



Device Material Content

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Package: 48 TQFP (1.4mm) with matte Sn Plating
Total Device Weight 0.18 Grams

MSL: 3
Peak Reflow Temp: 260°C

| August, 2008 | % of Total Pkg. Wt. | Weight (g) | % of Total Pkg. Wt. | Weight (g) | Substance | CAS # | Notes / Assumptions: |
|---------------------|---------------------|------------|---------------------|------------|----------------------|------------|---|
| Die | 2.05% | 0.0037 | | | Silicon chip | 7440-21-3 | Die size: 2.00 x 2.20 mm |
| Mold | 76.58% | 0.138 | 65.09% | 0.117 | Silica Fused | 60676-86-0 | Mold Compound Density between 1.7 and 2.1 grams/cc 80 to 90% Silica Fused (LSC uses 85% in our calculation) 5 to 10% Epoxy Resin (LSC uses 5% in our calculation). 5 to 10% Phenol Resin (LSC uses 5% in our calculation). 0.1% to 1% Antimony Trioxide (LSC uses 1% in our calculation) 0.1 to 1% Carbon black (LSC uses 0.6% in our calculation) 1 to 4% Other (LSC uses 3.4% in our calculation) |
| | | | 3.83% | 0.0069 | Epoxy Resin | - | |
| | | | 3.83% | 0.0069 | Phenol Resin | - | |
| | | | 0.77% | 0.0014 | Antimony Trioxide | 1309-64-4 | |
| | | | 0.46% | 0.0008 | Carbon black | 1333-86-4 | |
| | | | 2.60% | 0.0047 | Other (trade secret) | - | |
| D/A Epoxy | 0.25% | 0.0004 | 0.20% | 0.0004 | Silver (Ag) | 7440-22-4 | (silver content: 70-90%; LSC uses 80% in our calculation) |
| | | | 0.05% | 0.0001 | other | - | Die attach epoxy Density: 4 grams/cc |
| Wire | 0.78% | 0.0014 | | | Gold (Au) | 7440-57-5 | 0.8 to 1.0 mil diameter; 1 wire per package lead; wire length 3 mm |
| Lead Plating | 2.98% | 0.0054 | | | Tin (Sn) | 7440-31-5 | Plating is 100% Sn; thickness is 0.015mm |
| Leadframe | 17.36% | 0.031 | 16.93% | 0.0304 | Copper (Cu) | 7440-50-8 | Leadframe thickness is nominal (per Case Outline) Cu (LSC uses 97.5% in our calculation) 0 to 0.65% Si (LSC uses 0.4% in our calculation) 0 to 0.2% Zn (LSC uses 0.1% in our calculation) 0 to 0.25% Sn (LSC uses 0.2% in our calculation) 0 to 0.3% Cr (LSC uses 0.2% in our calculation) 0 to 3% Ni (LSC uses 1.5% in our calculation) 0 to 0.15% Mg (LSC uses 0.1% in our calculation) |
| | | | 0.07% | 0.00011 | Silicon (Si) | 7440-21-3 | |
| | | | 0.02% | 0.00001 | Zinc (Zn) | 7440-66-6 | |
| | | | 0.03% | 0.00004 | Tin (Sn) | 7440-31-5 | |
| | | | 0.03% | 0.00004 | Chromium (Cr) | 7440-47-3 | |
| | | | 0.26% | 0.00039 | Nickel (Ni) | 7440-02-0 | |
| | | | 0.02% | 0.00001 | Magnesium (Mg) | 7439-95-4 | |

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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