

Final Product/Process Change Notification

Document #:FPCN23564XA Issue Date:21 Dec 2020

| Title of Change: | Wafer diameter change from 5inch Bucheon to 6inch Bucheon | | |
|---|---|--|--|
| Proposed First Ship date: | 29 Mar 2021 or earlier if approved by customer | | |
| Contact Information: | Contact your local ON Semiconductor Sales Office or Yuna.Im@onsemi.com | | |
| PCN Samples Contact: | Contact your local ON Semiconductor Sales Office or <pcn.samples@onsemi.com>. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special custome packing/label requirements.</pcn.samples@onsemi.com> | | |
| Additional Reliability Data: | Contact your local ON Semiconductor Sales Office or songyong.sim@onsemi.com | | |
| Type of Notification: | This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. 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 PCN.Support@onsemi.com | | |
| Marking of Parts/ Traceability of Change: | Lot code after 2020 | | |
| Change Category: | Wafer Fab Change | | |
| Change Sub-Category(s): | Wafer diameter changes from 5inch to 6inch and adding passivation | | |

Sites Affected:

| ON Semiconductor Sites | External Foundry/Subcon Sites |
|---------------------------------|-------------------------------|
| ON Semiconductor Bucheon, Korea | None |

Description and Purpose:

Supply enhancement due to Bucheon 5inch fab closure instead EOL products. Qfet is qualified tech in Bucheon 6inch.

| Item | Before Change Description | After Change Description |
|----------------|---|--|
| Wafer diameter | ON Semiconductor Bucheon, Korea- Sinch | ON Semiconductor Bucheon, Korea- 6inch |
| Passivation | No | Nitride passivation |

Reliability Data Summary:

QV DEVICE NAME: FQP2N40-F080

RMS: K70179, K70446 PACKAGE: TO220

| Test | Specification | Condition | Interval | Results |
|------|------------------------------------|--|----------|---------|
| HTRB | JESD22-A108 | Tj=150°C, 80% max rated V | 1008 hrs | 0/240 |
| HTGB | JESD22-A108 | Tj=150°C, 100% max rated Vgss | 1008 hrs | 0/240 |
| HTSL | JESD22-A103 | Ta=150°C | 1008 hrs | 0/240 |
| IOL | MIL-STD-750 (M1037) AEC-Q101 | Ta=+25°C, delta Tj=100°C On/off = 3.5 min | 8572 cyc | 0/120 |

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| ТС | JESD22-A104 | Ta= -55°C to +150°C | 1000 cyc | 0/120 |
|-------|-------------|--------------------------------------|----------|-------|
| H3TRB | JESD22-A110 | 130°C, 85% RH, 18.8psig, bias (100V) | 1008 hrs | 0/120 |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs | 0/120 |

QV DEVICE NAME: IRFP150A RMS: K64737, K69610 PACKAGE: TO3PN

| Test | Specification | Condition | Interval | Results |
|-------|------------------------------------|--|----------|---------|
| HTRB | JESD22-A108 | Tj=175°C, 80% max rated V | 1008 hrs | 0/240 |
| HTGB | JESD22-A108 | Tj=175°C, 100% max rated Vgss | 1008 hrs | 0/240 |
| HTSL | JESD22-A103 | Ta=175°C | 1008 hrs | 0/240 |
| IOL | MIL-STD-750 (M1037) AEC-Q101 | Ta=+25°C, delta Tj=100°C On/off = 5 min | 6000 cyc | 0/40 |
| TC | JESD22-A104 | Ta= -55°C to +150°C | 1000 cyc | 0/120 |
| H3TRB | JESD22-A110 | 130°C, 85% RH, 18.8psig, bias (80V) | 1008 hrs | 0/120 |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs | 0/120 |

Electrical Characteristics Summary:

Electrical characteristics are not impacted.

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**.

| Part Number | Qualification Vehicle |
|-------------|-----------------------|
| FQP9N30 | FQP2N40-F080 |
| FQP3N30 | FQP2N40-F080 |
| IRFP150A | IRFP150A |

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Appendix A: Changed Products

| Product | Customer Part Number | Qualification Vehicle | New Part Number | Replacement Supplier |
|---------|----------------------|-----------------------|-----------------|----------------------|
| FQP9N30 | | FQP2N40-F080 | | |
| FQP3N30 | | FQP2N40-F080 | | |