## Device Material Content

<table>
<thead>
<tr>
<th>Package: 484 fpBGA</th>
<th>Total Device Weight</th>
<th>2.214 Grams</th>
</tr>
</thead>
</table>

### Package Code: FG484
- **XG2**

### Products:
- **Assembly:** ASEM
- **Size (mm):** 23 x 23
- **Lead pitch (mm):** 1.0
- **MSL:** 3
- **Reflow max (ºC):** 250

### Die
- **Package Code:** 7440-21-3
- **Weight:** 0.99% or 0.0219 grams
- **Content:** Silicon chip
- **Notes:** Die size: 5.66 x 6.71mm

### Mold Compound
- **Package Code:** 9003-35-4
- **Weight:** 34.35% or 0.7604 grams
- **Content:** Epoxy Resin, Phenol Novolac, Metal Hydioxide, Carbon Black, Silica Fused
- **Notes:** Mold Compound: Sumitomo G750SE

### D/A Epoxy
- **Package Code:** 7440-22-4
- **Weight:** 0.14% or 0.0032 grams
- **Content:** Silver, Esters & resins
- **Notes:** Die attach epoxy: Henkel (Ablebond) 2100A

### Wire
- **Package Code:** 7440-50-8
- **Weight:** 0.22% or 0.0050 grams
- **Content:** Copper, Palladium
- **Notes:** 0.8 mil diameter; 1 wire per solder ball

### Solder Balls
- **Package Code:** 7440-30-5
- **Weight:** 21.21% or 0.4696 grams
- **Content:** SAC305

### Substrate
- **Package Code:** 7440-05-3
- **Weight:** 20.15% or 0.4460 grams
- **Content:** BT Resin/CCL-HL832NX-A

### Foil
- **Package Code:** 7440-02-0
- **Weight:** 18.31% or 0.4053 grams
- **Content:** Copper, Nickel plating, Gold plating

### Solder Mask
- **Package Code:** 14080-60-7
- **Weight:** 4.61% or 0.1021 grams
- **Content:** Quartz, Methoxy-3-methylbutylacetate, Barium Sulfate, Talc, Naphthalene, Trade secret ingredients
- **Notes:** Solder mask PSR4000 AUS 308

---

Lattice regards this materials information to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Lattice subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers ("Contractors"). All data provided hereunder is based on information received from Contractors. Lattice has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Lattice products.
<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (g)</th>
<th>% of Total Pkg. Wt.</th>
<th>Substance</th>
<th>CAS #</th>
<th>% of Subst.</th>
<th>Notes / Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Die</td>
<td>0.0219</td>
<td>0.99%</td>
<td>Die</td>
<td></td>
<td></td>
<td>Die size: 5.66 x 6.71mm</td>
</tr>
<tr>
<td>Mold Compound</td>
<td>0.7604</td>
<td>34.35%</td>
<td>Epoxy Resin</td>
<td>-</td>
<td>5.00%</td>
<td>Mold Compound: Hitachi CEL-9750ZHF10AKL-U</td>
</tr>
<tr>
<td>D/A Epoxy</td>
<td>0.0032</td>
<td>0.14%</td>
<td>Silver</td>
<td>7440-22-4</td>
<td>80.00%</td>
<td>Die attach epoxy: Henkel (Ablebond) 2100A</td>
</tr>
<tr>
<td>Wire</td>
<td>0.0050</td>
<td>0.22%</td>
<td>Copper</td>
<td>7440-50-8</td>
<td>98.55%</td>
<td>0.8 mil diameter; 1 wire per solder ball</td>
</tr>
<tr>
<td>Solder Balls</td>
<td>0.4696</td>
<td>21.21%</td>
<td>Tin (Sn)</td>
<td>7440-31-5</td>
<td>96.50%</td>
<td>Ag 3.5</td>
</tr>
<tr>
<td>Substrate</td>
<td>0.4460</td>
<td>20.15%</td>
<td>BT Resins</td>
<td>-</td>
<td>32.00%</td>
<td>BT Resin CCL-HL832NX-A</td>
</tr>
<tr>
<td>Foil</td>
<td>0.4053</td>
<td>18.31%</td>
<td>Copper</td>
<td>7440-50-8</td>
<td>91.18%</td>
<td></td>
</tr>
<tr>
<td>Solder Mask</td>
<td>0.1021</td>
<td>4.61%</td>
<td>Quartz</td>
<td>14808-60-7</td>
<td>56.20%</td>
<td>Solder mask PSR4000 AUS 308</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3-methoxy-3-methylbutylacrate</td>
<td>103429-90-9</td>
<td>16.00%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Barium Sulfate</td>
<td>7727-43-7</td>
<td>22.00%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Talc</td>
<td>14807-96-6</td>
<td>3.00%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0.50%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Trade secret ingredients</td>
<td>-</td>
<td>2.30%</td>
<td></td>
</tr>
</tbody>
</table>