

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

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(Engineering Calculation)

TSSOP Exp. Pad

(printed on: 2020-07-11 20:25:19)

**TOTAL MASS (g) : 0.07301**

| 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  | 0.003426             | 1000000                       | 46924.8671875                   |                |                      |
| Die Coat                       | Dow Corning                      | Silicone                       | 69430-27-9 | 0.000000             | 0                             | 0                               |                |                      |
| Lead Frame                     | Cu                               | Copper (Cu)                    | 7440-50-8  | 0.024424             | 975000                        | 334528                          |                |                      |
|                                |                                  | Iron (Fe)                      | 7439-89-6  | 0.000601             | 24000                         | 8231.71191406                   |                |                      |
|                                |                                  | Phosphorus (P)                 | 7723-14-0  | 0.000008             | 300                           | 109.573524475                   |                |                      |
|                                |                                  | Zinc (Zn)                      | 7440-66-6  | 0.000018             | 700                           | 246.540466309                   |                |                      |
|                                |                                  | 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                               |                |                      |
| <b>Lead Frame Total:</b>       |                                  |                                |            | <b>0.025051</b>      | <b>1000000</b>                | <b>343115.8125</b>              |                |                      |
| Plating                        | PMI                              | Exter. Plating Pb              | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Exter. Plating Sn              | 7440-31-5  | 0.001770             | 1000000                       | 24247.6503906                   |                |                      |
|                                |                                  | <b>External Plating Total:</b> |            |                      |                               | <b>0.001770</b>                 | <b>1000000</b> | <b>24247.6503906</b> |
|                                |                                  | Inter. Plating Ni              | 7440-02-0  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Inter. Plating Ag              | 7440-22-4  | 0.000683             | 1000000                       | 9354.84082031                   |                |                      |
| <b>Internal Plating Total:</b> |                                  |                                |            | <b>0.000683</b>      | <b>1000000</b>                | <b>9354.84082031</b>            |                |                      |
| Die Attach                     | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag)                    | 7440-22-4  | 0.001012             | 750000                        | 13861.0517578                   |                |                      |
|                                |                                  | 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)                     |            | 0.000337             | 250000                        | 4615.78515625                   |                |                      |
| <b>Die Attach Total:</b>       |                                  |                                |            | <b>0.001349</b>      | <b>1000000</b>                | <b>18476.8359375</b>            |                |                      |
| Encapsulation                  | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                     |            | 0.006015             | 150000                        | 82385.6015625                   |                |                      |
|                                |                                  | Bromine (Br)                   | 40039-93-8 | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Silica (SiO2)                  | 60676-86-0 | 0.032882             | 820000                        | 450374.625                      |                |                      |
|                                |                                  | Antimony Trioxide (Sb2O3)      | 1309-64-4  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Metal Hydroxide                |            | 0.001003             | 25000                         | 13737.78125                     |                |                      |
|                                |                                  | Carbon Black (C)               | 1333-86-4  | 0.000201             | 5000                          | 2753.03491211                   |                |                      |
|                                |                                  | <b>Encapsulation Total:</b>    |            |                      |                               | <b>0.040101</b>                 | <b>1000000</b> | <b>549251</b>        |
| Bond Wire Estimated            | AFW/TANAKA/ Kn                   | Gold (Au)                      | 7440-57-5  | 0.000630             | 1000000                       | 8628.91601562                   |                |                      |
|                                |                                  |                                |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.07301</b>                  |                |                      |