

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

ltc1659cs8#trpbf

(Engineering Calculation)

SOIC

(printed on: 2020-07-11 17:36:35)

**TOTAL MASS (g) : 0.073787**

| 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  | 0.002346             | 1000000                       | 31794.2792969                   |                |                      |
| Die Coat                 | Dow Corning                      | Silicone                       | 69430-27-9 | 0.000000             | 0                             | 0                               |                |                      |
| Lead Frame               | Cu                               | Copper (Cu)                    | 7440-50-8  | 0.023653             | 975000                        | 320558.46875                    |                |                      |
|                          |                                  | Iron (Fe)                      | 7439-89-6  | 0.000582             | 24000                         | 7887.58398438                   |                |                      |
|                          |                                  | Phosphorus (P)                 | 7723-14-0  | 0.000007             | 300                           | 94.8678512573                   |                |                      |
|                          |                                  | Zinc (Zn)                      | 7440-66-6  | 0.000017             | 700                           | 230.393341064                   |                |                      |
|                          |                                  | 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>0.024259</b>      | <b>1000000</b>                | <b>328771.28125</b>             |                |                      |
| Plating                  | PMI                              | Exter. Plating Pb              | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                          |                                  | Exter. Plating Sn              | 7440-31-5  | 0.001477             | 1000000                       | 20015.109375                    |                |                      |
|                          |                                  | <b>External Plating Total:</b> |            |                      |                               | <b>0.001477</b>                 | <b>1000000</b> | <b>20015.109375</b>  |
|                          |                                  | Inter. Plating Ni              | 7440-02-0  | 0.000000             | 0                             | 0                               |                |                      |
|                          |                                  | Inter. Plating Ag              | 7440-22-4  | 0.000194             | 1000000                       | 2629.19433594                   |                |                      |
|                          |                                  | <b>Internal Plating Total:</b> |            |                      |                               | <b>0.000194</b>                 | <b>1000000</b> | <b>2629.19433594</b> |
| Die Attach               | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag)                    | 7440-22-4  | 0.000766             | 750000                        | 10381.2539062                   |                |                      |
|                          |                                  | 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)                     |            | 0.000255             | 250000                        | 3455.90014648                   |                |                      |
| <b>Die Attach Total:</b> |                                  |                                |            | <b>0.001021</b>      | <b>1000000</b>                | <b>13837.1533203</b>            |                |                      |
| Encapsulation            | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                     |            | 0.006657             | 150000                        | 90219.328125                    |                |                      |
|                          |                                  | Bromine (Br)                   | 40039-93-8 | 0.000000             | 0                             | 0                               |                |                      |
|                          |                                  | Silica (SiO2)                  | 60676-86-0 | 0.036392             | 820000                        | 493204.375                      |                |                      |
|                          |                                  | Antimony Trioxide (Sb2O3)      | 1309-64-4  | 0.000000             | 0                             | 0                               |                |                      |
|                          |                                  | Metal Hydroxide                |            | 0.001110             | 25000                         | 15043.3291016                   |                |                      |
|                          |                                  | Carbon Black (C)               | 1333-86-4  | 0.000222             | 5000                          | 3008.66601562                   |                |                      |
|                          |                                  | <b>Encapsulation Total:</b>    |            |                      |                               | <b>0.044381</b>                 | <b>1000000</b> | <b>601475.6875</b>   |
| Bond Wire Estimated      | AFW/TANAKA/ Kn                   | Gold (Au)                      | 7440-57-5  | 0.000109             | 1000000                       | 1477.22790527                   |                |                      |
|                          |                                  |                                |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.073787</b>                 |                |                      |