

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

1tc2644ims-110#pbf

(Engineering Calculation)

MSOP

(printed on: 2020-07-11 17:00:58)

**TOTAL MASS (g) : 0.037379**

| 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  | 0.003272             | 1000000                       | 87535.734375                    |                |                      |
| Die Coat                       | Dow Corning                      | Silicone                       | 69430-27-9 | 0.000000             | 0                             | 0                               |                |                      |
| Lead Frame                     | Cu                               | Copper (Cu)                    | 7440-50-8  | 0.013845             | 975000                        | 370394.90625                    |                |                      |
|                                |                                  | Iron (Fe)                      | 7439-89-6  | 0.000341             | 24000                         | 9122.76367188                   |                |                      |
|                                |                                  | Phosphorus (P)                 | 7723-14-0  | 0.000004             | 300                           | 107.011894226                   |                |                      |
|                                |                                  | Zinc (Zn)                      | 7440-66-6  | 0.000010             | 700                           | 267.529724121                   |                |                      |
|                                |                                  | 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>0.014200</b>      | <b>1000000</b>                | <b>379892.21875</b>             |                |                      |
| Plating                        | PMI                              | Exter. Plating Pb              | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Exter. Plating Sn              | 7440-31-5  | 0.000710             | 1000000                       | 18995.2792969                   |                |                      |
|                                |                                  | <b>External Plating Total:</b> |            |                      |                               | <b>0.000710</b>                 | <b>1000000</b> | <b>18995.2792969</b> |
|                                |                                  | Inter. Plating Ni              | 7440-02-0  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Inter. Plating Ag              | 7440-22-4  | 0.000086             | 1000000                       | 2300.75585938                   |                |                      |
| <b>Internal Plating Total:</b> |                                  |                                |            | <b>0.000086</b>      | <b>1000000</b>                | <b>2300.75585938</b>            |                |                      |
| Die Attach                     | ELECTRICALLY INSULATING ADHESIVE | Silver (Ag)                    | 7440-22-4  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Tin (Sn)                       | 7440-31-5  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Lead (Pb)                      | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Silica (SiO2)                  | 60676-86-0 | 0.000011             | 50000                         | 294.282714844                   |                |                      |
|                                |                                  | Indium (In)                    | 7440-74-6  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Metal Oxide                    |            | 0.000065             | 300000                        | 1738.9432373                    |                |                      |
|                                |                                  | Antimony (Sb)                  | 7440-36-0  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Resin (EP)                     |            | 0.000140             | 650000                        | 3745.41650391                   |                |                      |
| <b>Die Attach Total:</b>       |                                  |                                |            | <b>0.000216</b>      | <b>1000000</b>                | <b>5778.64257812</b>            |                |                      |
| Encapsulation                  | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                     |            | 0.002439             | 130000                        | 65250.5                         |                |                      |
|                                |                                  | Bromine (Br)                   | 40039-93-8 | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Silica (SiO2)                  | 60676-86-0 | 0.015571             | 830000                        | 416570.53125                    |                |                      |
|                                |                                  | Antimony Trioxide (Sb2O3)      | 1309-64-4  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Metal Hydroxide                |            | 0.000657             | 35000                         | 17576.703125                    |                |                      |
|                                |                                  | Carbon Black (C)               | 1333-86-4  | 0.000094             | 5000                          | 2514.77954102                   |                |                      |
|                                |                                  | <b>Encapsulation Total:</b>    |            |                      |                               | <b>0.018761</b>                 | <b>1000000</b> | <b>501912.53125</b>  |
| Bond Wire Estimated            | AFW/TANAKA/ Kn                   | Gold (Au)                      | 7440-57-5  | 0.000134             | 1000000                       | 3584.8984375                    |                |                      |
|                                |                                  |                                |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.037379</b>                 |                |                      |