PRODUCT / PROCESS CHANGE NOTIFICATION

| 1. PCN basic data | | | |
|----------------------|--|--|--|
| 1.1 Company | | STMicroelectronics International N.V | |
| 1.2 PCN No. | | AMS/19/11271 | |
| 1.3 Title of PCN | | Qualification of a new material set in ST Bouskoura for Voltage References in Automotive grade assembled in SO8 packages (General Purpose Analog Division) | |
| 1.4 Product Category | | Voltage references in Automotive Grade - SO8 package (see detail in the product list) | |
| 1.5 Issue date | | 2019-05-24 | |

| 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 | Lorenzo NASO |
| 2.1.2 Marketing Manager | Marcello SAN BIAGIO |
| 2.1.3 Quality Manager | Paolo MORETTI |

| 3. Change | | | |
|---------------------------------|---------------|----------------------------|--|
| 3.1 Category 3.2 Type of change | | 3.3 Manufacturing Location | |
| Materials | (Not Defined) | Back end : ST Bouskoura | |

| 4. Description of change | | |
|---|--|---|
| | Old | New |
| 4.1 Description | Current set of material : - Molding compound : Nitto MP8000 - Die attach : Hitachi 4900ST - Lead-frame : Standard density - Wire : Gold 1 mil - Plating : NiPdAu | New set of material : - Molding compound : Sumitomo G700KC - Die attach : Ablestick 8601-S25 - Lead-frame : Super High density - Wire : Copper 1 mil - Plating : Sn |
| 4.2 Anticipated Impact on form,fit, function, quality, reliability or processability? | | |

| 5. Reason / motivation for change | | |
|---|--|--|
| 5.1 Motivation Progressing on the activities related to quality continuous improvement, ST is gla announce a new material set for Automotive Grade version of Voltage References package produced in ST Bouskoura. This new set of material will improve our product robustness and meet the specification automotive market. | | |
| 5.2 Customer Benefit QUALITY IMPROVEMENT | | |

| 6. Marking of parts / traceability of change | |
|--|-------------------------|
| 6.1 Description | New Finished good codes |

| 7. Timing / schedule | |
|-------------------------------------|--------------|
| 7.1 Date of qualification results | 2019-05-15 |
| 7.2 Intended start of delivery | 2019-12-30 |
| 7.3 Qualification sample available? | Upon Request |

| 8. Qualification / Validation | | |
|--|--|--|
| 8.1 Description 11271 Qual report SOSSHD Bouskoura_may2019-Vref case.pdf | | |

| | Available (see attachment) | Issue | 2019-05-24 |
|-----------------------|----------------------------|-------|------------|
| qualification results | | Date | |

| 9. Attachments (additional documentations) |
|--|
| 11271 Public product.pdf 11271 Qual report SOSSHD Bouskoura_may2019-Vref case.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 |
| | TL1431AIYDT | |
| | TL431AIYDT | |
| | TL1431IYDT | |



Public Products List

Publict Products are off the shelf products. They are not dedicated to specific customers, they are available through ST Sales team, or Distributors, and visible on ST.com

PCN Title : Qualification of a new material set in ST Bouskoura for Voltage References in Automotive grade assembled in SO8 packages (General Purpose Analog Division)

PCN Reference: AMS/19/11271

Subject: Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

| TL1431AIYDT | TL431IYDT | TL1431IYDT |
|-------------|-----------|------------|
| TL431AIYDT | | |

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