

LINEAR TECHNOLOGY MATERIALS DECLARATION

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(Engineering Calculation)

TO-220

(printed on: 2020-07-11 17:51:16)

TOTAL MASS (g) : 2.027975

| 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 | 0.008603 | 1000000 | 4242.16210938 | | |
| Die Coat | Dow Corning | Silicone | 69430-27-9 | 0.000000 | 0 | 0 | | |
| Lead Frame | Cu | Copper (Cu) | 7440-50-8 | 1.457910 | 998500 | 718899.25 | | |
| | | 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 | 0.002190 | 1500 | 1079.89477539 | | |
| Lead Frame Total: | | | | 1.460100 | 1000000 | 719979.25 | | |
| Plating | PMI | Exter. Plating Pb | 7439-92-1 | 0.000000 | 0 | 0 | | |
| | | Exter. Plating Sn | 7440-31-5 | 0.012534 | 1000000 | 6180.70019531 | | |
| | | External Plating Total: | | | | 0.012534 | 1000000 | 6180.70019531 |
| | | Inter. Plating Ni | 7440-02-0 | 0.017000 | 893796 | 8382.74511719 | | |
| | | Inter. Plating Ag | 7440-22-4 | 0.002020 | 106203.992188 | 996.067321777 | | |
| Internal Plating Total: | | | | 0.019020 | 1000000 | 9378.8125 | | |
| Die Attach | 95Pb / 5 Sn | Silver (Ag) | 7440-22-4 | 0.000000 | 0 | 0 | | |
| | | Tin (Sn) | 7440-31-5 | 0.000170 | 50000 | 83.8274536133 | | |
| | | Lead (Pb) | 7439-92-1 | 0.003226 | 950000 | 1590.74914551 | | |
| | | 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: | | | | 0.003396 | 1000000 | 1674.57653809 | | |
| Encapsulation | MULTI-AROMATIC RESIN Br/Sb FREE | Resin (EP) | | 0.053828 | 103000 | 26542.7304688 | | |
| | | Bromine (Br) | 40039-93-8 | 0.000000 | 0 | 0 | | |
| | | Silica (SiO2) | 60676-86-0 | 0.467727 | 895000 | 230637.4375 | | |
| | | Antimony Trioxide (Sb2O3) | 1309-64-4 | 0.000000 | 0 | 0 | | |
| | | Metal Hydroxide | | 0.000000 | 0 | 0 | | |
| | | Carbon Black (C) | 1333-86-4 | 0.001045 | 2000 | 515.292297363 | | |
| | | Encapsulation Total: | | | | 0.522600 | 1000000 | 257695.4375 |
| Bond Wire Estimated | AFW/TANAKA/ Kn | Gold (Au) | 7440-57-5 | 0.001722 | 1000000 | 849.122741699 | | |
| | | | | | TOTAL MASS (g) : | 2.027975 | | |