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| Title of Change: | Change of leadframe plating and die size of the infrared light emitting diode for FOD3120/50 product families and change of UVLO datasheet specification for FOD3150 series only. |
| Proposed First Ship date: | 20 Mar 2020 or earlier if approved by customer |
| Contact Information: | Contact your local ON Semiconductor Sales Office or < LengKian.See@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 customer packing/label requirements. |
| Additional Reliability Data: | Contact your local ON Semiconductor Sales Office or < ChangKit.Mok@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: | Date code marking of parts |
| Change Category: | Assembly Change |
| Change Sub-Category(s): | Material Change, Datasheet/Product Doc change |

Sites Affected:

ON Semiconductor Sites

None

External Foundry/Subcon Sites

External Subcon Site

Description and Purpose:

This notification announces to customers the change of leadframe plating and Infrared Light Emitting Diode die size from 11mil x 11mil to die size 9mil x 9mil for FOD3120/50 families listed on this FPCN.

| | Before Change | After Change |
|-------------------------------|---|--|
| Lead frame | Lead frame with Ag plated on both DAP and leadpost. | Lead frame with NiPdAu Plating on both DAP and leadpost. |
| Infrared Light Emitting Diode | LED size : 11mil x 11mil | LED size : 9mil x 9mil |

In addition to the above changes, the datasheet electrical parameters “Under Voltage Lockout Threshold”, “ VUVLO+” and “ VUVLO-” of the FOD3150 series is revised as shown below to align product performance distribution.

| Datasheet Electrical Parameters | | | Before Change | | | After Change | | | Units |
|---------------------------------|---------------------------------|--------------------------------------|---------------|------|------|--------------|------|------|-------|
| VUVLO+ | Under Voltage Lockout Threshold | $I_F = 10\text{mA}, V_O > 5\text{V}$ | 11 | 12.7 | 13.5 | 11 | 12.7 | 14 | V |
| VUVLO- | | $I_F = 10\text{mA}, V_O < 5\text{V}$ | 9.5 | 11.2 | 12.0 | 9.7 | 11.2 | 12.7 | V |

Purpose:

The identified change will improve the reliability and robustness of the products. This change will have no impact on product quality, reliability, and electrical, visual, or mechanical performance. FOD3120 will remain fully compliant to all published specifications, whereas FOD3150 datasheet “Under Voltage Lockout Threshold” specification will be revised as described in this FPCN. There is no product marking change as a result of this change.

**Reliability Data Summary:**

QV DEVICE NAME : FOD3125

PACKAGE : 8-Pin DIP White Package

| Test | Specification | Condition | Interval | Results |
|--------|---------------------|--------------------------|-------------|---------|
| HTOL | JESD22-A108 | Ta=125°C, Vcc bias | 1008 hours | 0/77 |
| HTSL | JESD22-A103 | Ta= 150°C | 1008 hours | 0/77 |
| PC | J-STD-020 JESD-A113 | MSL 1@260°C | - | 0/154 |
| TC+PC | JESD22-A104 | Ta= -40°C to +125°C | 1000 cycles | 0/77 |
| THB+PC | JESD22-A101 | Ta=85°C / 85% RH, biased | 1008 hours | 0/77 |
| RSH | JESD22- B106 | Ta = 265C, 10 sec | - | 0/10 |
| SD | JSTD002 | Ta = 245C, 5 sec | - | 0/15 |

QV DEVICE NAME : FOD3120

PACKAGE : 8-Pin DIP White Package

| Test | Specification | Condition | Interval | Result |
|--------|---------------------|----------------------------|------------|--------|
| HTOL | JESD22-A108 | Ta=100°C, Vcc bias | 504 hours | 0/154 |
| HTSL | JESD22-A103 | Ta= 150°C | 504 hours | 0/153 |
| PC | J-STD-020 JESD-A113 | MSL 1@260°C | - | 0/462 |
| TC+PC | JESD22-A104 | Ta= -40°C to +125°C | 500 cycles | 0/154 |
| THB+PC | JESD22-A101 | Ta=85°C / 85% RH, biased | 504 hours | 0/154 |
| AC+PV | JESD22-A100 | Ta=121°C/100% RH, unbiased | 96 hours | 0/154 |
| RSH | JESD22- B106 | Ta = 265C, 10 sec | - | 0/20 |
| SD | JSTD002 | Ta = 245C, 5 sec | - | 0/30 |

Electrical Characteristics Summary:

Electrical characteristics are not impacted by this change.

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 |
|-------------|-----------------------|
| FOD3120 | FOD3120 |
| FOD3120S | FOD3120 |
| FOD3120SD | FOD3120 |



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|--------------|---------|
| FOD3120SDV | FOD3120 |
| FOD3120SV | FOD3120 |
| FOD3120TSR2 | FOD3120 |
| FOD3120TSR2V | FOD3120 |
| FOD3120TSV | FOD3120 |
| FOD3120TV | FOD3120 |
| FOD3120V | FOD3120 |
| FOD3150 | FOD3120 |
| FOD3150A | FOD3120 |
| FOD3150ASD | FOD3120 |
| FOD3150S | FOD3120 |
| FOD3150SD | FOD3120 |
| FOD3150SDV | FOD3120 |
| FOD3150SV | FOD3120 |
| FOD3150TSR2V | FOD3120 |
| FOD3150TSV | FOD3120 |
| FOD3150TV | FOD3120 |
| FOD3150V | FOD3120 |