



Initial Product/Process Change Notification

Document #: IPCN25070Z

Issue Date: 14 Dec 2022

| | |
|---|--|
| Title of Change: | Qualification of Alternate Lead Frame with either C7025 or A194ESH base material for Specific QFN Devices at onsemi Seremban, Malaysia. |
| Proposed Changed Material First Ship Date: | 30 Sep 2023 or earlier if approved by customer |
| Current Material Last Order Date: | N/A <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> |
| Current Material Last Delivery Date: | N/A <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i> |
| Product Category: | Active components – Integrated circuits |
| Contact information: | Contact your local onsemi Sales Office or Nanthiya.Krishnasamy@onsemi.com |
| PCN Samples Contact: | Contact your local onsemi Sales Office to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements. |
| Additional Reliability Data: | Contact your local onsemi Sales Office or MohdAzizi.Azman@onsemi.com |
| Type of Notification: | 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 < PCN.Support@onsemi.com >. |
| Change Category | |
| Category | Type of Change |
| Process - Assembly | Change of direct material supplier, Change of leadframe base material |

Description and Purpose:

onsemi is announcing the intent to qualify either C7025 or A194ESH as an alternative base material for specific QFN devices in onsemi Seremban, Malaysia.

FPCN may be issued by phases based in the timing of qualification completion.

| | From | | To | |
|---------------------|-------------|-------------|---------|---------|
| Lead Frame Supplier | DCI | DCI | HDS | AAMI |
| Base Material | EFTEC64T | EFTEC64T | C7025 | A194ESH |
| Roughening | Non-Roughed | Non-Roughed | Roughed | Roughed |

| | | | |
|---|--|--------------------------------------|--|
| Reason / Motivation for Change: | Process/Materials Change | | |
| Anticipated impact on fit, form, function, reliability, product safety or manufacturability: | The device will be qualified and validated based on the same Product Specification. No anticipated impacts. | | |
| Sites Affected: | | | |
| onsemi Sites | | External Foundry/Subcon Sites | |
| onsemi Seremban, Malaysia | | None | |
| Marking of Parts/ Traceability of Change: | Product traceability will be maintained by date code. | | |

Reliability Data Summary:

QV DEVICE NAME: NCV8715MX50TBG (Supplier: HDS)

PACKAGE: DFN-6

| Test | Specification | Condition | Interval |
|-------|---------------------|--|----------|
| HTSL | JESD22-A103 | Ta= 150°C | 1008 hrs |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | |
| TC | JESD22-A104 | Ta= - 55°C to +150°C | 1000 cyc |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec Required for through hole devices only | |
| SD | JSTD002 | Ta = 245°C, 5 sec | |

Estimated date for qualification completion: 31 December 2022

QV DEVICE NAME: SZESD7451N2T5G (Supplier: HDS)

PACKAGE: XDFN-2

| Test | Specification | Condition | Interval |
|-------|---------------------|--|----------|
| HTSL | JESD22-A103 | Ta= 150°C | 1008 hrs |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | |
| TC | JESD22-A104 | Ta= - 55°C to +150°C | 1000 cyc |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec Required for through hole devices only | |
| SD | JSTD002 | Ta = 245°C, 5 sec | |

Estimated date for qualification completion: 31 December 2022

QV DEVICE NAME: CAV25512HU5E-GT3 (Supplier: AAMI)

PACKAGE: UDFN-8

| Test | Specification | Condition | Interval |
|-------|---------------------|--|----------|
| HTSL | JESD22-A103 | Ta= 150°C | 1008 hrs |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | |
| TC | JESD22-A104 | Ta= - 55°C to +150°C | 1000 cyc |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec Required for through hole devices only | |
| SD | JSTD002 | Ta = 245°C, 5 sec | |

Estimated date for qualification completion: 28 February 2023

QV DEVICE NAME: NLSV4T244MUTAG (Supplier: HDS)

PACKAGE: UQFN-12

| Test | Specification | Condition | Interval |
|-------|---------------------|--|----------|
| HTSL | JESD22-A103 | Ta= 150°C | 1008 hrs |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | |
| TC | JESD22-A104 | Ta= - 55°C to +150°C | 1000 cyc |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec Required for through hole devices only | |
| SD | JSTD002 | Ta = 245°C, 5 sec | |

Estimated date for qualification completion: 31 December 2022

QV DEVICE NAME: NB3U23CMNTAG (Supplier: HDS)

PACKAGE: UDFN-6

| Test | Specification | Condition | Interval |
|-------|---------------------|--|----------|
| HTSL | JESD22-A103 | Ta= 150°C | 1008 hrs |
| PC | J-STD-020 JESD-A113 | MSL 1 @ 260 °C | |
| TC | JESD22-A104 | Ta= - 55°C to +150°C | 1000 cyc |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs |
| RSH | JESD22- B106 | Ta = 265°C, 10 sec Required for through hole devices only | |
| SD | JSTD002 | Ta = 245°C, 5 sec | |

Estimated date for qualification completion: 31 March 2023

Electrical Characteristics Summary:

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 |
|---------------------|-----------------|-----------------------|
| NLVSX4014MUTAG | NA | NLSV4T244MUTAG |
| NCV8702MX28TCG | NA | NCV8715MX50TBG |
| NCV8702MX30TCG | NA | NCV8715MX50TBG |
| NCV8703MX18TCG | NA | NCV8715MX50TBG |
| NCV8703MX30TCG | NA | NCV8715MX50TBG |
| NCV8703MX33TCG | NA | NCV8715MX50TBG |
| NCV8715MX18TBG | NA | NCV8715MX50TBG |
| NCV8715MX33TBG | NA | NCV8715MX50TBG |
| NLSV4T244MUTAG | NA | NLSV4T244MUTAG |
| NCV8715MX30TBG | NA | NCV8715MX50TBG |
| CAV25512HU5E-GT3 | NA | CAV25512HU5E-GT3 |
| CAV24C512HU5EGT3-TE | NA | CAV25512HU5E-GT3 |
| CAV24C512HU5EGT3 | NA | CAV25512HU5E-GT3 |
| NLVX1G74MUTCG | NA | NB3U23CMNTAG |
| NLVPCA9306AMUTCG | NA | NB3U23CMNTAG |
| NLVSX4373MUTAG | NA | NB3U23CMNTAG |
| SZESD7471N2T5G | NA | SZESD7451N2T5G |
| SZESD7461N2T5G | NA | SZESD7451N2T5G |
| SZESD7451N2T5G | NA | SZESD7451N2T5G |
| SZESD7421N2T5G | NA | SZESD7451N2T5G |
| NCV8752BMX33TCG | NA | NCV8715MX50TBG |
| NCV8752BMX28TCG | NA | NCV8715MX50TBG |
| NCV8752BMX18TCG | NA | NCV8715MX50TBG |
| NCV8752AMX28TCG | NA | NCV8715MX50TBG |
| NCV8752AMX18TCG | NA | NCV8715MX50TBG |
| NCV8715MX50TBG | NA | NCV8715MX50TBG |

Appendix A: Changed Products

PCN#: IPCN25070Z
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DIKG: DIGI-KEY

| Product | Customer Part Number | Qualification Vehicle | New Part Number | Replacement Supplier |
|-----------------|----------------------|-----------------------|-----------------|----------------------|
| NLVSX4014MUTAG | | NLSV4T244MUTAG | NA | |
| NCV8715MX33TBG | | NCV8715MX50TBG | NA | |
| NLVX1G74MUTCG | | NB3U23CMNTAG | NA | |
| NLVSX4373MUTAG | | NB3U23CMNTAG | NA | |
| SZESD7471N2T5G | | SZESD7451N2T5G | NA | |
| SZESD7461N2T5G | | SZESD7451N2T5G | NA | |
| SZESD7451N2T5G | | SZESD7451N2T5G | NA | |
| SZESD7421N2T5G | | SZESD7451N2T5G | NA | |
| NCV8752BMX28TCG | | NCV8715MX50TBG | NA | |
| NCV8715MX50TBG | | NCV8715MX50TBG | NA | |
| NCV8703MX18TCG | | NCV8715MX50TBG | NA | |
| NCV8703MX33TCG | | NCV8715MX50TBG | NA | |