

## Product Change Notice

Issue Date: 16-November-2016

**Change Type:**

Assembly related: Qualify alternate assembly source.

**Parts Affected:**

See Appendix A

**Description and Extent of Change:**

To qualify an alternate assembly contract manufacturer for the part numbers listed.

**Reasons for Change:**

This is part of Broadcom's strategy to secure and assurance of supply to meet market demands.

**Effect of Change on Fit, Form, Function, Quality, or Reliability:**

The device specification will remain the same, which will ensure product electrical performance remains the same. Electrical characterization and reliability qualification was performed on representative products to ensure normal parametric distribution, consistent electrical performance and reliability.

There will be some changes in the product bottom pad dimensions with the alternate source. Please review page 2, 3 and 4 for details. There will be no impact to stencil and package footprint for the PCB.

**Effective Date of Change:**

Product shipments using this change will begin in January 2017 but initiation of the change may be spread over approximately 3 months. Timing for shipment of the changed parts will vary by part number depending on customer demands and inventory level.

**Qualification Data:**

Reliability Qualification data has been completed. Please refer to Appendix A for the results. Qualification data has been generated and approved.

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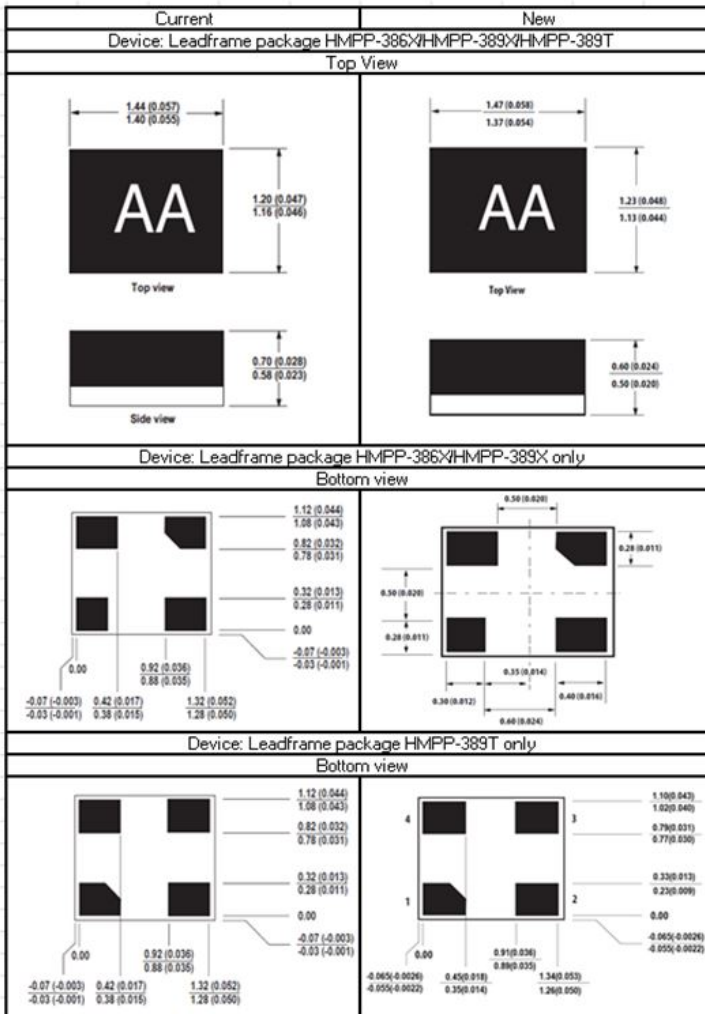
The changes to these Avago Technologies, a Broadcom Limited Company, parts have been reviewed and approved by Avago Technologies engineers and managers per Avago Technologies procedure: Change Control and Customer otification A-5962-6052-80.

Please contact your Broadcom Limited field sales engineer or Contact Center (<http://www.avagotech.com/contact/>) for any questions or support requirements. Please return any response as soon as possible, but not to exceed 30 days.

# Appendix A

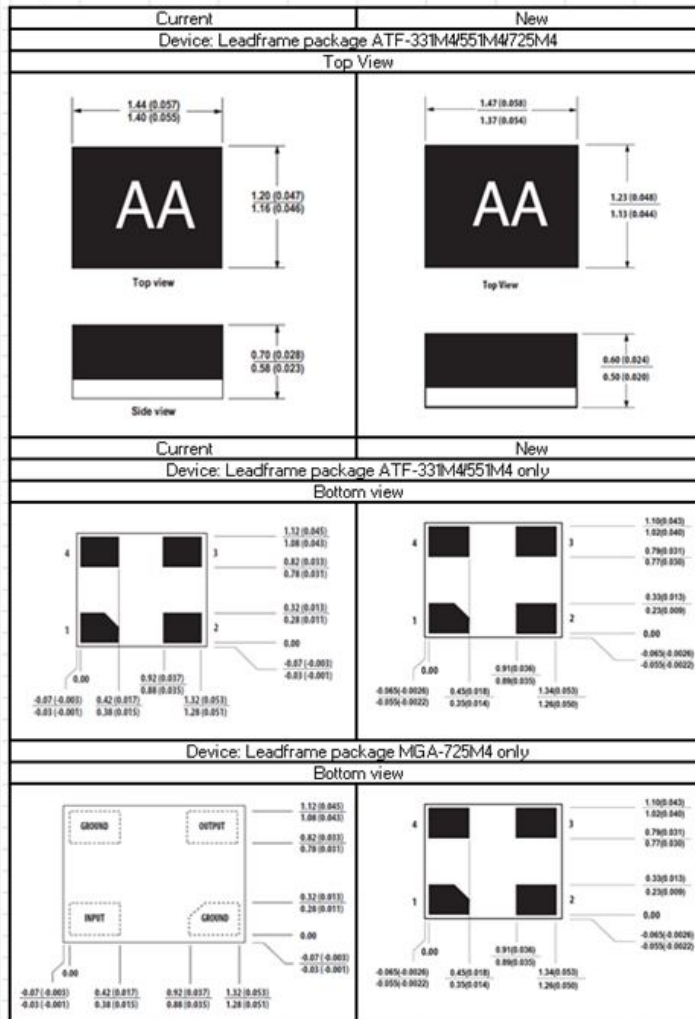
|               |                 |
|---------------|-----------------|
| ATF-331M4-BLK | HMPP-389T-BLK   |
| ATF-331M4-TR1 | HMPP-389T-TR1   |
| ATF-331M4-TR2 | HMPP-389T-TR2   |
| ATF-541M4-BLK | HMPS-2820-BLK   |
| ATF-541M4-TR1 | HMPS-2820-TR1   |
| ATF-541M4-TR2 | HMPS-2820-TR2   |
| ATF-551M4-BLK | HMPS-2822-BLK   |
| ATF-551M4-TR1 | HMPS-2822-TR1   |
| ATF-551M4-TR2 | HMPS-2822-TR2   |
| HMPP-3860-BLK | HMPS-2825-BLK   |
| HMPP-3860-TR1 | HMPS-2825-SG1G  |
| HMPP-3860-TR2 | HMPS-2825-TR1   |
| HMPP-3862-BLK | HMPS-2825-TR1SE |
| HMPP-3862-TR1 | HMPS-2825-TR2   |
| HMPP-3862-TR2 | MGA-725M4-BLK   |
| HMPP-3865-BLK | MGA-725M4-TR1   |
| HMPP-3865-TR1 | MGA-725M4-TR2   |
| HMPP-3865-TR2 | QFET-3002-BLK   |
| HMPP-3890-BLK | QFET-3002-TR1   |
| HMPP-3890-TR1 | QFET-3005-BLK   |
| HMPP-3890-TR2 | QFET-3005-TR1   |
| HMPP-3892-BLK | QFET-3009-BLK   |
| HMPP-3892-TR1 | QFET-3009-TR1   |
| HMPP-3892-TR2 | QFET-3010-BLK   |
| HMPP-3895-BLK | QFET-3010-TR1   |
| HMPP-3895-TR1 |                 |
| HMPP-3895-TR2 |                 |

## Diodes



## Appendix A

### FET/MMICS



| Stress Test       | Stress Condition                                    | Duration                  | Number of Devices (each qual vehicle) | Result |
|-------------------|---|---------------------------|---------------------------------------|--------|
| MSL1 verification | 85°C/85%RH 168hrs + 3x JEDEC Pb<br>Free reflow 260C | 3X reflow                 | 100pcs                                | PASSED |
| TMCL              | -65/150C, 10 minutes dwell time                     | 500X                      | 100pcs                                | PASSED |
| ESD MM            | MM  | Diode(40V)<br>FET(25V)    | 200pcs                                | PASSED |
| ESD HBM           | HBM   | Diode(600V),<br>FET(200V) | 200pcs                                | PASSED |
| Solderability     | Steam age 8 hour, lead free 245C,<br>5 sec Dip      | 2X Dip                    | 88pcs                                 | PASSED |

#### Qual Vehicle

Diode: HMPS-2825

FET: ATF-551M4

All samples are subjected to MSL1 preconditioning prior to Reliability test except ESD & solderability test

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