

# LINEAR TECHNOLOGY MATERIALS DECLARATION

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(Engineering Calculation)

TSSOP Exp. Pad

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**TOTAL MASS (g) : 0.081675**

| 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  | 0.007313             | 1000000                       | 89537.2578125                   |
| Die Coat            | Dow Corning                      | Silicone                  | 69430-27-9 | 0.000000             | 0                             | 0                               |
| Lead Frame          | Cu                               | Copper (Cu)               | 7440-50-8  | 0.026547             | 975000                        | 325030.15625                    |
|                     |                                  | Iron (Fe)                 | 7439-89-6  | 0.000653             | 24000                         | 7995.05419922                   |
|                     |                                  | Phosphorus (P)            | 7723-14-0  | 0.000008             | 300                           | 97.9485931396                   |
|                     |                                  | Zinc (Zn)                 | 7440-66-6  | 0.000019             | 700                           | 232.62789917                    |
|                     |                                  | 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:         |            | 0.027227             | 1000000                       | 333355.78125                    |
| Plating             | PMI                              | Exter. Plating Pb         | 7439-92-1  | 0.000000             | 0                             | 0                               |
|                     |                                  | Exter. Plating Sn         | 7440-31-5  | 0.002940             | 1000000                       | 35990.0273438                   |
|                     |                                  | External Plating Total:   |            | 0.002940             | 1000000                       | 35990.0273438                   |
|                     |                                  | Inter. Plating Ni         | 7440-02-0  | 0.000000             | 0                             | 0                               |
|                     |                                  | Inter. Plating Ag         | 7440-22-4  | 0.001123             | 1000000                       | 13749.5341797                   |
|                     |                                  | Internal Plating Total:   |            | 0.001123             | 1000000                       | 13749.5341797                   |
| Die Attach          | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag)               | 7440-22-4  | 0.001726             | 750000                        | 21132.4082031                   |
|                     |                                  | 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)                |            | 0.000575             | 250000                        | 7040.05517578                   |
|                     |                                  | Die Attach Total:         |            | 0.002301             | 1000000                       | 28172.4628906                   |
| Encapsulation       | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                |            | 0.006015             | 150000                        | 73645.09375                     |
|                     |                                  | Bromine (Br)              | 40039-93-8 | 0.000000             | 0                             | 0                               |
|                     |                                  | Silica (SiO2)             | 60676-86-0 | 0.032882             | 820000                        | 402593.1875                     |
|                     |                                  | Antimony Trioxide (Sb2O3) | 1309-64-4  | 0.000000             | 0                             | 0                               |
|                     |                                  | Metal Hydroxide           |            | 0.001002             | 25000                         | 12268.0595703                   |
|                     |                                  | Carbon Black (C)          | 1333-86-4  | 0.000201             | 5000                          | 2460.95849609                   |
|                     |                                  | Encapsulation Total:      |            | 0.040100             | 1000000                       | 490967.3125                     |
| Bond Wire Estimated | AFW/TANAKA/ Kn                   | Gold (Au)                 | 7440-57-5  | 0.000672             | 1000000                       | 8227.68164062                   |
|                     |                                  |                           |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.081675</b>                 |