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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20601**Generic Copy

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**Issue Date:** 09-Dec-2014**TITLE:** Manufacturing of Large body Clip QFN products at Amkor Technology Philippines**PROPOSED FIRST SHIP DATE:** 16-Mar-2015**AFFECTED CHANGE CATEGORY(S):** ON Semiconductor Manufacturing Assembly and Test**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**Contact your local ON Semiconductor Sales Office or Rob Prestoza <[rob.prestoza@onsemi.com](mailto:rob.prestoza@onsemi.com)>**SAMPLES:** Contact your local ON Semiconductor Sales Office**ADDITIONAL RELIABILITY DATA:** AvailableContact your local ON Semiconductor Sales Office or Nicky Siu <[nicky.siu@onsemi.com](mailto:nicky.siu@onsemi.com)>**NOTIFICATION TYPE:**

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <[quality@onsemi.com](mailto:quality@onsemi.com)>.**DESCRIPTION AND PURPOSE:**

This is a Final Product/Process Change Notification to alert customers of the qualification of Amkor Technology Philippines to assemble and test products in Large body Clip QFN package listed in this notification. Amkor Technology Philippines will provide additional capacity to supplement ON Semiconductor's current Assembly and Test in Seremban, Malaysia and Carmona, Philippines, respectively.

Upon implementation of the change on this FPCN, the affected parts may be sourced from any previously qualified Manufacturing locations.



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### RELIABILITY DATA SUMMARY:

Qual Vehicle: NCP5369MNR2G

| Test            | Conditions  | Interval | Result |
|-----------------|---|----------|--------|
| HTOL            | Ta=125°C, with bias   | 504hrs   | 0/80   |
| HTSL            | Ta=150°C  | 1008hrs  | 0/240  |
| Preconditioning | MSL 3@260°C, 3 X IR at 260°C                                  |          |        |
| TC+PC           | Ta= -55/150°C, air to air                                     | 500cyc   | 0/240  |
| HAST+PC         | Ta=130°C, RH=85%, Pressure=18.8Psig,<br>80% rated or 100V max | 96hrs    | 0/240  |
| UHASt+PC        | Ta=130°C, RH=85%, Pressure=18.8Psig                           | 96hrs    | 0/240  |
| RSH             | Ta=260°C Immersion  |          | 0/90   |
| Solderability   | Steam Aging=8hrs, Ta=245°C                                    |          | 0/45   |
| DPA             | AEC-Q101-004, Post HTSL 1008hrs,<br>TC500cycs & HAST96hrs     |          | 0/6    |
| WPS             | Mil-Std-750 Method 2037, Post TC500cycs<br>& HAST96hrs        |          | 0/15   |

#### For HS-FET

|                 |   |         |       |
|-----------------|---|---------|-------|
| HTRB            | Ta=150°C, Vds=80% Rated Voltage                               | 504hrs  | 0/240 |
| HTGB            | Ta=150°C, Vgs=100% Rated Voltage                              | 504hrs  | 0/240 |
| Preconditioning | MSL 3@260°C, 3 X IR at 260°C                                  |         |       |
| TC+PC           | Ta= -55/150°C, air to air                                     | 500cyc  | 0/240 |
| HAST+PC         | Ta=130°C, RH=85%, Pressure=18.8Psig,<br>80% rated or 100V max | 96hrs   | 0/240 |
| UHASt+PC        | Ta=130°C, RH=85%, Pressure=18.8Psig                           | 96hrs   | 0/240 |
| IOL+PC          | Ta=25°C, Delta Tj=100°C Ton/off = 2mins                       | 7500cyc | 0/240 |

#### For LS-FET

|                 |   |         |       |
|-----------------|---|---------|-------|
| HTRB            | Ta=150°C, Vds=80% Rated Voltage         | 504hrs  | 0/240 |
| HTGB            | Ta=150°C, Vgs=100% Rated Voltage        | 504hrs  | 0/240 |
| Preconditioning | MSL 3@260°C, 3 X IR at 260°C            |         |       |
| TC+PC           | Ta= -55/150°C, air to air               | 500cyc  | 0/240 |
| H3TRB+PC        | Ta=85°C, 85% RH, 80% rated or 100V max  | 504hrs  | 0/240 |
| UHASt+PC        | Ta=130°C, RH=85%, Pressure=18.8Psig     | 96hrs   | 0/240 |
| IOL+PC          | Ta=25°C, Delta Tj=100°C Ton/off = 2mins | 7500cyc | 0/240 |

### ELECTRICAL CHARACTERISTIC SUMMARY:

There is no change in the electrical performance. Datasheet specifications remain unchanged.

### CHANGED PART IDENTIFICATION:

Devices assembled by Amkor Technology Philippines will include the character "2" as Assembly Plant identifier in the Trace Code information.



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**List of affected General Parts:**

NCP5369MNR2G  
NCP5369MNTWG  
NCP5369NMNTXG  
NCP81081MNR2G  
NCP81081MNTWG  
NCP5338MNR2G

**List of affected Customer Specific Parts:**

ZSPM9015TWG