



# Initial Product/Process Change Notification

Document #: IPCN25839Z

Issue Date: 13 Dec 2023

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|--|--|---|
| <b>Title of Change:</b>  | Transfer of Assembly and Test operation of IC DPAK-5 package (Case outline 936A-02) from onsemi Seremban, Malaysia to Good-Ark Electronics Co.,Ltd, China  |   |
| <b>Proposed Changed Material First Ship Date:</b>  | 01 Oct 2024 or earlier if approved by customer   |   |
| <b>Current Material Last Order Date:</b>   | N/A<br><i>Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability.</i>  |   |
| <b>Current Material Last Delivery Date:</b>  | N/A<br><i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>  |   |
| <b>Product Category:</b>   | Active components – Integrated circuits  |   |
| <b>Contact information:</b>  | Contact your local onsemi Sales Office or <a href="mailto:Milos.Dvorak@onsemi.com">Milos.Dvorak@onsemi.com</a>   |   |
| <b>PCN Samples Contact:</b>  | Contact your local onsemi Sales Office to place sample order.<br>Sample requests are to be submitted no later than 45 days after publication of this change notification.<br>Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.   |   |
| <b>Additional Reliability Data:</b>  | Contact your local onsemi Sales Office or <a href="mailto:AbdulRasyid.Ruslan@onsemi.com">AbdulRasyid.Ruslan@onsemi.com</a>   |   |
| <b>Type of Notification:</b>   | This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 6 months prior to implementation of the change. In case of questions, contact < <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a> >. |   |
| <b>Change Category</b>   |  |   |
| <b>Category</b>  | <b>Type of Change</b>  |   |
| Test Flow  | Move of all or part of electrical wafer test and/or final test to a different location/site/subcontractor  |   |
| Equipment  | Production from a new equipment/tool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.   |   |
| Process - Assembly   | Move of all or part of assembly to a different location/site/subcontractor.,<br>Change of mold compound,<br>Die attach material,<br>Change of direct material supplier   |   |
| <b>Description and Purpose:</b>  |  |   |
| This Initial Notification announces to customers that onsemi plans to Transfer Assembly and Test operations of the DPAK-5 package (Case Outline 936A-02) products from onsemi Seremban, Malaysia to Good-Ark Electronics Co.,Ltd, (Suzhou), China. |  |   |
|  | <b>From</b>  | <b>To</b>                                   |
| <b>Assembly / Test Site</b>  | onsemi, Seremban, Malaysia   | Good-Ark Electronics Co.,Ltd, Suzhou, China |
| <b>Die Attach</b>  | Pb95Sn5  | Pb92.5Sn5Ag2.5                              |
| <b>Mold Compound</b>   | EME G600   | G700HF                                      |
| There is no product marking change as a result of this change.   |  |   |

| <b>Reason / Motivation for Change:</b>  | Source/Supply/Capacity Changes Process/Materials Change  |  |          |
|---|--|--|----------|
| <b>Anticipated impact on fit, form, function, reliability, product safety or manufacturability:</b>           | The device will be qualified and validated based on the same Product Specification.<br>No anticipated impacts. |  |          |
| <b>Sites Affected:</b>  |  |  |          |
| <b>onsemi Sites</b>   |  | <b>External Foundry/Subcon Sites</b>         |          |
| None  |  | Good-Ark, China                              |          |
| <b>Marking of Parts/ Traceability of Change:</b>  | Changed material can be identified by assembly plant code.   |  |          |
| <b>Reliability Data Summary:</b>  |  |  |          |
| <b>QV DEVICE NAME:</b> NCV57302DSADJR4G<br><b>RMS:</b> S91762, S93928, S93929<br><b>PACKAGE:</b> D2PAK 5LD EG |  |  |          |
| Test  | Specification  | Condition                                    | Interval |
| High Temperature Operating Life   | JESD22-A108  | Ta=104°C, 100 % max rated Vcc                | 1008 hrs |
| Early Life Failure Rate   | JESD22-A108  | Ta=104°C, 100 % max rated Vcc                | 48 hrs   |
| High Temperature Storage Life   | JESD22-A103  | Ta= 150°C                                    | 1008 hrs |
| Preconditioning   | J-STD-020 JESD-A113  | MSL 1 @ 260 °C                               |          |
| Temperature Cycling   | JESD22-A104  | Ta= -65°C to +150°C, mounted form air to air | 500 cyc  |
| Power Temperature Cycling   | JESD22 A105  | Tj= -40°C to +125°C, bias                    | 1000 cyc |
| Highly Accelerated Stress Test  | JESD22-A110  | 110°C, 85% RH, 18.8psig, bias                | 528 hrs  |
| Unbiased Highly Accelerated Stress Test   | JESD22-A118  | 130°C, 85% RH, 18.8psig, unbiased            | 96 hrs   |
| Resistance to Solder Heat   | JESD22- B106   | Ta = 265°C, 10 sec                           |          |
| Solderability   | JSTD002  | Ta = 245°C, 5 sec                            |          |
| Physical Dimensions   | JESD22-B120  |  |          |
| Estimated date for qualification completion: 1 March 2024   |  |  |          |
| <b>Electrical Characteristics Summary:</b>  |  |  |          |
| Electrical characteristics are not impacted.  |  |  |          |



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### List of Affected Parts:

**Note:** 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 [PCN Customized Portal](#).

| Current Part Number | New Part Number | Qualification Vehicle |
|---------------------|-----------------|-----------------------|
| NCV57302DSADJR4G    | NA              | NCV57302DSADJR4G      |
| NCV57152DSADJR4G    | NA              | NCV57302DSADJR4G      |
| NCV5662DSADJR4G     | NA              | NCV57302DSADJR4G      |
| NCV2931ACD2TR4G     | NA              | NCV57302DSADJR4G      |