

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

| | | |
|-----------------------------|---|--------------------------------------|
| 1.1 Company |  | STMicroelectronics International N.V |
| 1.2 PCN No. | AMG/16/9855 | |
| 1.3 Title of PCN | Linear Voltage Regulators - Back Metal Conversion from Cr/Ni/Au to Cr/Ni/Ag for Bipolar Technology in Ang Mo Kio (Singapore) FE plant | |
| 1.4 Product Category | See product list | |
| 1.5 Issue date | 2016-07-27 | |

2. PCN Team

| | |
|----------------------------------|-----------------------|
| 2.1 Contact supplier | |
| 2.1.1 Name | SETTLES JEFF |
| 2.1.2 Phone | +44 1628896222 |
| 2.1.3 Email | jeff.settles@st.com |
| 2.2 Change responsibility | |
| 2.2.1 Product Manager | Vito RUGGIRELLO |
| 2.1.2 Marketing Manager | Salvatore DI VINCENZO |
| 2.1.3 Quality Manager | Jean-Marc BUGNARD |

3. Change

| | | |
|---------------------|--|---|
| 3.1 Category | 3.2 Type of change | 3.3 Manufacturing Location |
| Wafer Fab (Process) | Backside finish modification except for wafer for sale: change in deposition material type/nature or final thickness | Front End plant : ST Ang Mo Kio (Singapore) |

4. Description of change

| | | |
|--|--|----------------------------|
| | Old | New |
| 4.1 Description | Cr/Ni/Au 700Å/5000Å /525Å | Cr/Ni/Ag 700Å/5000Å /1500Å |
| 4.2 Anticipated Impact on form,fit, function, quality, reliability or processability? | No changes of the Electrical Characteristics and Quality | |

5. Reason / motivation for change

| | |
|-----------------------------|---|
| 5.1 Motivation | Progressing on the activities related to the manufacturign rationalization, ST is glad to announce the Back Metal Conversion from Cr/Ni/Au to the most common in the market Cr/Ni/Ag in the bipolar technologies. The new process is widely used in our FE AMK plant for other product families (Power MOSFET) for years. |
| 5.2 Customer Benefit | QUALITY IMPROVEMENT |

6. Marking of parts / traceability of change

| | |
|------------------------|------------------------------------|
| 6.1 Description | Traceability code and Q.A. number. |
|------------------------|------------------------------------|

7. Timing / schedule

| | |
|--|--------------|
| 7.1 Date of qualification results | 2016-06-24 |
| 7.2 Intended start of delivery | 2016-10-22 |
| 7.3 Qualification sample available? | Upon Request |

8. Qualification / Validation

| | | | |
|---|----------------------------|-------------------|------------|
| 8.1 Description | 9855_Qual report.zip | | |
| 8.2 Qualification report and qualification results | Available (see attachment) | Issue Date | 2016-07-27 |

9. Attachments (additional documentations)

9855PpPrdtLst.pdf
9855_Qual report.zip

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 |
| | L7805CV | |
| | L78M05CDT-TR | |
| | L78M09ABDT-TR | |
| | LD1117AS33TR | |
| | LD1117DT33CTR | |
| | LD1117DTC-R | |
| | LD1117DTTR | |
| | LD1117S33CTR | |
| | LD1117S33TR | |
| | LM317T | |
| | L7805ACD2T-TR | |
| | L7806ABV | |
| | LF33CDT-TR | |
| | LM317D2T-TR | |
| | ULN2003A | |

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Public Products List

PCN Title : Linear Voltage Regulators - Back Metal Conversion from Cr/Ni/Au to Cr/Ni/Ag for Bipolar Technology in Ang Mo Kio (Singapore) FE plant

PCN Reference : AMG/16/9855

PCN Created on : 21-Jun-2016

Subject : Public Products List

Dear Customer,

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

| | | |
|---------------|----------------|----------------|
| LD1117ADT33TR | L78M05CV-DG | LD1117S50TR |
| LD1117V | L7805CP | L7915CV |
| LD1117S12TR | ULQ2003A | LF50ABDT-TR |
| L7905ACV | L7805ABD2T-TR | LD1117S12CTR |
| L7815ABV-DG | ULN2004D1013TR | L7905CP |
| L7824ABV-DG | L7812ACV | LD1086BV-DG |
| LD1117V50 | L7912ACV | LD1117V33-DG |
| LD1117STR | LD1117S33CTR | L7912CP |
| L7815CP | LF50ABV | L4941BDT-TR |
| L7824CP | KF33BD-TR | LD1117DT12TR |
| L7805ABV-DG | LD1117S18TR | L7915ACV |
| L7905CV | L7912CV | L78M12CV-DG |
| L78M05CDT-TR | L78M15ABDT-TR | L7806CV |
| LD1117DT50TR | LD1117SC-R | LD1086D2T33TR |
| L78M09ABDT-TR | L4931CD50-TR | LD1117D33TR |
| L7915CV-DG | LM317MDT-TR | L7805ABP |
| LM317T | L7805ACV | ULN2003D1013TR |
| LD1086DTTR | L7815ABD2T-TR | LD1117DT33TR |
| L7812CV | L78M15CDT-TR | LM217T |
| L78M09CDT-TR | LF50ABP | LF50ABV-DG |
| L78M05ACDT-TR | L7806ABV | LD1086DT33TR |
| LD1117DT33CTR | L7806CV-DG | L78M05CDT-1 |
| L7806ACV-DG | L7812ABD2T-TR | LF50CV |
| L7815ACD2T-TR | L7915ACV-DG | LF50ABPT-TR |
| L7905ACV-DG | L7824CD2T-TR | ULN2803A |
| L7812CV-DG | L78M12ACDT-TR | LF33CPT-TR |
| L7805CV | L78M05CV | ULQ2803A |
| L7818CV | L7815CV | L7905CD2T-TR |
| LD1117S50CTR | LD1117S33TR | LF50CPT-TR |
| L7805CD2T-TR | ULQ2003D1013TR | LM217D2T-TR |
| LD1117V50C | L78M05ABDT-TR | LD1117DT18TR |
| L7815CV-DG | LM217MDT-TR | L7805ACD2T-TR |
| ULQ2004A | LD1117DTTR | LD1117V18 |
| LM317D2T-TR | L78M15CV-DG | L7824CV-DG |
| L7805ACP | KF33BDT-TR | LF33ABV |
| L7912ACV-DG | L4940D2T5-TR | LD1117D33CTR |



Public Products List

| | | |
|---------------|---------------|----------------|
| LF50CDT-TR | L7815CD2T-TR | L7912CV-DG |
| ULN2004A | L7824CV | L7805ACV-DG |
| L4931CDT50-TR | L7805CV-DG | L4931ABDT50-TR |
| L7812ABV | L7812CD2T-TR | KF50BDT-TR |
| LD1117V33 | L7824ABV | ULQ2004D1013TR |
| LD1117S18CTR | L7805ABV | LD1117DT18CTR |
| LD1117DTC-R | L78M15ABV | L78M09CV |
| L78M15CV | LF50ABV-E | L7915CP |
| LF50CV-DG | L7818CV-DG | L78M12CDT-TR |
| LD1117V-DG | L4931ABD50-TR | ULN2003A |
| L78M09CV-DG | L7815ACV-DG | L7905ACD2T-TR |
| LD1117AS33TR | LD1117V33C | LF33ABV-DG |
| LD1086BDTTR | L78M15ABV-DG | L7805CDT-TR |
| L7824ACV | L4940V5 | L78M05ABV-DG |
| LD1117DT12CTR | L4931CZ50-AP | LD1117DT50CTR |
| L4941BV | L7812ACD2T-TR | LD1086D2MTR |
| LD1117AV33 | L78M05ABV | LD1086V33-DG |
| L7812ACV-DG | LF33ABDT-TR | LF33CV-DG |
| LD1086V-DG | L78M12CV | LD1086D2TTR |
| LD1117V33C-DG | L7806ABV-DG | LF33CV |
| L7912CD2T-TR | KF50BD-TR | L78M12ABDT-TR |
| L7806ACV | L7824ACV-DG | L7806CD2T-TR |
| LD1086D2M33TR | L78M05CP | LD1117V50-DG |
| LM317P | L7905CV-DG | LF33CDT-TR |
| L4931CPT50-TR | | |



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