

# Material Composition Specification

DIP Case

Pb (lead)-free plating\*



Device average mass ..... 327 mg

Fluctuation margin ..... +/-10%

| Component     | Material                        | Material |        | Substance                      | CAS No.     | Substance |         |         |
|---------------|---------------------------------|----------|--------|--------------------------------|-------------|-----------|---------|---------|
|               |                                 | (%wt)    | (mg)   |                                |             | (%wt)     | (mg)    | (ppm)   |
| active device | doped Si with glass passivation | 1.383%   | 4.52   | Si                             | 7440-21-3   | 1.31%     | 4.28    | 13,097  |
|               |                                 |          |        | Au                             | 7440-57-5   | .007%     | .023    | 69      |
|               |                                 |          |        | Pb                             | 7439-92-1   | .066%     | 0.217   | 664     |
| leadframe     | copper                          | 35.529%  | 116.12 | Cu                             | 7440-50-8   | 35.529%   | 116.12  | 355,292 |
| die attach    | high temperature solder         | 2.999%   | 9.8    | Pb                             | 7439-92-1   | 2.774%    | 9.065   | 27,736  |
|               |                                 |          |        | Sn                             | 7440-31-5   | 0.15%     | 0.49    | 1,499   |
|               |                                 |          |        | Ag                             | 7440-22-4   | .075%     | 0.245   | 750     |
| encapsulation | EMC                             | 59.76%   | 195.3  | silica                         | 7631-86-9   | 40.634%   | 132.804 | 406,340 |
|               |                                 |          |        | epoxy resin                    | Proprietary | 17.927%   | 58.59   | 179,268 |
|               |                                 |          |        | Sb <sub>2</sub> O <sub>3</sub> | 1309-64-4   | 0.598%    | 1.953   | 5,976   |
|               |                                 |          |        | bromine                        | 10097-32-2  | 0.598%    | 1.953   | 5,976   |
| plating*      | tin lead process                | 0.333%   | 1.09   | Sn                             | 7440-31-5   | 0.266%    | 0.871   | 2,665   |
|               |                                 |          |        | Pb                             | 7439-92-1   | .067%     | 0.218   | 667     |
|               | 100% tin process                | 0.333%   | 1.09   | Sn                             | 7440-31-5   | 0.333%    | 1.089   | 3,332   |

\*Specify Lead-Free when ordering 100% tin (Pb-free) plating.

Disclaimer

The information provided in this Material Composition data sheet is, to our knowledge, correct. However, there is no guarantee to completeness or accuracy, as some information is derived from data sources outside the company.