

# LINEAR TECHNOLOGY MATERIALS DECLARATION

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(Engineering Calculation)

TSOT-23

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**TOTAL MASS (g) : 0.012601**

| 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  | 0.000673             | 1000000                       | 53407.4648438                   |
| Die Coat            | Dow Corning                      | Silicone                  | 69430-27-9 | 0.000000             | 0                             | 0                               |
| Lead Frame          | Cu                               | Copper (Cu)               | 7440-50-8  | 0.004485             | 975000                        | 355917.46875                    |
|                     |                                  | Iron (Fe)                 | 7439-89-6  | 0.000110             | 24000                         | 8729.30371094                   |
|                     |                                  | Phosphorus (P)            | 7723-14-0  | 0.000001             | 300                           | 79.3572998047                   |
|                     |                                  | Zinc (Zn)                 | 7440-66-6  | 0.000003             | 700                           | 238.071914673                   |
|                     |                                  | 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  | 0.000000             | 0                             | 0                               |
|                     |                                  | Lead Frame Total:         |            | 0.004599             | 1000000                       | 364964.21875                    |
| Plating             | PMI                              | Exter. Plating Pb         | 7439-92-1  | 0.000000             | 0                             | 0                               |
|                     |                                  | Exter. Plating Sn         | 7440-31-5  | 0.000635             | 1000000                       | 50410.5898438                   |
|                     |                                  | External Plating Total:   |            | 0.000635             | 1000000                       | 50410.5898438                   |
|                     |                                  | Inter. Plating Ni         | 7440-02-0  | 0.000000             | 0                             | 0                               |
|                     |                                  | Inter. Plating Ag         | 7440-22-4  | 0.000080             | 1000000                       | 6348.58398438                   |
|                     |                                  | Internal Plating Total:   |            | 0.000080             | 1000000                       | 6348.58398438                   |
| Die Attach          | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag)               | 7440-22-4  | 0.000448             | 750000                        | 35552.0742188                   |
|                     |                                  | 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)                |            | 0.000149             | 250000                        | 11824.2382812                   |
|                     |                                  | Die Attach Total:         |            | 0.000597             | 1000000                       | 47376.3085938                   |
| Encapsulation       | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                |            | 0.000775             | 130000                        | 61501.9101562                   |
|                     |                                  | Bromine (Br)              | 40039-93-8 | 0.000000             | 0                             | 0                               |
|                     |                                  | Silica (SiO2)             | 60676-86-0 | 0.004947             | 830000                        | 392580.59375                    |
|                     |                                  | Antimony Trioxide (Sb2O3) | 1309-64-4  | 0.000000             | 0                             | 0                               |
|                     |                                  | Metal Hydroxide           |            | 0.000209             | 35000                         | 16585.6757812                   |
|                     |                                  | Carbon Black (C)          | 1333-86-4  | 0.000030             | 5000                          | 2380.71899414                   |
|                     |                                  | Encapsulation Total:      |            | 0.005961             | 1000000                       | 473048.875                      |
| Bond Wire Estimated | AFW/TANAKA/ Kn                   | Gold (Au)                 | 7440-57-5  | 0.000056             | 1000000                       | 4444.00927734                   |
|                     |                                  |                           |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.012601</b>                 |