# Material Composition Specification
## TO-126 Case

**Device average mass . . . . . . . . . . . . . . . . . . . . . . . . . . . 660.1 mg**
**Fluctuation margin . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . +/-10%**

| Component | Material | Material | | Substance | CAS No. | Substance | | |
|---|---|---|---|---|---|---|---|---|
| | | (%wt) | (mg) | | | (%wt) | (mg) | (ppm) |
| active device | doped Si | 0.15% | 1.01 | Si | 7440-21-3 | 0.15% | 1.01 | 1,530 |
| bond wire | copper | 0.31% | 2.03 | Cu | 7440-50-8 | 0.31% | 2.03 | 3,075 |
| leadframe | Cu alloy w/ silver plating | 45.90% | 303 | Cu | 7440-50-8 | 45.1% | 297.70 | 450,992 |
| | | | | Fe | 7439-89-6 | 0.05% | 0.31 | 470 |
| | | | | Ag | 7440-22-4 | 0.76% | 5.0 | 7,575 |
| die attach | silver epoxy | 0.30% | 2.00 | Pb | 7439-92-1 | 0.28% | 1.87 | 2,833 |
| | | | | Sn | 7440-31-5 | 0.02% | 0.10 | 151 |
| | | | | Ag | 7440-22-4 | 0% | 0.03 | 45 |
| encapsulation | EMC | 52.72% | 348 | silica | 7631-86-9 | 36.91% | 243.62 | 369,065 |
| | | | | epoxy resin | Proprietary | 14.23% | 93.94 | 142,312 |
| | | | | $Sb_2O_3$ | 1309-64-4 | 0.79% | 5.22 | 7,908 |
| | | | | TBBA | 79-94-7 | 0.79% | 5.22 | 7,908 |
| plating* | tin/lead process | 0.61% | 4.05 | Sn | 7440-31-5 | 0.49% | 3.25 | 4,923 |
| | | | | Pb | 7439-92-1 | 0.12% | 0.80 | 1,212 |
| | matte tin | 0.61% | 4.05 | Sn | 7440-31-5 | 0.61% | 4.05 | 6,135 |

*For Lead Free plating, add suffix "PB FREE" to part number.
For Tin/Lead plating, add suffix "TIN/LEAD" to part number.
No suffix designation allows for the supply of either lead-free or tin/lead plated product depending on availability.

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