Analog Devices Welcomes
Hittite Microwave Corporation

NO CONTENT ON THE ATTACHED DOCUMENT HAS CHANGED
## Material Composition Information

<table>
<thead>
<tr>
<th>Component</th>
<th>Sub-Part Name</th>
<th>Material</th>
<th>Material Trade Name</th>
<th>Material Mass (g) Minimum</th>
<th>Material Mass (g) Maximum</th>
<th>Percent of Substance (% Minimum)</th>
<th>Percent of Substance (% Maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Lead Frame</td>
<td>Metal</td>
<td>Copper Lead Frame</td>
<td>0.0250</td>
<td>0.0334</td>
<td>28.4%</td>
<td>31.0%</td>
</tr>
<tr>
<td>B</td>
<td>Mold Compound</td>
<td>Polymer</td>
<td>Sumitomo EME6600D</td>
<td>0.0364</td>
<td>0.0473</td>
<td>41.3%</td>
<td>43.9%</td>
</tr>
<tr>
<td>C</td>
<td>Epoxy, Die attach</td>
<td>84-1LMIT1</td>
<td>ABESTIK</td>
<td>0.0015</td>
<td>0.0037</td>
<td>1.7%</td>
<td>3.4%</td>
</tr>
<tr>
<td>D</td>
<td>Semicontactor, GaAs</td>
<td>Non-metal, Non-polymer</td>
<td>Crystalline Gallium Arsenide</td>
<td>0.0015</td>
<td>0.0037</td>
<td>1.7%</td>
<td>3.4%</td>
</tr>
<tr>
<td>E</td>
<td>Bond Wire, Gold</td>
<td>Metal</td>
<td>Wire</td>
<td>0.0004</td>
<td>0.0010</td>
<td>0.4%</td>
<td>0.5%</td>
</tr>
<tr>
<td>F</td>
<td>Solder, Lead Finish</td>
<td>Sn/Pb</td>
<td>Plating Coat</td>
<td>0.0015</td>
<td>0.0037</td>
<td>1.7%</td>
<td>3.4%</td>
</tr>
<tr>
<td>G</td>
<td>Copper Slug</td>
<td>Metal</td>
<td>0.0097</td>
<td>0.0151</td>
<td>11.0%</td>
<td>14.0%</td>
<td></td>
</tr>
</tbody>
</table>

### NOTE:
- CAS in not available for proprietary substances. All percentages are calculated from mass data declared. Material trade names are not applicable to some common materials for constant composition. When CAS is unavailable, vendor supplier comments such as PROPRIETARY or TRADE SECRET will be documented.

## Flammability

The plastic mold compound used for this device has been tested for flammability of plastic materials used for parts in devices and appliances and is classified as UL-94 V0.

## Absence of Hazardous Substances

Our material composition policy is to declare all substances intentionally added in our products and documented by our vendors. Additionally we confirm the following regulated substances known to be in electronics are not intentionally added or knowingly present in our semiconductor products or product packaging:

- Cadmium and cadmium compounds
- Mercury and mercury compounds
- Hexavalent chromium compounds
- Polychlorinated biphenyls (PCB)
- Polychlorinated naphthalenes (PCN)
- Polybrominated diphenyl ethers (PBDE)
- Decabromodiphenyl ether (DecaBDE)
- Short chain paraffins (CP) (C10-13) (CI = 50 wt% or more)
- Mirex (perchlordecone)
- TBBP-A-bis
- Organic tin compounds (tributyl tin compounds / triphenyl tin compounds)
- Asbestos
- Formaldehyde
- Azo compounds

## Product Life Cycle Information

Our devices are often incorporated into printed circuit boards and then assembled with other parts into electronic systems. In the U.S.A., end-of-life printed circuit boards (waste), are considered scrap metal by the Environmental Protection Agency (EPA) when they are recycled (USEPA Mgt. memo, Regulatory Status or Printed Circuit Boards, Aug 26, 1992). If any of our products are disposed of as part of a printed circuit board, the entire assembly is treated as scrap metal. Approved printed circuit recycling companies either have proper facilities or have access to secondary metal smelters and refiners which can safely recycle scrap electronic components or assemblies.

The information presented in this document is believed accurate and reliable. The information provided is a result of a review of numerous sources including vendor submitted datasheets. Data is the most current available to Hittite Microwave Corporation at the time of preparation and is issued as a matter of reference information only. No warranty as to accuracy or completeness is expressed or implied. The information in this document is subject to change without notice.

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**Product Environmental Data Sheet**