

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

1t3081mpt7#pbf

(Engineering Calculation)

TO-220

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**TOTAL MASS (g) : 2.021007**

| 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  | 0.004033             | 1000000                       | 1995.53979492                   |                |                      |
| Die Coat                 | Dow Corning                     | Silicone                       | 69430-27-9 | 0.000000             | 0                             | 0                               |                |                      |
| Lead Frame               | Cu                              | Copper (Cu)                    | 7440-50-8  | 1.457910             | 998500                        | 721377.875                      |                |                      |
|                          |                                 | 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                          | 1083.61804199                   |                |                      |
| <b>Lead Frame Total:</b> |                                 |                                |            | <b>1.460100</b>      | <b>1000000</b>                | <b>722461.5</b>                 |                |                      |
| Plating                  | PMI                             | Exter. Plating Pb              | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                          |                                 | Exter. Plating Sn              | 7440-31-5  | 0.012534             | 1000000                       | 6202.01025391                   |                |                      |
|                          |                                 | <b>External Plating Total:</b> |            |                      |                               | <b>0.012534</b>                 | <b>1000000</b> | <b>6202.01025391</b> |
|                          |                                 | Inter. Plating Ni              | 7440-02-0  | 0.017000             | 893796                        | 8411.64746094                   |                |                      |
|                          |                                 | Inter. Plating Ag              | 7440-22-4  | 0.002020             | 106203.992188                 | 999.501586914                   |                |                      |
|                          |                                 | <b>Internal Plating Total:</b> |            |                      |                               | <b>0.019020</b>                 | <b>1000000</b> | <b>9411.1484375</b>  |
| Die Attach               | 95Pb / 5 Sn                     | Silver (Ag)                    | 7440-22-4  | 0.000000             | 0                             | 0                               |                |                      |
|                          |                                 | Tin (Sn)                       | 7440-31-5  | 0.000098             | 50000                         | 48.4906692505                   |                |                      |
|                          |                                 | Lead (Pb)                      | 7439-92-1  | 0.001857             | 950000                        | 918.848815918                   |                |                      |
|                          |                                 | 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                               |                |                      |
| <b>Die Attach Total:</b> |                                 |                                |            | <b>0.001955</b>      | <b>1000000</b>                | <b>967.339355469</b>            |                |                      |
| Encapsulation            | MULTI-AROMATIC RESIN Br/Sb FREE | Resin (EP)                     |            | 0.053828             | 103000                        | 26634.2441406                   |                |                      |
|                          |                                 | Bromine (Br)                   | 40039-93-8 | 0.000000             | 0                             | 0                               |                |                      |
|                          |                                 | Silica (SiO2)                  | 60676-86-0 | 0.467727             | 895000                        | 231432.609375                   |                |                      |
|                          |                                 | 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                          | 517.068908691                   |                |                      |
|                          |                                 | <b>Encapsulation Total:</b>    |            |                      |                               | <b>0.522600</b>                 | <b>1000000</b> | <b>258583.9375</b>   |
| Bond Wire Estimated      | AFW/TANAKA/ Kn                  | Gold (Au)                      | 7440-57-5  | 0.000765             | 1000000                       | 378.524139404                   |                |                      |
|                          |                                 |                                |            |                      | <b>TOTAL MASS (g) :</b>       | <b>2.021007</b>                 |                |                      |