



Device Material Content

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Package: 256 caBGA with SnAgCu Solder Balls
Total Device Weight 0.532 Grams

Copper Bond Wire Version
MSL: 3
Peak Reflow Temp: 260°C

| December, 2012 | % of Total Pkg. Wt. | Weight (g) | % of Total Pkg. Wt. | Weight (g) | Substance | CAS # | Notes / Assumptions: |
|---------------------|---------------------|------------|---------------------|------------|--|-----------------|--|
| Die | 1.74% | 0.0093 | | | Silicon chip | 7440-21-3 | Die size: 3.53 x 4.17 mm |
| Mold | 51.18% | 0.2723 | 42.48% | 0.2260 | Silica | 60676-86-0 | Mold Compound composition: 75 to 95% Fused silica filler (LSC uses 83% in our calculation) 2 to 10% Epoxy resin (LSC uses 7.5% in our calculation) 2 to 10% Phenal resin (LSC uses 7.5% in our calculation) 0.5 to 2.5% Metal hydroxide (LSC uses 1.5% in our calculation) 0.1 to 0.5% Carbon Black (LSC uses 0.5% in our calculation) Mold Compound Density ranges between 1.8 and 2.1 grams/cc |
| | | | 3.84% | 0.0204 | Epoxy Resin | - | |
| | | | 3.84% | 0.0204 | Phenol Resin | - | |
| | | | 0.77% | 0.0041 | Metal Hydroxide | - | |
| | | | 0.26% | 0.0014 | Carbon Black | 1333-86-4 | |
| D/A Epoxy | 0.28% | 0.0015 | 0.22% | 0.0012 | Silver filled epoxy | 7440-22-4 | Die attach epoxy Density: 4 grams/cc 60 to 100% Silver (LSC uses 80% in our calculation) 0 to 40% Organic Resins (LSC uses 20% in our calculation) |
| | | | 0.06% | 0.0003 | Silver (Ag) Organic esters and resins | - | |
| Wire | 0.65% | 0.0035 | 0.64% | 0.00342 | Copper | 7440-50-8 | Pd coated Copper, 0.8 mil diameter 98.5% 1.5% |
| | | | 0.01% | 0.00005 | Palladium | 7440-05-3 | |
| Solder Balls | 18.26% | 0.0971 | 17.62% | 0.0937 | Tin (Sn) | 7440-31-5 | Solder ball composition Sn95.5/Ag3.0/Cu0.5% |
| | | | 0.55% | 0.0029 | Silver (Ag) | 7440-22-4 | |
| | | | 0.09% | 0.0005 | Copper (Cu) | 7440-50-8 | |
| Substrate | 21.57% | 0.1148 | 14.67% | 0.0780 | BT Resin | - | 60 to 75% glass fiber (LSC uses 68% in our calculation) |
| | | | 6.90% | 0.0367 | Fibrous-glass-wool Resins | 65997-17-3 - | |
| Foil | 6.31% | 0.0336 | | | Copper (Cu) | 7440-50-8 | |

Notes:

The values listed above are nominal values based on studies of representatives of this particular package type, and are believed to be as accurate as possible.
Constituent substances and proportions in epoxy materials are before curing.

The information provided above is representative of the package as of the date listed, and is subject to change at any time.

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