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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16676**Generic Copy

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**Issue Date:** 13-Jul-2011

**TITLE:** Qualification of Nantong Huada Microelectronics Group Co. Ltd. for Assembly and Test of TO-220 Bipolar Power Transistors and Rectifiers.

**PROPOSED FIRST SHIP DATE:** 13-Oct-11

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or  
Farrah Awang Omar at [Farrah.Omar@onsemi.com](mailto:Farrah.Omar@onsemi.com) (Bipolar Transistors)  
Norfizah Mohd Ariffin at [norfizah.mohdariffin@onsemi.com](mailto:norfizah.mohdariffin@onsemi.com) (Rectifiers)

**SAMPLES:** Contact your local ON Semiconductor Sales Office

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Laura Rivers < [laura.rivers@onsemi.com](mailto:laura.rivers@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 FPCN announces the planned capacity expansion of ON Semiconductor's assembly and test operations of TO-220 Discrete packaged products, currently built at the Nantong-Fujitsu in China facility and PSI Philippines, to Nantong-Huada Microelectronics Group in China. Upon the expiration of this FPCN, these Bipolar Power Transistors and Rectifiers devices may be processed at either location. These products have been qualified to commodity/commercial requirements. Nantong Huada Microelectronics is a supplier of power packages to many semiconductor companies and is ISO9001 and ISO14001 qualified.


**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16676**
**RELIABILITY DATA SUMMARY:**

Qualification Vehicles: MJE15032G, MJE15033G, MUR20200CTG, MUR1660CTG

**MJE15032G**

| Test:         | Conditions:                                    | Interval: | Results |
|---------------|------------------------------------------------|-----------|---------|
| HTRB          | Ta=150°C, 80% Rated Voltage                    | 1008 hrs  | 0/240   |
| Autoclave     | Ta=121°C RH=100% ~15 psig                      | 96 hrs    | 0/240   |
| H3TRB         | Ta=85°C RH=85%<br>bias=80% rated V or 100V Max | 1008 hrs  | 0/240   |
| Temp Cycle    | Ta= -65°C to 150°C                             | 1000 cyc  | 0/240   |
| IOL           | Ta=25°C, Delta TJ=100°C,<br>Ton/off = 2 min.   | 8572 cyc  | 0/240   |
| RSH           | Ta=260°C, 10 Sec dwell                         |           | 0/90    |
| Solderability | Ta=245°C, 10 Sec dwell                         |           | 0/45    |

**MJE15033G**

|               |                                                |          |       |
|---------------|------------------------------------------------|----------|-------|
| HTRB          | Ta=150°C, 80% Rated Voltage                    | 1008 hrs | 0/240 |
| Autoclave     | Ta=121°C RH=100% ~15 psig                      | 96 hrs   | 0/240 |
| H3TRB         | Ta=85°C RH=85%<br>bias=80% rated V or 100V Max | 1008 hrs | 0/240 |
| Temp Cycle    | Ta= -65°C to 150°C                             | 1000 cyc | 0/240 |
| IOL           | Ta=25°C, Delta TJ=100°C,<br>Ton/off = 2 min.   | 8572 cyc | 0/240 |
| RSH           | Ta=260°C, 10 Sec dwell                         |          | 0/90  |
| Solderability | Ta=245°C, 10 Sec dwell                         |          | 0/45  |

**MBR20200CTG**

|               |                                                |          |       |
|---------------|------------------------------------------------|----------|-------|
| HTRB          | Ta=150°C, 80% Rated Voltage                    | 1008 hrs | 0/240 |
| Autoclave     | Ta=121°C RH=100% ~15 psig                      | 96 hrs   | 0/240 |
| H3TRB         | Ta=85°C RH=85%<br>bias=80% rated V or 100V Max | 1008 hrs | 0/240 |
| Temp Cycle    | Ta= -65°C to 150°C                             | 1000 cyc | 0/240 |
| IOL           | Ta=25°C, Delta TJ=100°C,<br>Ton/off = 2 min.   | 8572 cyc | 0/240 |
| RSH           | Ta=260°C, 10 Sec dwell                         |          | 0/90  |
| Solderability | Ta=245°C, 10 Sec dwell                         |          | 0/45  |

**MUR1660CTG**

|               |                                                |          |       |
|---------------|------------------------------------------------|----------|-------|
| HTRB          | Ta=150°C, 80% Rated Voltage                    | 1008 hrs | 0/240 |
| Autoclave     | Ta=121°C RH=100% ~15 psig                      | 96 hrs   | 0/240 |
| H3TRB         | Ta=85°C RH=85%<br>bias=80% rated V or 100V Max | 1008 hrs | 0/240 |
| Temp Cycle    | Ta= -65°C to 150°C                             | 1000 cyc | 0/240 |
| IOL           | Ta=25°C, Delta TJ=100°C,<br>Ton/off = 2 min.   | 8572 cyc | 0/240 |
| RSH           | Ta=260°C, 10 Sec dwell                         |          | 0/90  |
| Solderability | Ta=245°C, 10 Sec dwell                         |          | 0/45  |

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16676****ELECTRICAL CHARACTERISTIC SUMMARY:**

There are no changes in electrical characteristics; and product performance meets data sheet specifications. Characterization data is available upon request.

**CHANGED PART IDENTIFICATION:**

Product from Nantong Huada will be identified by AF site code marking.


**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16676**
**List of affected General Parts:**

|         |             |         |
|---------|-------------|---------|
| 2N6040G | BUL45D2G    | TIP102G |
| 2N6043G | BUL45G      | TIP106G |
| 2N6045G | BUV26G      | TIP107G |
| 2N6107G | BUV27G      | TIP110G |
| 2N6109G | BUX85G      | TIP111G |
| 2N6111G | D44H11G     | TIP112G |
| 2N6288G | D44H8G      | TIP115G |
| 2N6292G | D44VH10G    | TIP116G |
| 2N6387G | D45C12G     | TIP117G |
| 2N6388G | D45H11G     | TIP120G |
| 2N6487G | D45H8G      | TIP121G |
| 2N6488G | D45VH10G    | TIP122G |
| 2N6490G | MBR2045CTG  | TIP125G |
| 2N6491G | MBR2060CTG  | TIP126G |
| 2N6667G | MBR20L45CTG | TIP127G |
| BD241CG | MBR3045STG  | TIP29AG |
| BD242BG | MJE13005G   | TIP29BG |
| BD242CG | MJE13007G   | TIP29CG |
| BD243CG | MJE13009G   | TIP30CG |
| BD244BG | MJE15028G   | TIP31AG |
| BD244CG | MJE15029G   | TIP31BG |
| BD809G  | MJE15030G   | TIP31CG |
| BD810G  | MJE15031G   | TIP31G  |
| BDW42G  | MJE15032G   | TIP32AG |
| BDW46G  | MJE15033G   | TIP32BG |
| BDW47G  | MJE15034G   | TIP32CG |
| BDX33BG | MJE15035G   | TIP32G  |
| BDX33CG | MJE18002G   | TIP41AG |
| BDX34BG | MJE18004G   | TIP41BG |
| BDX34CG | MJE18008G   | TIP41CG |
| BDX53BG | MJE2955TG   | TIP42AG |
| BDX53CG | MJE3055TG   | TIP42BG |
| BDX54BG | MJE5730G    | TIP42CG |
| BDX54CG | MJE5731AG   | TIP42G  |
| BU406G  | MJE5731G    | TIP47G  |
| BUH100G | MJE5742G    | TIP48G  |
| BUH150G | TIP100G     | TIP50G  |
| BUH50G  | TIP101G     |         |



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**List of affected Customer Specific Parts:**

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|-----------|
| TE02462TG |
| TE02463TG |