

**LINEAR TECHNOLOGY MATERIALS DECLARATION**

1tc2668cuj-12#trpbf

(Engineering Calculation)

QFN 6mm X 6mm Exp. Pad

(printed on: 2020-07-11 17:47:46)

**TOTAL MASS (g) : 0.113592**

| 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  | 0.009899             | 1000000                       | 87145.3125                      |                |                      |
| Die Coat                       | Dow Corning                      | Silicone                       | 69430-27-9 | 0.000000             | 0                             | 0                               |                |                      |
| Lead Frame                     | Cu                               | Copper (Cu)                    | 7440-50-8  | 0.043661             | 975000                        | 384367.25                       |                |                      |
|                                |                                  | Iron (Fe)                      | 7439-89-6  | 0.001075             | 24000                         | 9463.70507812                   |                |                      |
|                                |                                  | Phosphorus (P)                 | 7723-14-0  | 0.000013             | 300                           | 114.444793701                   |                |                      |
|                                |                                  | Zinc (Zn)                      | 7440-66-6  | 0.000031             | 700                           | 272.906829834                   |                |                      |
|                                |                                  | 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>0.044780</b>      | <b>1000000</b>                | <b>394218.3125</b>              |                |                      |
| Plating                        | PMI                              | Exter. Plating Pb              | 7439-92-1  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Exter. Plating Sn              | 7440-31-5  | 0.004194             | 1000000                       | 36920.6054688                   |                |                      |
|                                |                                  | <b>External Plating Total:</b> |            |                      |                               | <b>0.004194</b>                 | <b>1000000</b> | <b>36920.6054688</b> |
|                                |                                  | Inter. Plating Ni              | 7440-02-0  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Inter. Plating Ag              | 7440-22-4  | 0.000108             | 1000000                       | 950.772216797                   |                |                      |
| <b>Internal Plating Total:</b> |                                  |                                |            | <b>0.000108</b>      | <b>1000000</b>                | <b>950.772216797</b>            |                |                      |
| Die Attach                     | ELECTRICALLY CONDUCTIVE ADHESIVE | Silver (Ag)                    | 7440-22-4  | 0.002927             | 750000                        | 25767.6855469                   |                |                      |
|                                |                                  | 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)                     |            | 0.000976             | 250000                        | 8592.16308594                   |                |                      |
| <b>Die Attach Total:</b>       |                                  |                                |            | <b>0.003903</b>      | <b>1000000</b>                | <b>34359.8515625</b>            |                |                      |
| Encapsulation                  | MULTI-AROMATIC RESIN Br/Sb FREE  | Resin (EP)                     |            | 0.006540             | 130000                        | 57574.5351562                   |                |                      |
|                                |                                  | Bromine (Br)                   | 40039-93-8 | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Silica (SiO2)                  | 60676-86-0 | 0.043267             | 860000                        | 380898.71875                    |                |                      |
|                                |                                  | Antimony Trioxide (Sb2O3)      | 1309-64-4  | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Metal Hydroxide                |            | 0.000000             | 0                             | 0                               |                |                      |
|                                |                                  | Carbon Black (C)               | 1333-86-4  | 0.000503             | 10000                         | 4428.13330078                   |                |                      |
|                                |                                  | <b>Encapsulation Total:</b>    |            |                      |                               | <b>0.050310</b>                 | <b>1000000</b> | <b>442901.375</b>    |
| Bond Wire Estimated            | AFW/TANAKA/ Kn                   | Gold (Au)                      | 7440-57-5  | 0.000398             | 1000000                       | 3503.77172852                   |                |                      |
|                                |                                  |                                |            |                      | <b>TOTAL MASS (g) :</b>       | <b>0.113592</b>                 |                |                      |