# nexperia

# **Final Product Change Notification**

Issue Date: 01-Oct-2020 Effective Date: 30-Mar-2021

Here's your personalized quality information concerning products Digi-Key purchased from Nexperia.

For detailed information we invite you to view this notification online

# 202008003F01



#### **Management Summary**

- Improved BOM of leadless 5/6 pad packages, including die optimization to achieve zero delamination in ATSN (Nexperia Assembly & Test Plant Seremban Malaysia)

- For automotive products

Change Category
[] Wafer Fab Process

[] Wafer Fab Materials

[] Wafer Fab Location

| [] Assembl<br>Process                | y[] Product Marking              | [] Test<br>Location    | [X] Design                              |  |
|--------------------------------------|----------------------------------|------------------------|---|--|
| [X]<br>Assembly                      | [] Mechanical<br>Specification   | []Test<br>Process      | [] Errata                               |  |
| Materials<br>[ ] Assembl<br>Location | y[]<br>Packing/Shipping/Labelinę | [] Test<br>g Equipment | [] Electrical<br>spec./Test<br>coverage |  |
|                                      |                                  |                        | •                                       |  |

Improved leadless 5/6 pad packages incl die optimization to achieve zero delamination

### **Details of this Change**

Improved BOM of leadless 5/6 pad packages, including die optimization to achieve zero delamination in ATSN (Nexperia Assembly & Test Plant Seremban Malaysia) for automotive products

- Where necessary optimized die for legacy leadless packages

- Improved die aspect ratio and bond-pad relocation to improve intrinsic quality for wire-bond process and support zero delamination

- Identical IP used resulting in same performance as existing die

- BOM change for zero delamination performance
- Enhanced mould compound
- Introduced rough PPF inner leadframe

- Changed lead finish from Sn to enhanced NiPdAu (alignment with packages which were released since 2015)

- No change in diffusion fab and assembly location

Qualification in accordance to the Automotive Electronics Council:

AEC-Q100-rev. H Stress Test Qualification for Integrated Circuits
 AEC-Q006-rev. A Qualification requirements for Cu wire interconnection

#### Why do we Implement this Change

To improve the intrinsic quality

# Identification of Affected Products

The changed products can be identified by backward traceability of the product marking date code as well as on the reel and box labels

#### **Product Availability**

### Sample Information

Samples are available upon request

Samples are available upon request via Helpdesk+ from BG Analog & Logic ICs sample store in Nijmegen The Netherlands

#### Production

Planned first shipment 30-Mar-2021

#### Impact

SOT886/1202/1115: No change

SOT1226/1255: No change in fit, function, quality or reliability anticipated.Pads have rounded edges to enhance adhesion/locking. No change on recommended solder footprint

#### Data Sheet Revision

No impact to existing datasheet

# **Disposition of Old Products**

Existing inventory will be shipped until depleted

#### **Related Notifications**

Notification Issue Date Effective DateTitle

201912002F0131-Dec- 30-Mar-2020 Improved leadless 5/6 pad packages incl die optimization to achieve zero delamination

#### Timing and Logistics

Your acknowledgement of this change, conform JEDEC J-STD-046, is expected till 30-Oct-2020. Lack of acknowledgement of the PCN constitutes acceptance of the change.

#### Remarks

- No change in data sheet electrical specification, test limits and distributions

- No assembly location change
- No fab location change

- Outline drawing products with SOT1226 and SOT1255 will show rounded edges on pads. (A new datasheet will be issued)

#### **Contact and Support**

For all inquiries regarding the ePCN tool application or access issues, please contact Nexperia "Global Quality Support Team".

For all Quality Notification content inquiries, please contact your local Nexperia Sales Support team.

For specific questions on this notice or the products affected please contact our specialist directly: **e-mail address** PCN-Logic@nexperia.com

At Nexperia B.V. we are constantly striving to improve our product and processes to ensure they reach the highest possible Quality Standards.

About Nexperia B.V.

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| Changed Orderable Part# | Changed Part 12NC | Changed Part Number | Changed Part Description           | Package Outline | Package Name | Status | Product Line       |
|-------------------------|-------------------|---------------------|------------------------------------|-----------------|--------------|--------|--------------------|
| 74LVC1G08GM-Q100X       | 935690713115      | 74LVC1G08GM-Q100    | Single 2-input AND gate            | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC2G14GM-Q100X       | 935690714115      | 74LVC2G14GM-Q100    | Dual inverting Schmitt trigger     | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC1G07GS-Q100H       | 935690778125      | 74LVC1G07GS-Q100    | Buffer with open-drain o/p         | SOT1202         | X2SON6       | RFS    | Analog & Logic ICs |
| 74LVC1G32GM-Q100H       | 935299288125      | 74LVC1G32GM-Q100    | Single 2-input OR gate             | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74AUP1G125GM-Q100X      | 935690726115      | 74AUP1G125GM-Q100   | Low power bufferline driver        | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC2G04GS-Q100H       | 935690676125      | 74LVC2G04GS-Q100    | Low Voltage Dual Inverter          | SOT1202         | X2SON6       | RFS    | Analog & Logic ICs |
| 74AUP1G08GM-Q100X       | 935690769115      | 74AUP1G08GM-Q100    | Low-power 2-input AND gate         | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC2G34GM-Q100,1      | 935299049125      | 74LVC2G34GM-Q100    | Dual buffer gate                   | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74AUP1G125GS-Q100H      | 935690772125      | 74AUP1G125GS-Q100   | 2 supply translator/transceiver    | SOT1202         | X2SON6       | RFS    | Analog & Logic ICs |
| 74AVC1T45GM-Q100H       | 935299489125      | 74AVC1T45GM-Q100    | Dual supply xlator w/3-state       | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74AVC1T45GS-Q100H       | 935690771125      | 74AVC1T45GS-Q100    | 2 supply translator/transceiver    | SOT1202         | X2SON6       | RFS    | Analog & Logic ICs |
| 74LVC2GU04GM-Q100,      | 935299056125      | 74LVC2GU04GM-Q100   | Dual inverter                      | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC1G17GM-Q100X       | 935690764115      | 74LVC1G17GM-Q100    | Single Schmitt trigger buffer      | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC1T45GM-Q100X       | 935690846115      | 74LVC1T45GM-Q100    | 1 bit dual supply transceiver      | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC1G125GM-Q100X      | 934660723115      | 74LVC1G125GM-Q100   | Single bus buffer/line driver      | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74AUP1G157GM-Q100X      | 935690765115      | 74AUP1G157GM-Q100   | Low-power 2-input mux              | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74AUP1G32GM-Q100X       | 935690767115      | 74AUP1G32GM-Q100    | Low-power 2-input OR-gate          | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74AUP2GU04GM-Q100X      | 935690768115      | 74AUP2GU04GM-Q100   | Low-power dual unbuffered inverter | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC1G14GM-Q100X       | 935690763115      | 74LVC1G14GM-Q100    | Single Schmitt-trigger inverter    | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74LVC1G3157GM-Q10X      | 935300911115      | 74LVC1G3157GM-Q100  | 2-channel analog mux/dmux          | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
| 74AUP1T34GM-Q100X       | 935690766115      | 74AUP1T34GM-Q100    | Low-power 2 supply buffer          | SOT886          | XSON6        | RFS    | Analog & Logic ICs |
|                         |                   |                     |                                    |                 |              |        |                    |