

LINEAR TECHNOLOGY MATERIALS DECLARATION

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(Engineering Calculation)

TO-220

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TOTAL MASS (g) : 1.988315

| COMPONENT MATERIAL | VENDOR/ INDUSTRY NAMES | CONSTITUENT NAME | CAS NUMBER | CONSTITUENT MASS (g) | CONSTITUENT (PPM) OF MATERIAL | CONSTITUENT (PPM) OF TOTAL PKG. | | |
|--------------------------|---------------------------------|--------------------------------|------------|----------------------|-------------------------------|---------------------------------|----------------|----------------------|
| Active Device | Linear Technology | Silicon (Si) | 7440-21-3 | 0.002887 | 1000000 | 1451.98303223 | | |
| Die Coat | Dow Corning | Silicone | 69430-27-9 | 0.000000 | 0 | 0 | | |
| Lead Frame | Cu | Copper (Cu) | 7440-50-8 | 1.428754 | 998500 | 718575.125 | | |
| | | Iron (Fe) | 7439-89-6 | 0.000000 | 0 | 0 | | |
| | | Phosphorus (P) | 7723-14-0 | 0.000000 | 0 | 0 | | |
| | | Zinc (Zn) | 7440-66-6 | 0.000000 | 0 | 0 | | |
| | | Nickel (Ni) | 7440-02-0 | 0.000000 | 0 | 0 | | |
| | | Silicon (Si) | 7440-21-3 | 0.000000 | 0 | 0 | | |
| | | Magnesium (Mg) | 7439-95-4 | 0.000000 | 0 | 0 | | |
| | | Tin (Sn) | 7440-31-5 | 0.002146 | 1500 | 1079.30566406 | | |
| Lead Frame Total: | | | | 1.430900 | 1000000 | 719654.4375 | | |
| Plating | PMI | Exter. Plating Pb | 7439-92-1 | 0.000000 | 0 | 0 | | |
| | | Exter. Plating Sn | 7440-31-5 | 0.011398 | 1000000 | 5732.62548828 | | |
| | | External Plating Total: | | | | 0.011398 | 1000000 | 5732.62548828 |
| | | Inter. Plating Ni | 7440-02-0 | 0.010000 | 834028.375 | 5029.38330078 | | |
| | | Inter. Plating Ag | 7440-22-4 | 0.001990 | 165971.640625 | 1000.84729004 | | |
| | | Internal Plating Total: | | | | 0.011990 | 1000000 | 6030.23046875 |
| Die Attach | 95Pb / 5 Sn | Silver (Ag) | 7440-22-4 | 0.000000 | 0 | 0 | | |
| | | Tin (Sn) | 7440-31-5 | 0.000078 | 50000 | 39.2291870117 | | |
| | | Lead (Pb) | 7439-92-1 | 0.001478 | 950000 | 743.342834473 | | |
| | | Silica (SiO2) | 60676-86-0 | 0.000000 | 0 | 0 | | |
| | | Indium (In) | 7440-74-6 | 0.000000 | 0 | 0 | | |
| | | Metal Oxide | | 0.000000 | 0 | 0 | | |
| | | Antimony (Sb) | 7440-36-0 | 0.000000 | 0 | 0 | | |
| | | Resin (EP) | | 0.000000 | 0 | 0 | | |
| Die Attach Total: | | | | 0.001556 | 1000000 | 782.572021484 | | |
| Encapsulation | MULTI-AROMATIC RESIN Br/Sb FREE | Resin (EP) | | 0.054270 | 103000 | 27294.4628906 | | |
| | | Bromine (Br) | 40039-93-8 | 0.000000 | 0 | 0 | | |
| | | Silica (SiO2) | 60676-86-0 | 0.471567 | 895000 | 237169.109375 | | |
| | | Antimony Trioxide (Sb2O3) | 1309-64-4 | 0.000000 | 0 | 0 | | |
| | | Metal Hydroxide | | 0.000000 | 0 | 0 | | |
| | | Carbon Black (C) | 1333-86-4 | 0.001054 | 2000 | 530.096984863 | | |
| | | Encapsulation Total: | | | | 0.526891 | 1000000 | 264993.65625 |
| Bond Wire Estimated | AFW/TANAKA/ Kn | Gold (Au) | 7440-57-5 | 0.000547 | 1000000 | 275.10723877 | | |
| | | | | | TOTAL MASS (g) : | 1.988315 | | |