

**LTM8050-BGA 70L,15mm X 9mm X 4.92mm (TABLE OF MATERIAL DECLARATION)**
*The LTM8050 is RoHS compliant per EU RoHS Directive 2003/95/EC.*

It contains less than 100ppm cadmium (Cd) and less than 1,000ppm of each - lead (Pb), mercury (Hg), hexavalent chromium (Cr+), polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

| No.                         | Part Name                 | Material Name | Component Weight (gram) | Materials Analysis (element)                                       | CAS Number  | Material Mass (gram) | Materials Analysis (weight %) |
|-----------------------------|---------------------------|---------------|-------------------------|--|---|----------------------|-------------------------------|
| 1                           | Substrate                 | Circuit Board | 0.1480                  | Barium Compounds   | 7727-43-7   | 0.00379              | 2.56                          |
|                             |                           |               |                         | Bismaleimide/Triazine/Resin/Filler Substances (Silica Crystalline) | 105391-33-1, 1156-51-0/9003-36-5/21645-51-2, non-disclosure | 0.02824              | 19.08                         |
|                             |                           |               |                         | Copper Metal   | 7440-50-8   | 0.08392              | 56.69                         |
|                             |                           |               |                         | Copper Compounds   | 147-14-8  | 0.00003              | 0.02                          |
|                             |                           |               |                         | Ecotoxic substances  | 7440-38-2, 7440-28-0  | 0.00001              | 0.01                          |
|                             |                           |               |                         | Gold metal or alloy  | 7440-57-5   | 0.00022              | 0.15                          |
|                             |                           |               |                         | Nickel   | 7440-02-0   | 0.00104              | 0.70                          |
|                             |                           |               |                         | Zinc   | 7440-66-6   | 0.00016              | 0.11                          |
|                             |                           |               |                         | Continuous Filament Fiber Glass                                    | 65997-17-3  | 0.02219              | 14.99                         |
|                             |                           |               |                         | Acrylic Resin  | non-disclosure  | 0.00721              | 4.87                          |
|                             |                           |               |                         | Epoxy Resin  | non-disclosure  | 0.00003              | 0.02                          |
|                             |                           |               |                         | Chromium(III) Oxide  | 1308-38-9   | 0.00001              | 0.00                          |
|                             |                           |               |                         | Silica Amorphous   | 7631-86-9   | 0.00008              | 0.05                          |
|                             |                           |               |                         | Talc;not containing fiber like asbestos                            | 14807-96-6  | 0.00044              | 0.30                          |
|                             |                           |               |                         | Aromatic carbonyl compounds  | non-disclosure  | 0.00041              | 0.28                          |
|                             |                           |               |                         | Cyanoguanidine   | 461-58-5  | 0.00001              | 0.01                          |
|                             |                           |               |                         | Calcium caobonate  | 471-34-1  | 0.00000              | 0.00                          |
| Amine compounds             | non-disclosure            | 0.00005       | 0.04                    |  |   |                      |                               |
| Leveling agent and others   | non-disclosure            | 0.00016       | 0.11                    |  |   |                      |                               |
| 2                           | Solder Paste              | Alloy         | 0.0900                  | Sn   | 7440-31-5   | 0.08546              | 95.00                         |
|                             |                           |               |                         | Sb   | 7440-36-0   | 0.00450              | 5.00                          |
| 3                           | Passive/Active Components |               | 0.6638                  | Iron Powder (Fe)   | 7439-89-6   | 0.48443              | 72.98                         |
|                             |                           |               |                         | Copper (Cu)  | 7440-50-8   | 0.13350              | 20.11                         |
|                             |                           |               |                         | Nickel (Ni)  | 7440-02-0   | 0.00549              | 0.83                          |
|                             |                           |               |                         | Tin (Sn)   | 7440-31-5   | 0.00517              | 0.78                          |
|                             |                           |               |                         | Ceramic (Ba) Compounds   | 12047-27-7  | 0.03521              | 5.30                          |
| 4                           | Active Ics                | Silicon       | 0.0041                  | Silicon  | 7440-21-3   | 0.00411              | 100.00                        |
| 5                           | Wire                      | Gold          | 0.0002                  | Au   | 7440-57-5   | 0.00022              | 99.99                         |
| 6                           | Solder Ball               | SAC305        | 0.1191                  | Sn   | 7440-31-5   | 0.11489              | 96.50                         |
|                             |                           |               |                         | Ag   | 7440-22-4   | 0.00357              | 3.00                          |
|                             |                           |               |                         | Cu   | 7440-50-8   | 0.00060              | 0.50                          |
| 7                           | Encapsulation             | Epoxy Resin   | 0.8275                  | Fused Silica   | 60676-86-0  | 0.63885              | 77.20                         |
|                             |                           |               |                         | Epoxy Resin  | non-disclosure  | 0.07365              | 8.90                          |
|                             |                           |               |                         | Phenol Resin   | non-disclosure  | 0.07365              | 8.90                          |
|                             |                           |               |                         | Crytalline Silica  | 14808-60-7  | 0.02483              | 3.00                          |
|                             |                           |               |                         | Carbon Black   | 1333-86-4   | 0.00414              | 0.50                          |
|                             |                           |               |                         | Metal Hydroxide  | non-disclosure  | 0.01241              | 1.50                          |
| <b>Total Package Weight</b> |                           |               | <b>1.8527</b>           |  |   |                      |                               |

 Note: Composition derived from MSDS and material C of C from Vendors  
 Component Weight based on assembly of generic parts