



Device Material Content

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| 5555 NE Moore Ct. Hillsboro OR 97124 custreq@latticesemi.com May, 2021 | Package: 400 caBGA Total Device Weight 743.47 Milligrams | Package Code: <div style="border: 1px solid black; padding: 2px; display: inline-block; background-color: #e0e0e0;">BG400</div> Products: <div style="border: 1px solid black; padding: 2px; display: inline-block; background-color: #e0e0e0;">LIFCL</div> | Assembly: ASEK Size (mm): 17 x 17 x 0.7 Lead pitch (mm): 0.8 MSL: 3 Reflow max (°C): 260 |
|--|---|--|--|

| | % of Total Pkg. Wt. | Weight (mg) | % of Total Pkg. Wt. | Weight (mg) | Substance | CAS # | % of Subst. | Notes / Assumptions: |
|----------------------|---------------------|-------------|---------------------|-------------|-------------------------------------|-------------|-------------|---|
| Die | 1.59% | 11.796 | 1.59% | 11.796 | Silicon chip | 7440-21-3 | 100.00% | Die size: 4.805 x 5.185mm |
| Mold Compound | 53.84% | 400.272 | 47.11% | 350.238 | Silica | 60676-86-0 | 87.50% | Mold Compound: Kyocera KE-G1250AAS |
| | | | 3.50% | 26.018 | Epoxy resin | - | 6.50% | |
| | | | 2.96% | 22.015 | Phenol Resin | - | 5.50% | |
| | | | 0.27% | 2.001 | Carbon Black | 1333-86-4 | 0.50% | |
| D/A Epoxy | 0.57% | 4.247 | 0.46% | 3.398 | Silver | 7440-22-4 | 80.00% | Die attach epoxy: Henkel (Ablebond) 2100A |
| | | | 0.11% | 0.849 | Esters & resins | - | 20.00% | |
| Wire | 0.35% | 2.635 | 0.35% | 2.595 | Copper | 7440-50-8 | 98.50% | 0.8 mil diameter; 1 wire per solder ball |
| | | | 0.01% | 0.040 | Palladium | 7440-05-3 | 1.50% | |
| | | | 0.00% | 0.000 | Gold | 7440-57-5 | | |
| Solder Balls | 20.63% | 153.376 | 19.91% | 148.007 | Tin (Sn) | 7440-31-5 | 96.50% | SAC305 |
| | | | 0.62% | 4.601 | Silver (Ag) | 7440-22-4 | 3.00% | |
| | | | 0.10% | 0.767 | Copper (Cu) | 7440-50-8 | 0.50% | |
| Substrate | 5.98% | 44.489 | 1.91% | 14.237 | BT Resins | - | 32.00% | BT Resin CCL-HL832NX-A |
| | | | 4.07% | 30.253 | Glass fiber | 65997-17-3 | 68.00% | |
| Foil | 1.61% | 11.977 | 1.61% | 11.977 | Copper | 7440-50-8 | 100.00% | |
| Solder Mask | 15.42% | 114.673 | 8.39% | 62.348 | Quartz | 14808-60-7 | 54.37% | Solder mask PSR4000 AUS 308 |
| | | | 1.13% | 8.406 | Dipropylene glycol monomethyl ether | 34590-94-8 | 7.33% | |
| | | | 0.51% | 3.807 | Morpholine derivative | 71868-10-5 | 3.32% | |
| | | | 0.46% | 3.440 | Silicon dioxide | 7631-86-9 | 3.00% | |
| | | | 0.46% | 3.440 | Silica, amorphous | 112945-52-5 | 3.00% | |
| | | | 0.04% | 0.275 | Carbon black | 1333-86-4 | 0.24% | |
| | | | 4.43% | 32.957 | Trade secret ingredients | - | 28.74% | |
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Rev. A