                                                                   |

## 6. Marking of parts / traceability of change

|                 |                                                                                                                                    |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------|
| 6.1 Description | Traceability of the change is ensured by ST internal tools. See more information on 9299 Additional information document attached. |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------|

## 7. Timing / schedule

|                                     |              |
|-------------------------------------|--------------|
| 7.1 Date of qualification results   | 2016-09-01   |
| 7.2 Intended start of delivery      | 2016-10-01   |
| 7.3 Qualification sample available? | Upon Request |

| 8. Qualification / Validation                      |                                          |            |            |
|----------------------------------------------------|------------------------------------------|------------|------------|
| 8.1 Description                                    | PCN9299- RERMCD1512 reliability plan.pdf |            |            |
| 8.2 Qualification report and qualification results | Available (see attachment)               | Issue Date | 2016-06-16 |

| 9. Attachments (additional documentations)                                                       |  |
|--------------------------------------------------------------------------------------------------|--|
| 9299PpPrdtLst.pdf<br>9299_Additional information.pdf<br>PCN9299- RERMCD1512 reliability plan.pdf |  |

| 10. Affected parts      |                         |                          |
|-------------------------|-------------------------|--------------------------|
| 10. 1 Current           |                         | 10.2 New (if applicable) |
| 10.1.1 Customer Part No | 10.1.2 Supplier Part No | 10.1.2 Supplier Part No  |
|                         | STM32F030F4P6           |                          |
|                         | STM32F030F4P6TR         |                          |
|                         | STM32F031F4P6           |                          |
|                         | STM32F031F4P7           |                          |
|                         | STM32F031F6P6           |                          |
|                         | STM32F031F6P7           |                          |
|                         | STM32F038F6P6           |                          |
|                         | STM8S003F3P6            |                          |
|                         | STM8S003F3P6TR          |                          |
|                         | STM8S103F2P3TR          |                          |
|                         | STM8S103F2P6            |                          |
|                         | STM8S103F2P6TR          |                          |
|                         | STM8S103F3P3TR          |                          |
|                         | STM8S103F3P6            |                          |
|                         | STM8S103F3P6TR          |                          |
|                         | STM8S903F3P3            |                          |
|                         | STM8S903F3P6            |                          |
|                         | STM8S903F3P6TR          |                          |
|                         | STM8S103F3P3            |                          |

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