

Certificate of Compliance

| DUNS | | Document Date | URL for Additional Information |
|-----------------|-------------------------|----------------------------|------------------------------------------------------------------------------------------|
| 00-489-5751 | | Fri, May 18, 2012 07:46 PM | Fairchildsemi.com |
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Material Declaration Processing Information

| FSID | Material Declaration | Site Owner | Assembly Location | Package Weight(g) | MSL Rating |
|-----------------|----------------------|--------------|-------------------|-------------------|------------|
| HMHA2801R2V | SOIC-4 HalfPitch | PENANG | INTERNAL PENANG | 0.055 | 1 |
| Terminal Finish | Base Alloy | Green Status | Reflow Cycles | Max Time at Temp | Peak Temp |
| Matte Tin (Sn) | CU Alloy | | 3 | 30 | 230 |

Homogenous Material Composition Declaration

| Component | Material | Weight of Component(mg) | Substance | Weight (mg) | CAS | PPM in FSID |
|---------------|--------------------------------------------|-------------------------|-------------------------|-------------|------------|-------------|
| Chip | Other inorganic materials | 0.266 | Gallium Arsenide | 0.087 | 1303-00-0 | 1580 |
| | | | Silicon | 0.180 | 7440-21-3 | 3288 |
| Coupling Gel | Other Organic Materials | 8.800 | Dimethyl Cyclosiloxanes | 1.760 | 69430-24-6 | 32147 |
| | | | Titanium Dioxide | 2.640 | 13463-67-7 | 48220 |
| | | | Methyltrimethoxysilane | 4.400 | 1185-55-3 | 80367 |
| Die Attach | | 0.021 | Acrylic Resin | 0.005 | 54208-63-8 | 97 |
| | | | Silver | 0.016 | 7440-22-4 | 290 |
| Encapsulation | Thermoplastics | 31.400 | Antimony Trioxide | 0.942 | 1309-64-4 | 17206 |
| | | | Bromine Resin | 1.260 | 6386-73-8 | 23014 |
| | | | Epoxy Resin | 7.220 | 29690-82-2 | 131876 |
| | | | Silica, vitreous | 22.000 | 60676-86-0 | 401837 |
| Lead Frame | Other Ferrous alloys, non-stainless steels | 13.200 | Silver | 0.001 | 7440-22-4 | 24 |
| | | | Phosphorus | 0.004 | 7723-14-0 | 72 |
| | | | Zinc | 0.016 | 7440-66-6 | 289 |
| | | | Iron | 0.304 | 7439-89-6 | 5553 |
| | | | Copper | 12.900 | 7440-50-8 | 235623 |
| Plating | Other Nonferrous metals & alloys | 0.961 | Tin | 0.961 | 7440-31-5 | 17553 |
| Wire Bond | Precious metals | 0.053 | Gold | 0.053 | 7440-57-5 | 964 |

Note: The substance content disclosed herewith is approximate and is based on various methods including, engineering calculations, supplier surveys, Material Safety Data Sheets, analytical measurements. Fairchild may update this document without notification.

Additionally, the following should be noted:

- This statement may not include information regarding the minute quantities of dopant and metal materials in the electrical devices contained within the finished product.
- CAS numbers listed for Resin substances are generic and may contain alternate substances of similar composition.

RoHS Declaration

The European Parliament and of the Council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive restricts the concentration of Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) to 0.1% (1000 PPM) and restricts the concentration of Cadmium (Cd) to 0.01% (100 PPM) in homogeneous materials of electronic products.

The FSC part number listed above and the homogenous materials in the product are compliant with the Directive 2011/65/EU of FSC is aware of the Courts annulment of the exemption of decabromodiphenyl ether (decaBDE) effective June 08, 2011. FSC products do not contain Decabromodiphenyl ether (decaBDE).

Exemptions as declared for the directive are: 0

China RoHS

With the possible exception of lead, if applicable (refer to the RoHS Declaration statement above), this product and all homogeneous materials in the product comply with the China RoHS standard SJ/T 11363-2006.

REACH Compliance

The Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) entered into force on June 1, 2007. Fairchild Semiconductor is aware of and agrees with the purpose of REACH which is to ensure a high level of protection of human health and the environment. Fairchild Semiconductor is compliant with all applicable requirements of REACH and has provided information regarding the chemical composition of our product(s) in this document.

Fairchild Semiconductor is neither a manufacturer nor importer of preparations into Europe and therefore the registration requirements do not apply to us. It is expected that any electronic materials manufactures that use preparations from Europe in their products will ensure compliance with REACH registration requirements.

Product (articles) manufacturers or importers into Europe are obligated under Article 33 of REACH to inform recipients of any articles that contain chemicals on the Substances of Very High Concern (SVHC) candidate list above a 0.1% concentration (by weight per article). Products manufactured and marketed by Fairchild Semiconductor **do not** contain substances on the REACH SVHC candidate list in concentrations greater than 0.1% by weight per article.

Fairchild will continue to monitor the developments of the REACH legislation and is committed to meeting our responsibilities as an environmentally-responsible company. Refer to the ECHA European Chemical Agency weblink for a complete list of SVHC.
[ECHA European Chemical Agency](#)

Joint Industry Guide (JIG) 101

With the exception of RoHS exemptions listed above (if applicable), this product does not contain any restricted substances listed in the Joint Industry Guide (JIG) 101 in concentrations greater than the threshold listed.

| Substance Name | Threshold |
|-----------------------------------------------------------------------|---------------------------------------------------------|
| Asbestos | Intentionally added |
| Certain Azocolourants and Azodyes | Intentionally added |
| Cadmium / Cadmium Compounds | 75 Ppm or Intentionally added |
| Hexavalent Chromium / Hexavalent Chromium Compounds | 1000 ppm or intentionally added |
| Lead / Lead Compounds | 1000 ppm or intentionally added |
| Mercury / Mercury Coumpounds | 1000 ppm or intentionally added |
| Ozone Depleting substances (CFCs, HCFCs, HBFCs, carbon tetrachloride) | Class I: Intentionally added Class I: HCFCs 1000 ppm |
| Polybrominated Biphenyls (PBBs) | 1000 ppm or intentionally added |
| Polybrominated Diphenylethers (PBDEs) | 1000 ppm or intentionally added |
| Polychlorinated Biphenyl's (PCBs) | 1000 ppm or intentionally added |
| Polychlorinated Naphthalenes (more than 3 chlorine atoms) | Intentionally added |
| Radioactive substances | Intentionally added |
| Certain Shortchain Chloronated Pataffins | Intentionally added |
| Tributyl Tin (TBT) and Triphenyl Tin (TPT) | Intentionally added |
| Tributyl Tin Oxide (TBTO) | Intentionally added |

[Joint Industry Guide \(JIG\) 101](#)

The signature below is of the Company's designated personnel with delegated product ecology compliance responsibility and verifies that to the best of our knowledge the statements above are valid and accurate.

David Lancaster



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Environmental Declaration

The content of this document is based upon information collected from Fairchild Semiconductor's supply chain, manufacturing facilities and affiliates worldwide. Providing for limitations below, Fairchild Semiconductor certifies that the information provided in this document is correct as of the date indicated on this page.

Fairchild has implemented systems to ensure our products are compliant to environmental regulations and laws worldwide. However, not all materials in Fairchild's products may have been independently verified regarding substance content. In the event of any issues arising from information in this document, the warranty section of Fairchild's standard terms and conditions of sale shall apply, unless alternate contracts have been agreed upon in writing by both parties.