

LINEAR TECHNOLOGY MATERIALS DECLARATION

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(Engineering Calculation)

TO-220

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TOTAL MASS (g) : 1.895516

| 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 | 0.004012 | 1000000 | 2116.57421875 | | |
| Die Coat | Dow Corning | Silicone | 69430-27-9 | 0.000000 | 0 | 0 | | |
| Lead Frame | Cu | Copper (Cu) | 7440-50-8 | 1.327316 | 998500 | 700240 | | |
| | | 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 | 0.001994 | 1500 | 1051.9564209 | | |
| Lead Frame Total: | | | | 1.329310 | 1000000 | 701292 | | |
| Plating | PMI | Exter. Plating Pb | 7439-92-1 | 0.000000 | 0 | 0 | | |
| | | Exter. Plating Sn | 7440-31-5 | 0.010641 | 1000000 | 5613.72705078 | | |
| | | External Plating Total: | | | | 0.010641 | 1000000 | 5613.72705078 |
| | | Inter. Plating Ni | 7440-02-0 | 0.009000 | 826446.25 | 4748.04785156 | | |
| | | Inter. Plating Ag | 7440-22-4 | 0.001890 | 173553.71875 | 997.090026855 | | |
| Internal Plating Total: | | | | 0.010890 | 1000000 | 5745.13818359 | | |
| Die Attach | 95Pb / 5 Sn | Silver (Ag) | 7440-22-4 | 0.000000 | 0 | 0 | | |
| | | Tin (Sn) | 7440-31-5 | 0.000098 | 50000 | 51.7009658813 | | |
| | | Lead (Pb) | 7439-92-1 | 0.001853 | 950000 | 977.5703125 | | |
| | | 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: | | | | 0.001951 | 1000000 | 1029.27124023 | | |
| Encapsulation | MULTI-AROMATIC RESIN Br/Sb FREE | Resin (EP) | | 0.055248 | 103000 | 29146.6835938 | | |
| | | Bromine (Br) | 40039-93-8 | 0.000000 | 0 | 0 | | |
| | | Silica (SiO2) | 60676-86-0 | 0.480069 | 895000 | 253265.65625 | | |
| | | Antimony Trioxide (Sb2O3) | 1309-64-4 | 0.000000 | 0 | 0 | | |
| | | Metal Hydroxide | | 0.000000 | 0 | 0 | | |
| | | Carbon Black (C) | 1333-86-4 | 0.001073 | 2000 | 566.072814941 | | |
| | | Encapsulation Total: | | | | 0.536390 | 1000000 | 282978.375 |
| Bond Wire Estimated | AFW/TANAKA/ Kn | Gold (Au) | 7440-57-5 | 0.000328 | 1000000 | 173.039962769 | | |
| | | | | | TOTAL MASS (g) : | 1.895516 | | |