

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

1t1990ims8-10#pbf

(Engineering Calculation)

MSOP

(printed on: 2020-07-11 20:22:01)

**TOTAL MASS (g) : 0.027328**

| 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  | 0.002001             | 1000000                       | 73221.5390625                   |                |                      |
| Die Coat                       | Dow Corning                      | Silicone                       | 69430-27-9 | 0.000000             | 0                             | 0                               |                |                      |
| Lead Frame                     | A42                              | Copper (Cu)                    | 7440-50-8  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Iron (Fe)                      | 7439-89-6  | 0.006206             | 580000                        | 227092.890625                   |                |                      |
|                                |                                  | Phosphorus (P)                 | 7723-14-0  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Zinc (Zn)                      | 7440-66-6  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Nickel (Ni)                    | 7440-02-0  | 0.004494             | 420000                        | 164446.578125                   |                |                      |
|                                |                                  | Silicon (Si)                   | 7440-21-3  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Magnesium (Mg)                 | 7439-95-4  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Tin (Sn)                       | 7440-31-5  | 0.000000             | 0                             | 0                               |                |                      |
| <b>Lead Frame Total:</b>       |                                  |                                |            | <b>0.010700</b>      | <b>1000000</b>                | <b>391539.46875</b>             |                |                      |
| Plating                        | PMI                              | Exter. Plating Pb              | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Exter. Plating Sn              | 7440-31-5  | 0.000710             | 1000000                       | 25981.5683594                   |                |                      |
|                                |                                  | <b>External Plating Total:</b> |            |                      |                               | <b>0.000710</b>                 | <b>1000000</b> | <b>25981.5683594</b> |
|                                |                                  | Inter. Plating Ni              | 7440-02-0  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Inter. Plating Ag              | 7440-22-4  | 0.000086             | 1000000                       | 3146.95239258                   |                |                      |
| <b>Internal Plating Total:</b> |                                  |                                |            | <b>0.000086</b>      | <b>1000000</b>                | <b>3146.95239258</b>            |                |                      |
| Die Attach                     | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag)                    | 7440-22-4  | 0.000689             | 750000                        | 25212.2128906                   |                |                      |
|                                |                                  | Tin (Sn)                       | 7440-31-5  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Lead (Pb)                      | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | 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)                     |            | 0.000230             | 250000                        | 8416.26855469                   |                |                      |
| <b>Die Attach Total:</b>       |                                  |                                |            | <b>0.000919</b>      | <b>1000000</b>                | <b>33628.4804688</b>            |                |                      |
| Encapsulation                  | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                     |            | 0.001659             | 130000                        | 60706.9101562                   |                |                      |
|                                |                                  | Bromine (Br)                   | 40039-93-8 | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Silica (SiO2)                  | 60676-86-0 | 0.010591             | 830000                        | 387550.875                      |                |                      |
|                                |                                  | Antimony Trioxide (Sb2O3)      | 1309-64-4  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Metal Hydroxide                |            | 0.000447             | 35000                         | 16356.8349609                   |                |                      |
|                                |                                  | Carbon Black (C)               | 1333-86-4  | 0.000064             | 5000                          | 2341.91821289                   |                |                      |
|                                |                                  | <b>Encapsulation Total:</b>    |            |                      |                               | <b>0.012761</b>                 | <b>1000000</b> | <b>466956.53125</b>  |
| Bond Wire Estimated            | AFW/TANAKA/ Kn                   | Gold (Au)                      | 7440-57-5  | 0.000151             | 1000000                       | 5525.46337891                   |                |                      |
|                                |                                  |                                |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.027328</b>                 |                |                      |