## **ON Semiconductor®**



| Title of Change:   | IPD Metal 2 and Metal   | IPD Metal 2 and Metal 3 Copper-Barrier film improvement.  |  |  |
|--|---|---|--|--|
| Proposed First Ship date:  | 16 Nov 2020 or earlier  | 16 Nov 2020 or earlier if approved by customer  |  |  |
| Contact Information:   | Contact your local ON S   | Contact your local ON Semiconductor Sales Office or Timothy.Nitschke@onsemi.com   |  |  |
| PCN Samples Contact:   | Sample requests are to<br>Initial PCN or Final PCN<br>Samples delivery timing | Contact your local ON Semiconductor Sales Office or <u>PCN.samples@onsemi.com</u><br>Sample requests are to be submitted no later than 30 days from the date of first notification,<br>Initial PCN or Final PCN, for this change.<br>Samples delivery timing will be subject to request date, sample quantity and special customer<br>packing/label requirements. |  |  |
| Additional Reliability Data:   | Contact your local ON S   | Contact your local ON Semiconductor Sales Office or Paul.Syndergaard@onsemi.com   |  |  |
| Type of Notification:  | days prior to implemen<br>ON Semiconductor will                               | 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 <u>PCN.Support@onsemi.com</u>                             |  |  |
| Marking of Parts/ Traceability of<br>Change:   | by date of change of lo   | by date of change of lot production   |  |  |
| Change Category:   | Wafer Fab Change  | Wafer Fab Change  |  |  |
| Change Sub-Category(s):  | Material Change   | Material Change   |  |  |
| Sites Affected:  |   |   |  |  |
| ON Semiconductor Sites   |   | External Foundry/Subcon Sites   |  |  |
| Gresham Factory  |   | None  |  |  |
| Description and Purpose:<br>IPD Process improvement at Metal 2 and Metal 3 "Barrier"- seed process steps. Standardizes the IPD copper/barrier process to match Gresham<br>Cu technologies and also known industry BKM for Cu metal barrier protection layers design.<br>Will improve stress migration/electomigration performance on affected IPD products.<br>There is no product marking change as a result of this change |   |   |  |  |
| Reliability Data Summary:<br>Intrinsic reliability data collection – electromigration and stress migration measurements all passing.   |   |   |  |  |
| Electrical Characteristics Summary:<br>Electrical characteristics are not impacted.  |   |   |  |  |
| <b>List of Affected Parts:</b><br><b>Note:</b> Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the <u>PCN Customized Portal</u> .  |   |   |  |  |
| Part Number  |   | Qualification Vehicle   |  |  |
|  |   |   |  |  |

| PC-GFA007G-L050 | GDA01X8-L05L |
|-----------------|--------------|
|                 |              |



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| PC-GFA0087-L05A  | GDA01X8-L05L                 |
|------------------|------------------------------|
|                  |                              |
| PC-GFA0093-L05M  | GDA01X8-L05L                 |
| PC-GFA0099-L05N  | GDA01X8-L05L                 |
| XC-GFA002E-L01S  | GDA01X8-L05L                 |
| GDA00P8-L020-ENG | GDA01X8-L05L                 |
| GFA002A-L01N-ENG | GDA01X8-L05L                 |
| GFA002B-L01P-ENG | GDA01X8-L05L                 |
| GFA002C-L01Q-ENG | GDA01X8-L05L                 |
| GFA002D-L01R-ENG | GDA01X8-L05L                 |
| GFA002E-L01S-ENG | GDA01X8-L05L                 |
| GFA002J-L01U-ENG | GDA01X8-L05L                 |
| GFA002L-L01V-ENG | GDA01X8-L05L                 |
| GFA002M-L01W-ENG | GDA01X8-L05L                 |
| GFA0022-L01F-900 | GDA01X8-L05L                 |
| GFA0029-L01M-ENG | GDA01X8-L05L                 |
| PC-D1192871-L053 | GDA01X8-L05L                 |
| PC-D1192872-L053 | GDA01X8-L05L                 |
| PC-D1192873-L053 | GDA01X8-L05L                 |
| PC-D1192874-L053 | GDA01X8-L05L                 |
| PC-D1192875-L053 | GDA01X8-L05L                 |
| PC-GFA003R-L02W  | GDA01X8-L05L                 |
| PC-GFA003V-L02Z  | GDA01X8-L05L                 |
| PC-GFA003W-L030  | GDA01X8-L05L                 |
| PC-GFA003X-L031  | GDA01X8-L05L                 |
| PC-GFA003Y-L032  | GDA01X8-L05L                 |
| PC-GFA003Z-L033  | GDA01X8-L05L                 |
| PC-GFA004F-L03J  | GDA01X8-L05L                 |
| PC-GFA005W-L049  | GDA01X8-L05L                 |
| PC-GFA007T-L058  | GDA01X8-L05L                 |
| PC-GFA0042-L035  | GDA01X8-L05L                 |
| PC-GFA0043-L036  | GDA01X8-L05L                 |
| PC-GFA0045-L038  | GDA01X8-L05L                 |
| PC-GFA0065-L04F  | GDA01X8-L05L                 |
| PC-GFB003X-L031  | GDA01X8-L05L<br>GDA01X8-L05L |
| FC-GFB003A-L031  | UDAUIX0-LUJL                 |



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| XC-GFA002F-L01T | GDA01X8-L05L |
|-----------------|--------------|
| XC-GFA002T-L021 | GDA01X8-L05L |
| XC-GFA002U-L022 | GDA01X8-L05L |
| XC-GFA002V-L023 | GDA01X8-L05L |
| XC-GFA002W-L024 | GDA01X8-L05L |
| XC-GFA003B-L02J | GDA01X8-L05L |
| XC-GFA003C-L02K | GDA01X8-L05L |
| XC-GFA003D-L02G | GDA01X8-L05L |
| XC-GFA003E-L02H | GDA01X8-L05L |
| XC-GFA003M-L02R | GDA01X8-L05L |
| XC-GFA003P-L02T | GDA01X8-L05L |
| XC-GFA0031-L027 | GDA01X8-L05L |
| XC-GFA0032-L028 | GDA01X8-L05L |
| XC-GFA0033-L029 | GDA01X8-L05L |
| XC-GFA0036-L02C | GDA01X8-L05L |
| XC-GFA0038-L02D | GDA01X8-L05L |
| XC-GFB0035-L02B | GDA01X8-L05L |
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