



PCN# : P692AAB
Issue Date : Jan. 03, 2017

DESIGN/PROCESS CHANGE NOTIFICATION

This is to inform you that a change is being made to the products listed below.

Unless otherwise indicated in the details of this notification, the identified change will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will remain fully compliant to all published specifications. Products incorporating this change may be shipped interchangeably with existing unchanged products.

This change is planned to take effect in 90 calendar days from the date of this notification. Please work with your local ON Sales Representative to manage your inventory of unchanged product if your evaluation of this change will require more than 90 calendar days.

Please contact your local Customer Quality Engineer within 30 days of receipt of this notification if you require any additional data or samples.

Implementation of change:

Expected First Shipment Date for Changed Product :Apr. 03, 2017

Expected First Date Code of Changed Product :1715

Description of Change (From) :
Wafer fabrication of PT1 products at TowerJazz Israel

Description of Change (To) :
8-inch wafer fabrication of PT1 products at ON Semiconductor Bucheon, South Korea and TowerJazz Israel

Reason for Change:
ON Semiconductor is increasing wafer fabrication capacity by qualifying 8-inch wafer fabrication line at ON Semiconductor Bucheon Korea.
Quality and reliability remain at the highest standards already demonstrated within ON Semiconductor's existing products.
The reliability qualification results used to qualify the 8-inch wafer fabrication line are summarized below.
Design, die size and layout of the affected products will remain unchanged. There are no changes in the datasheet or electrical performance.



Affected Product(s):

| | | |
|------------------|-------------------|-------------------|
| BSS84_G | FDB8030L | FDC2512 |
| FDC3512 | FDC3535 | FDC5614P |
| FDC642P_G | FDC658P_NB4E011 | FDD2670 |
| FDD3510H | FDD3670 | FDD3680 |
| FDD3690 | FDD5612 | FDD5614P |
| FDD5670 | FDD5680 | FDD5690 |
| FDD6530A | FDD6630A | FDD6630A_B5N004A |
| FDFS2P106A | FDMC5614P | FDN336P |
| FDN342P | FDN5630 | FDN5630_G |
| FDP6030BL | FDS3512 | FDS3580 |
| FDS4435A | FDS4488 | FDS5690 |
| FDS5690_NBBM009A | FDS6570A | FDS6612A_NB5E029A |
| FDS6675 | FDS6680A_NBBI005A | FDS6690A_NBBM015A |
| FDS6961A | FDS8935 | FDT3612_SN00151 |
| NDT2955 | SI3443DV | SI4532DY |
| SI4542DY | | |

| Qualification Plan | Device | Package | Process | No. of Lots |
|--------------------|--------------|-------------|---------|-------------|
| Q20150480 | FDS4559_F085 | SOIC-8 Dual | PT1 N/P | 2 (1*) |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|--|-------------|--------------|----------|
| MSL1 Preconditioning | 260C, 3x reflow | JESD22-A113 | NA | 0/924 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, Vr=+/- 42V | JESD22-A110 | 96 hrs | 0/231 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/231 |
| High Temperature Gate Bias | 150C, Vgs=100% of rated Vgs | JESD22-A108 | 1000hrs | 0/231 |
| High Temperature Reverse Bias | 150C, Vr=100% of rate BV | JESD22-A108 | 1000hrs | 0/231 |
| Power Cycle | MSL 1 Preconditioning Delta Tj=100C, 2min on/off | JESD22-A105 | 15000 cycles | 0/231 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/231 |

2 (1*): 2 lots for N channel die and 1 lot for P channel die

| Qualification Plan | Device | Package | Process | No. of Lots |
|--------------------|----------|---------|---------|-------------|
| Q20150479 | FDB8030L | TO263 | PT1 N | 1 |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|---|-------------|-------------|----------|
| MSL1 Preconditioning | 245C, 3x reflow | JESD22-A113 | NA | 0/385 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, Vr=24V | JESD22-A110 | 96 hrs | 0/77 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/77 |
| High Temperature Gate Bias | 175C, Vgs=100% of rated Vgs | JESD22-A108 | 1000 hrs | 0/77 |
| High Temperature Reverse Bias | 175C, Vr=80% of rated BV | JESD22-A108 | 1000hrs | 0/77 |
| Power Cycle | MSL 1 Preconditioning Delta Tj=100C, 3.5min on/off | JESD22-A105 | 8572 cycles | 0/77 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/77 |
| High Temperature Storage Life | MSL 1 Preconditioning 150C | JESD22-A103 | 1000 cycles | 0/77 |
| Resistance to Solder Heat | 260C | JESD22-B016 | 10 sec | 0/10 |

| Qualification Plan | Device | Package | Process | No. of Lots |
|--------------------|---------|---------|---------|-------------|
| Q20150479 | FDC2612 | SSOT6 | PT1 N | 1 |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|--|-------------|--------------|----------|
| MSL1 Preconditioning | 260C, 3x reflow | JESD22-A113 | NA | 0/385 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, Vr=80% of rated BV | JESD22-A110 | 96 hrs | 0/77 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/77 |
| High Temperature Gate Bias | 150C, Vgs=100% of rated Vgs | JESD22-A108 | 1000 hrs | 0/77 |
| High Temperature Reverse Bias | 150C, Vr=80% of rated BV | JESD22-A108 | 1000hrs | 0/77 |
| High Temperature Storage Life | MSL 1 Preconditioning 150C | JESD22-A103 | 1000 cycles | 0/77 |
| Power Cycle | MSL 1 Preconditioning Delta Tj=100C, 2min on/off | JESD22-A105 | 10000 cycles | 0/77 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/77 |
| Resistance to Solder Heat | 260C | JESD22-B016 | 10 sec | 0/30 |

| Qualification Plan | Device | Package | Process | No. of Lots |
|------------------------|----------|---------|---------|-------------|
| Q20150479 Q20160604 | FDC6306F | SSOT6 | PT1 P | 1 |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|---|-------------|-----------------|----------|
| MSL1 Preconditioning | 260C, 3 cycles | JESD22-A113 | NA | 0/385 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/77 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, Vr=80% of rated BV | JESD22-A110 | 96 hrs | 0/77 |
| High Temperature Gate Bias | 150C, Vgs=100% of rated Vgs | JESD22-A108 | 1000 hrs | 0/77 |
| High Temperature Reverse Bias | 150C, Vr=80% of rated BV | JESD22-A108 | 1000hrs | 0/77 |
| Power Cycle | MSL 1 Preconditioning Delta Tj=100C, 2min on/off | JESD22-A105 | 10000 cycles | 0/77 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/77 |
| Resistance to Solder Heat | 260C | JESD22-B016 | 10 sec | 0/30 |
| High Temperature Storage Life | MSL 1 Preconditioning 150C | JESD22-A103 | 1000 cycles | 0/77 |



Title : Qualification Report for PCN : P692AAB

Date : Jan. 03, 2017

Affected devices :

Customer Name : DIGI-KEY CORPORATION

Customer Code : 0003948101

| Product | Customer Part Number | BBB | Drawing |
|------------|----------------------|-----|---------|
| FDB8030L | | Y | N |
| FDC2512 | | Y | N |
| FDC3535 | | Y | N |
| FDC5614P | | Y | N |
| FDD5614P | | Y | N |
| FDD5670 | | Y | N |
| FDD5690 | | Y | N |
| FDD6530A | | Y | N |
| FDD6630A | | Y | N |
| FDFS2P106A | | Y | N |
| FDMC5614P | | Y | N |
| FDN336P | | Y | N |
| FDN342P | | Y | N |
| FDN5630 | | Y | N |
| FDP6030BL | | Y | N |
| FDS3580 | | Y | N |
| FDS5690 | | Y | N |
| FDS6570A | | Y | N |
| FDS6961A | | Y | N |
| FDS8935 | | Y | N |
| NDT2955 | NDT2955TR-ND | Y | N |
| SI3443DV | | Y | N |
| SI4532DY | | Y | N |
| SI4542DY | | Y | N |

Customer Name : DIGI-KEY CONSIGNMENT

Customer Code : 0003948144

| Product | Customer Part Number | BBB | Drawing |
|----------|----------------------|-----|---------|
| FDD3510H | | Y | N |
| FDS6675 | | Y | N |

Customer Name : DIGI-KEY CONSIGNMENT

Customer Code : 0003948145

| Product | Customer Part Number | BBB | Drawing |
|---------|----------------------|-----|---------|
| FDN5630 | | Y | N |

Qualification Test Summary :

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| Qualification Plan | Device | Package | Process | No. of Lots |
|--------------------|--------------|-------------|---------|-------------|
| Q20150480 | FDS4559 F085 | SOIC-8 Dual | PT1 N/P | 2 (1*) |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|--|-------------|--------------|----------|
| MSL1 Preconditioning | 260C, 3x reflow | JESD22-A113 | NA | 0/924 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, $V_{r}=+/-$ 42V | JESD22-A110 | 96 hrs | 0/231 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/231 |
| High Temperature Gate Bias | 150C, $V_{gs}=100\%$ of rated V_{gs} | JESD22-A108 | 1000hrs | 0/231 |
| High Temperature Reverse Bias | 150C, $V_{r}=100\%$ of rate BV | JESD22-A108 | 1000hrs | 0/231 |
| Power Cycle | MSL 1 Preconditioning Delta $T_{j}=100C$, 2min on/off | JESD22-A105 | 15000 cycles | 0/231 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/231 |

2 (1*): 2 lots for N channel die and 1 lot for P channel die

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| Qualification Plan | Device | Package | Process | No. of Lots |
|--------------------|----------|---------|---------|-------------|
| Q20150479 | FDB8030L | TO263 | PT1 N | 1 |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|--|-------------|-------------|----------|
| MSL1 Preconditioning | 245C, 3x reflow | JESD22-A113 | NA | 0/385 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, $V_{r}=24V$ | JESD22-A110 | 96 hrs | 0/77 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/77 |
| High Temperature Gate Bias | 175C, $V_{gs}=100\%$ of rated V_{gs} | JESD22-A108 | 1000 hrs | 0/77 |
| High Temperature Reverse Bias | 175C, $V_{r}=80\%$ of rated BV | JESD22-A108 | 1000hrs | 0/77 |
| Power Cycle | MSL 1 Preconditioning Delta $T_{j}=100C$, 3.5min on/off | JESD22-A105 | 8572 cycles | 0/77 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/77 |
| High Temperature Storage Life | MSL 1 Preconditioning 150C | JESD22-A103 | 1000 cycles | 0/77 |
| Resistance to Solder Heat | 260C | JESD22-B016 | 10 sec | 0/10 |



| Qualification Plan | Device | Package | Process | No. of Lots |
|--------------------|---------|---------|---------|-------------|
| Q20150479 | FDC2612 | SSOT6 | PT1 N | 1 |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|--|-------------|--------------|----------|
| MSL1 Preconditioning | 260C, 3x reflow | JESD22-A113 | NA | 0/385 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, $V_{r}=80\%$ of rated BV | JESD22-A110 | 96 hrs | 0/77 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/77 |
| High Temperature Gate Bias | 150C, $V_{gs}=100\%$ of rated V_{gs} | JESD22-A108 | 1000 hrs | 0/77 |
| High Temperature Reverse Bias | 150C, $V_{r}=80\%$ of rated BV | JESD22-A108 | 1000hrs | 0/77 |
| High Temperature Storage Life | MSL 1 Preconditioning 150C | JESD22-A103 | 1000 cycles | 0/77 |
| Power Cycle | MSL 1 Preconditioning Delta $T_j=100C$, 2min on/off | JESD22-A105 | 10000 cycles | 0/77 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/77 |
| Resistance to Solder Heat | 260C | JESD22-B016 | 10 sec | 0/30 |



| Qualification Plan | Device | Package | Process | No. of Lots |
|------------------------|----------|---------|---------|-------------|
| Q20150479 Q20160604 | FDC6306P | SSOT6 | PT1 P | 1 |

| Test Description: | Condition: | Standard : | Duration: | Results: |
|--|--|-------------|--------------|----------|
| MSL1 Preconditioning | 260C, 3 cycles | JESD22-A113 | NA | 0/385 |
| Un-biased Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH | JESD22-A110 | 96 hrs | 0/77 |
| Highly Accelerated Stress Test | MSL 1 Preconditioning 130C, 85%RH, $V_{r}=80\%$ of rated BV | JESD22-A110 | 96 hrs | 0/77 |
| High Temperature Gate Bias | 150C, $V_{gs}=100\%$ of rated V_{gs} | JESD22-A108 | 1000 hrs | 0/77 |
| High Temperature Reverse Bias | 150C, $V_{r}=80\%$ of rated BV | JESD22-A108 | 1000hrs | 0/77 |
| Power Cycle | MSL 1 Preconditioning Delta $T_j=100C$, 2min on/off | JESD22-A105 | 10000 cycles | 0/77 |
| Temperature Cycle | MSL 1 Preconditioning -55C, 150C | JESD22-A104 | 1000 cycles | 0/77 |
| Resistance to Solder Heat | 260C | JESD22-B016 | 10 sec | 0/30 |
| High Temperature Storage Life | MSL 1 Preconditioning 150C | JESD22-A103 | 1000 cycles | 0/77 |

The selection methodology of qualification vehicles is aligned with JESD47 and if automotive devices are impacted by the PCN the selection of qualification vehicles is also align with the requirements in AEC-Q100 or AEC-Q101

Please contact your local Customer Quality Engineer if you have any questions concerning this data.