

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

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(Engineering Calculation)

TSOT-23

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**TOTAL MASS (g) : 0.012543**

| COMPONENT MATERIAL         | VENDOR/ INDUSTRY NAMES           | CONSTITUENT NAME               | CAS NUMBER | CONSTITUENT MASS (g) | CONSTITUENT (PPM) OF MATERIAL | CONSTITUENT (PPM) OF TOTAL PKG. |                |                      |
|----------------------------|----------------------------------|--------------------------------|------------|----------------------|-------------------------------|---------------------------------|----------------|----------------------|
| <b>Active Device</b>       | Linear Technology                | Silicon (Si)                   | 7440-21-3  | 0.000567             | 1000000                       | 45205.3789062                   |                |                      |
| <b>Die Coat</b>            | Dow Corning                      | Silicone                       | 69430-27-9 | 0.000000             | 0                             | 0                               |                |                      |
| <b>Lead Frame</b>          | A42                              | Copper (Cu)                    | 7440-50-8  | 0.000000             | 0                             | 0                               |                |                      |
|                            |                                  | Iron (Fe)                      | 7439-89-6  | 0.002726             | 580000                        | 217336.609375                   |                |                      |
|                            |                                  | Phosphorus (P)                 | 7723-14-0  | 0.000000             | 0                             | 0                               |                |                      |
|                            |                                  | Zinc (Zn)                      | 7440-66-6  | 0.000000             | 0                             | 0                               |                |                      |
|                            |                                  | Nickel (Ni)                    | 7440-02-0  | 0.001974             | 420000                        | 157381.671875                   |                |                      |
|                            |                                  | 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>0.004700</b>      | <b>1000000</b>                | <b>374718.28125</b>             |                |                      |
| <b>Plating</b>             | PMI                              | Exter. Plating Pb              | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                            |                                  | Exter. Plating Sn              | 7440-31-5  | 0.000644             | 1000000                       | 51324.921875                    |                |                      |
|                            |                                  | <b>External Plating Total:</b> |            |                      |                               | <b>0.000644</b>                 | <b>1000000</b> | <b>51324.921875</b>  |
|                            |                                  | Inter. Plating Ni              | 7440-02-0  | 0.000000             | 0                             | 0                               |                |                      |
|                            |                                  | Inter. Plating Ag              | 7440-22-4  | 0.000080             | 1000000                       | 6378.18310547                   |                |                      |
|                            |                                  | <b>Internal Plating Total:</b> |            |                      |                               | <b>0.000080</b>                 | <b>1000000</b> | <b>6378.18310547</b> |
| <b>Die Attach</b>          | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag)                    | 7440-22-4  | 0.000409             | 750000                        | 32608.4648438                   |                |                      |
|                            |                                  | 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)                     |            | 0.000136             | 250000                        | 10842.9121094                   |                |                      |
| <b>Die Attach Total:</b>   |                                  |                                |            | <b>0.000545</b>      | <b>1000000</b>                | <b>43451.375</b>                |                |                      |
| <b>Encapsulation</b>       | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                     |            | 0.000772             | 130000                        | 61549.46875                     |                |                      |
|                            |                                  | Bromine (Br)                   | 40039-93-8 | 0.000000             | 0                             | 0                               |                |                      |
|                            |                                  | Silica (SiO2)                  | 60676-86-0 | 0.004930             | 830000                        | 393055.53125                    |                |                      |
|                            |                                  | Antimony Trioxide (Sb2O3)      | 1309-64-4  | 0.000000             | 0                             | 0                               |                |                      |
|                            |                                  | Metal Hydroxide                |            | 0.000208             | 35000                         | 16583.2773438                   |                |                      |
|                            |                                  | Carbon Black (C)               | 1333-86-4  | 0.000030             | 5000                          | 2391.81860352                   |                |                      |
|                            |                                  | <b>Encapsulation Total:</b>    |            |                      |                               | <b>0.005940</b>                 | <b>1000000</b> | <b>473580.125</b>    |
| <b>Bond Wire Estimated</b> | AFW/TANAKA/ Kn                   | Gold (Au)                      | 7440-57-5  | 0.000067             | 1000000                       | 5341.72851562                   |                |                      |
|                            |                                  |                                |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.012543</b>                 |                |                      |